



# **Palliser Airshed Society**

## **Ambient Air Monitoring Network Summary**

**Continuous Ambient Air Quality Monitoring Program  
Monthly Report  
August 2008**

**Operations and Reporting**

**FOCUS**  
AIR QUALITY MONITORING



September 8, 2008

**Alberta Environment**  
11th Floor, Oxbridge Place  
9820-106 Street  
Edmonton Alberta T6B 2X3

**Attention: Director of Monitoring and Evaluation**

**RE: Palliser Airshed Society (PAS) Ambient Air Monitoring Report – August 2008**

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Enclosed is the PAS Ambient Monitoring Report for the month of **August 2008**.

**Continuous Monitoring – Crescent Heights and Portable-Brooks**

Included in this report are; monthly sampling table, detailed hourly average reports and multipoint calibration reports of all instruments.

**Crescent Heights:**

- ◆ All analyzers and instruments at the Crescent Heights Station were above 90% operational for the month of August.
- ◆ The measured ambient air quality was within the Alberta Objectives and Federal guidelines with no exceedences recorded at the Crescent Heights Station.
- ◆ The following is a summary of the monthly averages recorded during sampling:
  - Monthly average concentrations of NO<sub>2</sub> was 4.0 ppb
  - Monthly average concentrations for O<sub>3</sub> was 26.6 ppb
  - Monthly average concentrations for CO was 0.16 ppm
  - Monthly average concentrations for THC was 1.90 ppm
  - Monthly average concentrations for PM<sub>2.5</sub> was 3.3 µg/m<sup>3</sup>

**Portable-Brooks:**

- ◆ All pollutant analyzers at the Portable Brooks Station were 100% operational for the month of August.
- ◆ The measured ambient air quality was within the Alberta Objectives and Federal guidelines for SO<sub>2</sub> and O<sub>3</sub> pollutants recorded at the Portable - Brooks Station. The H<sub>2</sub>S analyzer recorded eight (8) exceedence greater then the Alberta Objective of 10 (ppb):

1.	August 2:	05:00	16.9 ppb	Alberta Environment Reference # <b>204810</b> .
2.	August 5:	01:00	19.6 ppb	Alberta Environment Reference # <b>204701</b> .
3.	August 6:	03:00	10.5 ppb	Alberta Environment Reference # <b>204250</b> .
4.	August 8:	04:00	20.2 ppb	Alberta Environment Reference # <b>204743</b> .
5.	August 8:	05:00	11.3 ppb	Alberta Environment Reference # <b>204743</b> .
6.	August 8:	21:00	13.4 ppb	Alberta Environment Reference # <b>205263</b> .
7.	August 14:	23:00	12.0 ppb	Alberta Environment Reference # <b>205349</b> .
8.	August 18:	06:00	18.9 ppb	Alberta Environment Reference # <b>204496</b> .
- ◆ The following is a summary of the monthly averages recorded during sampling:
  - Monthly average concentrations of SO<sub>2</sub> was 0.5 ppb
  - Monthly average concentrations for H<sub>2</sub>S was 0.6 ppb
  - Monthly average concentrations for O<sub>3</sub> was 27.5 ppb



### Passive Monitoring – Twenty Sites throughout the PAS zone:

There were two duplicate sites sampled in the month of August: Site 12 and Site 12. The passive sample analyses were performed by MAXXAM Analytics Inc. The following are the ranges for August 2008 recorded by the twenty passive stations located throughout the PAS zone.

- ◆ Average concentrations for SO<sub>2</sub> passives ranged from 0.2 to 0.5 ppb with a mean of 0.3 ppb.
- ◆ Average concentrations for NO<sub>2</sub> passives ranged from 0.3 to 3.3 ppb with a mean of 1.4 ppb.
- ◆ Average concentrations for O<sub>3</sub> passives ranged from 29.3 to 39.9 ppb with a mean of 36.0 ppb.

If you have any questions, please contact the Focus Intec office at 1.403.255.9440.

Sharon Whiteley, B.Sc.  
AQM Data Specialist

Kelly Baragar, C.E.T  
AQM Technical Field Supervisor



# Continuous Monitoring

## Ambient Air Monitoring Network

### Crescent Heights Station

#### General Station Issues

Routine monthly calibrations were performed on August 11<sup>th</sup> (CO & THC) and August 12<sup>th</sup> (NO<sub>x</sub> & O<sub>3</sub>). A second calibration was performed on the THC analyzer on August 27<sup>th</sup>.

Parameter	Make	Model	Units	Notes
Ozone	TECO	43I	ppb	No operational issues were observed.
Nitrogen Dioxide	Teledyne - API	200E	ppb	The span on August 18 <sup>th</sup> was dropped less than 10% (reason unknown), otherwise operations were good.
Total Hydrocarbons	Bendix	400A	ppm	The flame went out on August 25 <sup>th</sup> on the THC analyzer data; forty (40) hours were flagged invalid. The analyzer was repaired & calibrated on August 27 <sup>th</sup> .
Carbon Monoxide	TEI	49C	ppm	No operational issues were observed.
PM <sub>2.5</sub>	R&P TEOM	1400ab	µg/m <sup>3</sup>	A small power outage on August 9 <sup>th</sup> resulted in one (1) hour of invalid data. Six (6) hours were flagged for excessive baseline drift
Wind Speed	Met One	010C	kph	No operational issues were observed.
Wind Direction	Met One	020C	Deg	No operational issues were observed.
Ambient Temperature	Met One	083D	DegC	No operational issues were observed.
Relative Humidity	Met One	083D	%	No operational issues were observed.
Solar Radiation	Met One	096-1	W/m <sup>2</sup>	No operational issues were observed.
Data Acquisition System	Titan Logix	AP1000		No operational issues were observed.



# Continuous Monitoring

## Ambient Air Monitoring Network

### Portable-Brooks Station

#### General Station Issues

Routine monthly calibrations were performed on August 18<sup>th</sup> (SO<sub>2</sub>, H<sub>2</sub>S and O<sub>3</sub>).

Parameter	Make	Model	Units	Notes
Ozone	Teledyne - API	400E	ppb	No operational problems observed.
Sulphur Dioxide	TEI	43A	ppb	No operational problems observed.
Hydrogen Sulphide	TEI	43A	ppb	No operational problems observed.
Wind Speed	Blue Sky		kph	No operational problems observed.
Wind Direction	Blue Sky		Deg	No operational problems observed.
Data Acquisition System	Titan Logix	AP1000		No operational problems observed.





# **PAS - Crescent Heights**

Monthly Summary Tables, Graphs and Roses

**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

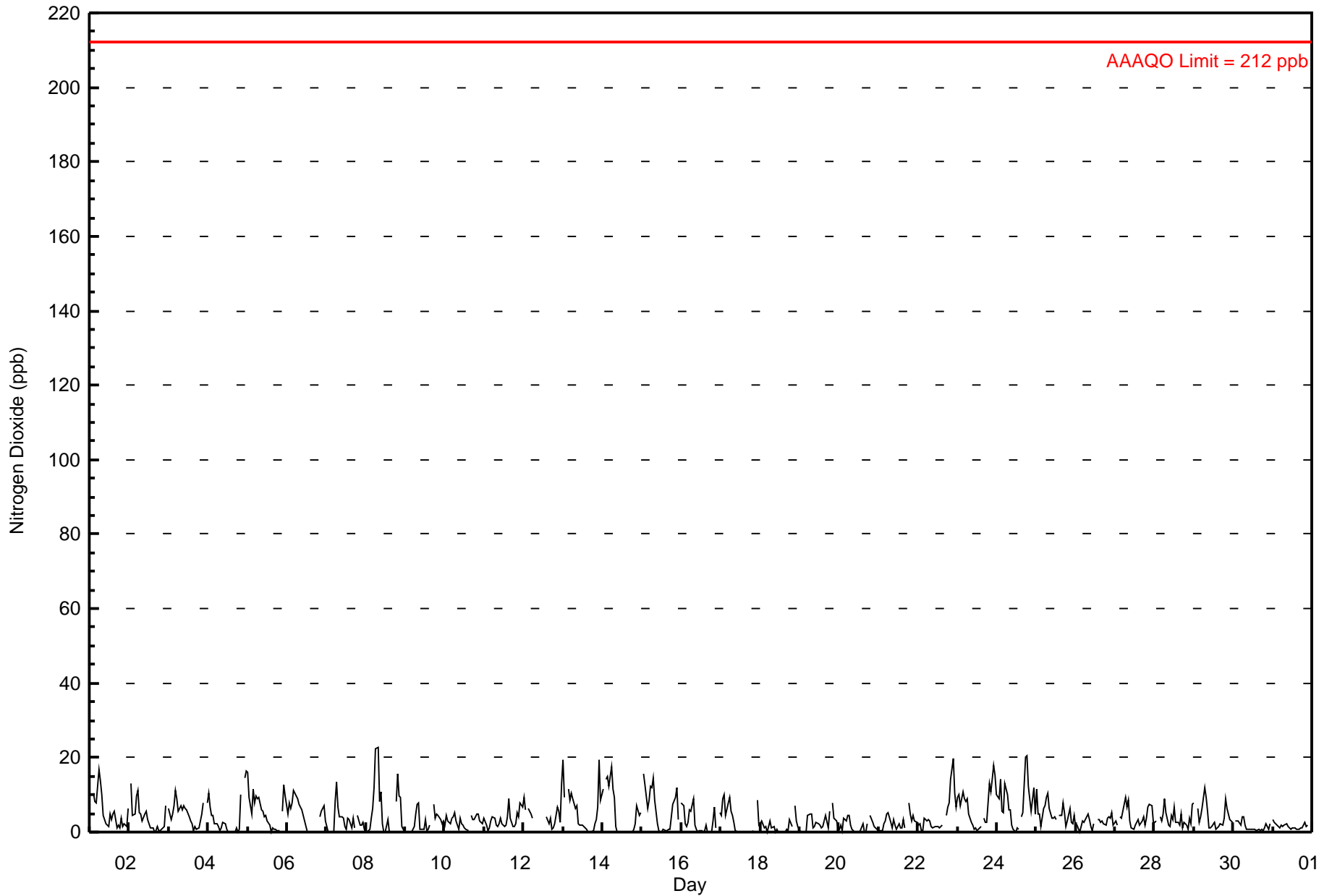
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 22.6 ppb on Aug 8 08:00	Maximum Daily Average: 7.7 ppb on Aug 24
Minimum Value: 0 ppb on Aug 4 13:00	Hours of Data: 703
Maximum Diurnal Average: 7.5 ppb at hour 7	Hours of Missing Data: 41
Monthly Average: 3.95 ppb	Hours of Calibration: 41
Minimum Daily Average: 1.5 ppb on Aug 18	Percent Operational Time: 100.0
Minimum Diurnal Average: 1.3 ppb at hour 14	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 1.1 Median = 2.7 Q <sub>3</sub> = 5.7 P <sub>90</sub> = 9.3 P <sub>99</sub> = 19.3	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	3	A	11	8	8	17	14	10	4	3	2	2	5	3	5	6	1	2	1	4	1	2	1	6	5.2	16.7	
2-Aug	A	13	5	5	10	11	5	5	3	5	6	3	2	1	1	0	0	1	0	0	1	2	7	A	4.0	13.0	
3-Aug	6	3	5	7	11	9	5	7	6	7	6	6	4	3	2	0	2	1	1	3	5	8	A	8	5.0	11.2	
4-Aug	10	7	5	4	2	2	1	0	1	2	2	1	0	0	0	0	0	1	0	1	10	A	15	16	3.6	16.4	
5-Aug	16	9	5	12	8	10	9	9	6	6	4	4	3	2	0	1	1	1	0	0	A	5	13	10	5.8	16.1	
6-Aug	5	8	6	8	11	11	9	7	7	6	5	1	0	0	0	0	0	0	0	A	4	6	7	3	4.5	11.0	
7-Aug	1	0	0	0	0	8	13	7	4	4	4	1	1	4	3	1	4	1	A	4	2	2	3	1	3.0	13.5	
8-Aug	0	0	1	4	6	12	22	23	8	11	2	0	0	3	0	0	0	A	8	16	10	9	1	0	5.9	22.6	
9-Aug	0	0	0	0	0	1	5	7	8	1	1	1	3	1	1	2	A	7	4	5	5	3	2	3	2.6	7.7	
10-Aug	2	5	3	2	4	4	5	3	1	4	2	2	1	1	0	A	4	3	3	5	5	3	3	2	2.9	5.3	
11-Aug	4	2	1	1	3	4	4	2	2	2	4	2	1	2	4	9	4	1	1	2	5	4	8	7	3.3	8.8	
12-Aug	9	6	A	6	5	4	C	C	C	C	C	C	C	4	2	4	1	1	1	2	7	6	3	13	--	12.9	
13-Aug	19	9	A	11	9	11	9	6	7	2	2	2	2	1	1	0	0	0	0	2	3	7	19	9	5.8	19.5	
14-Aug	12	A	14	15	12	17	12	9	1	0	0	0	0	0	0	0	0	0	0	1	2	7	4	5	4.9	17.4	
15-Aug	A	16	13	6	9	12	12	15	9	2	1	0	0	1	0	0	1	1	4	8	9	12	3	A	6.1	15.8	
16-Aug	8	7	2	1	3	6	6	9	2	1	0	0	0	0	1	2	0	0	0	3	7	1	A	5	2.7	8.9	
17-Aug	4	9	10	5	8	9	6	4	3	0	0	0	0	0	0	0	0	0	0	0	0	A	8	2	3.0	10.1	
18-Aug	2	3	1	2	0	1	3	1	1	0	1	0	0	0	0	0	1	0	3	2	A	7	3	1	1.5	7.0	
19-Aug	0	0	0	0	0	4	5	5	1	2	3	2	2	1	2	3	4	1	5	A	8	4	3	1	2.4	7.8	
20-Aug	1	2	1	4	3	4	5	2	1	0	0	0	0	0	2	0	0	2	A	5	3	2	1	1	1.6	4.6	
21-Aug	0	0	0	2	3	5	5	3	1	3	2	1	2	1	1	3	1	A	8	5	3	4	3	3	2.6	8.0	
22-Aug	2	2	0	0	4	3	3	2	1	2	2	1	1	1	1	2	A	4	7	8	14	20	11	7	4.3	19.8	
23-Aug	9	10	7	11	9	8	9	5	3	2	1	1	0	1	1	A	4	2	3	13	11	14	18	15	6.8	18.0	
24-Aug	10	9	14	6	5	13	10	6	6	2	1	0	1	1	A	4	5	20	21	12	9	6	12	5	7.7	20.5	
25-Aug	12	5	5	2	6	7	9	11	6	4	4	4	3	A	4	5	8	5	2	3	6	3	2	5	5.2	11.5	
26-Aug	2	2	0	1	3	3	4	5	3	1	0	2	A	3	3	2	3	2	2	4	4	4	5	2	2.7	5.2	
27-Aug	3	2	A	4	4	7	9	7	8	3	1	1	2	2	3	2	3	4	2	4	7	8	7	3	4.2	9.3	
28-Aug	2	3	A	4	3	5	9	5	2	1	4	3	7	3	3	2	5	1	3	2	1	4	2	8	3.5	9.1	
29-Aug	8	A	6	3	4	6	12	9	6	1	1	1	3	1	1	1	2	2	4	9	6	5	3	3	4.2	12.0	
30-Aug	A	3	3	3	2	4	4	2	1	1	1	1	1	1	0	1	1	1	1	0	1	2	1	2	A	1.5	4.3
31-Aug	3	3	2	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	1	2	A	4	1.6	3.5	
	5.5	4.9	4.4	4.5	5.0	7.2	7.5	6.3	3.8	2.6	2.0	1.5	1.6	1.3	1.5	1.7	2.0	2.3	2.9	4.3	5.2	5.5	6.1	5.2	Diurnal Average		
	19.5	15.8	14.2	15.0	12.5	17.4	22.3	22.6	8.6	10.8	6.5	6.1	6.6	3.8	4.8	8.8	7.8	20.1	20.5	15.7	14.1	19.8	19.4	16.4	Diurnal Maximum		

C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb    24-hr 106 ppb



# Hourly Averages for NO<sub>2</sub> at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Crescent Heights - Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 50.9 ppb on Aug 8 08:00	Maximum Daily Average: 17.6 ppb on Aug 8	Hours in Service: 744
Minimum Value: 0 ppb on Aug 9 01:00	Minimum Daily Average: 3.1 ppb on Aug 31	Hours of Data: 703
Maximum Diurnal Average: 18.1 ppb at hour 6	Minimum Diurnal Average: 6.3 ppb at hour 12	Hours of Missing Data: 41
Monthly Average: 10.70 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 3.5 Median = 7.9 Q <sub>3</sub> = 16.2 P <sub>90</sub> = 24.4 P <sub>99</sub> = 40.1	Hours of Calibration: 41
		Percent Operational Time: 100.0

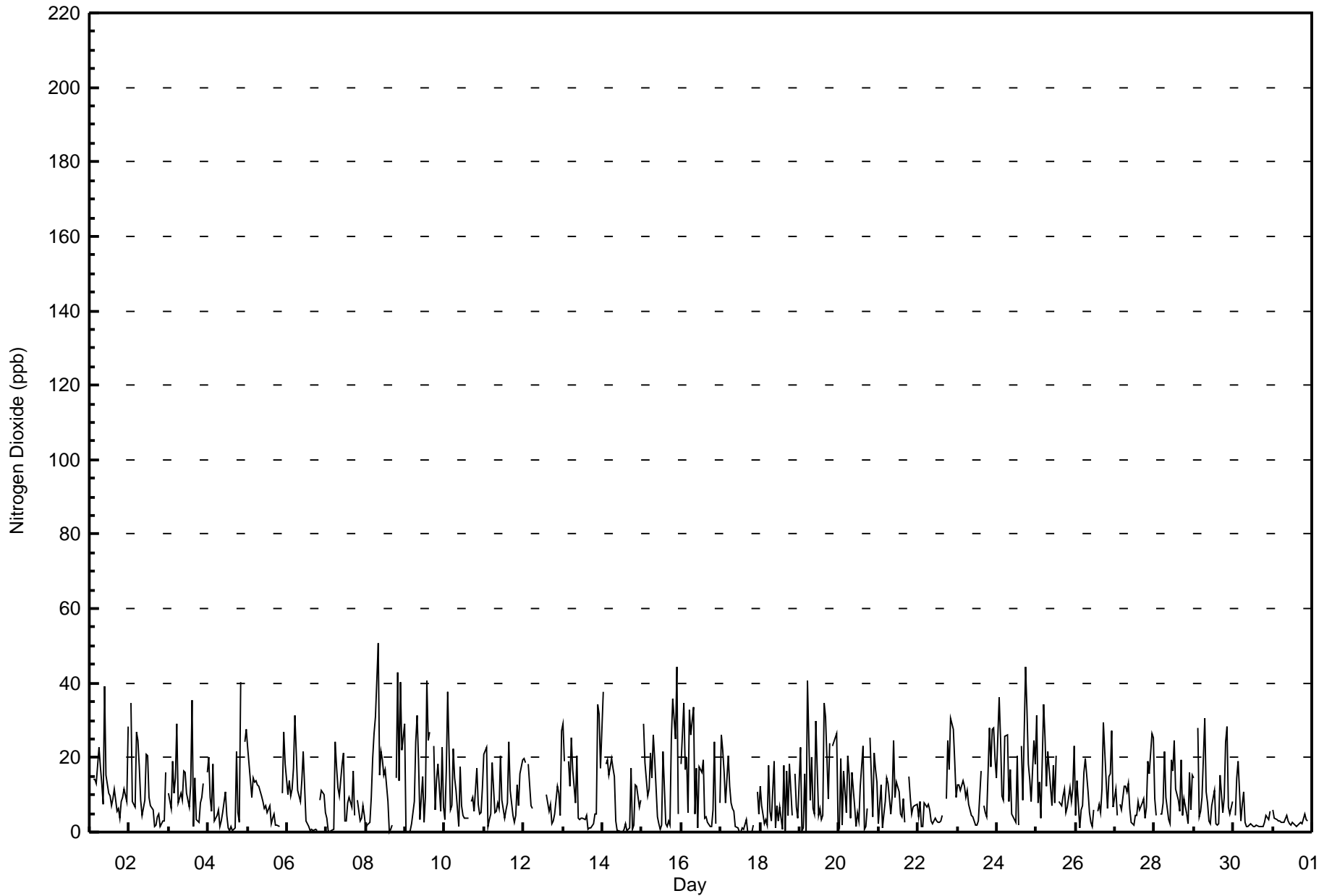
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	9	A	14	14	13	23	18	13	7	39	15	10	10	7	9	12	5	6	4	8	9	11	8	28	12.8	39.1	
2-Aug	A	35	8	7	27	25	18	9	5	8	21	21	9	7	6	2	2	4	5	1	3	3	16	A	10.9	34.7	
3-Aug	10	7	19	10	15	29	8	11	8	16	16	10	7	13	36	2	14	3	3	8	9	13	A	16	12.3	35.6	
4-Aug	20	9	6	18	3	4	6	1	3	5	11	4	1	1	1	0	1	22	5	3	40	A	24	27	9.4	40.3	
5-Aug	23	18	9	14	13	14	13	12	10	8	6	7	5	7	2	4	5	2	2	2	A	11	27	18	10.1	26.7	
6-Aug	10	14	10	12	17	31	11	10	8	14	22	3	2	1	1	1	0	1	0	A	9	11	10	5	8.8	31.4	
7-Aug	4	0	0	0	1	24	17	12	10	18	21	3	3	8	9	7	17	4	A	9	3	4	7	4	8.1	24.1	
8-Aug	1	2	2	9	20	26	31	51	15	22	19	15	17	8	0	1	2	A	14	43	14	40	22	29	17.6	50.9	
9-Aug	0	0	0	0	2	8	24	31	19	3	15	3	10	41	25	27	A	23	6	14	18	5	23	7	13.3	40.5	
10-Aug	4	16	38	6	7	22	15	11	1	18	7	4	4	4	4	A	8	9	6	17	8	5	5	12	10.0	37.5	
11-Aug	21	23	1	3	5	19	5	6	8	6	21	9	4	6	8	24	11	5	3	5	13	7	16	19	10.3	24.3	
12-Aug	20	19	A	18	7	6	C	C	C	C	C	C	C	C	10	6	7	2	3	5	12	10	4	27	--	27.1	
13-Aug	29	19	A	19	12	25	17	8	21	4	3	4	4	3	5	1	1	1	2	5	5	34	32	17	11.8	34.3	
14-Aug	38	A	18	19	15	20	17	15	3	0	0	0	0	1	2	0	1	17	1	2	13	12	7	9	9.2	37.7	
15-Aug	A	29	19	10	12	21	14	26	20	4	2	1	2	22	2	2	3	2	25	36	25	44	5	A	14.8	44.4	
16-Aug	18	35	17	20	5	33	26	34	5	17	1	18	16	19	4	4	3	1	2	6	24	2	A	8	13.8	34.7	
17-Aug	26	22	16	8	21	12	8	6	6	1	1	0	0	1	1	4	0	0	0	0	2	A	11	5	6.6	26.2	
18-Aug	12	7	2	4	2	18	6	3	19	1	7	3	7	1	18	0	16	5	18	4	A	16	7	4	7.8	19.0	
19-Aug	23	0	1	16	0	41	9	20	6	5	30	4	6	3	4	35	31	9	24	A	23	24	27	3	14.9	40.7	
20-Aug	2	20	2	16	5	20	15	4	16	7	2	5	3	12	23	1	1	6	A	25	4	21	17	13	10.5	25.5	
21-Aug	2	13	1	5	8	15	13	5	10	25	9	13	11	5	4	9	3	A	15	9	5	7	7	8	8.7	24.5	
22-Aug	4	8	2	2	8	7	7	6	3	2	4	3	3	2	3	4	A	9	25	17	31	28	19	9	8.9	30.6	
23-Aug	13	13	11	14	12	9	11	8	4	4	3	2	2	3	16	A	7	5	4	28	18	27	28	20	11.4	27.9	
24-Aug	15	36	25	10	9	26	26	8	17	5	4	3	21	2	A	23	9	44	33	18	14	8	24	18	17.2	44.5	
25-Aug	31	8	13	4	34	25	12	22	17	7	18	8	20	A	8	7	10	11	5	7	12	8	12	23	14.0	34.3	
26-Aug	4	14	1	6	7	16	20	11	5	2	2	6	A	6	8	5	12	29	14	6	15	16	27	7	10.3	29.3	
27-Aug	11	4	A	8	6	12	12	11	13	6	3	2	4	4	8	6	8	9	4	7	19	16	27	25	9.8	26.6	
28-Aug	9	4	A	5	5	8	22	9	3	2	20	16	24	12	9	6	20	4	9	5	2	16	6	15	10.0	24.4	
29-Aug	15	A	28	4	6	9	31	11	8	3	2	7	11	2	2	2	15	5	9	24	29	7	5	8	10.6	30.6	
30-Aug	A	4	15	19	3	8	11	3	2	2	2	2	2	2	2	1	1	1	1	2	3	4	3	6	A	4.3	18.9
31-Aug	6	4	3	3	3	3	3	3	4	3	2	2	3	2	2	2	2	3	2	5	3	3	A	6	3.1	5.9	

13.5	13.7	10.4	9.8	9.8	18.1	14.8	12.6	9.2	8.6	9.7	6.3	7.2	7.0	7.7	6.7	7.4	8.4	8.4	11.1	13.3	14.3	15.2	14.0	Diurnal Average	
37.7	36.0	37.5	20.2	34.3	40.7	30.9	50.9	20.7	39.1	29.8	20.6	24.4	40.5	35.6	34.6	30.9	44.5	32.9	43.0	40.3	44.4	31.8	28.9	Diurnal Maximum	

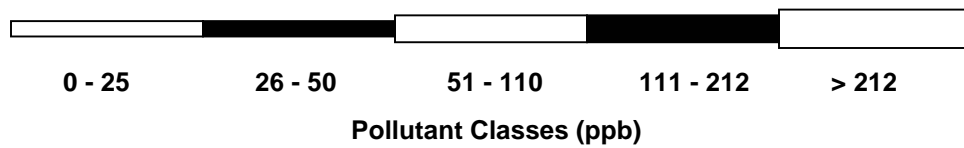
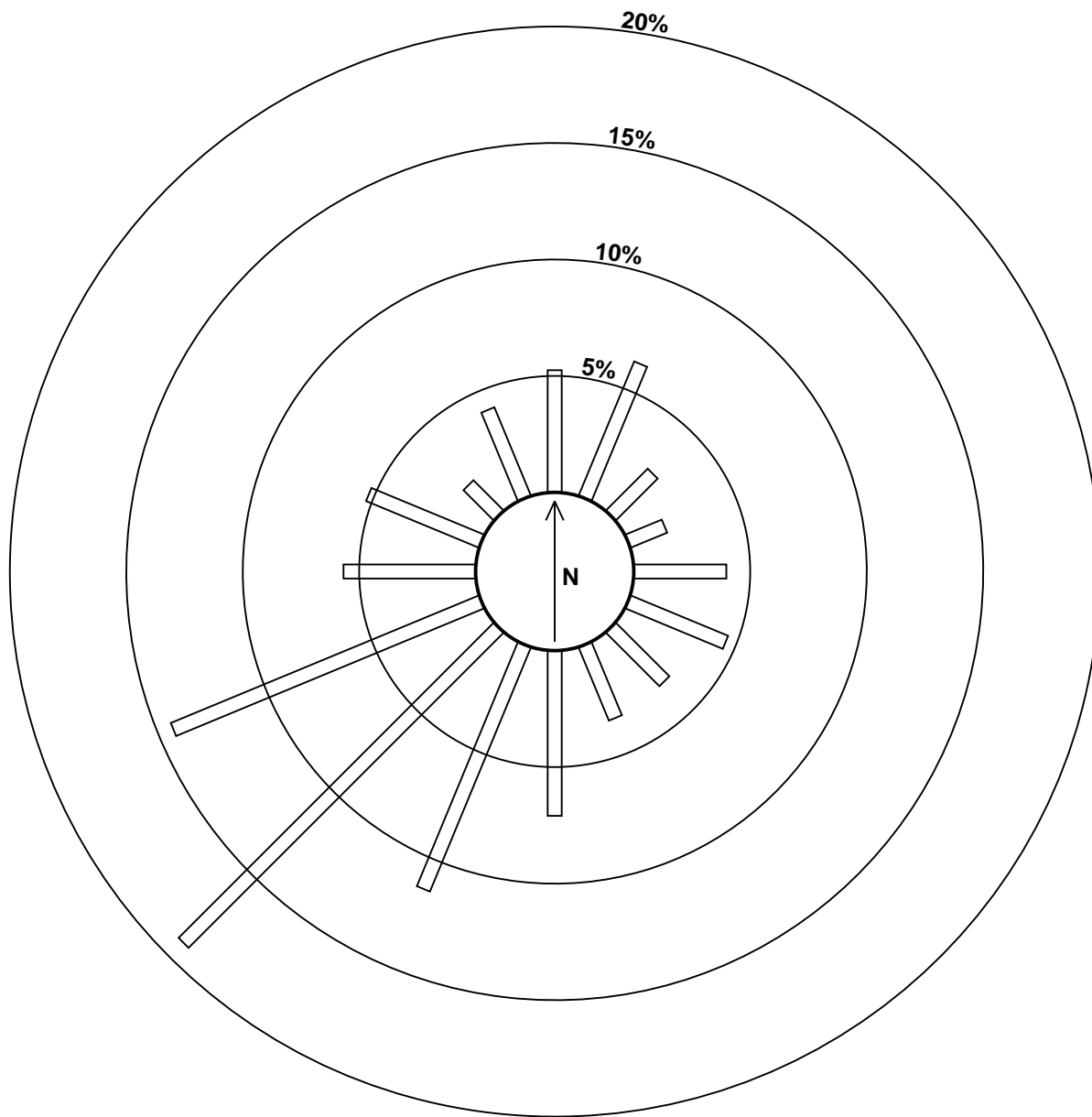
C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for NO<sub>2</sub> at Crescent Heights

## August 2008



# Pollutant Rose for NO<sub>2</sub> at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Nitrogen Oxide (NO) - ppb**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 23.4 ppb on Aug 15 08:00	Maximum Daily Average: 3.3 ppb on Aug 15	Hours in Service: 744
Minimum Value: 0 ppb on Aug 4 14:00	Minimum Daily Average: 0.5 ppb on Aug 31	Hours of Data: 703
Maximum Diurnal Average: 4.7 ppb at hour 8	Minimum Diurnal Average: 0.6 ppb at hour 20	Hours of Missing Data: 41
Monthly Average: 1.61 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.3 Median = 0.8 Q <sub>3</sub> = 1.8 P <sub>90</sub> = 4.0 P <sub>99</sub> = 12.2	Hours of Calibration: 41
		Percent Operational Time: 100.0

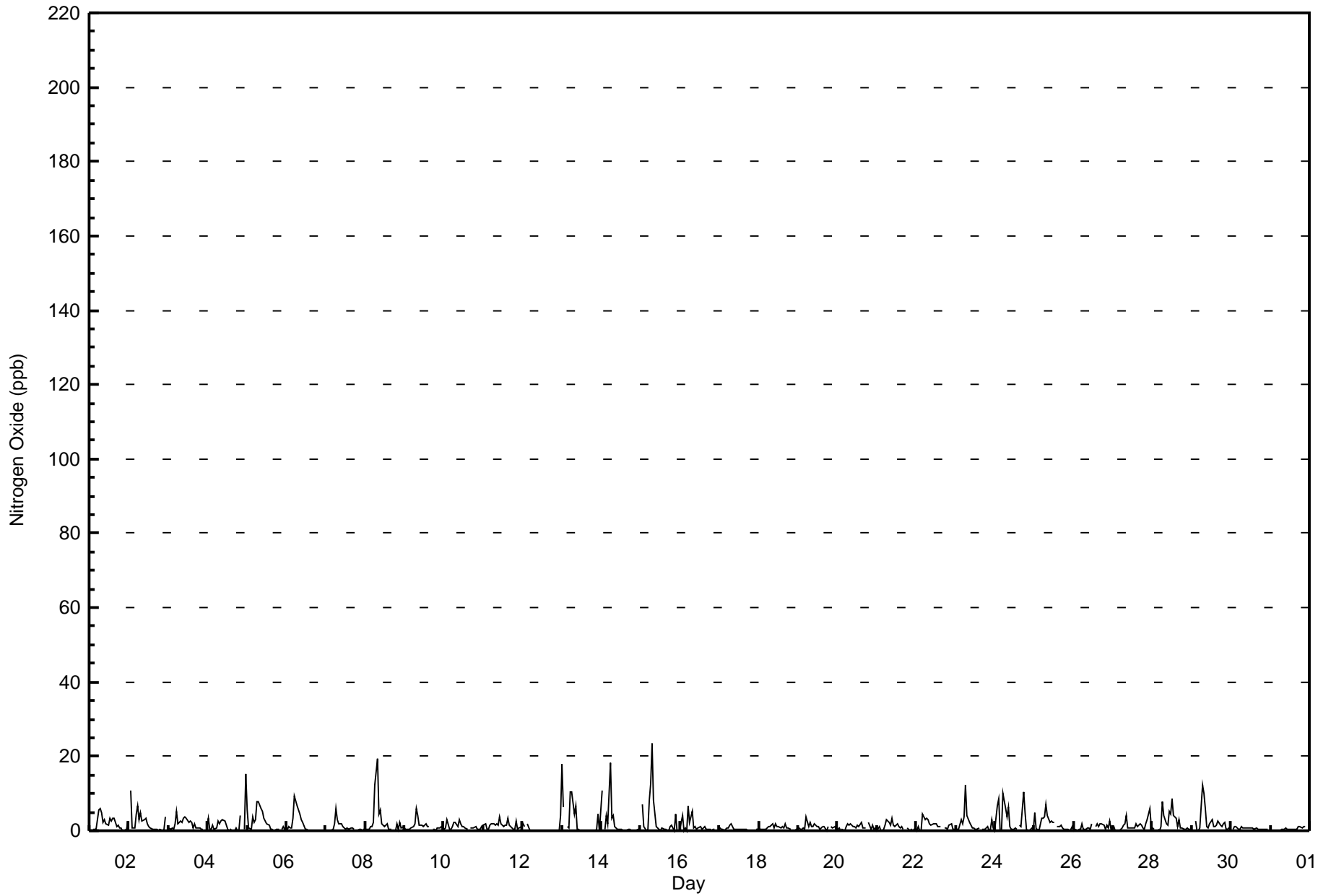
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	A	0	0	0	6	6	5	2	3	2	2	3	3	3	4	1	2	1	1	0	0	0	2		
2-Aug	A	11	1	1	4	7	3	5	3	3	3	2	1	1	1	0	0	0	0	0	0	0	4	A		
3-Aug	1	0	1	0	2	5	2	3	2	3	4	3	2	3	2	1	2	1	1	1	0	1	A	1		
4-Aug	3	0	0	2	1	1	3	2	3	3	3	1	0	0	0	0	0	1	0	0	4	A	0	15		
5-Aug	6	1	0	4	2	3	8	8	6	5	3	3	2	1	0	0	0	0	0	0	A	0	1	0		
6-Aug	0	1	1	1	3	9	7	5	4	3	2	0	0	0	0	0	0	0	0	A	0	0	0	0		
7-Aug	0	0	0	0	0	2	6	3	2	2	1	1	1	1	1	1	1	1	A	0	0	0	0	0		
8-Aug	0	0	0	1	1	2	12	19	5	6	2	1	1	2	0	0	0	A	0	2	0	2	1	1		
9-Aug	0	0	0	1	1	1	2	6	4	2	1	1	2	2	1	1	A	0	0	0	1	1	1	1		
10-Aug	1	1	3	0	1	1	2	2	1	3	2	1	1	1	1	A	1	1	1	1	0	0	0	1		
11-Aug	2	2	0	0	1	2	2	2	2	2	4	2	1	2	2	3	1	1	0	1	3	0	1	1		
12-Aug	2	1	A	2	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	4	4		
13-Aug	18	6	A	1	1	10	10	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0		
14-Aug	11	A	0	4	2	18	3	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
15-Aug	A	7	1	0	0	8	12	23	8	1	1	0	0	1	0	0	0	0	1	1	0	4	0	A		
16-Aug	0	4	0	1	0	7	2	5	1	1	0	1	1	1	1	0	0	0	0	0	0	0	A	0		
17-Aug	1	1	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0		
18-Aug	1	1	0	0	0	1	1	1	2	1	2	1	1	1	1	1	2	1	1	0	A	0	0	0		
19-Aug	1	0	0	1	0	4	1	2	1	1	2	1	1	1	1	1	1	0	1	A	1	1	1	0		
20-Aug	0	1	0	0	0	1	2	2	2	1	1	1	1	1	2	1	1	1	1	A	2	0	1	1		
21-Aug	0	1	0	0	0	2	3	2	1	3	1	1	2	1	1	1	0	A	1	0	0	0	0	1		
22-Aug	0	1	0	0	5	3	3	3	2	2	2	2	1	1	1	1	A	1	1	0	1	2	0	0		
23-Aug	1	0	0	3	2	4	12	4	2	2	1	1	1	0	1	A	0	0	0	1	0	0	3	1		
24-Aug	0	7	9	0	0	10	6	4	6	1	0	0	1	0	A	1	1	10	5	0	0	0	1	1		
25-Aug	5	0	0	0	3	3	4	7	4	2	3	2	2	A	1	1	1	1	0	0	0	0	0	1		
26-Aug	0	0	0	0	0	2	1	0	1	1	1	2	A	1	2	1	2	2	1	0	1	1	2	1		
27-Aug	1	0	A	0	0	1	2	2	4	1	1	1	1	1	2	1	2	1	1	0	2	3	6	1		
28-Aug	1	0	A	0	0	1	8	4	2	1	5	5	9	4	3	1	3	1	1	0	0	1	0	0		
29-Aug	0	A	2	0	0	1	12	10	6	1	1	2	3	1	1	1	3	1	1	2	2	0	0	1		
30-Aug	A	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A		
31-Aug	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	A	1		

1.9	1.7	0.9	0.8	1.0	3.7	4.6	4.7	2.9	1.9	1.7	1.3	1.4	1.0	1.0	0.9	0.8	0.9	0.6	0.6	0.7	0.8	1.0	1.3	Diurnal Average
17.9	11.0	8.5	4.2	4.5	18.2	12.5	23.4	8.4	5.6	5.1	4.6	8.8	4.2	3.4	3.5	2.8	10.3	5.0	2.2	4.2	4.4	6.0	15.1	Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

# Hourly Averages for NO at Crescent Heights

## August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Crescent Heights - Nitrogen Oxide (NO) - ppb**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 115.3 ppb on Aug 6 06:00	Maximum Daily Average: 20.1 ppb on Aug 15	Hours in Service: 744
Minimum Value: 0 ppb on Aug 12 16:00	Minimum Daily Average: 1.7 ppb on Aug 31	Hours of Data: 703
Maximum Diurnal Average: 30.6 ppb at hour 6	Minimum Diurnal Average: 5.1 ppb at hour 19	Hours of Missing Data: 41
Monthly Average: 10.77 ppb	Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.5 Median = 2.8 Q <sub>3</sub> = 12.9 P <sub>90</sub> = 31.2 P <sub>99</sub> = 85.3	Hours of Calibration: 41
		Percent Operational Time: 100.0

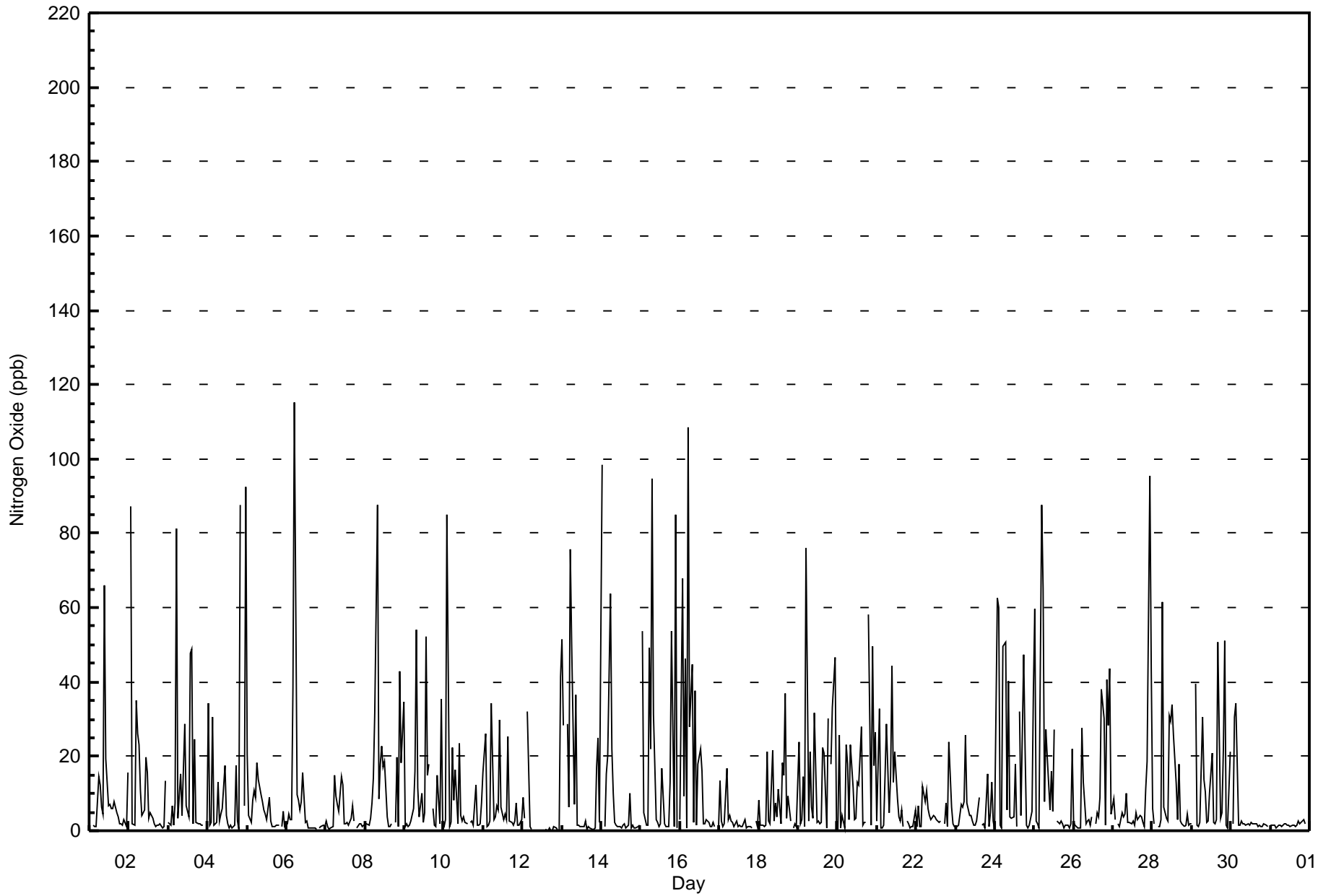
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	A	2	1	1	15	12	6	5	66	20	7	7	6	6	8	5	4	2	2	1	3	1	16	8.5	65.8
2-Aug	A	87	2	2	35	26	23	11	4	5	20	16	3	5	3	2	1	1	2	2	1	1	13	A	12.0	87.4
3-Aug	2	2	7	2	7	81	3	15	4	16	29	7	4	48	49	2	25	2	2	2	1	2	A	2	13.6	81.3
4-Aug	34	1	2	31	2	2	13	3	5	6	18	4	2	1	1	1	1	17	3	1	88	A	7	92	14.5	92.3
5-Aug	20	4	2	8	11	9	18	14	10	8	6	5	3	9	2	1	1	1	1	1	A	1	5	1	6.3	20.5
6-Aug	2	4	3	3	38	115	10	8	6	8	16	2	3	1	1	1	1	1	0	A	1	1	2	1	9.9	115.3
7-Aug	3	1	1	1	1	15	9	7	5	15	12	2	2	2	3	7	2	A	1	2	2	2	1	2	4.2	15.0
8-Aug	1	2	1	3	7	14	32	88	9	18	23	17	19	4	1	1	2	A	2	20	1	43	18	35	15.7	87.5
9-Aug	1	2	1	2	3	6	16	54	12	4	10	2	5	52	15	18	A	6	1	1	15	2	36	2	11.5	54.0
10-Aug	1	3	85	1	2	22	8	16	2	24	4	2	4	2	2	A	2	3	1	12	2	2	2	8	9.2	85.0
11-Aug	16	26	1	1	3	34	3	4	7	6	30	6	3	4	3	25	3	2	1	3	7	1	2	3	8.1	34.4
12-Aug	9	3	A	32	1	0	C	C	C	C	C	C	C	0	0	1	0	0	1	1	0	0	41	--	41.2	
13-Aug	52	29	A	29	6	76	50	7	37	2	1	1	1	3	0	1	1	1	0	0	1	17	25	2	14.8	75.6
14-Aug	99	A	1	15	20	64	22	10	2	2	1	1	1	2	1	2	10	1	2	1	1	1	1	1	11.3	98.5
15-Aug	A	54	5	1	2	49	22	95	31	3	2	1	2	17	2	1	1	1	13	54	1	85	1	A	20.1	94.7
16-Aug	3	68	9	46	1	109	28	45	2	38	1	18	22	16	2	2	3	2	1	1	2	1	A	1	18.3	108.6
17-Aug	14	3	1	2	17	3	4	3	2	1	3	1	1	1	1	3	1	1	1	1	1	A	3	1	3.0	16.8
18-Aug	8	2	1	1	2	21	3	2	21	2	7	4	11	2	18	15	37	3	9	3	A	1	2	1	7.7	36.8
19-Aug	24	2	3	14	1	76	2	21	6	3	32	2	3	2	2	22	21	1	30	A	18	33	47	1	16.0	76.0
20-Aug	1	26	1	4	1	23	18	3	23	12	3	3	13	12	28	2	2	2	A	58	1	50	17	26	14.4	58.3
21-Aug	3	33	1	1	1	15	29	5	14	45	13	21	9	4	3	6	1	A	3	2	1	1	1	6	9.3	44.5
22-Aug	1	7	1	1	12	8	11	6	4	3	4	4	3	2	2	2	A	2	8	1	24	7	2	1	5.0	24.0
23-Aug	1	1	2	7	6	8	26	7	4	4	3	2	2	3	9	A	2	2	1	15	1	5	13	3	5.4	25.7
24-Aug	0	63	60	1	1	50	51	6	40	4	3	4	18	1	A	32	4	48	22	1	1	1	5	37	19.7	62.7
25-Aug	60	3	2	1	88	65	8	27	20	6	16	5	27	A	3	2	2	2	1	1	2	1	2	22	15.8	87.7
26-Aug	2	1	1	1	1	28	13	2	3	3	2	4	A	2	5	4	9	38	30	1	41	28	44	4	11.5	43.6
27-Aug	9	3	A	2	1	5	4	4	10	2	2	2	2	2	5	3	4	4	2	1	11	19	96	43	10.3	95.6
28-Aug	6	2	A	1	1	3	62	6	3	3	31	30	34	26	13	3	18	3	2	1	1	4	2	2	11.1	61.7
29-Aug	2	A	39	2	1	2	31	14	10	2	3	10	21	2	2	3	51	3	5	22	51	2	1	21	13.0	51.0
30-Aug	A	2	30	34	2	2	3	2	2	1	2	1	2	2	2	2	1	1	1	1	2	2	1	A	4.4	34.4
31-Aug	1	1	2	1	1	2	1	1	2	2	1	1	1	1	2	1	2	3	2	3	3	2	A	3	1.7	2.9

13.5	15.5	9.9	8.1	8.9	30.6	17.8	16.4	10.2	10.3	10.6	6.2	7.8	8.0	6.3	5.7	7.2	5.7	5.1	7.4	9.7	10.9	12.4	13.6	Diurnal Average	
98.5	87.4	85.0	46.3	87.7	115.3	61.7	94.7	40.4	65.8	31.5	29.6	33.9	52.2	48.9	32.2	50.7	47.5	30.3	58.3	87.7	85.2	95.6	92.3	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for NO at Crescent Heights

## August 2008





**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Oxides of Nitrogen (NO<sub>x</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 40.9 ppb on Aug 8 08:00	Maximum Daily Average: 10.0 ppb on Aug 24	Hours in Service: 744
Minimum Value: 0 ppb on Aug 4 13:00	Minimum Daily Average: 1.6 ppb on Aug 31	Hours of Data: 703
Maximum Diurnal Average: 11.7 ppb at hour 7	Minimum Diurnal Average: 2.0 ppb at hour 14	Hours of Missing Data: 41
Monthly Average: 5.15 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 1.3 Median = 3.3 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 12.4 P <sub>99</sub> = 29.5	Hours of Calibration: 41
		Percent Operational Time: 100.0

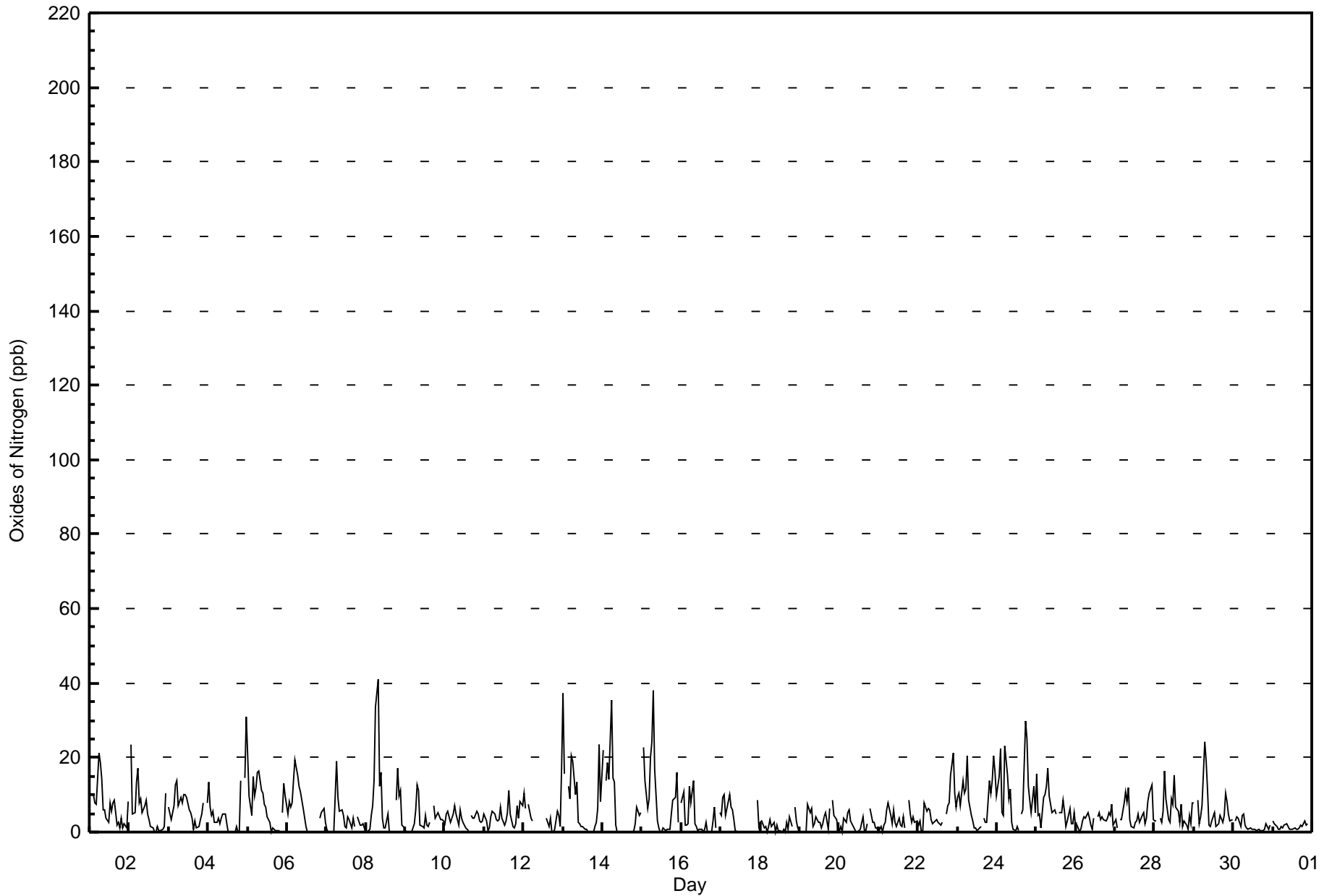
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	3	A	10	8	7	21	19	14	6	6	4	3	8	6	8	9	2	3	1	4	1	2	1	8	6.6	21.4
2-Aug	A	23	5	5	14	17	8	9	5	7	8	5	3	2	1	0	0	1	0	0	1	1	10	A	5.8	23.4
3-Aug	7	3	5	7	13	14	7	9	8	10	10	9	6	5	4	1	3	1	1	3	5	8	A	8	6.4	13.6
4-Aug	13	7	5	6	2	3	4	2	4	5	5	2	0	0	0	0	0	2	0	0	14	A	14	31	5.1	30.9
5-Aug	21	10	5	15	10	12	16	17	11	10	7	7	4	3	0	1	1	0	0	0	A	5	13	10	7.8	21.0
6-Aug	5	8	7	8	14	19	15	12	11	8	6	1	0	0	0	0	0	0	0	A	4	5	7	2	5.8	19.4
7-Aug	1	0	0	0	0	9	19	9	6	6	4	2	1	4	3	1	4	1	A	4	2	2	2	1	3.6	19.0
8-Aug	0	0	1	4	7	14	34	41	12	16	4	1	1	5	0	0	0	A	8	17	10	11	2	1	8.2	40.9
9-Aug	0	0	0	0	0	2	6	13	11	2	2	1	5	2	1	3	A	7	4	4	5	3	3	3	3.4	12.5
10-Aug	2	5	5	3	4	5	7	5	2	6	4	3	2	1	0	A	5	4	4	6	5	3	3	3	3.6	7.1
11-Aug	5	3	1	1	4	5	5	3	3	3	7	4	2	3	5	11	5	2	1	2	7	4	8	7	4.2	11.3
12-Aug	10	6	A	8	4	3	C	C	C	C	C	C	C	C	4	1	4	0	0	1	5	5	1	17	--	17.0
13-Aug	37	15	A	12	9	21	19	10	13	2	2	1	1	1	1	0	0	0	0	2	2	7	23	8	8.2	37.3
14-Aug	22	A	14	19	14	35	15	13	2	0	0	0	0	0	0	0	0	0	0	0	2	7	4	5	6.7	35.3
15-Aug	A	23	14	6	9	20	24	38	17	3	1	0	0	1	0	1	1	1	5	9	9	16	3	A	9.1	37.9
16-Aug	8	11	2	2	2	12	8	14	2	2	0	1	1	0	1	3	0	0	0	3	7	1	A	5	3.7	13.8
17-Aug	5	9	10	4	8	10	7	6	3	0	0	0	0	0	0	0	0	0	0	0	0	A	8	2	3.2	10.0
18-Aug	2	3	1	1	0	2	3	1	3	0	2	0	0	0	1	0	3	1	4	2	A	7	3	1	1.7	6.8
19-Aug	0	0	0	0	0	7	5	6	2	2	4	3	3	1	2	4	5	1	6	A	9	4	3	1	3.0	8.5
20-Aug	0	2	0	4	3	5	6	3	2	1	0	0	0	1	4	1	0	2	A	6	3	3	1	1	2.1	6.5
21-Aug	0	1	0	2	3	6	8	4	2	6	3	1	4	2	1	4	1	A	8	5	3	4	3	3	3.3	8.5
22-Aug	2	3	0	0	8	6	6	6	3	2	3	3	2	2	2	3	A	5	7	8	15	21	10	7	5.4	21.1
23-Aug	9	10	7	14	10	12	21	9	4	3	1	1	0	1	2	A	4	2	2	14	11	14	21	16	8.1	20.6
24-Aug	10	15	22	5	5	23	15	9	12	3	1	0	1	0	A	5	6	30	25	12	9	5	12	5	10.0	30.0
25-Aug	16	5	5	1	9	10	12	17	10	5	6	6	5	A	5	5	9	6	1	3	6	2	2	5	6.6	17.1
26-Aug	1	2	0	1	3	4	4	5	4	2	1	4	A	4	5	3	4	3	3	4	5	4	7	2	3.3	7.4
27-Aug	3	1	A	3	3	8	11	8	12	3	1	1	2	3	5	3	5	5	2	4	8	10	13	3	5.2	12.8
28-Aug	3	3	A	4	3	6	16	9	3	2	9	8	15	7	6	3	7	2	3	2	1	4	2	8	5.4	16.4
29-Aug	8	A	8	2	4	7	24	19	11	2	2	3	5	1	2	2	5	2	5	11	8	5	3	3	6.2	24.1
30-Aug	A	3	4	4	2	4	5	2	1	1	1	1	1	1	0	1	0	0	0	1	2	1	2	A	1.7	4.7
31-Aug	3	2	1	1	1	2	1	2	2	2	1	1	1	1	1	1	1	2	2	3	2	2	A	4	1.6	4.3

7.0	6.2	4.9	4.9	5.6	10.5	11.7	10.5	6.3	4.1	3.3	2.4	2.6	2.0	2.1	2.2	2.5	2.9	3.3	4.4	5.5	5.8	6.7	6.1	Diurnal Average	
37.3	23.4	22.3	18.7	14.1	35.3	33.7	40.9	16.8	15.9	10.0	9.2	15.1	6.6	7.8	11.3	8.7	30.0	24.9	17.3	15.2	21.1	23.4	30.9	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Averages for NO<sub>x</sub> at Crescent Heights

## August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Crescent Heights - Oxides of Nitrogen (NO<sub>x</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

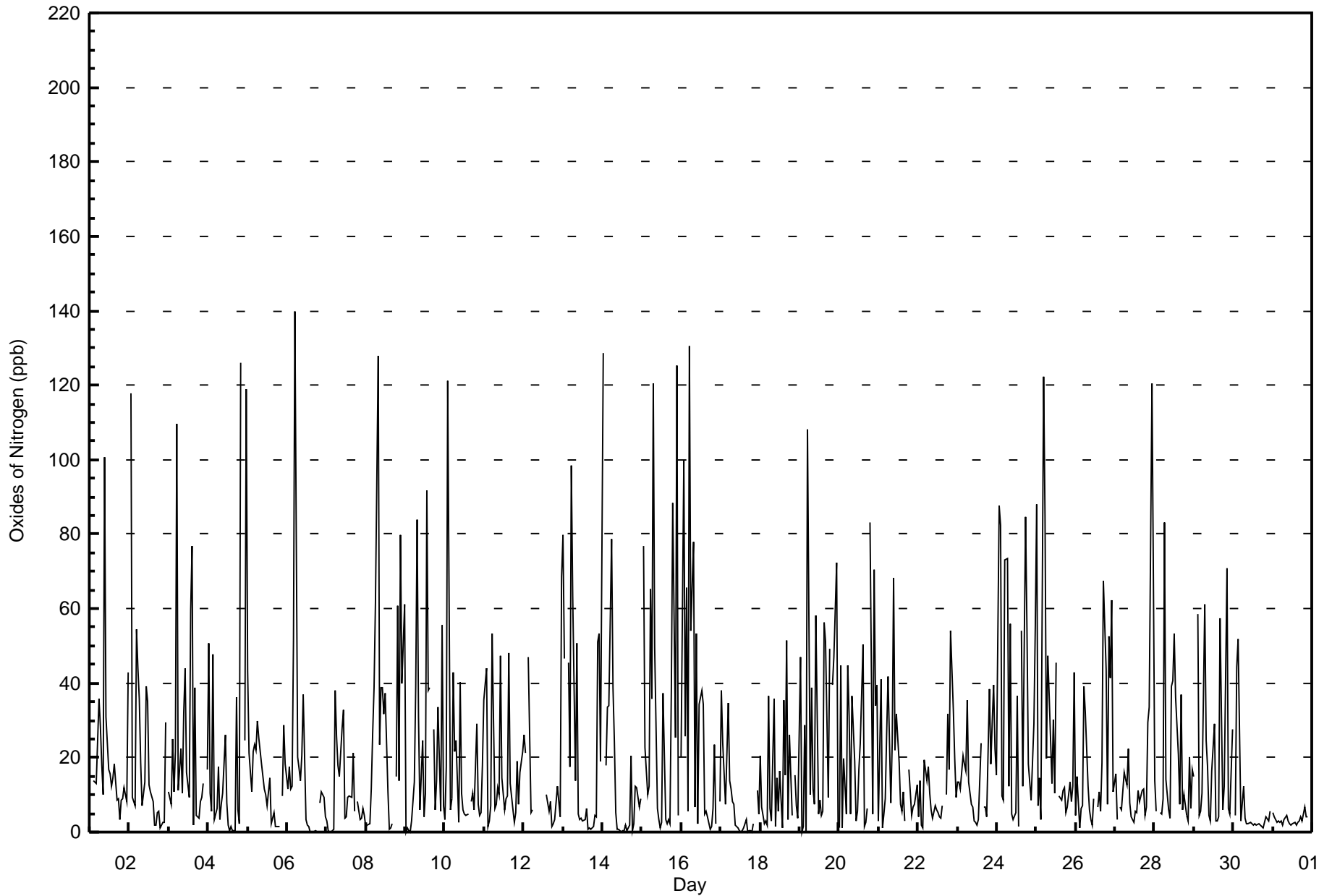
Maximum Value: 139.8 ppb on Aug 6 06:00	Maximum Daily Average: 34.8 ppb on Aug 24	Hours in Service: 744
Minimum Value: 0 ppb on Aug 9 01:00	Minimum Daily Average: 3.4 ppb on Aug 31	Hours of Data: 703
Maximum Diurnal Average: 46.0 ppb at hour 6	Minimum Diurnal Average: 11.2 ppb at hour 12	Hours of Missing Data: 41
Monthly Average: 19.94 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 4.0 Median = 10.1 Q <sub>3</sub> = 27.4 P <sub>90</sub> = 51.3 P <sub>99</sub> = 120.7	Hours of Calibration: 41
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	11	A	14	13	13	36	28	18	10	101	31	17	16	12	14	18	9	9	3	9	9	12	8	43	19.7	100.8
2-Aug	A	118	9	7	54	44	36	19	7	13	39	35	13	11	8	2	2	5	6	1	3	3	29	A	21.1	118.0
3-Aug	11	7	25	11	21	110	11	22	10	32	44	16	9	60	77	2	39	4	4	8	9	13	A	17	24.5	109.6
4-Aug	51	10	6	48	3	6	18	4	7	10	26	8	2	0	2	0	0	36	6	2	126	A	25	119	22.4	125.9
5-Aug	43	21	11	21	24	22	30	25	18	15	12	10	7	14	2	4	5	2	2	2	A	10	29	18	15.1	43.1
6-Aug	11	18	12	12	52	140	20	17	14	21	37	3	2	1	0	0	0	1	0	A	8	11	9	4	17.1	139.8
7-Aug	3	0	0	0	1	38	26	18	15	28	33	4	4	9	10	9	21	6	A	8	3	4	6	5	10.9	38.0
8-Aug	1	2	2	12	26	39	61	128	23	39	39	32	37	11	1	1	2	A	15	61	14	80	40	61	31.6	127.9
9-Aug	0	1	0	0	3	14	39	84	31	6	24	4	10	92	38	39	A	27	6	14	34	6	56	7	23.2	91.7
10-Aug	3	17	121	6	9	43	22	25	3	40	11	6	5	5	5	A	8	11	6	29	8	5	5	18	17.8	121.3
11-Aug	35	44	2	3	7	53	6	8	12	10	47	15	6	9	10	48	13	6	2	5	19	7	16	22	16.9	53.5
12-Aug	26	21	A	47	5	6	C	C	C	C	C	C	C	C	10	5	8	1	2	3	12	8	4	69	--	68.5
13-Aug	80	47	A	46	18	98	63	14	51	5	3	4	3	3	6	1	1	1	1	4	4	51	53	19	25.0	98.4
14-Aug	129	A	18	34	34	79	39	24	5	1	1	0	0	0	2	0	2	20	0	2	12	12	7	9	18.7	128.5
15-Aug	A	77	23	10	12	65	36	121	49	6	4	1	3	37	3	2	3	2	38	89	25	125	4	A	33.5	125.2
16-Aug	20	100	26	65	6	131	54	78	7	53	2	34	38	34	5	6	4	1	2	6	23	2	A	8	30.6	130.7
17-Aug	38	24	16	8	35	14	12	8	7	2	1	0	0	1	1	3	0	0	0	0	2	A	11	5	8.2	38.1
18-Aug	20	7	2	3	2	37	6	3	36	2	14	6	17	1	35	15	51	3	26	4	A	15	7	4	13.8	51.4
19-Aug	47	0	2	29	0	108	10	39	11	7	58	5	8	5	6	56	51	9	49	A	39	47	73	2	28.8	108.0
20-Aug	1	45	1	20	5	45	31	5	36	19	3	6	17	24	50	2	3	6	A	83	5	70	34	40	23.9	83.1
21-Aug	3	41	1	5	9	27	42	8	24	68	22	32	19	8	6	11	3	A	17	11	5	7	7	13	16.7	68.1
22-Aug	4	14	2	1	19	14	18	11	6	4	7	6	5	4	4	7	A	10	32	17	54	33	20	9	13.0	54.0
23-Aug	13	13	11	21	18	16	36	14	7	7	3	3	2	3	24	A	7	7	4	38	18	29	40	22	15.5	39.7
24-Aug	15	87	82	10	9	73	73	12	56	5	3	5	37	2	A	54	12	85	54	18	14	9	29	55	34.8	87.5
25-Aug	88	7	15	3	122	84	20	47	37	13	30	10	46	A	10	8	11	12	5	7	13	8	12	43	28.4	122.3
26-Aug	4	15	1	6	7	39	32	12	6	3	2	9	A	7	11	6	19	68	44	7	52	41	62	11	20.2	67.5
27-Aug	16	3	A	7	6	16	14	13	22	8	4	3	5	5	11	8	11	11	4	7	29	34	120	69	18.6	120.4
28-Aug	14	6	A	5	5	9	83	14	6	4	39	41	53	36	21	8	37	6	10	4	3	20	6	17	19.4	83.3
29-Aug	15	A	59	4	6	11	61	25	18	5	3	16	29	3	3	4	57	6	12	41	71	6	5	28	21.2	70.8
30-Aug	A	5	44	52	3	8	12	4	2	2	2	2	2	2	2	2	2	1	1	3	4	3	6	A	7.5	51.7
31-Aug	5	4	3	3	3	3	2	3	5	3	2	2	2	2	2	3	3	4	3	7	4	4	A	8	3.4	7.8
	25.3	26.9	18.8	16.5	17.3	46.0	31.4	27.4	18.1	17.7	18.2	11.2	13.7	13.8	12.6	11.2	13.3	12.4	12.2	16.9	21.5	23.3	25.9	26.5	Diurnal Average	
	128.5	118.0	121.3	65.5	122.3	139.8	83.3	127.9	56.0	100.8	58.0	40.8	53.1	91.7	76.9	56.2	57.3	84.8	54.3	88.5	125.9	125.2	120.4	119.0	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for NO<sub>x</sub> at Crescent Heights

## August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Ozone (O<sub>3</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

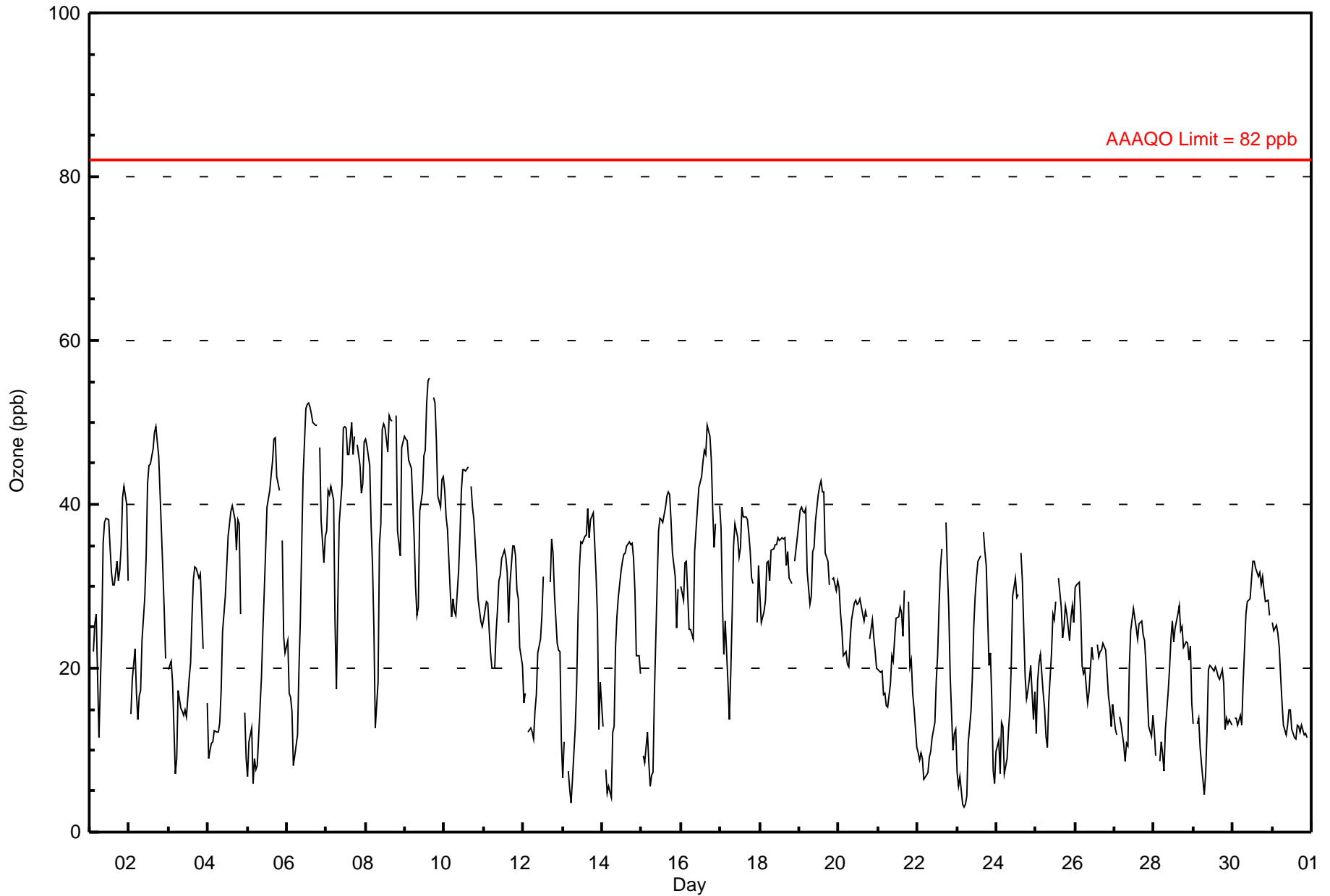
Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 55.3 ppb on Aug 9 16:00	Maximum Daily Average: 43.8 ppb on Aug 9
Minimum Value: 3 ppb on Aug 23 05:00	Hours of Data: 708
Minimum Daily Average: 15.0 ppb on Aug 29	Hours of Missing Data: 36
Maximum Diurnal Average: 35.3 ppb at hour 15	Hours of Calibration: 36
Monthly Average: 26.58 ppb	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 4.6 P <sub>10</sub> = 11.0 Q <sub>1</sub> = 16.9 Median = 26.4 Q <sub>3</sub> = 35.0 P <sub>90</sub> = 43.3 P <sub>99</sub> = 52.3	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	27	A	22	25	27	12	18	24	35	38	38	38	35	32	30	33	31	32	35	41	42	40	31	31.1	42.1	
2-Aug	A	14	19	22	17	14	17	17	23	29	34	43	45	45	47	49	50	48	46	41	32	27	21	A	31.8	49.5
3-Aug	20	21	18	13	7	9	17	15	15	14	15	14	19	21	26	31	32	32	31	32	27	22	A	16	20.3	32.4
4-Aug	9	10	11	11	12	12	12	13	17	24	29	32	36	38	39	40	38	34	38	38	27	A	15	9	23.7	39.8
5-Aug	7	11	13	6	9	8	8	12	19	24	29	34	40	42	44	45	48	48	43	42	A	36	24	22	26.6	48.1
6-Aug	23	17	16	15	8	9	12	20	26	35	43	52	52	52	51	50	50	50	A	47	38	33	36	34.2	52.3	
7-Aug	37	42	41	42	40	26	17	28	38	42	49	49	49	46	46	50	46	48	A	47	45	41	43	48	41.8	50.1
8-Aug	48	47	45	37	33	25	13	18	35	38	49	50	49	47	51	50	50	A	51	37	35	34	47	48	40.7	50.8
9-Aug	48	48	45	45	44	36	30	26	28	39	42	46	47	52	55	55	A	53	52	48	41	40	43	43	43.8	55.3
10-Aug	42	39	37	29	26	28	27	26	32	36	42	44	44	44	45	A	42	40	38	32	29	27	26	25	34.8	44.6
11-Aug	26	28	28	25	22	20	20	24	27	31	31	33	34	34	32	26	30	35	35	34	29	28	23	20	28.2	35.0
12-Aug	16	17	A	12	13	12	11	15	17	22	24	27	31	C	C	A	31	36	34	29	23	22	22	11	21.2	35.7
13-Aug	7	11	A	7	5	4	7	13	18	26	32	35	35	36	36	40	36	38	39	35	31	26	13	18	23.9	39.5
14-Aug	13	A	8	5	6	4	12	13	23	26	29	32	33	34	34	35	35	35	35	33	29	22	22	19	23.3	35.4
15-Aug	A	9	8	12	9	6	7	7	17	30	37	38	38	38	40	41	42	41	38	34	31	25	30	A	26.3	41.6
16-Aug	30	28	33	33	29	25	25	24	34	37	39	42	43	45	47	46	50	48	45	39	35	38	A	40	37.2	49.7
17-Aug	37	28	22	26	18	14	19	27	35	38	36	34	35	40	38	38	38	36	34	31	30	A	26	33	30.9	39.7
18-Aug	29	26	27	28	33	33	31	34	35	35	35	36	36	36	36	36	33	34	31	30	A	33	35	36	32.9	36.2
19-Aug	39	40	39	39	39	32	28	29	34	35	38	41	42	43	42	42	34	33	30	A	31	31	30	31	35.7	42.9
20-Aug	30	27	25	22	22	21	20	24	26	28	28	28	28	28	27	26	27	26	A	24	26	24	22	20	25.1	29.8
21-Aug	20	20	20	17	17	15	15	18	21	21	23	26	26	27	27	24	30	A	28	20	21	17	15	10	20.8	29.5
22-Aug	10	9	10	9	7	7	7	9	10	11	13	18	22	27	32	35	A	38	32	27	19	10	12	13	16.8	37.8
23-Aug	7	6	7	3	3	3	4	11	15	19	25	29	31	33	34	A	37	34	33	20	22	16	8	6	17.6	36.5
24-Aug	10	11	7	13	13	7	9	12	15	20	29	31	29	29	A	34	31	19	16	17	19	20	14	17	18.4	34.1
25-Aug	12	18	21	22	17	15	12	10	16	22	27	26	28	A	31	27	24	25	28	27	23	26	28	26	22.2	31.0
26-Aug	30	30	31	27	20	19	20	16	17	20	23	21	A	23	21	22	22	23	22	19	17	15	13	16	21.2	30.6
27-Aug	13	12	A	14	13	11	9	11	11	20	25	27	26	25	23	25	26	24	23	21	17	13	12	14	18.0	27.3
28-Aug	12	9	A	9	11	10	7	12	17	20	24	26	23	25	27	28	25	25	23	23	23	21	23	16	19.0	27.6
29-Aug	13	A	13	14	10	8	5	7	12	20	20	20	20	20	20	19	19	20	18	13	14	13	14	13	15.0	20.3
30-Aug	A	14	14	13	14	13	18	22	27	28	28	31	33	33	32	31	32	30	31	29	28	28	26	A	25.3	33.1
31-Aug	26	24	25	24	22	19	16	13	12	13	15	15	12	12	11	13	13	12	13	12	12	12	A	13	15.6	25.5

22.8	22.0	22.3	20.0	18.3	15.3	15.3	17.8	22.7	27.2	30.7	32.9	34.1	34.7	35.3	35.3	34.5	34.4	33.5	30.0	27.7	25.8	24.1	23.2	Diurnal Average	
48.0	47.8	45.5	44.9	44.4	35.9	30.8	34.5	37.7	42.5	49.3	51.7	52.3	52.4	55.1	55.3	50.2	53.1	52.3	47.9	46.9	42.1	46.9	48.3	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb    24-hr na

# Hourly Averages for O<sub>3</sub> at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Crescent Heights - Ozone (O<sub>3</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

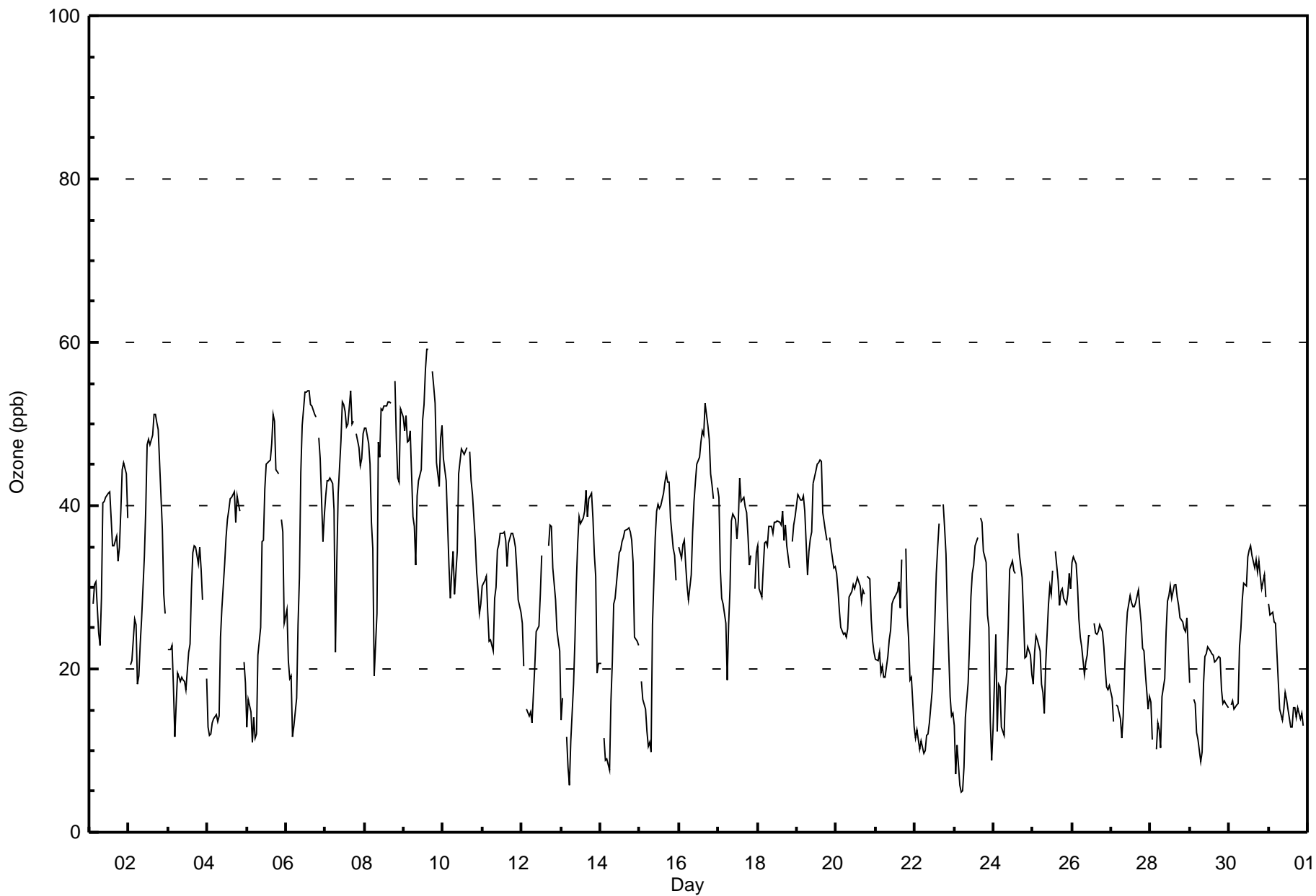
Maximum Value: 59.2 ppb on Aug 9 15:00	Maximum Daily Average: 48.2 ppb on Aug 9	Hours in Service: 744
Minimum Value: 5 ppb on Aug 23 05:00	Minimum Daily Average: 17.7 ppb on Aug 31	Hours of Data: 708
Maximum Diurnal Average: 38.1 ppb at hour 16	Minimum Diurnal Average: 19.2 ppb at hour 7	Hours of Missing Data: 36
Monthly Average: 30.19 ppb	Percentiles: P <sub>1</sub> = 7.8 P <sub>10</sub> = 14.1 Q <sub>1</sub> = 21.1 Median = 30.1 Q <sub>3</sub> = 38.4 P <sub>90</sub> = 46.8 P <sub>99</sub> = 53.8	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	29	A	28	30	31	24	23	29	40	40	41	41	42	39	35	35	36	33	35	39	44	45	44	38	35.8	45.2
2-Aug	A	21	21	26	25	18	19	23	26	34	39	47	48	47	49	51	51	50	49	45	37	29	27	A	35.7	51.3
3-Aug	22	22	23	18	12	16	20	19	19	19	18	17	22	23	30	34	35	35	33	35	32	28	A	19	24.0	35.1
4-Aug	13	12	12	13	14	14	14	14	24	27	33	36	38	39	41	41	42	38	41	40	39	A	21	18	27.2	41.7
5-Aug	13	16	15	11	14	12	12	22	25	36	36	42	45	45	46	48	51	50	44	44	A	38	37	26	31.6	51.2
6-Aug	27	21	19	19	12	13	16	25	31	44	50	54	54	54	52	52	51	51	A	48	46	36	39	37.8	54.1	
7-Aug	41	43	43	43	43	39	22	33	42	48	53	52	51	50	50	54	50	50	A	49	47	45	46	49	45.4	54.1
8-Aug	49	50	48	45	38	35	19	27	48	46	52	52	52	52	53	53	53	A	55	48	43	43	52	51	46.2	55.3
9-Aug	49	51	48	48	49	39	37	33	41	43	44	50	52	57	59	59	A	56	55	53	45	42	48	50	48.2	59.2
10-Aug	46	44	43	33	29	32	34	29	34	44	45	47	47	46	47	A	47	43	41	36	32	30	27	28	38.4	47.1
11-Aug	30	31	31	27	23	24	22	29	30	35	35	37	37	37	36	32	35	37	37	36	35	32	28	27	31.8	36.8
12-Aug	26	20	A	15	14	15	13	17	20	25	25	29	34	C	C	A	35	38	37	32	29	25	23	22	24.7	37.7
13-Aug	14	16	A	12	8	6	11	18	24	30	35	39	38	38	39	42	39	41	41	38	34	31	20	21	27.6	41.9
14-Aug	21	A	12	9	9	8	16	21	28	29	31	34	35	36	36	37	37	37	37	36	33	24	23	23	26.5	37.2
15-Aug	A	18	16	15	12	10	11	10	25	36	39	40	40	40	42	43	44	43	43	38	35	34	31	A	30.3	44.0
16-Aug	35	34	35	36	33	30	28	31	37	41	43	45	46	48	49	49	53	50	48	44	42	41	A	42	40.8	52.6
17-Aug	41	32	29	28	26	19	25	30	38	39	38	36	38	43	40	41	40	39	36	33	34	A	30	34	34.3	43.3
18-Aug	35	30	29	32	35	36	35	37	37	37	38	38	38	38	38	39	36	38	35	32	A	36	38	39	35.9	39.3
19-Aug	41	41	41	41	41	39	32	34	36	37	43	44	45	45	46	45	39	37	36	A	36	35	32	32	39.1	45.5
20-Aug	32	30	27	25	24	24	24	25	29	29	30	30	30	31	30	28	30	29	A	31	31	26	23	22	27.9	31.6
21-Aug	21	21	22	19	20	19	19	21	24	25	28	29	29	30	31	27	33	A	35	27	24	19	19	13	24.1	34.8
22-Aug	12	13	11	10	11	10	10	12	12	13	17	21	26	32	35	38	A	40	37	34	27	17	14	15	20.3	40.2
23-Aug	13	7	11	6	5	5	8	14	18	23	29	32	33	35	36	A	38	38	34	33	27	25	13	9	21.4	38.5
24-Aug	13	24	12	18	18	13	12	18	20	25	32	33	32	32	A	37	34	31	27	21	21	23	22	19	23.4	36.6
25-Aug	18	22	24	24	22	18	17	15	20	28	30	29	32	A	34	31	28	30	30	29	28	29	32	30	26.0	34.4
26-Aug	33	34	33	30	26	24	23	19	21	22	24	24	A	26	24	24	24	25	25	23	20	18	18	18	24.2	33.8
27-Aug	16	14	A	16	15	14	12	14	20	24	27	29	28	28	28	28	30	28	26	23	22	19	15	17	21.3	29.6
28-Aug	16	11	A	10	13	13	10	17	19	25	28	29	30	29	30	30	29	28	26	26	25	25	26	22	22.5	30.4
29-Aug	18	A	16	16	12	11	9	10	18	22	22	23	22	22	22	21	21	22	21	17	16	16	16	15	17.7	22.7
30-Aug	A	16	16	15	16	16	23	25	28	30	30	34	35	35	34	32	33	32	33	31	30	31	29	A	27.5	35.1
31-Aug	28	27	27	26	26	22	18	15	14	15	17	16	15	13	13	15	15	14	15	14	15	13	A	15	17.7	28.0

26.9	25.7	25.6	23.1	21.8	19.9	19.2	22.1	27.4	31.3	34.0	35.8	37.1	37.6	38.1	38.1	37.6	37.3	36.7	34.0	32.1	29.8	28.2	26.8	Diurnal Average	
49.5	51.0	47.7	47.9	49.1	39.4	37.4	37.4	47.8	48.0	52.7	53.9	53.9	56.7	59.2	59.1	52.6	56.5	55.3	52.6	48.3	45.7	51.8	50.8	Diurnal Maximum	

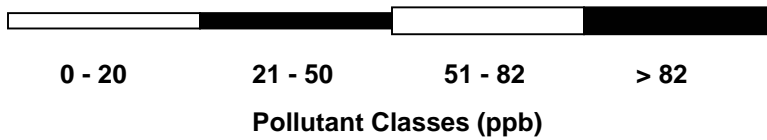
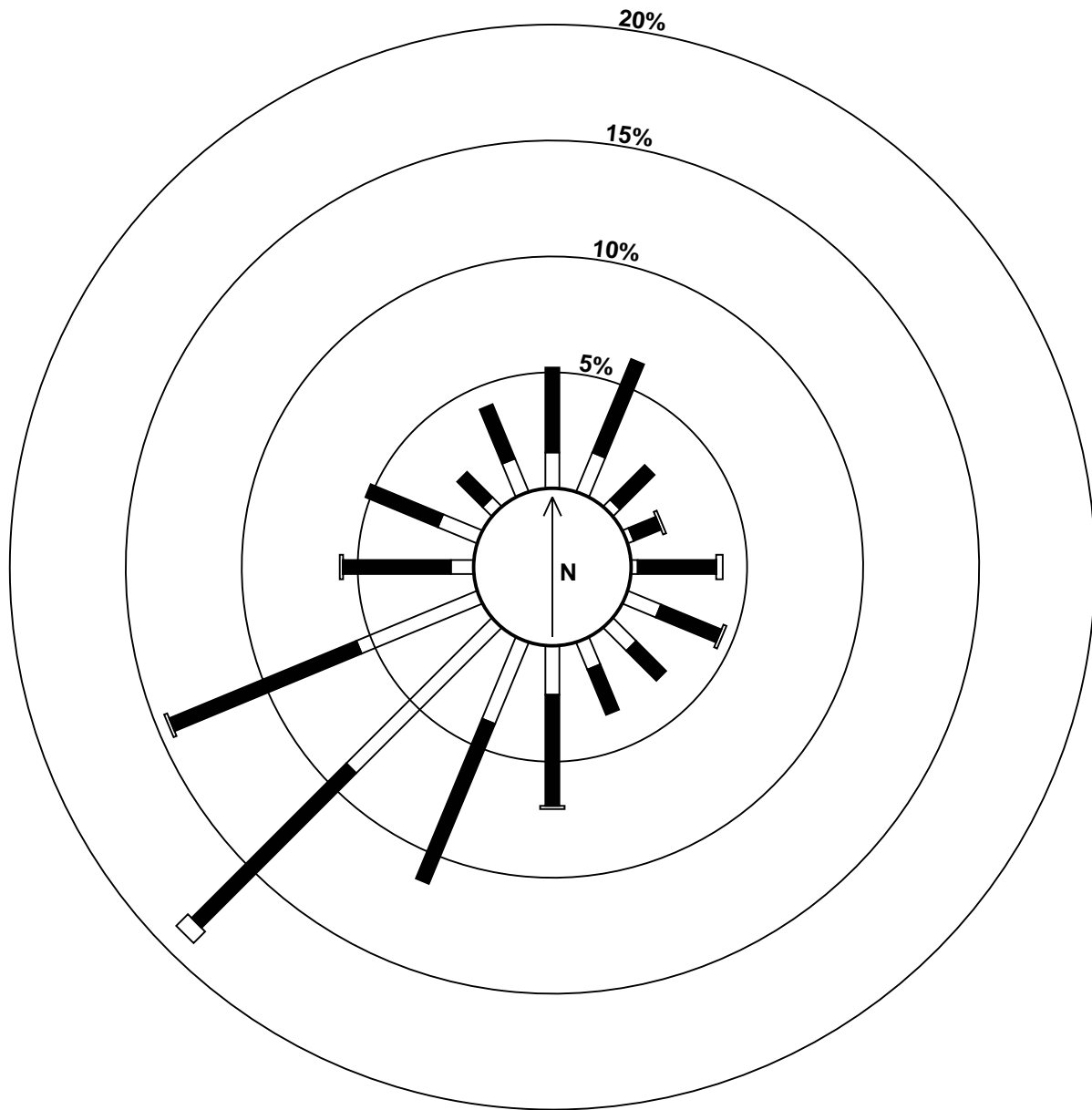
C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for O<sub>3</sub> at Crescent Heights August 2008





# Pollutant Rose for O<sub>3</sub> at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Eight Hour Running Averages**

**Crescent Heights - Ozone (O<sub>3</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Number of Exceedences (AAAQO): 8-hr: 0	Hours in Service: 744
Maximum Value: 51.8 ppb on Aug 9 20:00	Hours of Data: 738
Minimum Value: 5.6 ppb on Aug 23 08:00	Hours of Missing Data: 6
	Hours of Calibration: 6
	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 8.1 P <sub>10</sub> = 12.6 Q <sub>1</sub> = 18.0 Median = 26.3 Q <sub>3</sub> = 34.3 P <sub>90</sub> = 41.7 P <sub>99</sub> = 50.1	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	34	33	29	27	26	24	23	22	23	25	27	29	30	32	34	35	34	33	33	32	33	34	35	36	35.5
2-Aug	36	34	32	30	26	22	19	17	18	20	22	24	28	31	35	39	42	45	46	46	45	42	39	38	46.4
3-Aug	34	30	26	22	18	16	15	15	14	14	13	13	15	16	17	19	22	24	26	28	29	29	30	27	33.6
4-Aug	24	21	18	15	13	12	12	11	12	14	16	19	22	25	29	32	35	36	37	38	36	36	33	28	37.6
5-Aug	24	21	17	12	10	10	9	9	11	12	14	18	22	26	30	35	38	41	43	44	44	44	41	37	44.5
6-Aug	34	30	26	22	20	17	15	15	15	18	21	26	31	36	41	45	48	50	51	51	50	48	45	43	51.1
7-Aug	41	40	39	39	39	37	35	34	34	34	35	36	37	40	44	46	47	48	48	48	47	46	46	45	48.1
8-Aug	46	46	45	44	43	41	37	33	32	30	31	33	35	37	42	46	48	49	50	48	46	44	43	43	49.7
9-Aug	43	43	43	44	45	45	43	40	38	37	36	36	37	39	42	45	48	50	52	52	51	49	47	46	51.8
10-Aug	45	43	42	39	37	36	34	32	31	30	31	33	35	37	39	41	42	43	42	41	38	36	33	32	45.3
11-Aug	30	29	28	27	26	25	24	24	24	25	25	26	28	29	31	31	31	32	32	32	32	31	30	29	32.4
12-Aug	28	25	24	21	18	16	15	14	14	15	16	17	20	21	22	N	N	N	N	N	N	29	28	26	29.1
13-Aug	23	20	18	15	12	10	7	8	9	11	14	17	21	25	29	32	35	36	37	37	36	35	32	30	36.9
14-Aug	27	25	21	16	13	9	9	9	10	12	15	18	21	25	28	31	32	33	34	34	34	32	31	29	34.4
15-Aug	28	24	20	17	14	12	10	8	9	12	16	19	23	27	31	35	38	39	39	39	38	36	35	34	39.4
16-Aug	33	31	30	30	30	30	29	28	29	30	31	32	34	36	39	42	44	45	46	46	44	43	43	42	45.9
17-Aug	40	37	34	32	30	26	25	24	23	25	26	27	30	33	35	37	37	37	37	36	36	35	33	33	40.4
18-Aug	31	30	29	28	29	29	30	30	31	32	33	34	34	35	35	35	35	35	35	34	34	33	33	33	35.5
19-Aug	34	35	36	37	38	37	37	36	35	34	34	35	35	36	38	40	40	39	38	38	36	35	33	31	39.5
20-Aug	31	30	29	28	27	26	25	24	23	23	24	25	25	26	27	27	27	27	27	26	26	26	25	24	30.8
21-Aug	23	22	22	21	20	19	18	18	18	18	19	20	21	22	24	25	26	26	27	26	25	24	22	20	26.9
22-Aug	17	16	14	13	11	10	9	8	8	9	9	10	12	15	18	21	23	27	29	30	30	28	25	22	30.4
23-Aug	20	16	13	10	8	7	6	6	7	8	10	14	17	21	25	27	30	32	33	32	30	28	24	22	32.9
24-Aug	19	16	12	12	10	9	10	10	11	12	15	17	19	22	24	27	29	29	27	25	24	22	21	19	28.9
25-Aug	17	17	17	18	18	17	17	16	16	17	18	18	19	20	23	25	26	27	27	27	26	26	26	26	27.1
26-Aug	27	27	28	28	27	26	25	24	22	21	20	20	19	20	20	21	22	22	22	22	21	20	19	18	27.6
27-Aug	17	16	15	14	14	13	12	12	11	13	14	16	17	19	21	23	25	25	25	24	23	22	20	19	25.2
28-Aug	17	15	14	12	11	11	10	10	11	12	14	16	17	19	22	24	25	25	25	25	25	24	24	22	25.2
29-Aug	21	20	19	18	16	14	11	10	10	11	12	13	14	16	17	19	20	20	19	18	18	17	16	15	20.8
30-Aug	15	14	13	14	14	14	14	16	17	19	21	23	25	28	29	30	31	31	32	31	31	30	30	29	31.7
31-Aug	28	28	27	26	25	24	22	21	20	18	17	16	14	13	13	13	13	13	13	12	12	12	12	12	28.4
	45.7	45.6	45.5	44.2	44.9	45.2	43.1	40.4	37.8	36.7	36.2	36.3	37.4	40.0	43.6	46.3	48.4	50.3	51.5	51.8	51.0	49.2	47.5	45.8	
	Diurnal Maximums																								

N - Not Valid  
 Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Total Hydrocarbons (THC) - ppm**  
**August 1, 2008 to September 1, 2008**

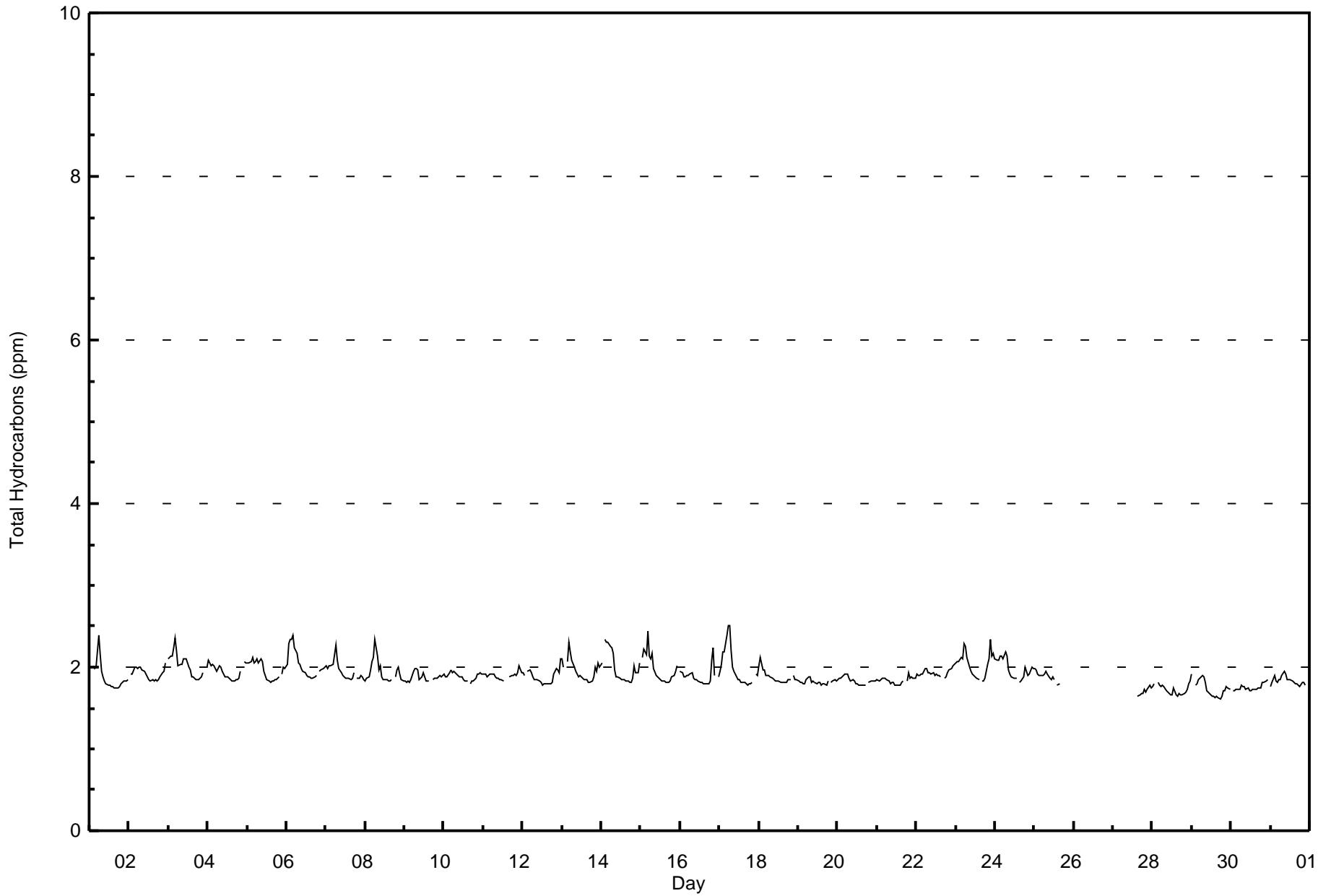
Maximum Value: 2.51 ppm on Aug 17 07:00	Maximum Daily Average: 2.04 ppm on Aug 6	Hours in Service: 744
Minimum Value: 1.6 ppm on Aug 29 18:00	Minimum Daily Average: 1.72 ppm on Aug 28	Hours of Data: 663
Maximum Diurnal Average: 2.03 ppm at hour 6	Minimum Diurnal Average: 1.80 ppm at hour 16	Hours of Missing Data: 81
Monthly Average: 1.903 ppm	Percentiles: P <sub>1</sub> = 1.65 P <sub>10</sub> = 1.77 Q <sub>1</sub> = 1.82 Median = 1.87 Q <sub>3</sub> = 1.96 P <sub>90</sub> = 2.09 P <sub>99</sub> = 2.36	Hours of Calibration: 40
		Percent Operational Time: 94.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1.9	A	2.0	2.0	2.0	2.4	2.2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	2.39	
2-Aug	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	1.92	2.04	
3-Aug	2.1	2.1	2.1	2.2	2.4	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.02	2.36	
4-Aug	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	2.1	2.0	1.95	2.09	
5-Aug	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	2.0	2.0	1.97	2.11	
6-Aug	2.0	2.3	2.3	2.3	2.4	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.04	2.39	
7-Aug	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.95	2.27	
8-Aug	1.8	1.9	1.9	2.0	2.1	2.1	2.3	2.1	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	2.0	2.0	1.9	1.9	1.8	1.94	2.35	
9-Aug	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.0	1.8	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.99	
10-Aug	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.89	1.96	
11-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.90	2.01	
12-Aug	1.9	1.9	A	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	1.9	2.1	1.88	2.11	
13-Aug	2.1	2.0	A	2.1	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.9	2.1	2.0	1.96	2.30	
14-Aug	2.0	A	2.3	2.3	2.3	2.2	2.2	2.2	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.9	1.9	2.1	1.99	2.34	
15-Aug	A	2.1	2.2	2.1	2.4	2.1	2.1	2.2	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	1.98	2.45	
16-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.2	1.9	A	1.9	1.89	2.23	
17-Aug	1.9	2.0	2.2	2.2	2.4	2.5	2.5	2.2	2.0	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.99	2.51	
18-Aug	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.8	1.88	2.12	
19-Aug	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.82	1.89	
20-Aug	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.83	1.92	
21-Aug	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.84	1.93	
22-Aug	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.93	2.04	
23-Aug	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.9	2.0	2.1	2.3	2.1	2.2	2.03	2.34	
24-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.9	2.0	1.9	1.9	1.9	2.0	2.0	1.98	2.19	
25-Aug	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	N	N	N	N	N	N	N	N	--	1.99	
26-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
27-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	A	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	--	1.78
28-Aug	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.72	1.83	
29-Aug	1.9	A	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.7	1.7	1.74	1.91	
30-Aug	A	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.75	1.84	
31-Aug	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.83	1.94	
	1.95	1.96	1.98	1.99	2.02	2.03	2.03	1.98	1.92	1.89	1.86	1.85	1.83	1.82	1.81	1.80	1.80	1.81	1.82	1.87	1.90	1.90	1.92	1.92	Diurnal Average		
	2.10	2.29	2.34	2.35	2.45	2.51	2.51	2.20	2.10	2.11	2.10	2.10	2.00	1.96	1.90	1.89	1.88	1.94	2.00	2.08	2.23	2.34	2.13	2.16	Diurnal Maximum		

C - Calibration                      N - Not Valid                      A - Automated Daily Zero Span

# Hourly Averages for THC at Crescent Heights

## August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Crescent Heights - Total Hydrocarbons (THC) - ppm**  
**August 1, 2008 to September 1, 2008**

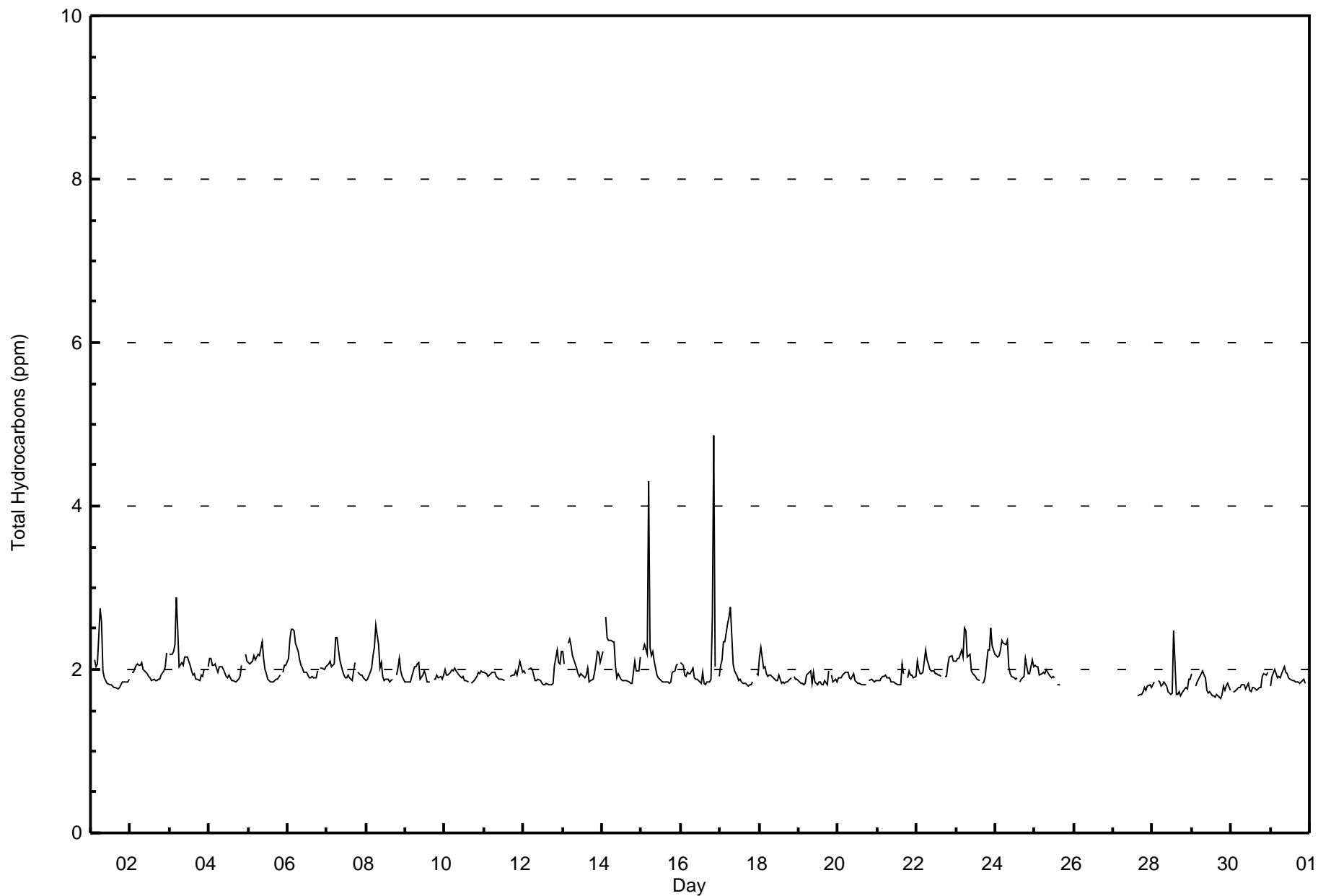
Maximum Value: 4.86 ppm on Aug 16 21:00	Maximum Daily Average: 2.12 ppm on Aug 23	Hours in Service: 744
Minimum Value: 1.7 ppm on Aug 29 18:00	Minimum Daily Average: 1.79 ppm on Aug 29	Hours of Data: 663
Maximum Diurnal Average: 2.17 ppm at hour 5	Minimum Diurnal Average: 1.84 ppm at hour 17	Hours of Missing Data: 81
Monthly Average: 1.972 ppm	Percentiles: P <sub>1</sub> = 1.69 P <sub>10</sub> = 1.81 Q <sub>1</sub> = 1.85 Median = 1.92 Q <sub>3</sub> = 2.03 P <sub>90</sub> = 2.19 P <sub>99</sub> = 2.65	Hours of Calibration: 40
		Percent Operational Time: 94.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2.0	A	2.1	2.0	2.1	2.8	2.6	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.95	2.75
2-Aug	A	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	A	1.97	2.21
3-Aug	2.2	2.2	2.2	2.3	2.9	2.5	2.0	2.1	2.1	2.2	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.10	2.88
4-Aug	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	A	2.2	2.1	1.99	2.19
5-Aug	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	A	2.0	2.1	2.1	2.02	2.33
6-Aug	2.1	2.4	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.09	2.49
7-Aug	2.1	2.1	2.1	2.0	2.1	2.4	2.4	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	A	2.0	1.9	1.9	1.9	1.9	2.03	2.40
8-Aug	1.9	1.9	2.0	2.0	2.2	2.3	2.5	2.3	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.1	2.0	1.9	1.8	2.00	2.54
9-Aug	1.8	1.8	1.9	1.8	1.9	2.0	2.0	2.1	2.1	1.9	1.9	2.0	1.9	1.9	1.8	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.09
10-Aug	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.0	1.93	2.02
11-Aug	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.1	2.0	1.94	2.09
12-Aug	2.0	1.9	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.2	2.1	2.1	2.2	1.94	2.25
13-Aug	2.2	2.1	A	2.3	2.4	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.1	2.2	2.2	2.1	2.06	2.37
14-Aug	2.2	A	2.6	2.4	2.4	2.4	2.3	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	2.0	2.1	2.0	2.0	2.2	2.07	2.65
15-Aug	A	2.2	2.3	2.2	4.3	2.3	2.2	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.0	2.0	2.1	2.1	A	2.12	4.30
16-Aug	2.1	2.1	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	2.0	1.8	1.8	1.8	1.9	1.9	2.7	4.9	2.0	A	1.9	2.08	4.86
17-Aug	2.0	2.1	2.3	2.3	2.6	2.7	2.8	2.4	2.1	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	2.06	2.76
18-Aug	2.2	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	1.92	2.27
19-Aug	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	2.0	A	1.9	1.8	1.9	1.9	1.87	1.99
20-Aug	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.88	1.97
21-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.0	A	1.9	2.0	1.9	1.9	1.9	1.9	1.89	2.06
22-Aug	2.1	2.0	1.9	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	1.9	2.0	1.9	1.9	A	A	1.9	1.9	2.0	2.1	2.2	2.1	2.1	2.02	2.24
23-Aug	2.1	2.1	2.1	2.2	2.1	2.5	2.5	2.2	2.2	2.0	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.9	2.2	2.2	2.5	2.3	2.2	2.12	2.51
24-Aug	2.2	2.2	2.2	2.2	2.4	2.3	2.3	2.4	2.0	1.9	1.9	1.9	1.9	1.9	A	1.8	1.9	1.9	2.1	2.0	1.9	1.9	2.1	2.0	2.06	2.36
25-Aug	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.8	1.8	N	N	N	N	N	N	N	N	--	2.05
26-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
27-Aug	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	A	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	--	1.81
28-Aug	1.8	1.8	A	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.81	2.47
29-Aug	2.0	A	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.8	1.7	1.79	1.98
30-Aug	A	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.7	1.8	1.8	1.8	1.9	2.0	1.9	2.0	A	1.80	1.96
31-Aug	1.8	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.8	A	1.8	1.89	2.03
	2.02	2.02	2.05	2.05	2.17	2.14	2.12	2.06	1.99	1.93	1.90	1.88	1.87	1.89	1.84	1.84	1.84	1.84	1.87	1.96	2.07	1.98	1.99	1.97	Diurnal Average	
	2.22	2.38	2.65	2.49	4.30	2.75	2.76	2.42	2.33	2.16	2.16	2.15	2.05	2.47	1.94	2.06	1.98	2.09	2.13	2.65	4.86	2.51	2.30	2.24	Diurnal Maximum	

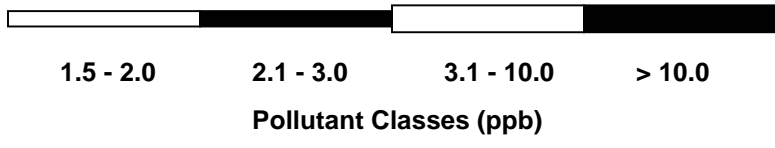
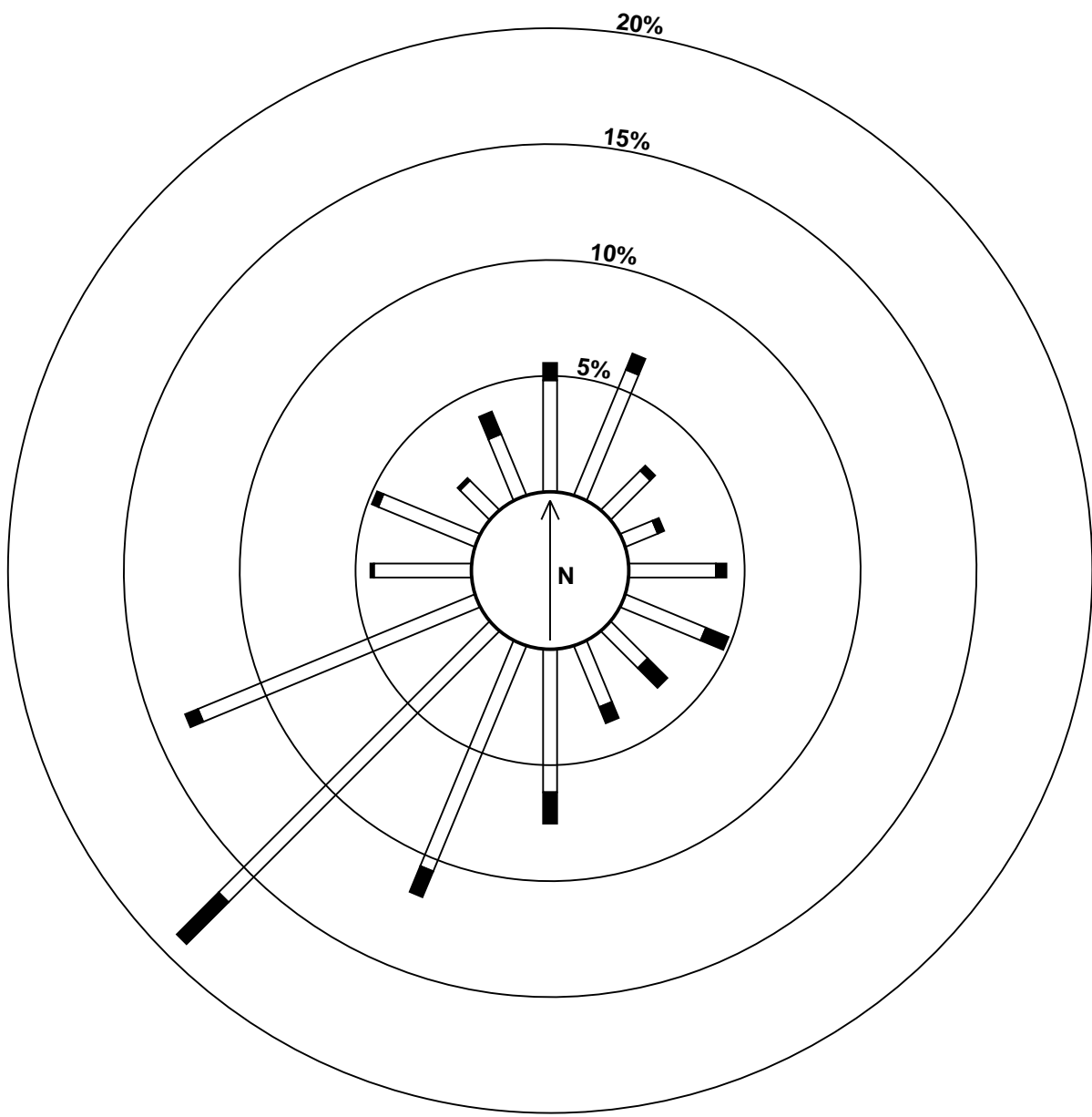
C - Calibration                      N - Not Valid                      A - Automated Daily Zero Span

# Hourly Maximums for THC at Crescent Heights

## August 2008



# Pollutant Rose for THC at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Carbon Monoxide (CO) - ppm**  
**August 1, 2008 to September 1, 2008**

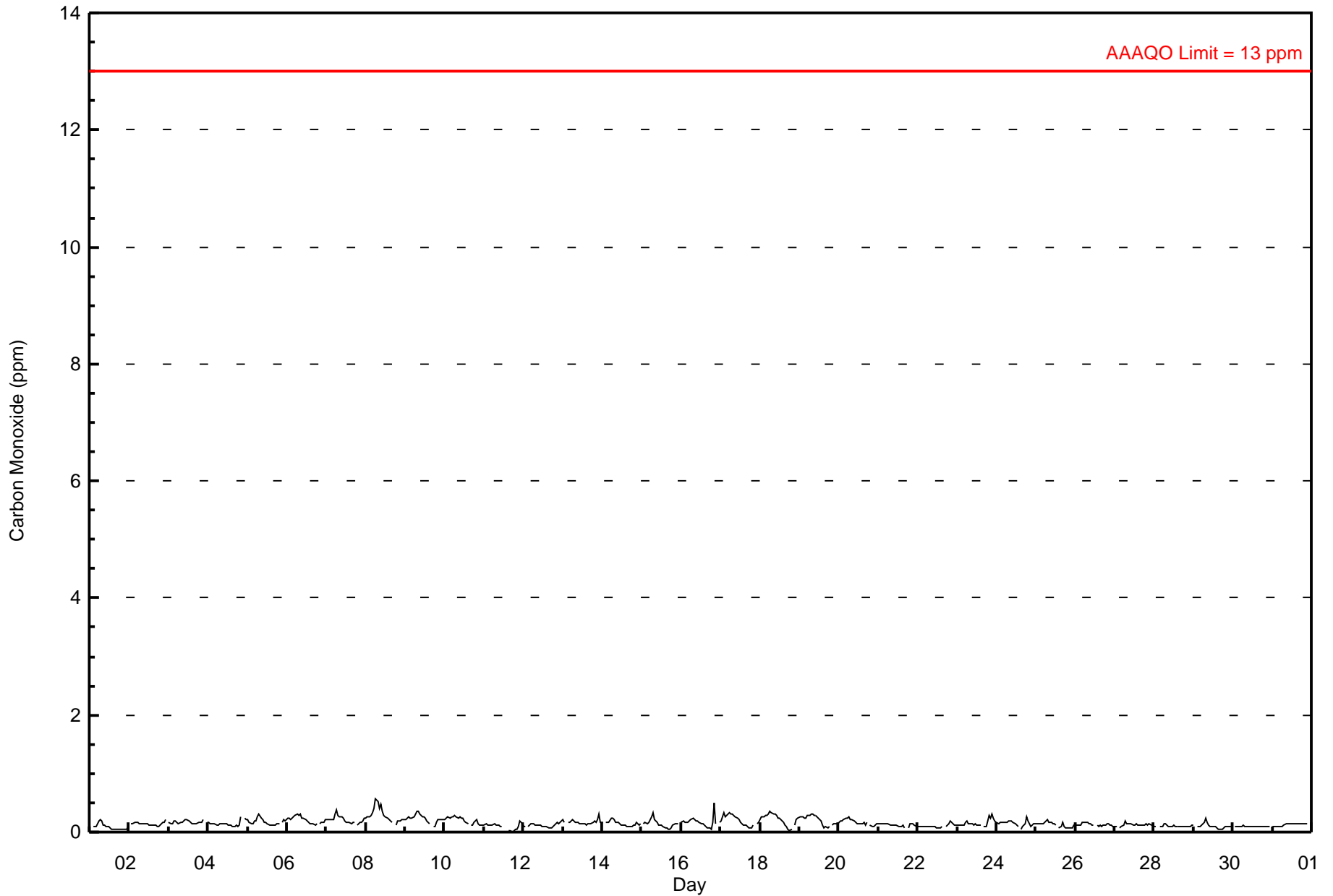
Number of Exceedances (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value:	0.58 ppm on Aug 8 07:00		Maximum Daily Average:	0.29 ppm on Aug 8
Minimum Value:	0.0 ppm on Aug 11 18:00		Hours of Data:	708
Maximum Diurnal Average:	0.22 ppm at hour 7		Hours of Missing Data:	36
Monthly Average:	0.156 ppm		Hours of Calibration:	36
	Minimum Daily Average: 0.09 ppm on Aug 1		Percent Operational Time:	100.0
	Minimum Diurnal Average: 0.10 ppm at hour 18			
	Percentiles: P <sub>1</sub> = 0.04 P <sub>10</sub> = 0.09 Q <sub>1</sub> = 0.11 Median = 0.14 Q <sub>3</sub> = 0.19 P <sub>90</sub> = 0.25 P <sub>99</sub> = 0.38			

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.09	0.20	
2-Aug	A	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.14	0.21	
3-Aug	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.2	0.17	0.22	
4-Aug	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	A	0.2	0.14	0.25	
5-Aug	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.17	0.31	
6-Aug	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.21	0.30	
7-Aug	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.2	0.2	0.2	0.21	0.39	
8-Aug	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.5	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	A	0.1	0.2	0.2	0.2	0.2	0.29	0.58	
9-Aug	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.23	0.37	
10-Aug	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.20	0.28	
11-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	A	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.10	0.19	
12-Aug	0.1	0.1	A	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.12	0.19	
13-Aug	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.17	0.30
14-Aug	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.15	0.24	
15-Aug	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.14	0.34	
16-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.1	A	0.17	0.51	
17-Aug	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.20	0.33	
18-Aug	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	A	0.1	0.2	0.22	0.35	
19-Aug	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.20	0.32	
20-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	A	0.1	0.1	0.1	0.1	0.17	0.26	
21-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.1	0.1	0.1	0.12	0.15	
22-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.1	0.10	0.19	
23-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.3	0.2	0.3	0.2	0.15	0.31	
24-Aug	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.15	0.26	
25-Aug	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.21	
26-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.16	
27-Aug	0.1	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.18	
28-Aug	0.1	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.15	
29-Aug	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.10	0.23	
30-Aug	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.10	0.13	
31-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.13	0.15	

C - Calibration	A - Automated Daily Zero Span		Diurnal Average	
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 13 ppm	24-hr na	Diurnal Maximum



# Hourly Averages for CO at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

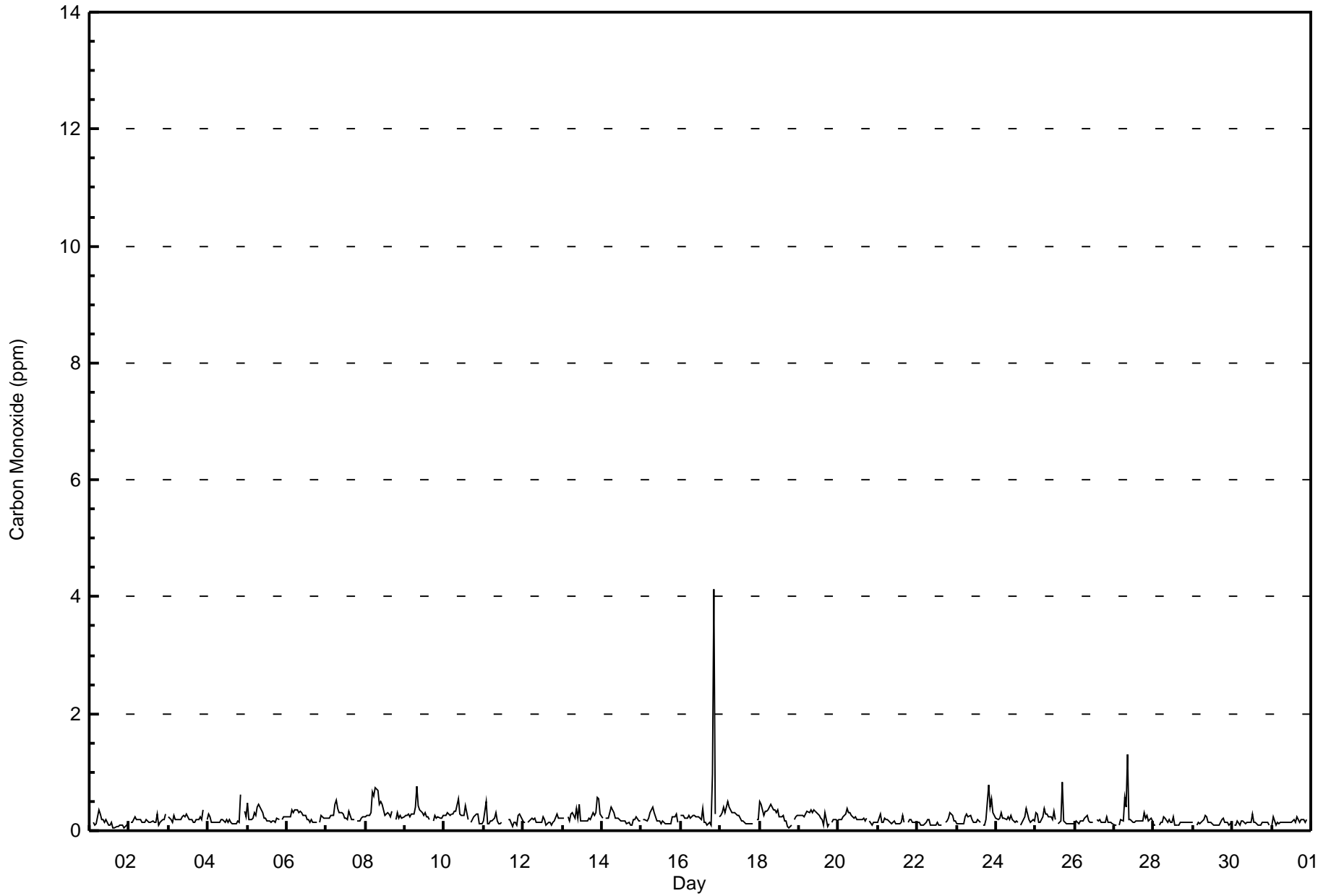
**Crescent Heights - Carbon Monoxide (CO) - ppm**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 4.12 ppm on Aug 16 21:00	Maximum Daily Average: 0.42 ppm on Aug 16	Hours in Service: 744
Minimum Value: 0.0 ppm on Aug 18 19:00	Minimum Daily Average: 0.13 ppm on Aug 1	Hours of Data: 708
Maximum Diurnal Average: 0.34 ppm at hour 21	Minimum Diurnal Average: 0.15 ppm at hour 18	Hours of Missing Data: 36
Monthly Average: 0.219 ppm	Percentiles: P <sub>1</sub> = 0.08 P <sub>10</sub> = 0.11 Q <sub>1</sub> = 0.15 Median = 0.19 Q <sub>3</sub> = 0.25 P <sub>90</sub> = 0.33 P <sub>99</sub> = 0.72	Hours of Calibration: 36
		Percent Operational Time: 100.0

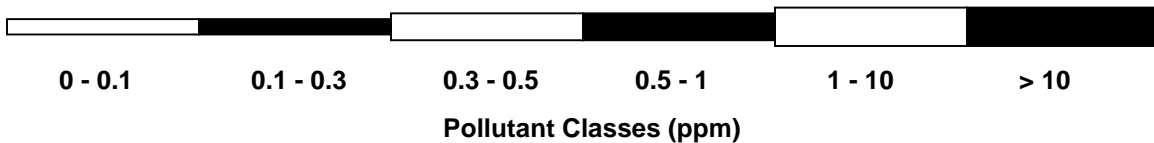
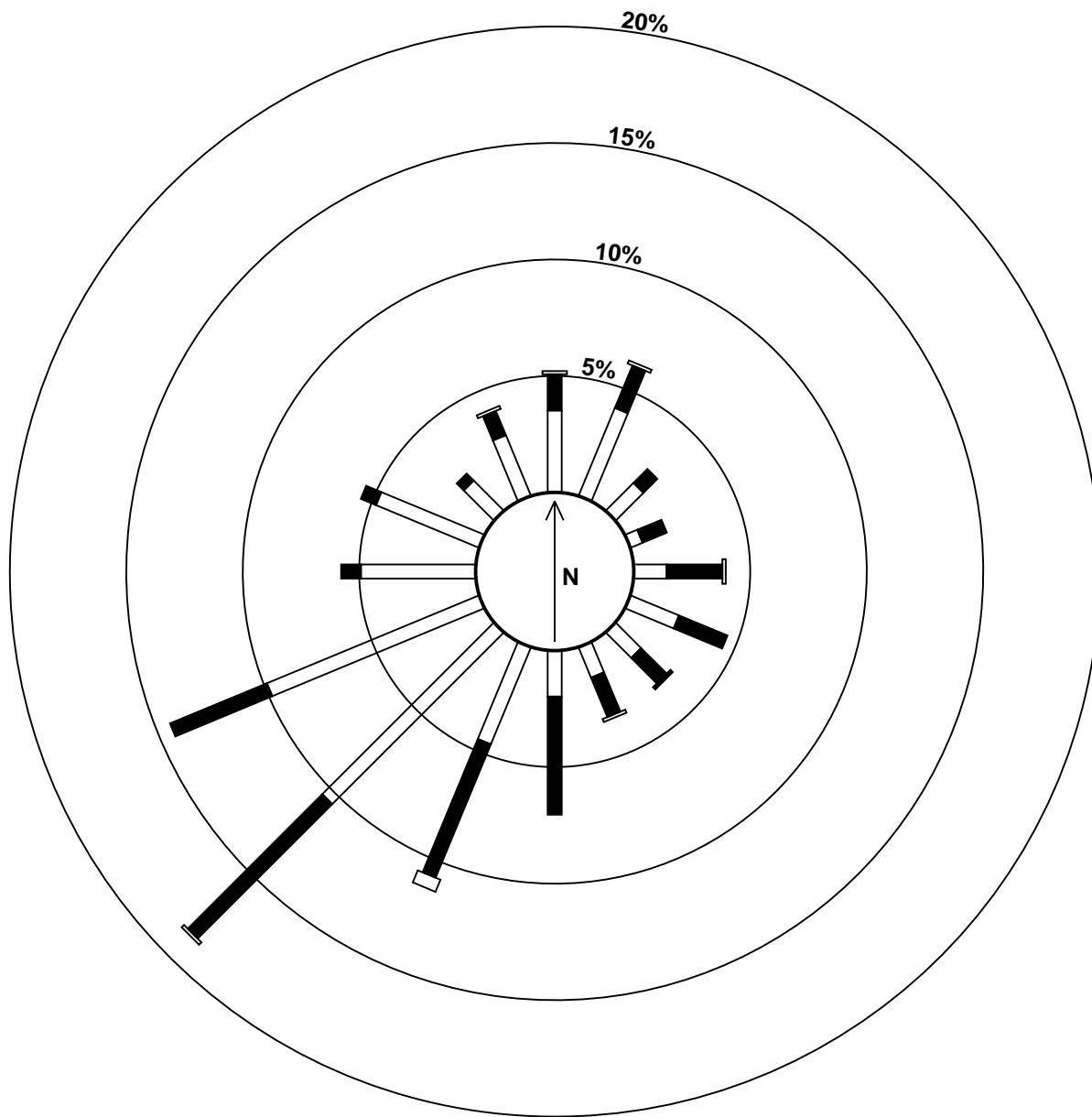
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	0.1	A	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.13	0.35																						
2-Aug	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.2	0.3	A	0.18	0.28																						
3-Aug	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	A	0.21	0.35																						
4-Aug	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.6	A	0.3	0.2	0.19	0.62																						
5-Aug	0.5	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	A	0.2	0.2	0.2	0.24	0.47																						
6-Aug	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.24	0.35																						
7-Aug	0.2	0.2	0.2	0.3	0.3	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.26	0.52																						
8-Aug	0.2	0.3	0.3	0.3	0.7	0.6	0.7	0.7	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.3	A	0.2	0.3	0.2	0.3	0.2	0.2	0.37	0.73																						
9-Aug	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.8	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	A	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.29	0.75																						
10-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.3	0.3	0.3	0.4	0.2	A	0.1	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.26	0.55																						
11-Aug	0.2	0.5	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	C	C	A	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.19	0.51																						
12-Aug	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.18	0.30																						
13-Aug	0.2	0.2	A	0.2	0.2	0.3	0.3	0.2	0.4	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.6	0.3	0.27	0.56																					
14-Aug	0.2	A	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.20	0.41																						
15-Aug	A	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	A	0.20	0.41																						
16-Aug	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	1.0	4.1	0.3	A	0.2	0.42	4.12																						
17-Aug	0.3	0.3	0.4	0.3	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.24	0.49																						
18-Aug	0.5	0.5	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.4	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.1	A	0.2	0.2	0.3	0.28	0.49																						
19-Aug	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.3	0.1	0.1	A	0.2	0.2	0.2	0.2	0.24	0.36																						
20-Aug	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.2	0.2	0.21	0.37																						
21-Aug	0.1	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.2	A	0.1	0.2	0.2	0.2	0.1	0.1	0.16	0.29																						
22-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.15	0.32																						
23-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.1	A	0.1	0.1	0.2	0.8	0.4	0.5	0.3	0.3	0.23	0.77																						
24-Aug	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	A	0.1	0.1	0.2	0.4	0.3	0.2	0.1	0.2	0.2	0.20	0.38																						
25-Aug	0.3	0.3	0.1	0.1	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	A	0.1	0.2	0.8	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.23	0.83																						
26-Aug	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.16	0.25																						
27-Aug	0.1	0.1	A	0.1	0.2	0.2	0.6	0.4	1.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.25	1.30																						
28-Aug	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.25																						
29-Aug	0.1	A	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.15	0.26																						
30-Aug	A	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.14	0.28																						
31-Aug	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	A	0.1	0.16	0.25																						
																								0.22	0.22	0.19	0.20	0.23	0.27	0.30	0.30	0.29	0.23	0.22	0.20	0.19	0.19	0.16	0.15	0.18	0.15	0.17	0.23	0.34	0.22	0.20	0.19	Diurnal Average
																								0.49	0.51	0.40	0.35	0.66	0.59	0.73	0.75	1.30	0.50	0.46	0.37	0.30	0.43	0.33	0.27	0.83	0.28	0.38	0.98	4.12	0.56	0.55	0.29	Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for CO at Crescent Heights August 2008



# Pollutant Rose for CO at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Eight Hour Running Averages**

**Crescent Heights - Carbon Monoxide (CO) - ppm**  
**August 1, 2008 to September 1, 2008**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.42 ppm on Aug 8 12:00	Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 0.03 ppm on Aug 11 21:00	
Percentiles: P <sub>1</sub> = 0.05 P <sub>10</sub> = 0.10 Q <sub>1</sub> = 0.12 Median = 0.14 Q <sub>3</sub> = 0.18 P <sub>90</sub> = 0.24 P <sub>99</sub> = 0.34	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.14
2-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
3-Aug	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
4-Aug	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
5-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21
6-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.27
7-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
8-Aug	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.42
9-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
10-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.26
11-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	0.0	0.0	0.1	0.1	0.15
12-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
13-Aug	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.19
14-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.20
15-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21
16-Aug	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.19
17-Aug	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.30
18-Aug	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.31
19-Aug	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.28
20-Aug	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22
21-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
22-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
23-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.19
24-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22
25-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
26-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
27-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
28-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
29-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
30-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
31-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
	0.20	0.21	0.25	0.27	0.25	0.27	0.32	0.36	0.38	0.41	0.42	0.42	0.41	0.39	0.35	0.31	0.27	0.25	0.21	0.19	0.18	0.18	0.19	0.19	
	Diurnal Maximums																								

N - Not Valid  
 Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

**Palliser Airshed Society**  
**Summary of Hourly Averages**

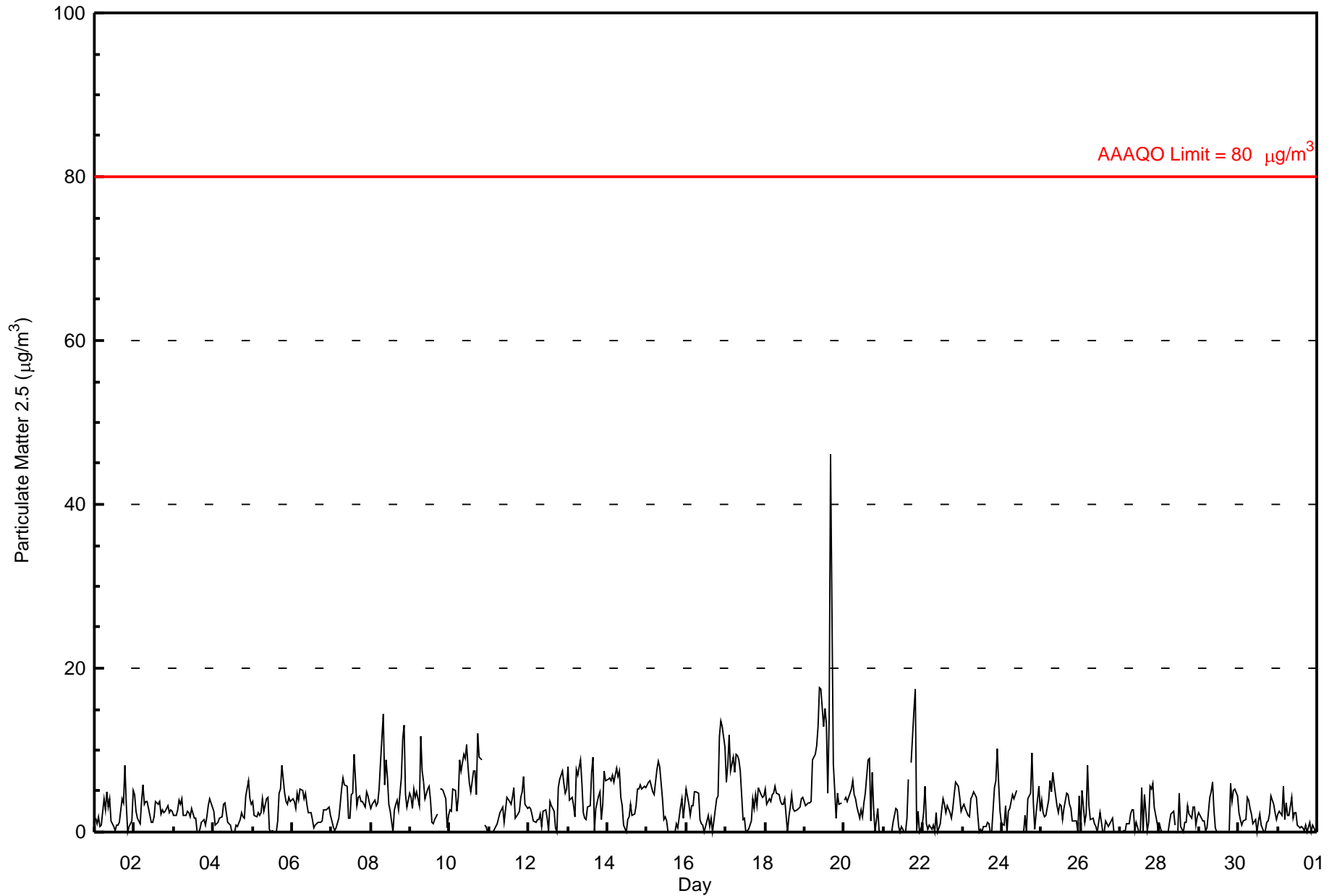
**Crescent Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>**  
**August 1, 2008 to September 1, 2008**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 46.1 µg/m <sup>3</sup> on Aug 19 17:00	Maximum Daily Average: 9.9 µg/m <sup>3</sup> on Aug 19
Minimum Value: 0 µg/m <sup>3</sup> on Aug 1 21:00	Hours of Data: 737
Maximum Diurnal Average: 5.0 µg/m <sup>3</sup> at hour 8	Hours of Missing Data: 7
Monthly Average: 3.31 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 1.4 µg/m <sup>3</sup> on Aug 28	Percent Operational Time: 99.1
Minimum Diurnal Average: 2.1 µg/m <sup>3</sup> at hour 14	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 1.2 Median = 2.8 Q <sub>3</sub> = 4.5 P <sub>90</sub> = 6.6 P <sub>99</sub> = 14.0	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	1	2	1	1	4	3	5	3	4	1	1	0	1	1	1	4	3	8	3	0	1	1	5	2.3	8.1
2-Aug	5	3	2	1	4	6	3	4	4	2	1	1	2	4	3	4	2	3	2	3	3	2	3	3	2.8	5.8
3-Aug	2	2	3	4	3	4	2	2	3	2	2	3	2	2	0	0	0	1	1	1	2	3	4	3	2.1	4.1
4-Aug	2	1	1	1	2	2	3	4	2	1	1	0	0	0	1	1	1	2	2	2	4	6	4	3	2.0	6.3
5-Aug	4	2	2	2	2	2	4	3	4	4	0	0	0	0	0	1	5	5	8	5	4	3	4	4	2.9	8.1
6-Aug	4	4	3	5	4	5	5	4	5	3	2	2	1	1	1	1	1	1	1	3	3	3	3	2	2.8	5.2
7-Aug	1	1	0	1	2	3	5	7	6	6	2	2	5	5	10	3	4	4	4	4	3	5	4	4	3.7	9.6
8-Aug	3	3	4	3	4	5	9	14	6	9	7	3	3	0	3	3	4	3	7	11	13	5	3	5	5.3	14.4
9-Aug	4	3	5	4	5	3	12	7	6	4	5	6	4	1	1	2	2	P	5	5	5	4	1	2	4.2	11.7
10-Aug	3	3	5	5	2	4	9	7	10	9	11	8	6	5	8	7	5	12	9	9	BD	1	1	0	6.0	12.0
11-Aug	0	0	0	0	1	1	2	3	3	1	3	4	4	3	4	5	2	2	2	4	5	7	3	3	2.7	6.8
12-Aug	3	3	2	1	1	2	2	1	3	3	2	0	4	3	3	1	0	5	7	7	6	5	5	5	2.9	7.4
13-Aug	8	4	4	3	2	8	7	9	6	2	2	2	3	3	7	9	0	3	4	5	2	3	7	6	4.6	9.2
14-Aug	6	7	6	7	6	8	7	8	4	3	1	0	2	2	3	2	2	3	5	5	6	5	6	5	4.6	7.7
15-Aug	6	6	6	5	5	6	8	9	8	4	1	2	1	0	0	0	0	0	1	1	3	4	2	3	3.4	8.7
16-Aug	5	3	2	3	3	5	5	5	2	1	1	0	1	2	1	2	0	3	4	4	12	14	13	10	4.2	13.6
17-Aug	6	8	12	8	9	7	9	9	9	7	2	2	0	0	0	1	4	3	5	3	5	5	4	4	5.1	11.8
18-Aug	5	3	4	4	5	5	6	5	5	4	3	3	4	0	2	3	5	3	3	3	3	3	4	4	3.6	5.6
19-Aug	3	3	4	4	4	9	10	11	13	18	17	13	15	13	5	14	46	8	5	2	5	3	4	BD	9.9	46.1
20-Aug	4	4	4	4	5	6	5	4	3	2	3	2	4	5	9	9	1	7	3	0	3	0	0	0	3.6	8.9
21-Aug	0	0	0	0	0	0	1	3	3	1	0	1	0	0	2	6	BD	9	15	17	0	2	0	1	2.6	17.4
22-Aug	2	6	1	0	1	0	1	0	2	0	1	3	4	3	2	3	2	2	3	5	6	6	4	2	2.5	6.1
23-Aug	3	3	3	2	2	4	4	5	4	2	0	0	0	1	1	1	1	0	0	5	6	10	6	3	2.8	10.1
24-Aug	1	1	3	0	2	3	5	4	5	5	BD	0	0	0	2	0	4	5	10	3	0	2	6	2	2.7	9.7
25-Aug	4	2	2	2	4	6	5	7	6	3	2	3	3	1	3	5	5	3	3	1	1	1	0	4	3.3	7.3
26-Aug	0	5	1	2	8	3	2	2	1	1	0	1	2	0	0	1	1	1	1	2	0	0	0	0	1.4	8.2
27-Aug	0	0	0	0	1	1	2	3	3	0	1	0	0	5	0	5	0	1	6	5	6	3	1	0	1.8	6.0
28-Aug	1	0	0	0	0	0	1	2	2	1	BD	0	5	1	0	1	1	3	2	2	3	3	1	2	1.4	4.7
29-Aug	2	2	1	1	0	1	4	5	6	3	1	0	0	0	0	0	0	BD	0	6	4	5	5	4	2.2	6.1
30-Aug	2	2	1	1	1	4	4	3	2	1	2	0	1	2	1	0	0	1	1	2	4	3	2	2	1.8	4.4
31-Aug	2	2	2	6	2	4	2	2	4	2	2	2	1	0	1	0	0	1	0	1	0	1	0	0	1.6	5.5
	3.1	2.8	2.8	2.6	2.9	3.9	4.7	5.0	4.5	3.5	2.6	2.1	2.4	2.1	2.3	3.1	3.5	3.2	4.1	4.1	4.0	3.9	3.3	3.1	Diurnal Average	
	7.9	8.1	11.8	7.5	9.1	8.7	11.7	14.4	13.0	17.6	17.4	12.9	15.0	13.2	9.6	13.9	46.1	12.0	14.7	17.4	13.0	13.6	12.9	10.3	Diurnal Maximum	

P - Power Failure      BD - Baseline Drift  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 µg/m<sup>3</sup>      24-hr 30 µg/m<sup>3</sup>

# Hourly Averages for PM<sub>2.5</sub> at Crescent Heights August 2008



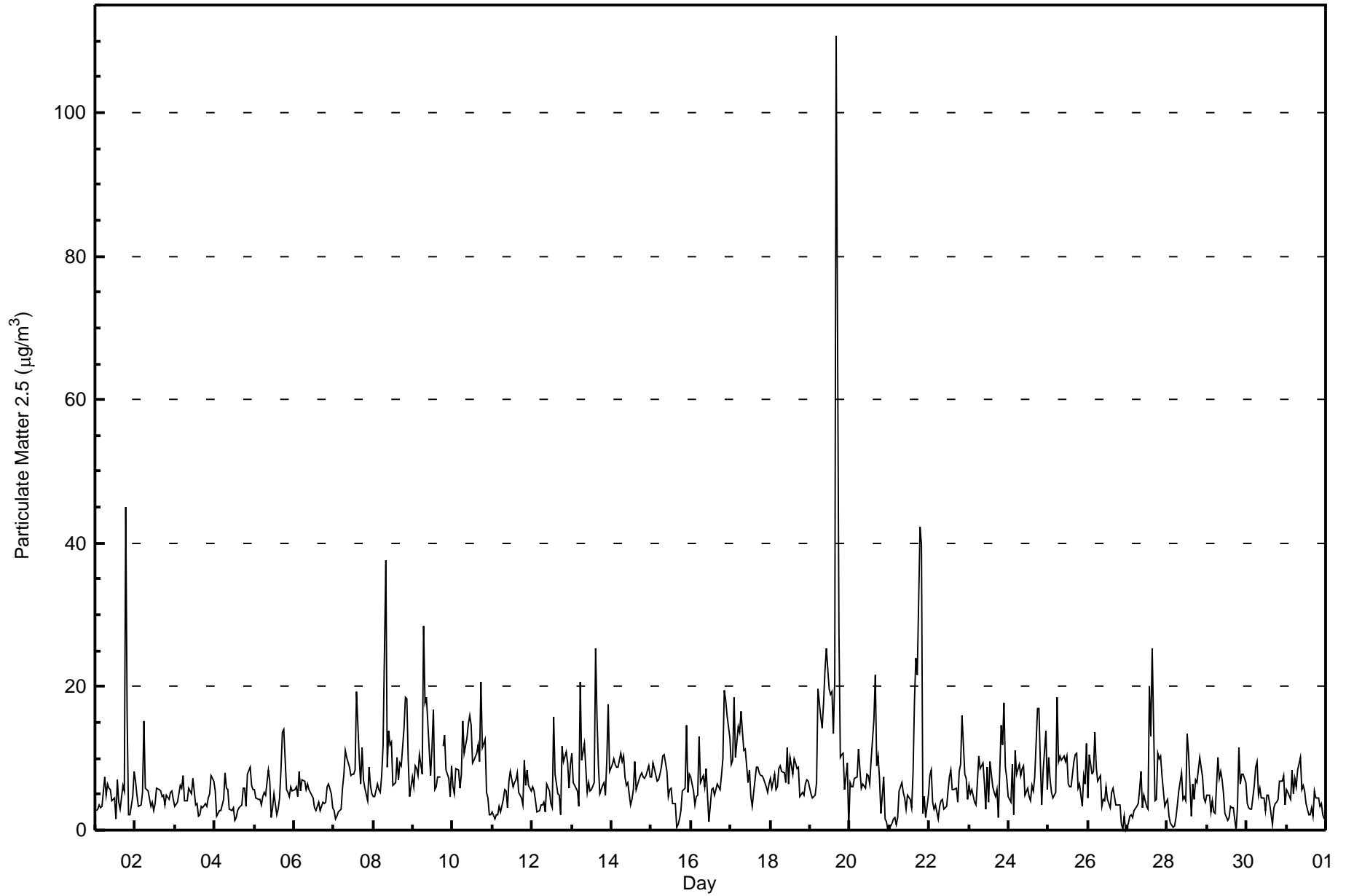
**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Crescent Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>**  
**August 1, 2008 to September 1, 2008**

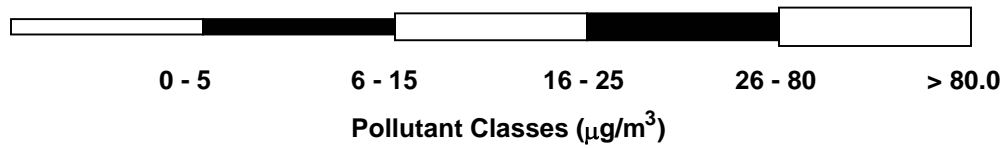
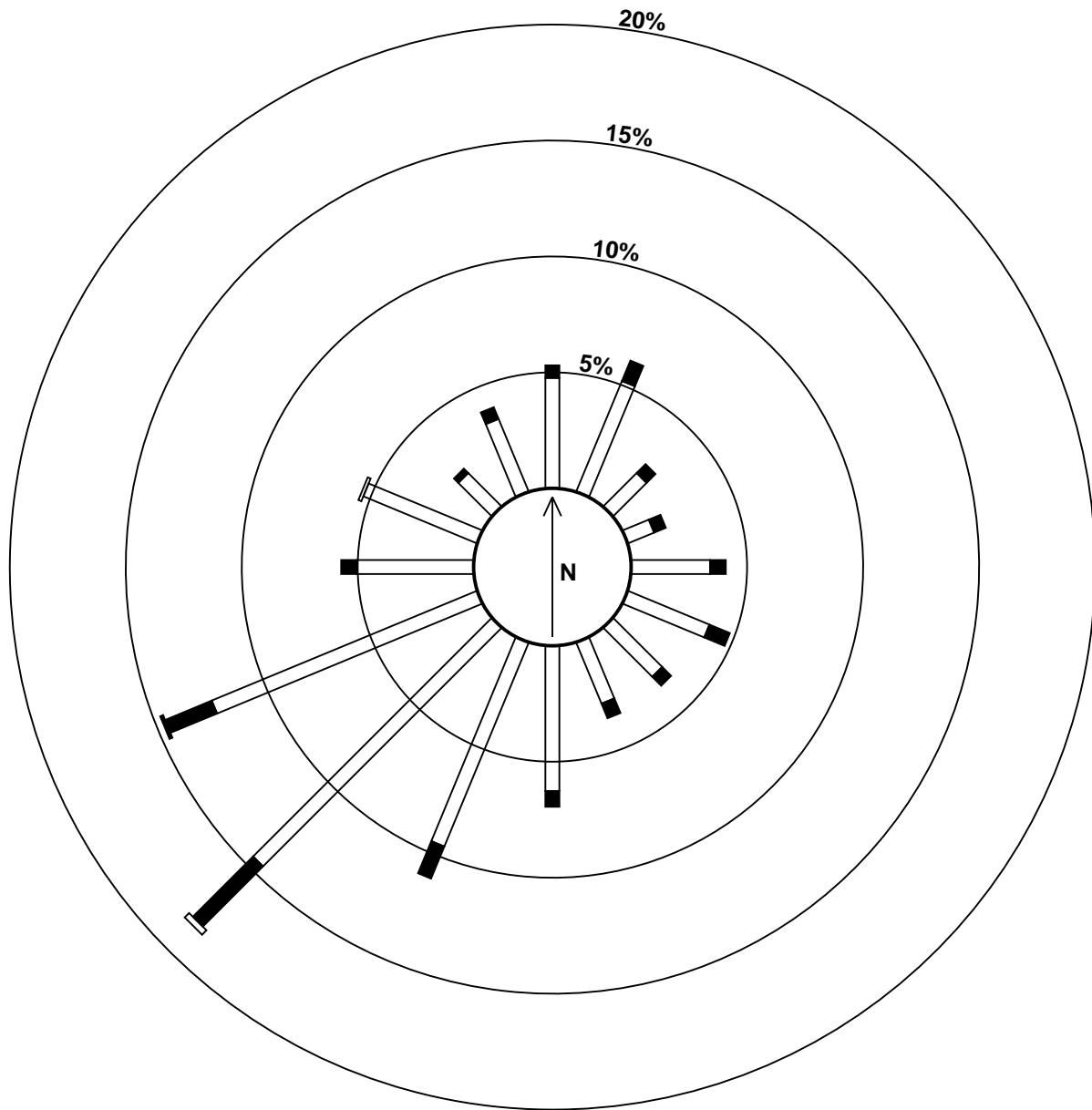
Maximum Value: 110.7 µg/m <sup>3</sup> on Aug 19 17:00		Maximum Daily Average: 17.5 µg/m <sup>3</sup> on Aug 19		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Aug 21 00:00		Minimum Daily Average: 4.3 µg/m <sup>3</sup> on Aug 4		Hours of Data: 743																							
Maximum Diurnal Average: 9.9 µg/m <sup>3</sup> at hour 17		Minimum Diurnal Average: 4.9 µg/m <sup>3</sup> at hour 4		Hours of Missing Data: 1																							
Monthly Average: 7.20 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 2.7 Q <sub>1</sub> = 4.1 Median = 5.9 Q <sub>3</sub> = 8.6 P <sub>90</sub> = 12.0 P <sub>99</sub> = 27.1		Hours of Calibration: 0																							
				Percent Operational Time: 99.9																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	3	3	3	3	3	7	5	6	6	6	4	5	2	7	4	3	6	5	45	16	2	2	5	8	6.7	45.1	
2-Aug	7	5	3	3	5	15	6	6	5	3	4	3	4	6	6	5	5	3	5	4	5	5	5	4	5.1	15.2	
3-Aug	3	4	5	6	6	8	4	4	6	6	5	7	3	4	2	2	3	3	4	3	5	5	8	7	4.7	7.5	
4-Aug	5	2	2	3	3	4	8	6	6	3	3	3	1	2	3	3	3	6	6	3	8	9	6	6	4.3	8.7	
5-Aug	6	4	4	4	3	5	5	5	8	7	2	3	5	2	3	5	8	14	14	6	5	5	6	6	5.6	14.1	
6-Aug	6	6	5	8	5	7	7	6	6	6	5	5	3	3	3	4	3	4	4	4	6	6	5	3	5.0	8.3	
7-Aug	3	2	2	3	3	6	8	11	10	9	8	8	8	8	19	10	7	11	7	6	4	9	6	5	7.1	19.3	
8-Aug	5	5	6	6	5	8	12	38	9	14	12	12	6	7	10	7	9	9	14	19	18	10	5	7	10.5	37.7	
9-Aug	6	9	8	8	11	8	28	18	19	15	8	12	17	6	6	7	7	P	12	13	8	7	5	9	10.7	28.5	
10-Aug	6	5	9	8	6	8	15	11	13	15	16	15	9	10	11	12	9	21	12	13	5	5	2	2	9.8	20.6	
11-Aug	3	2	2	2	3	3	4	6	5	3	7	8	6	7	7	8	5	5	4	10	6	8	6	5	5.2	9.8	
12-Aug	6	6	4	3	3	4	4	4	3	6	5	4	3	16	8	5	5	2	12	10	11	9	6	9	6.1	15.8	
13-Aug	11	7	6	5	3	21	10	12	9	5	7	5	6	7	25	16	9	5	6	7	5	10	18	8	9.2	25.3	
14-Aug	9	10	9	9	9	11	10	10	7	6	7	3	4	6	9	6	7	8	8	7	7	8	9	7	7.8	10.8	
15-Aug	7	9	8	7	7	8	9	10	10	8	5	6	6	4	4	0	1	2	3	5	6	15	5	8	6.4	14.6	
16-Aug	7	5	4	5	5	13	7	8	6	9	5	1	6	6	5	6	6	6	8	10	20	18	16	13	8.0	19.5	
17-Aug	9	10	18	10	14	14	17	14	11	11	7	8	5	3	5	9	9	8	8	8	7	6	5	6	9.2	18.4	
18-Aug	7	6	8	6	6	9	9	8	8	7	11	6	10	8	10	9	9	9	5	5	5	6	7	7	7.5	11.4	
19-Aug	5	5	5	5	7	20	16	14	18	22	25	20	19	19	14	21	111	28	10	11	11	6	9	0	17.5	110.7	
20-Aug	7	6	6	7	7	11	8	6	6	6	8	8	7	10	15	22	9	10	7	2	7	2	1	0	7.5	21.6	
21-Aug	0	1	2	2	1	2	5	7	5	4	3	5	4	3	8	18	24	22	42	40	2	5	2	5	8.8	42.3	
22-Aug	8	8	4	3	3	2	3	4	4	3	3	5	7	8	6	6	6	4	8	9	16	8	7	4	5.9	16.1	
23-Aug	6	5	6	4	3	7	10	9	9	7	3	9	4	9	6	5	5	6	2	15	12	18	9	7	7.3	17.7	
24-Aug	5	4	9	2	11	8	9	8	9	9	5	6	5	4	6	5	7	17	17	9	3	8	14	6	7.8	17.0	
25-Aug	10	7	5	5	5	19	10	10	10	10	10	10	6	6	6	10	10	11	6	6	3	8	6	12	8.4	18.6	
26-Aug	5	11	8	8	14	9	7	8	3	4	4	6	4	3	5	6	5	4	4	4	1	0	2	0	5.1	13.6	
27-Aug	1	2	2	2	3	3	4	6	8	3	5	3	3	20	13	25	4	4	11	10	10	8	3	4	6.6	25.4	
28-Aug	4	2	1	0	1	2	3	5	8	4	5	4	13	11	2	6	4	7	7	10	9	7	4	4	5.2	13.5	
29-Aug	5	5	3	4	3	2	10	7	8	7	5	2	1	2	3	3	3	0	3	12	6	8	8	7	4.9	11.6	
30-Aug	4	3	3	3	6	9	10	5	6	4	5	3	5	5	4	1	3	4	4	4	7	7	8	4	4.8	9.6	
31-Aug	6	5	4	8	5	7	6	8	10	6	6	6	4	2	2	3	2	5	5	5	3	4	2	2	4.8	10.1	
		5.6	5.2	5.3	4.9	5.5	8.2	8.6	9.0	8.1	7.4	6.6	6.5	6.0	6.8	7.4	8.0	9.9	8.1	9.6	9.2	7.2	7.4	6.5	5.7	Diurnal Average	
		10.7	10.6	18.4	10.2	14.4	20.7	28.5	37.7	18.5	22.3	25.4	19.7	18.9	20.1	25.3	25.4	110.7	27.8	45.1	39.8	19.5	18.1	17.5	12.9	Diurnal Maximum	
P - Power Failure																											



# Hourly Maximums for PM<sub>2.5</sub> at Crescent Heights August 2008



# Pollutant Rose for PM<sub>2.5</sub> at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

**Crescent Heights - Relative Humidity (RH) - %**  
**August 1, 2008 to September 1, 2008**

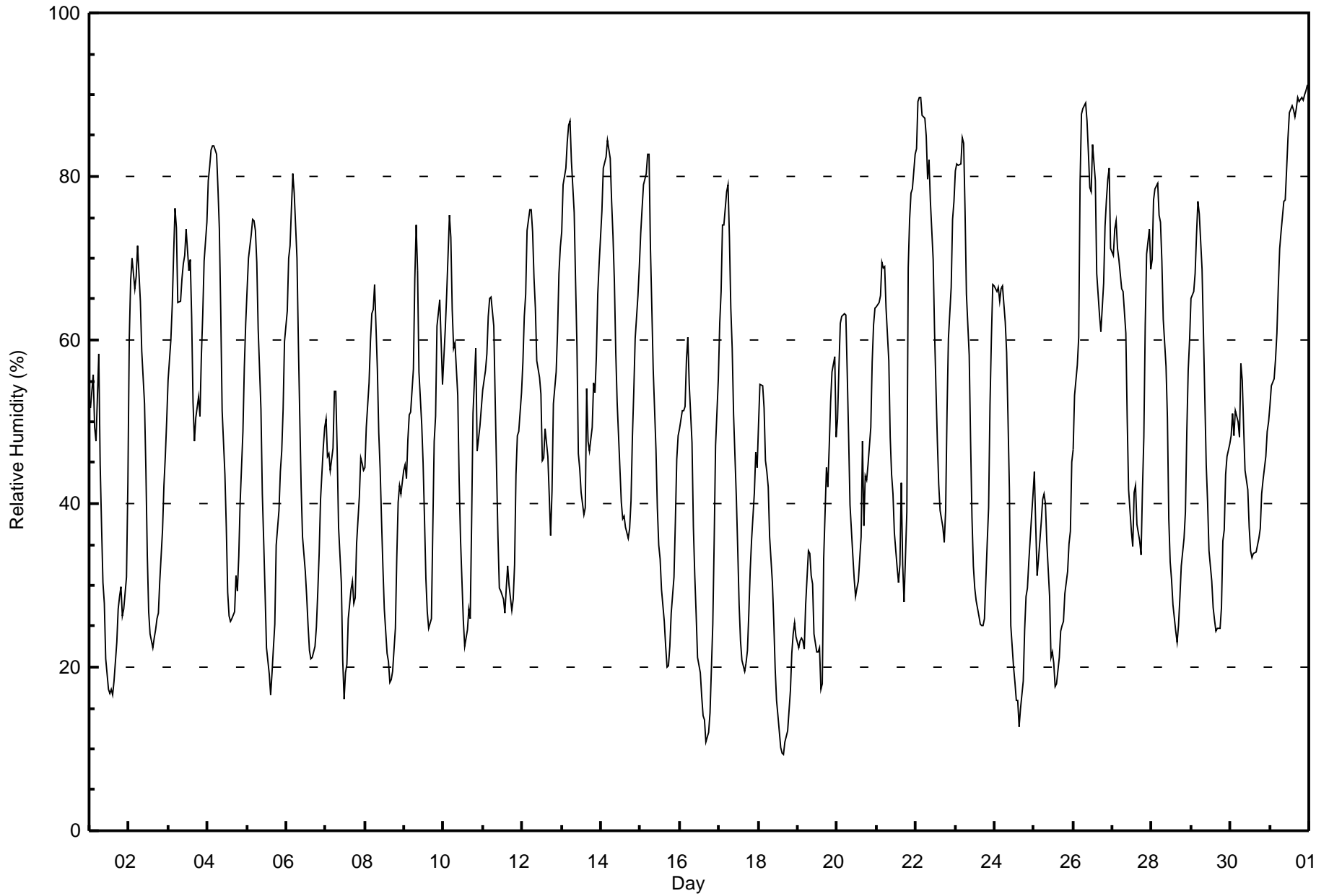
Maximum Value: 91.2 % on Sep 1 00:00	Maximum Daily Average: 78.4 % on Aug 31	Hours in Service: 744
Minimum Value: 9 % on Aug 18 16:00	Minimum Daily Average: 27.4 % on Aug 18	Hours of Data: 744
Maximum Diurnal Average: 68.0 % at hour 6	Minimum Diurnal Average: 30.9 % at hour 17	Hours of Missing Data: 0
Monthly Average: 48.81 %	Percentiles: P <sub>1</sub> = 12.1 P <sub>10</sub> = 23.0 Q <sub>1</sub> = 31.6 Median = 47.7 Q <sub>3</sub> = 65.3 P <sub>90</sub> = 77.1 P <sub>99</sub> = 89.5	Hours of Calibration: 0
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	52	54	56	49	48	58	45	37	30	28	21	17	17	17	17	18	23	27	29	30	26	27	31	43	33.3	58.2
2-Aug	60	67	70	66	68	72	68	65	59	52	44	34	27	24	22	24	25	26	27	31	37	42	46	50	46.0	71.5
3-Aug	55	60	64	70	76	74	65	65	67	69	70	74	69	70	63	52	48	51	53	51	58	63	70	74	63.7	76.0
4-Aug	80	81	83	84	84	83	78	74	63	51	44	37	29	26	26	26	27	31	29	34	40	49	57	62	53.2	83.8
5-Aug	66	70	73	75	75	73	69	61	52	41	35	29	22	19	17	19	22	25	35	39	44	46	52	60	46.7	74.7
6-Aug	64	70	71	76	80	78	70	60	51	42	36	32	29	25	22	21	21	22	25	29	34	41	47	49	45.6	80.3
7-Aug	50	46	46	44	47	54	54	46	37	30	21	16	19	20	26	29	30	28	28	35	41	46	45	44	36.8	53.8
8-Aug	44	49	55	60	63	64	67	56	49	44	38	32	27	22	21	18	18	19	25	33	40	42	41	44	40.5	66.7
9-Aug	45	43	48	51	51	56	68	74	68	56	50	45	38	31	27	25	26	37	48	51	62	65	60	55	49.1	74.1
10-Aug	58	61	66	75	73	64	59	60	53	43	36	31	26	23	25	27	26	38	51	59	46	48	50	52	47.8	75.2
11-Aug	54	56	58	63	65	65	62	53	44	36	30	29	28	27	30	32	30	27	28	33	43	48	49	54	43.5	65.3
12-Aug	57	63	66	73	76	76	73	68	64	57	55	53	45	46	49	46	41	36	42	52	56	61	68	71	58.1	75.9
13-Aug	73	79	81	84	86	87	82	76	67	59	46	44	41	39	40	54	48	46	49	55	54	58	66	69	61.8	86.7
14-Aug	76	81	82	82	84	82	77	73	67	59	52	44	40	38	39	37	36	37	40	48	54	60	65	69	59.3	84.4
15-Aug	73	76	79	80	83	83	71	64	56	47	39	35	33	30	26	22	20	20	22	27	31	38	46	48	47.9	82.8
16-Aug	49	51	51	52	58	60	55	47	37	31	26	21	19	16	14	14	11	12	14	20	25	36	47	55	34.3	60.4
17-Aug	62	66	74	74	78	79	72	64	59	51	41	34	28	23	21	19	20	22	27	32	36	41	46	44	46.4	79.0
18-Aug	50	55	54	52	45	44	42	36	30	26	20	16	14	10	10	9	11	12	12	17	22	24	25	24	27.4	54.6
19-Aug	22	23	24	23	22	28	34	34	31	30	24	22	22	22	17	18	33	44	42	47	52	56	58	48	32.4	57.9
20-Aug	50	57	62	63	63	63	56	48	40	34	31	29	30	31	36	48	37	43	43	45	49	57	62	64	47.5	63.8
21-Aug	64	65	65	70	69	69	64	57	48	44	41	36	32	30	32	43	33	28	39	69	75	78	78	83	54.6	82.7
22-Aug	83	89	90	90	87	87	85	80	82	77	70	61	54	48	42	39	37	35	39	51	60	66	75	77	66.9	89.7
23-Aug	81	82	81	82	85	84	76	66	58	48	38	32	30	28	26	25	25	25	26	35	39	52	60	67	52.1	84.7
24-Aug	67	66	66	65	66	67	62	58	50	42	25	20	18	16	16	13	15	18	25	29	30	33	38	41	39.4	66.7
25-Aug	44	37	31	33	38	41	41	40	35	29	21	22	21	18	18	21	24	25	26	29	32	35	37	45	30.9	45.1
26-Aug	47	53	57	60	79	88	88	89	87	83	79	78	84	80	68	66	63	61	67	74	77	80	81	71	73.3	89.0
27-Aug	70	74	75	71	70	66	66	63	61	50	42	37	35	41	42	37	35	34	42	48	62	70	74	69	55.6	74.5
28-Aug	70	77	78	79	75	74	70	62	57	50	38	33	31	28	24	23	25	28	32	36	39	49	56	60	49.8	79.2
29-Aug	65	66	68	73	77	75	69	61	53	45	40	34	30	27	26	24	25	25	27	36	37	44	46	47	46.6	76.9
30-Aug	48	51	48	51	50	48	57	55	49	44	42	37	34	33	34	34	35	36	37	41	43	46	49	50	43.9	57.1
31-Aug	52	54	55	58	61	66	71	73	77	77	81	85	88	89	88	87	88	90	89	90	89	90	91	91	78.4	91.2

59.1	62.0	63.8	65.4	67.2	68.0	65.0	60.2	54.3	47.6	41.2	37.1	34.2	32.1	31.0	31.4	30.9	32.6	36.1	42.0	46.2	51.3	55.3	57.4		Diurnal Average
83.5	89.2	89.7	89.6	87.4	87.7	88.4	89.0	86.8	82.9	80.8	84.7	87.8	88.6	88.2	87.3	88.2	89.7	89.2	89.7	89.4	89.9	90.6	91.2		Diurnal Maximum

# Hourly Averages for Relative Humidity at Crescent Heights

## August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

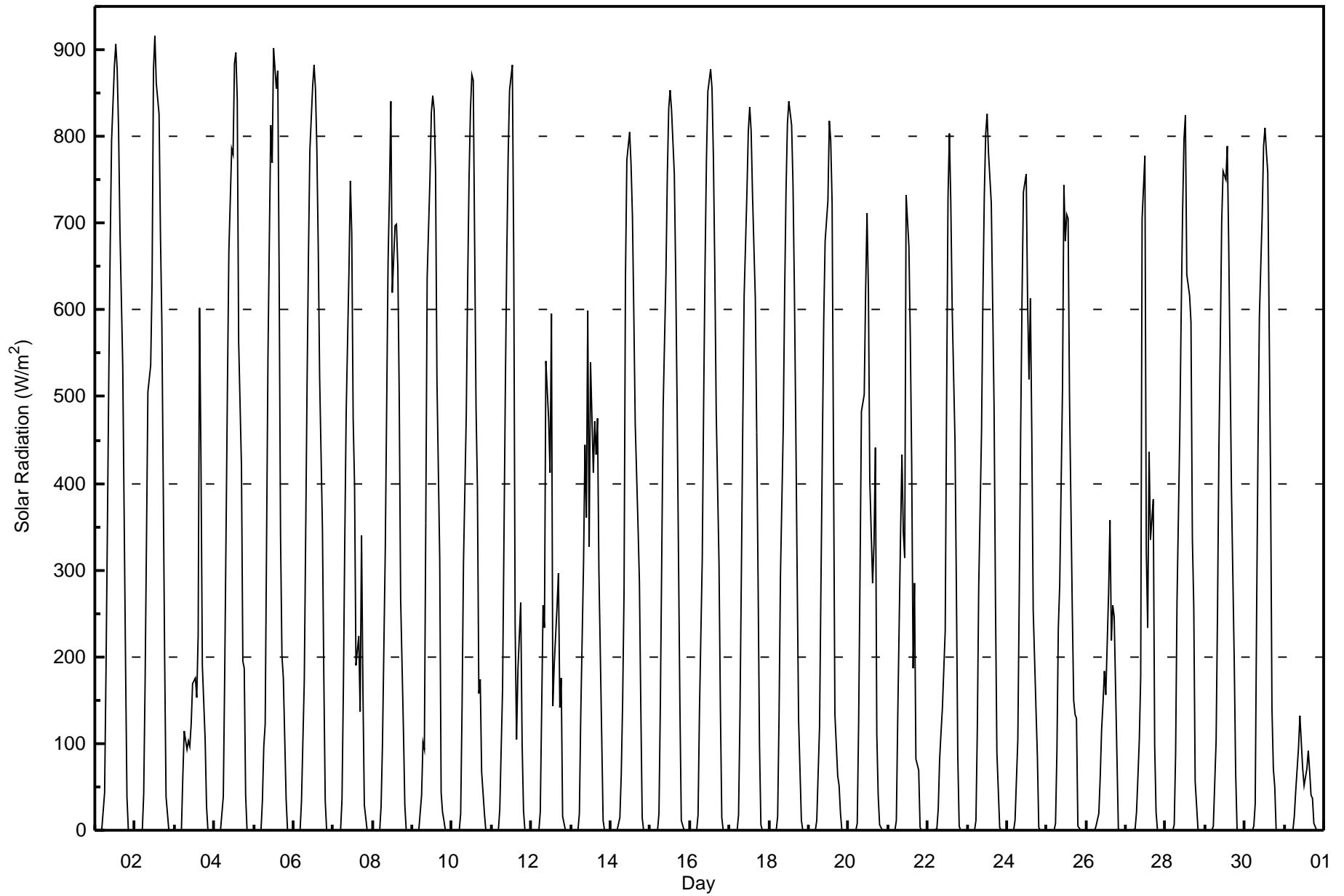
**Crescent Heights - Solar Radiation (SR) - W/m<sup>2</sup>**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 916.4 W/m <sup>2</sup> on Aug 2 13:00	Maximum Daily Average: 327.5 W/m <sup>2</sup> on Aug 1	Hours in Service: 744
Minimum Value: 0 W/m <sup>2</sup> on Aug 1 01:00	Minimum Daily Average: 34.5 W/m <sup>2</sup> on Aug 31	Hours of Data: 744
Maximum Diurnal Average: 696.0 W/m <sup>2</sup> at hour 13	Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 1	Hours of Missing Data: 0
Monthly Average: 236.86 W/m <sup>2</sup>	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 84.2 Q <sub>3</sub> = 462.4 P <sub>90</sub> = 746.8 P <sub>99</sub> = 881.2	Hours of Calibration: 0
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	1	43	184	348	524	673	795	881	906	877	808	691	535	362	192	39	1	0	0	0	327.5	905.8
2-Aug	0	0	0	0	1	41	170	336	505	536	633	877	916	861	825	686	584	398	199	39	0	0	0	0	317.1	916.4
3-Aug	0	0	0	0	1	61	115	93	104	97	122	170	175	153	226	603	428	191	105	27	0	0	0	0	111.3	602.7
4-Aug	0	0	0	0	0	38	180	348	518	668	786	779	884	896	841	563	420	195	187	40	0	0	0	0	306.0	896.2
5-Aug	0	0	0	0	1	34	97	122	547	685	813	769	902	854	876	639	340	200	175	35	0	0	0	0	295.4	902.4
6-Aug	0	0	0	0	0	34	173	342	515	666	784	859	883	856	786	671	521	348	176	34	0	0	0	0	318.7	883.0
7-Aug	0	0	0	0	0	35	164	334	482	646	748	687	476	397	189	224	136	340	161	30	0	0	0	0	210.4	748.2
8-Aug	0	0	0	0	0	28	100	324	489	656	736	841	620	697	698	650	499	267	115	29	0	0	0	0	281.2	840.7
9-Aug	0	0	0	0	0	41	102	93	353	638	752	828	847	831	760	521	312	43	22	12	0	0	0	0	256.4	846.5
10-Aug	0	0	0	0	0	20	144	308	477	631	752	831	872	865	488	393	158	173	68	19	0	0	0	0	258.3	871.6
11-Aug	0	0	0	0	0	24	162	337	511	662	777	854	882	662	236	105	186	263	100	22	0	0	0	0	241.0	882.1
12-Aug	0	0	0	0	0	21	140	260	233	540	473	413	596	144	192	257	296	142	176	16	0	0	0	0	162.5	596.2
13-Aug	0	0	0	0	0	19	134	309	444	361	599	327	539	412	471	434	476	298	108	12	0	0	0	0	206.0	599.1
14-Aug	0	0	0	0	0	14	65	150	276	636	772	805	768	708	594	469	351	286	141	15	0	0	0	0	252.1	804.8
15-Aug	0	0	0	0	0	20	146	315	487	640	758	833	854	830	756	639	489	313	143	12	0	0	0	0	301.5	854.0
16-Aug	0	0	0	0	0	17	138	312	492	650	772	853	877	855	775	646	482	307	140	14	0	0	0	0	305.4	877.4
17-Aug	0	0	0	0	0	17	133	293	465	616	735	807	833	807	732	614	459	285	98	7	0	0	0	0	287.5	833.5
18-Aug	0	0	0	0	0	16	132	293	464	618	737	814	840	813	744	622	463	290	126	11	0	0	0	0	291.1	839.8
19-Aug	0	0	0	0	0	12	119	282	439	588	680	727	818	795	723	431	133	62	51	19	0	0	0	0	244.9	817.7
20-Aug	0	0	0	0	0	8	124	296	482	502	621	712	622	402	285	329	440	110	41	6	0	0	0	0	207.6	711.9
21-Aug	0	0	0	0	0	10	130	340	433	343	313	732	674	567	422	187	284	81	69	3	0	0	0	0	191.2	732.0
22-Aug	0	0	0	0	0	2	24	82	112	142	230	498	730	803	723	601	449	278	85	4	0	0	0	0	198.5	802.7
23-Aug	0	0	0	0	0	11	117	282	459	615	732	803	826	780	723	605	487	262	90	4	0	0	0	0	283.2	826.4
24-Aug	0	0	0	0	0	11	105	269	455	612	736	757	608	520	613	457	254	140	85	4	0	0	0	0	234.4	757.1
25-Aug	0	0	0	0	0	8	92	233	284	510	743	680	710	706	500	255	150	133	129	4	0	0	0	0	214.1	743.2
26-Aug	0	0	0	0	0	0	5	19	61	116	147	183	157	275	357	219	260	246	84	2	0	0	0	0	88.8	356.8
27-Aug	0	0	0	0	0	1	22	62	105	177	704	778	322	233	436	336	381	98	21	0	0	0	0	0	153.2	778.4
28-Aug	0	0	0	0	0	6	89	264	461	598	713	797	825	641	617	585	336	257	57	2	0	0	0	0	260.3	824.6
29-Aug	0	0	0	0	0	4	103	251	439	563	702	759	750	790	679	539	392	193	67	1	0	0	0	0	259.7	789.8
30-Aug	0	0	0	0	0	4	31	249	442	592	710	789	810	782	758	404	140	70	50	0	0	0	0	0	243.0	810.1
31-Aug	0	0	0	0	0	0	16	45	95	133	101	71	52	71	91	68	40	37	8	0	0	0	0	0	34.5	132.7
	0.0	0.0	0.0	0.0	0.1	19.4	111.5	244.8	392.1	519.7	634.8	694.0	696.0	641.4	578.3	465.8	351.1	215.2	105.5	14.9	0.1	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	1.0	61.1	184.1	347.6	547.1	684.7	812.6	880.7	916.4	896.2	875.9	691.0	584.2	398.0	198.8	39.7	0.5	0.0	0.0	0.0	Diurnal Maximum	

# Hourly Averages for Solar Radiation at Crescent Heights

## August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

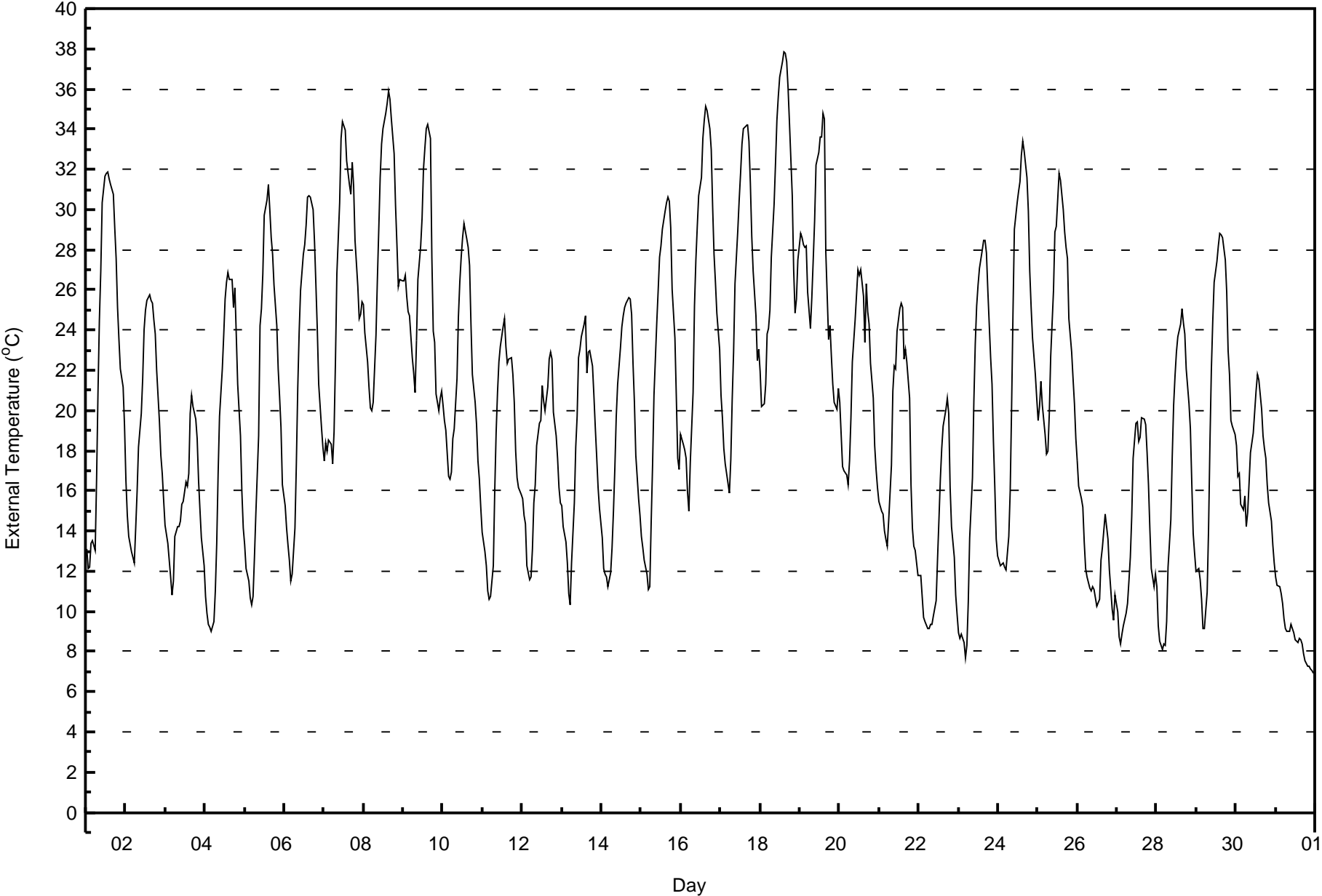
**Crescent Heights - External Temperature (ET) - °C**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 37.8 °C on Aug 18 15:00	Maximum Daily Average: 29.6 °C on Aug 18	Hours in Service: 744
Minimum Value: 7 °C on Sep 1 00:00	Minimum Daily Average: 8.9 °C on Aug 31	Hours of Data: 744
Maximum Diurnal Average: 26.9 °C at hour 15	Minimum Diurnal Average: 13.7 °C at hour 6	Hours of Missing Data: 0
Monthly Average: 20.37 °C	Percentiles: P <sub>1</sub> = 7.9 P <sub>10</sub> = 10.9 Q <sub>1</sub> = 14.2 Median = 20.1 Q <sub>3</sub> = 25.7 P <sub>90</sub> = 30.6 P <sub>99</sub> = 35.8	Hours of Calibration: 0
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	13	12	12	13	14	13	17	21	25	27	30	32	32	32	31	31	29	28	25	24	22	21	19	23.1	31.9	
2-Aug	17	15	14	13	13	12	14	16	18	20	22	24	25	25	26	25	24	24	22	19	18	17	16	19.3	25.7	
3-Aug	14	13	13	12	11	12	14	14	14	15	15	15	16	16	17	20	21	20	19	17	15	14	12	15.3	20.7	
4-Aug	11	10	9	9	9	9	11	13	17	20	22	24	26	26	27	27	27	25	26	24	21	19	16	14	18.4	26.8
5-Aug	13	12	12	11	10	11	13	15	19	24	25	27	30	31	31	30	29	28	26	24	22	21	19	16	20.7	31.2
6-Aug	15	14	13	13	12	12	14	17	21	24	26	28	28	29	31	31	31	30	28	26	24	21	19	18	21.9	30.7
7-Aug	17	18	18	19	18	17	19	22	27	30	34	34	34	34	32	31	31	32	31	28	26	25	25	25	26.2	34.4
8-Aug	25	24	22	21	20	20	20	24	27	29	32	33	34	35	35	36	35	35	33	30	28	26	27	26	28.2	35.9
9-Aug	26	27	26	25	25	23	22	21	23	27	28	30	32	33	34	34	34	28	24	23	21	20	21	21	26.1	34.2
10-Aug	20	19	19	17	17	17	19	19	22	25	26	28	29	29	29	28	27	24	22	20	19	17	17	15	21.8	29.3
11-Aug	14	13	12	11	11	11	12	16	19	21	22	23	24	25	23	22	23	23	22	20	18	17	16	16	18.1	24.5
12-Aug	16	15	14	12	12	12	13	15	16	18	19	19	21	20	20	21	23	23	23	20	19	18	16	15	17.5	22.9
13-Aug	15	14	13	12	11	10	12	15	18	20	23	23	24	24	25	22	23	23	22	21	19	18	16	15	18.3	24.7
14-Aug	14	12	12	12	11	12	13	15	17	20	21	23	24	25	25	25	26	26	25	22	20	18	16	15	18.7	25.6
15-Aug	14	13	13	12	11	11	14	17	21	24	26	28	28	29	30	30	31	30	29	26	24	21	18	17	21.5	30.6
16-Aug	19	18	18	18	16	15	17	21	25	27	29	31	32	34	34	35	35	34	33	30	28	26	25	23	26.0	35.1
17-Aug	21	20	18	17	16	16	18	21	23	26	29	30	32	33	34	34	34	33	31	29	27	25	22	23	25.5	34.2
18-Aug	22	20	20	21	24	24	25	28	30	32	34	36	37	37	38	38	37	36	34	31	27	25	26	27	29.6	37.8
19-Aug	29	29	28	28	28	26	24	26	28	29	32	33	34	34	35	35	28	24	24	23	21	20	20	21	27.4	34.8
20-Aug	20	19	17	17	17	16	18	20	22	24	26	27	27	27	26	23	26	25	24	22	21	18	17	16	21.5	27.0
21-Aug	15	15	15	14	14	13	15	17	21	22	22	24	25	25	25	23	23	22	21	16	14	13	13	12	18.3	25.3
22-Aug	12	12	11	10	9	9	9	9	9	10	11	13	15	17	18	19	20	21	20	16	14	13	11	10	13.2	20.6
23-Aug	9	9	9	8	8	8	10	14	17	21	23	25	26	27	28	28	28	28	26	23	21	18	16	14	18.5	28.4
24-Aug	13	12	12	12	12	12	14	16	20	25	29	30	31	31	33	33	33	32	30	27	25	24	22	21	22.9	33.4
25-Aug	19	20	21	20	19	18	18	20	23	26	29	29	30	32	31	30	29	28	28	25	23	22	20	19	24.1	31.8
26-Aug	17	16	16	15	13	12	12	11	11	11	11	11	10	11	13	13	14	15	14	12	11	10	10	11	12.5	17.5
27-Aug	10	9	8	9	9	10	10	12	13	15	18	19	19	18	19	20	20	19	18	16	14	12	11	12	14.2	19.6
28-Aug	11	9	9	8	8	8	9	12	15	18	20	22	23	24	24	25	24	24	22	20	19	16	14	13	16.6	25.1
29-Aug	12	12	12	11	9	9	11	14	18	22	24	26	27	28	29	29	29	27	26	23	22	19	19	19	19.9	28.8
30-Aug	18	17	17	15	15	16	14	15	16	18	19	20	21	22	21	20	19	18	18	16	15	14	13	12	17.1	21.8
31-Aug	12	11	11	11	10	10	9	9	9	9	9	9	9	8	9	9	8	8	8	7	7	7	7	7	8.9	11.7
	16.3	15.5	15.0	14.4	13.9	13.7	14.9	16.9	19.5	21.9	23.8	25.0	25.9	26.5	26.9	26.7	26.5	25.6	24.4	22.2	20.4	18.6	17.5	16.8	Diurnal Average	
	28.8	28.6	28.3	28.1	28.2	25.9	25.0	27.7	30.3	32.3	34.5	35.6	36.6	37.4	37.8	37.8	37.3	36.0	34.3	30.7	28.3	26.4	26.5	27.5	Diurnal Maximum	

# Hourly Averages for External Temperature at Crescent Heights

## August 2008





**Palliser Airshed Society**  
**Summary of Hourly Averages**

Crescent Heights  
 August 1, 2008 to September 1, 2008  
 WS (km/h), WD (deg)

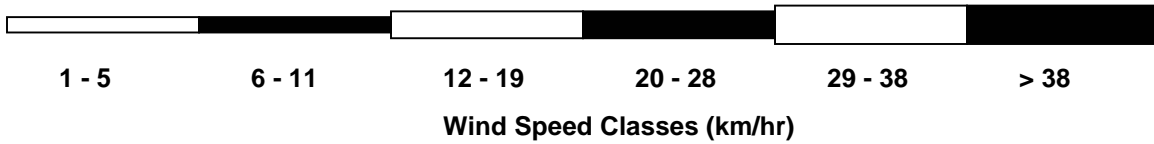
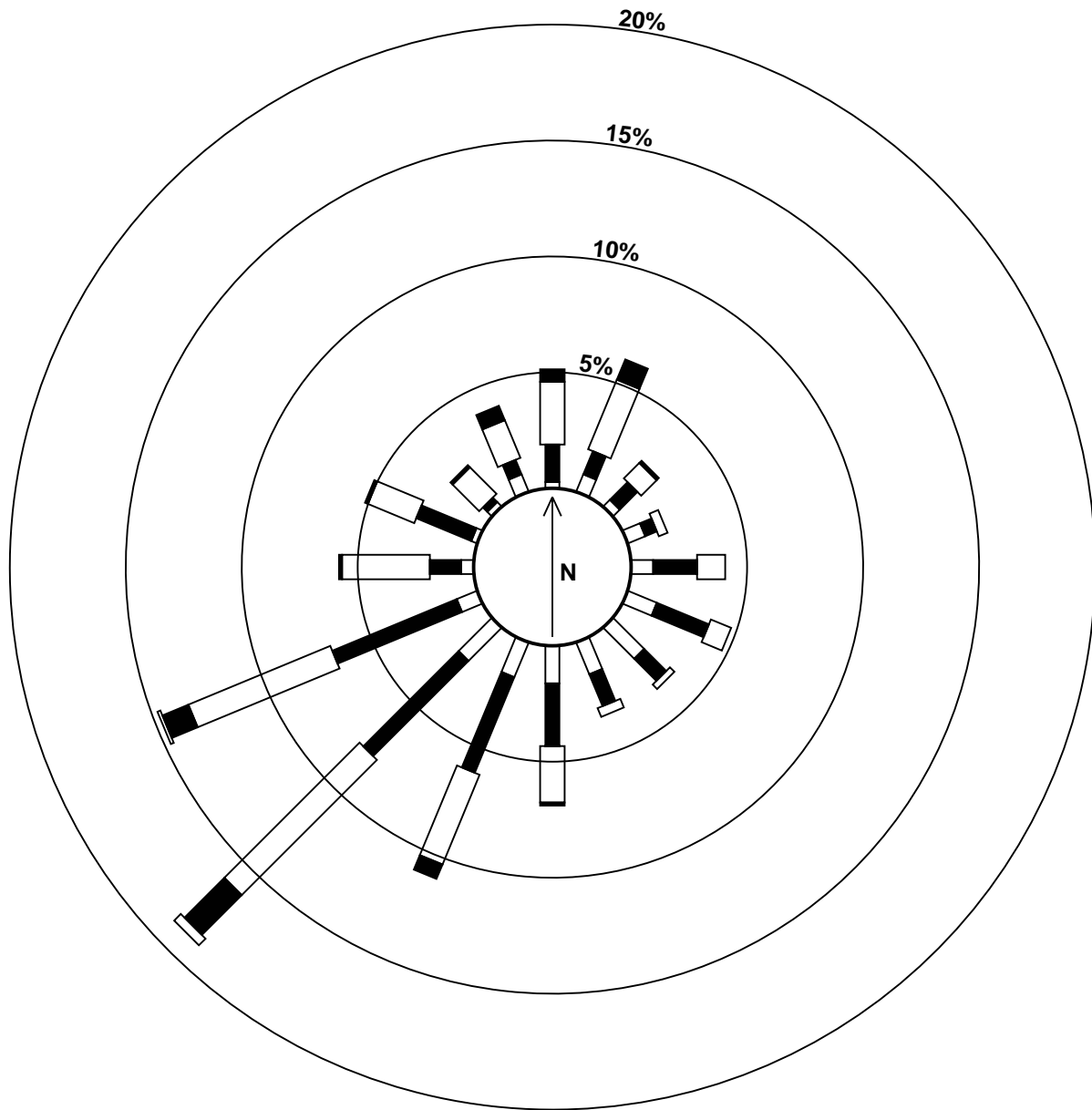
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	9	5	3	3	1	3	3	4	14	18	21	26	25	25	28	26	19	19	18	17	17	16	15	9	12.5	27.7
Dir	130	126	206	218	196	208	208	193	206	225	225	230	236	244	244	243	263	272	278	279	269	269	275	251	245	244
2 Spd	8	9	8	9	7	6	6	6	7	9	13	13	17	14	14	14	15	17	16	15	10	5	8	7	6.9	17.5
Dir	233	232	234	331	270	258	229	224	233	241	239	241	248	258	290	310	325	341	348	347	353	12	359	350	289	341
3 Spd	7	6	1	4	3	4	8	4	8	7	3	7	10	14	10	8	9	10	9	8	4	6	7	7	4.6	14.2
Dir	346	9	292	240	224	290	349	220	230	247	208	209	207	204	196	198	221	208	244	309	347	248	245	243	236	204
4 Spd	8	8	7	10	14	13	14	13	13	14	14	13	11	11	12	12	10	9	4	8	3	3	6	7	7.0	14.3
Dir	224	217	206	225	234	232	224	227	229	235	236	251	294	292	300	284	268	250	116	52	148	150	123	144	239	236
5 Spd	7	7	7	7	6	4	3	2	6	3	15	9	1	9	13	11	14	12	21	16	11	8	5	7	3.0	20.7
Dir	176	182	176	172	168	117	92	224	12	100	11	22	7	214	237	353	12	17	32	31	37	79	117	128	46	32
6 Spd	3	4	5	3	5	7	6	5	4	5	3	3	4	9	7	8	9	11	15	16	18	11	11	7	5.0	17.5
Dir	82	339	358	227	180	187	194	198	203	219	174	170	59	82	106	90	89	88	85	86	102	122	119	118	111	102
7 Spd	10	14	12	11	8	3	5	3	3	5	7	11	11	8	8	8	10	12	12	13	13	10	3	11	5.3	13.6
Dir	104	97	93	96	94	47	18	9	61	144	166	164	196	252	249	78	47	83	90	89	95	107	183	211	108	97
8 Spd	11	9	2	6	8	5	2	4	3	5	9	13	14	12	12	13	12	10	7	8	6	8	13	16	6.1	15.6
Dir	197	210	251	350	340	332	134	222	193	154	198	212	231	258	261	250	248	246	251	216	213	147	177	178	223	178
9 Spd	16	19	16	18	2	12	2	9	9	13	12	10	11	17	14	11	10	34	22	7	13	18	15	8	10.9	33.6
Dir	180	187	199	195	127	14	57	80	193	198	220	227	242	225	218	222	225	229	230	217	202	210	200	161	209	229
10 Spd	6	10	13	4	6	9	6	13	15	13	15	14	14	15	13	13	12	14	6	7	12	13	11	12	10.3	15.4
Dir	244	260	235	199	178	209	192	223	218	243	232	246	251	252	263	264	263	221	184	204	231	238	236	242	235	218
11 Spd	10	14	15	13	19	17	15	14	14	17	16	18	19	19	17	13	10	17	13	12	12	6	5	3	10.8	19.4
Dir	253	229	238	248	228	218	228	240	258	247	249	241	235	236	243	248	281	328	321	340	4	341	313	302	256	235
12 Spd	5	7	8	10	9	9	11	12	11	13	14	14	14	14	10	7	7	12	8	8	4	9	7	2	6.5	14.4
Dir	264	242	250	239	244	255	251	257	266	288	299	309	305	324	302	302	271	301	4	37	90	31	32	129	291	324
13 Spd	3	6	5	5	7	7	7	10	12	11	12	12	15	14	14	22	18	14	11	8	6	4	5	7	5.0	22.2
Dir	233	254	281	229	219	233	235	231	238	267	287	296	288	296	334	14	5	14	34	34	48	69	225	238	305	14
14 Spd	3	4	4	4	3	3	5	5	14	22	18	18	19	19	17	16	14	16	14	12	7	7	5	5	7.2	22.1
Dir	223	105	258	252	223	281	342	313	352	358	15	4	360	12	33	31	29	40	60	79	96	122	139	131	23	358
15 Spd	6	4	5	5	5	5	4	4	6	6	7	6	8	11	9	8	8	8	8	8	10	9	6	6	6.4	10.8
Dir	118	147	170	184	154	165	193	186	184	172	200	188	191	196	177	170	183	167	177	166	159	149	127	151	171	196
16 Spd	8	11	15	16	10	6	8	7	9	14	16	15	14	9	5	3	9	11	10	7	11	16	16	9	3.3	16.3
Dir	211	213	204	210	223	218	192	170	193	205	211	213	231	215	276	134	12	2	9	11	357	14	25	48	227	210
17 Spd	4	3	3	4	1	4	5	4	8	6	9	11	11	10	8	11	12	15	17	17	17	13	8	10	7.9	17.2
Dir	113	98	105	49	231	346	30	26	62	81	92	84	87	108	109	98	103	109	111	108	116	124	127	89	99	111
18 Spd	6	13	6	3	11	13	7	17	14	18	19	19	18	16	16	15	16	18	18	14	12	10	10	17	10.7	19.4
Dir	18	343	13	142	208	193	203	198	186	181	186	182	181	179	174	176	173	163	154	135	132	133	129	160	172	182
19 Spd	20	19	18	16	16	17	14	17	23	21	19	17	18	17	11	13	32	21	16	17	13	17	18	23	16.5	32.4
Dir	171	172	174	182	187	221	221	214	224	224	235	236	234	230	240	232	255	246	226	198	221	218	211	215	217	255
20 Spd	20	18	9	4	10	10	14	18	23	28	29	28	28	25	30	23	16	7	15	20	22	20	20	16	18.5	29.9
Dir	224	222	233	246	251	254	218	215	214	219	224	231	226	224	231	230	201	185	229	230	209	204	209	211	222	231
21 Spd	18	18	9	8	16	17	16	12	15	17	17	15	13	12	11	7	12	17	18	19	18	12	14	10	12.9	19.3
Dir	210	213	251	286	225	231	228	234	227	224	234	239	252	232	241	313	270	256	262	292	292	250	256	257	246	292
22 Spd	9	21	26	27	23	19	17	17	14	12	12	11	12	12	10	9	8	5	3	5	6	7	7	8	9.3	27.1
Dir	302	351	347	342	337	330	327	335	321	306	296	302	302	311	295	302	301	336	165	102	110	116	116	122	329	342

**Palliser Airshed Society**  
**Summary of Hourly Averages**

Crescent Heights  
 August 1, 2008 to September 1, 2008  
 WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	4	4	4	4	4	3	4	5	4	1	4	5	3	1	4	4	6	5	2	7	7	7	7	2.5	7.3
Dir	138	110	93	147	120	20	125	73	70	46	288	145	170	190	165	143	100	246	247	26	58	110	133	119	116	58
24 Spd	7	6	5	8	6	5	5	6	6	7	16	18	15	15	13	16	7	4	5	6	5	7	6	5	7.5	18.0
Dir	133	141	234	229	220	183	157	206	189	191	207	207	204	199	190	199	182	135	159	147	154	217	193	241	194	207
25 Spd	5	7	11	10	9	9	10	9	13	13	14	13	13	11	11	9	6	8	13	15	16	15	16	10	9.9	16.4
Dir	232	256	227	225	219	219	221	232	236	241	249	236	223	247	251	251	248	297	320	297	281	268	272	254	252	272
26 Spd	13	12	15	13	13	20	12	11	14	17	22	23	18	20	18	11	11	15	17	12	14	7	7	15	10.7	22.9
Dir	281	266	264	260	239	218	241	299	295	306	318	328	325	329	332	283	253	235	226	225	205	212	215	225	272	328
27 Spd	15	20	15	13	7	6	6	7	8	14	18	17	13	12	8	9	17	16	14	7	10	8	9	11	9.4	20.4
Dir	240	230	238	238	287	276	266	265	242	238	247	245	263	281	300	292	338	333	350	265	248	231	230	255	263	230
28 Spd	12	5	7	9	11	12	11	15	16	20	20	21	22	19	20	18	18	22	18	15	16	8	7	2	12.0	22.3
Dir	239	193	200	216	213	216	221	213	227	218	245	248	263	288	278	275	261	274	275	268	357	119	103	103	248	261
29 Spd	2	8	8	8	5	10	6	5	7	16	14	16	17	20	18	20	19	18	14	9	15	15	21	22	12.2	21.9
Dir	189	235	228	228	209	224	203	179	196	215	229	252	251	244	251	252	241	233	223	201	198	197	211	209	226	209
30 Spd	17	10	16	12	10	10	14	13	17	17	17	16	16	16	21	24	23	21	19	18	19	20	16	13	11.1	24.5
Dir	215	249	238	244	284	301	349	11	23	20	5	11	9	14	15	5	20	29	32	33	45	37	43	67	12	5
31 Spd	12	9	14	14	16	17	17	18	16	17	13	15	18	20	20	20	19	18	17	16	17	17	16	16	15.6	20.2
Dir	65	53	38	52	21	16	31	30	16	42	40	26	15	13	10	12	9	1	5	6	4	1	4	2	19	10
Spd	5.1	4.8	4.8	4.6	4.8	5.0	4.0	4.6	5.8	7.1	8.1	8.0	8.6	8.1	7.0	5.1	5.0	4.3	2.0	1.0	1.1	2.1	3.2	4.4	Diurnal Average	
Dir	208	220	231	233	232	242	237	234	236	235	244	246	251	254	264	274	286	279	294	332	203	187	200	197	Diurnal Maximum	
Spd	20.5	21.2	26.4	27.1	23.4	20.0	17.0	18.2	23.0	27.9	28.6	28.1	27.6	25.2	29.9	26.0	32.4	33.6	22.2	19.9	21.9	20.1	20.5	22.6	Diurnal Maximum	
Dir	224	351	347	342	337	218	31	215	214	219	224	231	226	244	231	243	255	229	230	230	209	204	211	215	Diurnal Maximum	
Maximum Speed Value: 34 km/h on Aug 9 18:00		Minimum Speed Value: 1 km/h on Aug 5 13:00		Hours in Service: 744																						
Maximum Daily Speed Average: 18.5 km/h on Aug 20		Minimum Daily Speed Average: 2.5 km/h on Aug 23		Hours of Data: 744																						
Maximum Diurnal Speed Average: 8.6 km/h at hour 13		Minimum Diurnal Speed Average: 1.0 km/h at hour 20		Hours of Missing Data: 0																						
Monthly Average Velocity: 4.51 km/h 242.2 deg				Speed Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 6.9 Median = 11.2 Q <sub>3</sub> = 15.7 P <sub>90</sub> = 18.6 P <sub>99</sub> = 27.4				Percent Operational Time: 100.0																		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Percentage Frequency Distribution																										
Direction	Speed Range (km/h)							Total																		
	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38																				
North	0.94	2.96	5.24	1.75	0.00	0.00	10.89																			
NorthEast	1.21	1.48	2.96	0.54	0.00	0.00	6.18																			
East	1.75	2.82	2.42	0.00	0.00	0.00	6.99																			
SouthEast	2.69	4.30	0.67	0.00	0.00	0.00	7.66																			
South	2.28	6.18	4.44	0.54	0.00	0.00	13.44																			
SouthWest	2.82	10.22	14.65	4.44	0.54	0.00	32.66																			
West	1.08	5.38	7.53	1.08	0.13	0.00	15.19																			
NorthWest	0.27	2.15	3.90	0.67	0.00	0.00	6.99																			
Total	13.04	35.48	41.80	9.01	0.67	0.00	100.00																			

# Wind Rose for WS at Crescent Heights August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Crescent Heights - Wind Speed (WS) - km/h**  
**August 1, 2008 to September 1, 2008**

Maximum Speed: 34 km/h on Aug 9 18:00	Maximum Daily Speed Average: 19.3 km/h on Aug 20	Hours in Service: 744
Minimum Speed: 3 km/h on Aug 17 05:00	Minimum Daily Speed Average: 5.6 km/h on Aug 23	Hours of Data: 744
Maximum Diurnal Speed Average: 15.4 km/h at hour 14	Minimum Diurnal Speed Average: 9.1 km/h at hour 7	Hours of Missing Data: 0
Monthly Average Speed: 12.20 km/h	Percentiles: P <sub>1</sub> = 4.0 P <sub>10</sub> = 5.6 Q <sub>1</sub> = 7.5 Median = 11.9 Q <sub>3</sub> = 16.1 P <sub>90</sub> = 19.1 P <sub>99</sub> = 28.0	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	9	6	4	4	4	5	4	6	15	18	22	26	25	26	28	26	20	20	19	17	18	16	15	9	15.0	28.1
2-Aug	9	9	9	9	8	6	7	7	7	9	14	14	17	15	14	14	16	18	16	15	10	7	8	8	11.1	18.0
3-Aug	8	6	5	5	4	7	9	6	8	7	5	8	10	14	10	9	10	11	9	10	6	6	7	7	7.7	14.4
4-Aug	8	8	7	11	14	13	14	13	13	14	15	15	13	12	13	13	12	9	6	8	6	5	7	7	10.6	14.7
5-Aug	7	7	7	7	6	5	4	3	6	5	16	10	8	10	14	12	15	13	21	16	11	8	6	7	9.5	20.9
6-Aug	6	4	6	5	5	7	6	5	5	6	6	7	8	11	9	9	10	12	15	16	18	11	11	8	8.6	17.8
7-Aug	10	14	12	11	9	6	6	5	6	6	9	12	12	9	10	11	10	12	12	13	13	10	8	12	9.9	13.7
8-Aug	11	9	6	7	8	6	3	5	5	6	9	13	14	13	12	13	12	10	8	8	7	9	13	16	9.3	15.7
9-Aug	17	19	16	19	15	13	6	10	10	13	13	10	12	18	15	12	11	34	23	10	13	18	15	8	14.5	33.8
10-Aug	8	11	14	7	7	9	7	13	16	13	15	14	15	16	13	13	12	16	6	8	12	13	11	12	11.7	16.0
11-Aug	11	14	15	13	19	17	15	14	15	17	16	18	20	20	17	13	13	17	13	12	12	7	6	5	14.2	20.0
12-Aug	6	7	8	10	9	9	12	12	11	13	15	14	14	15	11	10	9	12	11	8	5	10	8	4	10.1	15.1
13-Aug	4	6	5	5	7	8	7	10	12	12	13	13	16	15	19	23	19	15	11	8	7	5	6	7	10.5	22.5
14-Aug	6	5	6	6	5	4	5	6	14	23	19	18	19	20	18	17	15	16	14	12	8	7	6	6	11.4	22.6
15-Aug	6	5	6	6	5	5	5	4	6	7	8	8	10	12	11	10	9	8	9	9	10	9	6	7	7.5	11.9
16-Aug	9	11	15	16	11	7	8	7	10	15	17	16	15	11	8	8	10	11	10	7	11	16	16	10	11.4	16.7
17-Aug	5	3	4	4	3	5	5	5	9	7	10	12	12	11	10	12	12	16	17	17	17	13	8	10	9.5	17.2
18-Aug	7	13	9	6	12	13	8	17	14	18	20	20	19	17	16	16	16	18	18	14	12	10	10	17	14.2	19.7
19-Aug	20	20	18	17	17	17	15	17	23	21	19	17	19	17	12	14	33	23	17	17	14	17	19	23	18.5	32.6
20-Aug	21	18	10	7	10	11	15	18	23	28	29	29	28	26	30	23	16	7	16	20	22	20	20	17	19.3	30.1
21-Aug	18	18	10	9	16	17	17	13	15	17	17	15	14	14	13	13	15	18	20	20	18	13	14	10	15.2	20.4
22-Aug	10	22	26	27	24	20	17	18	15	12	12	12	13	13	11	10	9	6	5	6	6	7	7	8	13.1	27.1
23-Aug	5	4	5	4	5	5	4	5	6	6	6	6	7	7	6	7	6	7	5	3	7	7	7	7	5.6	7.5
24-Aug	7	7	6	8	7	6	5	7	7	7	17	18	16	15	14	16	8	4	6	6	6	8	7	6	8.8	18.4
25-Aug	5	7	12	11	10	10	10	9	13	14	14	14	13	12	12	10	7	9	13	15	16	16	17	12	11.6	16.8
26-Aug	14	13	15	14	13	20	15	12	14	18	22	23	18	20	18	12	11	15	17	12	14	7	8	15	15.0	23.0
27-Aug	15	20	15	14	8	6	6	8	8	14	19	17	14	14	11	17	17	16	14	8	10	9	9	11	12.5	20.4
28-Aug	12	7	7	9	11	12	11	15	17	21	21	21	22	20	21	19	19	23	19	16	16	11	8	4	15.1	22.5
29-Aug	6	9	8	8	6	10	6	6	7	17	15	16	18	21	19	20	19	18	14	9	15	15	21	22	13.5	21.9
30-Aug	17	11	16	13	11	10	14	13	18	17	18	16	17	17	21	25	23	21	19	18	19	20	17	13	16.8	24.6
31-Aug	12	10	14	15	17	17	17	18	16	17	13	15	18	20	20	20	19	18	17	16	17	17	16	16	16.5	20.3

10.0	10.4	10.2	9.9	9.7	9.8	9.1	9.9	11.7	13.5	14.9	15.1	15.3	15.4	14.6	14.4	13.9	14.6	13.6	12.0	12.2	11.2	10.8	10.4	Diurnal Average
20.6	21.6	26.5	27.1	23.5	20.2	17.4	18.4	23.2	28.2	28.8	28.5	28.1	25.9	30.1	26.3	32.6	33.8	22.6	20.0	22.1	20.4	20.7	22.7	Diurnal Maximum

All monthly, daily, and diurnal averages have been calculated using scalar methods

**Palliser Airshed Society**  
**Summary of Hourly Standard Deviations**

**Crescent Heights - Wind Direction (WD) - deg**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 96.5 deg on Aug 3 03:00																								Hours in Service:	744
Minimum Value: 2.8 deg on Aug 11 21:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 4.6 P <sub>10</sub> = 7.3 Q <sub>1</sub> = 10.2 Median = 14.8 Q <sub>3</sub> = 25.6 P <sub>90</sub> = 45.5 P <sub>99</sub> = 82.4																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	12	25	57	51	82	72	72	48	19	9	13	12	12	13	9	8	12	10	13	14	9	10	9	13	82.4
2-Aug	8	10	33	21	21	22	19	31	26	22	17	20	15	20	19	18	21	14	10	5	9	51	17	14	51.1
3-Aug	26	26	97	36	51	52	41	60	15	17	62	30	11	9	13	24	24	10	21	35	68	16	12	9	96.5
4-Aug	9	11	9	10	5	6	6	8	12	11	13	30	25	29	25	21	35	22	43	15	60	47	14	22	59.8
5-Aug	17	16	8	17	19	42	53	73	22	51	14	25	93	38	24	28	22	14	8	5	14	20	32	14	93.2
6-Aug	63	36	13	74	24	11	13	18	35	43	64	71	76	35	50	32	26	19	8	6	10	12	10	16	75.7
7-Aug	11	7	7	6	14	52	20	55	57	26	34	19	25	26	35	48	13	14	8	7	8	10	73	26	72.6
8-Aug	13	12	72	13	7	54	70	28	67	37	20	14	14	14	16	13	12	10	14	16	41	26	9	8	71.8
9-Aug	11	11	12	11	83	17	82	38	20	12	25	25	27	11	16	17	13	8	12	54	13	12	8	24	83.4
10-Aug	43	20	21	58	28	17	33	10	8	13	13	13	15	15	18	18	14	34	17	15	8	9	8	11	58.0
11-Aug	14	12	11	10	7	8	10	16	11	9	17	15	14	13	8	9	37	8	11	19	3	33	23	52	51.5
12-Aug	23	13	21	11	7	10	7	10	14	17	15	18	19	17	18	46	38	19	40	12	34	24	29	76	75.5
13-Aug	64	15	22	21	16	14	16	12	13	19	18	20	15	15	41	11	10	15	9	8	17	46	19	6	63.9
14-Aug	71	45	46	55	68	61	34	38	11	11	12	15	10	13	17	20	17	14	15	7	29	11	34	18	70.6
15-Aug	6	26	22	24	19	32	34	23	26	30	39	58	37	28	31	40	26	19	12	11	6	9	9	31	57.6
16-Aug	29	13	8	7	16	30	17	18	19	15	13	16	20	34	51	82	28	16	10	8	7	8	6	25	82.2
17-Aug	21	45	32	40	82	38	35	49	22	45	24	23	24	27	33	22	16	9	6	7	8	10	14	13	82.4
18-Aug	30	20	61	72	16	12	35	12	12	9	9	10	13	15	14	14	13	9	10	11	9	8	17	12	72.1
19-Aug	7	6	6	9	13	14	17	13	9	7	8	13	12	12	29	14	5	30	21	8	15	9	11	6	29.5
20-Aug	5	8	25	73	16	26	21	7	8	8	7	10	11	14	9	7	16	13	16	6	8	10	9	8	73.2
21-Aug	6	8	31	22	11	6	12	19	10	13	15	17	18	31	39	54	43	7	28	11	11	20	12	13	54.0
22-Aug	25	12	5	4	6	9	8	13	13	13	17	21	19	19	23	29	28	46	54	18	19	16	9	11	53.8
23-Aug	20	36	46	40	21	29	42	27	30	56	90	56	49	82	93	69	58	37	13	68	12	9	11	8	93.4
24-Aug	13	34	16	8	11	37	17	25	26	22	14	13	15	13	13	14	13	20	18	24	26	25	39	47	47.2
25-Aug	30	16	24	32	12	23	13	10	6	12	14	12	15	27	26	20	15	25	14	16	7	8	11	29	32.1
26-Aug	10	15	8	10	17	9	38	16	10	9	7	7	8	7	14	27	12	12	7	7	8	24	27	13	37.8
27-Aug	17	5	5	8	22	17	22	28	23	8	11	13	15	31	40	54	15	11	10	28	13	23	9	10	54.5
28-Aug	17	54	18	9	7	7	11	8	16	12	15	13	13	16	13	13	13	8	14	14	18	49	18	71	70.8
29-Aug	70	28	9	16	27	7	12	18	16	13	26	13	14	12	13	10	9	6	8	14	7	5	7	3	70.5
30-Aug	7	28	13	29	22	19	13	8	11	16	12	13	12	17	13	6	9	5	5	5	6	7	10	8	29.0
31-Aug	8	13	7	15	9	6	11	11	9	10	11	10	6	5	5	5	5	5	4	4	5	5	3	4	14.8
70.6	53.6	96.5	74.4	83.4	72.4	82.2	73.5	67.3	55.9	89.7	70.7	93.2	82.3	93.4	82.2	57.6	46.4	53.8	67.8	67.9	51.1	72.6	75.5		



# **PAS – Portable-Brooks**

Monthly Summary Tables, Graphs and Roses

**Palliser Airshed Society**  
**Summary of Hourly Averages**

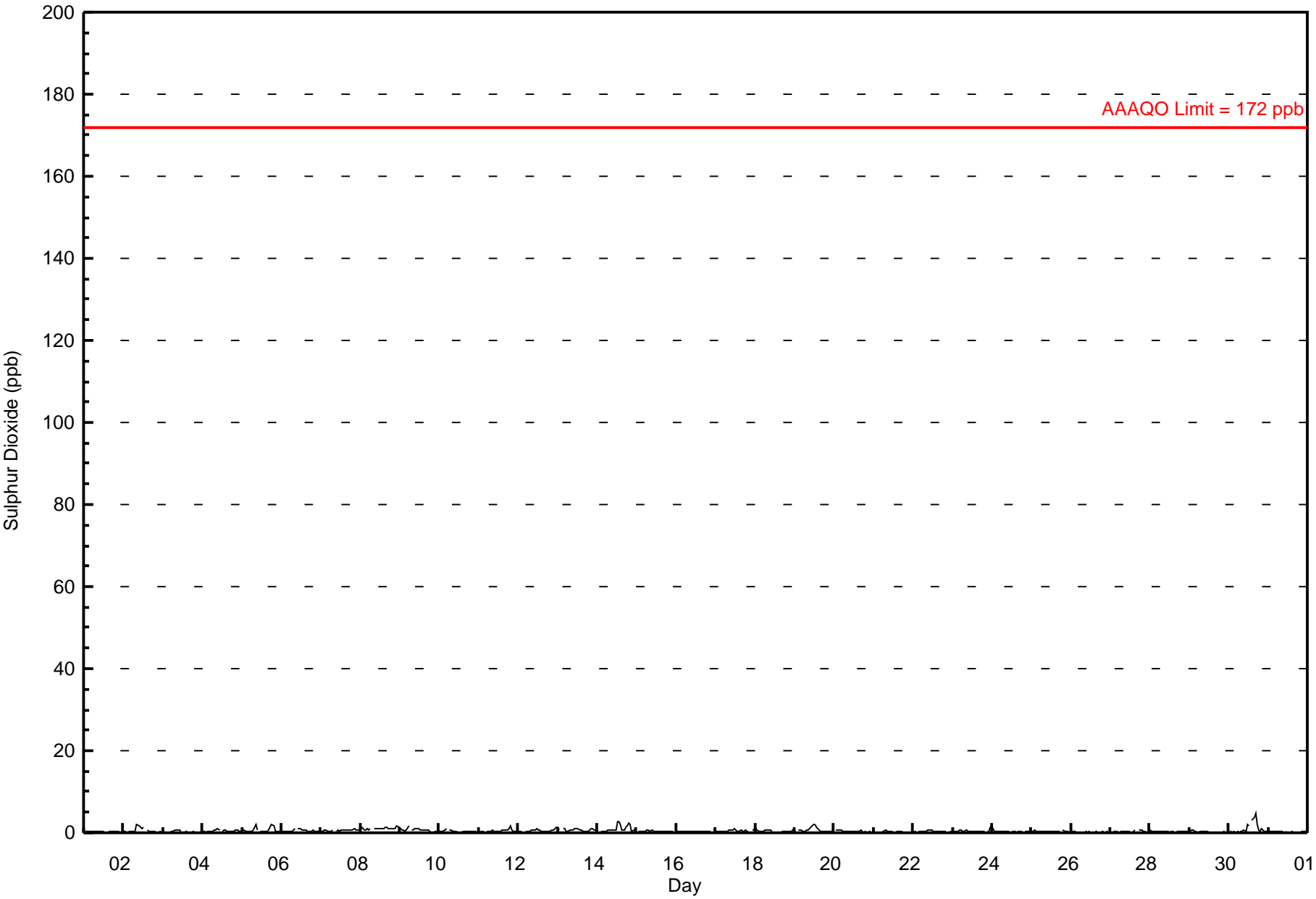
**Portable-Brooks - Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 4.8 ppb on Aug 30 17:00	Maximum Daily Average: 1.0 ppb on Aug 8
Minimum Value: 0 ppb on Aug 29 14:00	Hours of Data: 707
Maximum Diurnal Average: 0.6 ppb at hour 9	Hours of Missing Data: 37
Monthly Average: 0.47 ppb	Hours of Calibration: 37
Minimum Daily Average: 0.2 ppb on Aug 26	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.3 ppb at hour 3	
Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.4 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.1	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5
2-Aug	0	0	0	0	0	0	0	0	0	2	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0.5	1.9
3-Aug	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
4-Aug	0	0	0	0	0	0	0	1	1	1	1	A	0	1	1	0	1	0	0	0	1	1	0	0	0.5	1.1
5-Aug	1	1	0	0	0	0	0	1	2	1	A	0	0	0	0	0	1	1	2	2	0	0	0	0	0.7	2.2
6-Aug	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0.5	1.1
7-Aug	0	0	1	1	0	0	0	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
8-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.0	1.7
9-Aug	1	1	1	0	1	2	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.7
10-Aug	0	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
11-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	1	1	1	1	1	1	2	1	0	0	0	0.5	1.8
12-Aug	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0.6	1.3
13-Aug	1	1	A	1	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0.7	1.3
14-Aug	1	A	0	0	0	0	1	1	1	1	1	3	3	2	1	1	1	2	2	2	0	1	1	1	1.0	2.7
15-Aug	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.6
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.5
17-Aug	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	0	1	0	0	0	A	1	1	0.5	0.9
18-Aug	2	1	0	0	0	0	1	1	1	1	0	C	C	C	A	A	0	0	0	0	0	0	0	1	0.5	1.6
19-Aug	0	A	1	1	1	0	0	1	1	1	1	2	2	1	1	1	0	0	0	0	0	0	0	1	0.7	1.9
20-Aug	A	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0.4	0.7
21-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.7
22-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6
23-Aug	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0.4	1.3
24-Aug	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.6
25-Aug	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.3	0.6
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.5
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	0	0	0	0	0.3	0.8
28-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.8
29-Aug	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5
30-Aug	0	0	0	0	0	0	0	0	0	1	0	2	2	A	3	4	5	2	1	0	1	0	0	0	1.0	4.8
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	Diurnal Average
	1.6	1.3	0.7	0.9	0.9	1.7	0.9	0.8	2.2	1.8	1.3	2.1	2.7	2.6	3.2	3.6	4.8	1.9	2.0	2.4	1.9	1.1	1.7	1.4	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb

# Hourly Averages for SO<sub>2</sub> at Portable-Brooks August 2008





**Palliser Airshed Society**  
**Summary of Hourly Maximums**

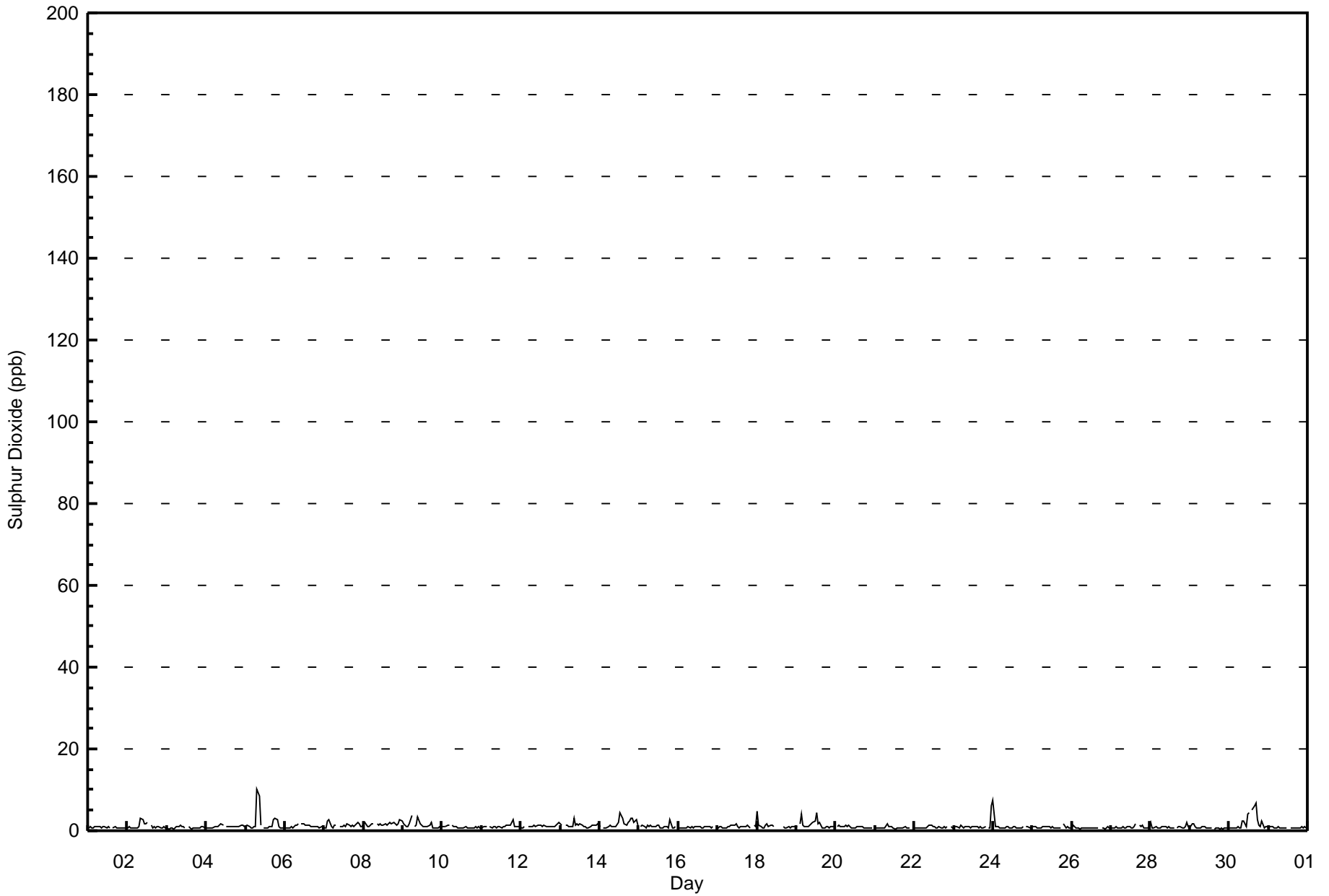
**Portable-Brooks - Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 10.1 ppb on Aug 5 08:00	Maximum Daily Average: 2.1 ppb on Aug 30	Hours in Service: 744
Minimum Value: 0 ppb on Aug 26 06:00	Minimum Daily Average: 0.7 ppb on Aug 26	Hours of Data: 707
Maximum Diurnal Average: 1.5 ppb at hour 9	Minimum Diurnal Average: 0.9 ppb at hour 5	Hours of Missing Data: 37
Monthly Average: 1.12 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.7 Median = 0.9 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 1.7 P <sub>99</sub> = 4.4	Hours of Calibration: 37
		Percent Operational Time: 100.0

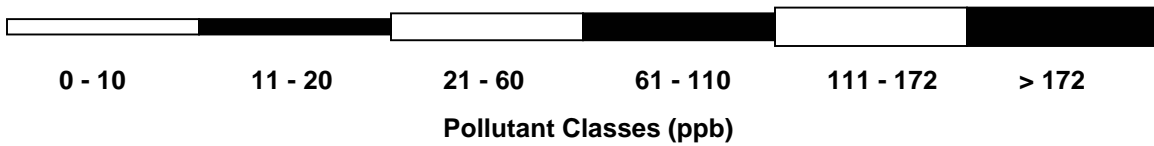
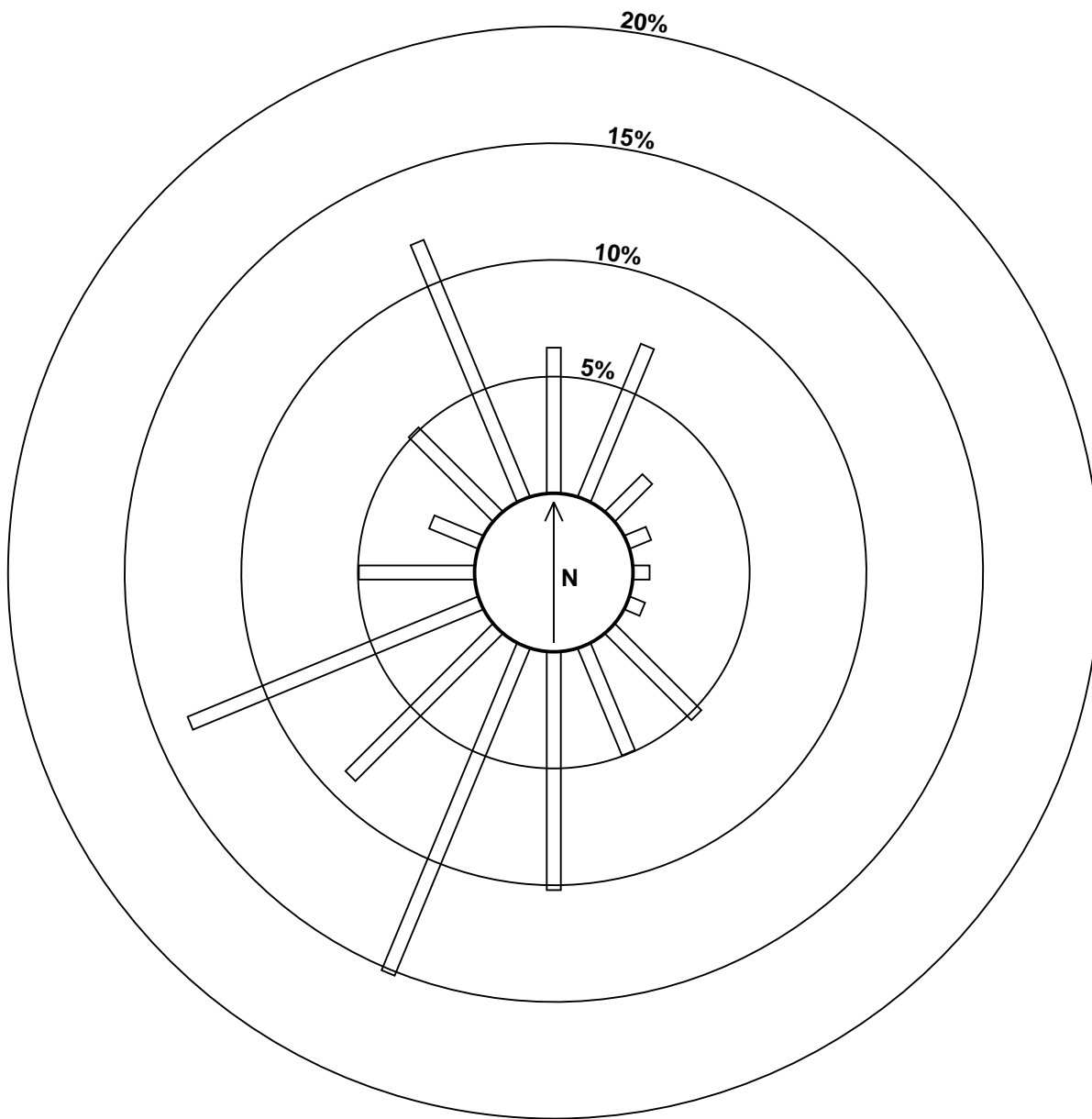
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1
2-Aug	1	1	1	1	1	1	1	1	3	3	2	2	2	A	1	1	1	1	1	1	1	1	1	1	1.1	3.0
3-Aug	1	0	1	1	0	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	0.8	1.4
4-Aug	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6
5-Aug	1	1	1	1	1	1	1	10	9	1	A	1	1	1	1	1	1	3	3	3	1	1	1	1	1.9	10.1
6-Aug	1	1	1	1	1	1	1	1	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7
7-Aug	1	1	2	3	1	1	1	1	A	1	1	1	1	1	2	2	1	1	1	1	2	2	1	1	1.3	2.8
8-Aug	2	2	1	1	2	2	2	A	2	1	2	1	1	2	2	2	2	2	2	2	1	2	3	2	1.7	2.7
9-Aug	2	1	1	1	2	4	A	1	1	3	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1.4	3.6
10-Aug	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
11-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1.1	2.7
12-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	1.9
13-Aug	2	1	A	1	1	1	1	1	3	1	2	1	2	1	1	1	1	1	1	1	1	1	1	2	1.3	3.1
14-Aug	1	A	1	1	1	1	1	1	1	1	1	2	4	4	3	2	1	2	2	3	3	2	3	1	1.8	4.5
15-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	A	1.1	2.7
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.1
17-Aug	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.6
18-Aug	5	1	1	1	1	1	2	1	1	1	1	C	C	C	A	A	1	1	1	1	1	1	1	1	1.2	4.7
19-Aug	1	A	2	4	1	1	1	1	1	2	2	2	4	2	2	1	1	1	1	1	1	1	1	1	1.5	4.5
20-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.5
21-Aug	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.8
22-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.3
23-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	6	1.1	6.2
24-Aug	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	7.5
25-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	0.9	1.6
26-Aug	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	0.7	1.5
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	0.9	1.7
28-Aug	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	0.9	2.0
29-Aug	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0	1	0	1	1	1	0.8	1.6
30-Aug	1	1	1	1	1	1	1	1	3	2	1	4	4	A	5	6	7	3	1	1	2	1	1	1	2.1	6.7
31-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
	1.3	1.0	1.0	1.0	0.9	1.0	1.0	1.3	1.5	1.2	1.1	1.2	1.4	1.0	1.2	1.2	1.1	1.1	1.1	1.2	1.0	1.0	1.1	1.2	Diurnal Average	
	7.5	2.2	2.2	4.1	1.5	3.6	1.8	10.1	8.5	3.3	2.0	4.2	4.5	3.7	5.0	6.2	6.7	2.8	3.0	3.0	2.9	2.0	2.8	6.2	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for SO<sub>2</sub> at Portable-Brooks August 2008



# Pollutant Rose for SO<sub>2</sub> at Portable-Brooks August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages**

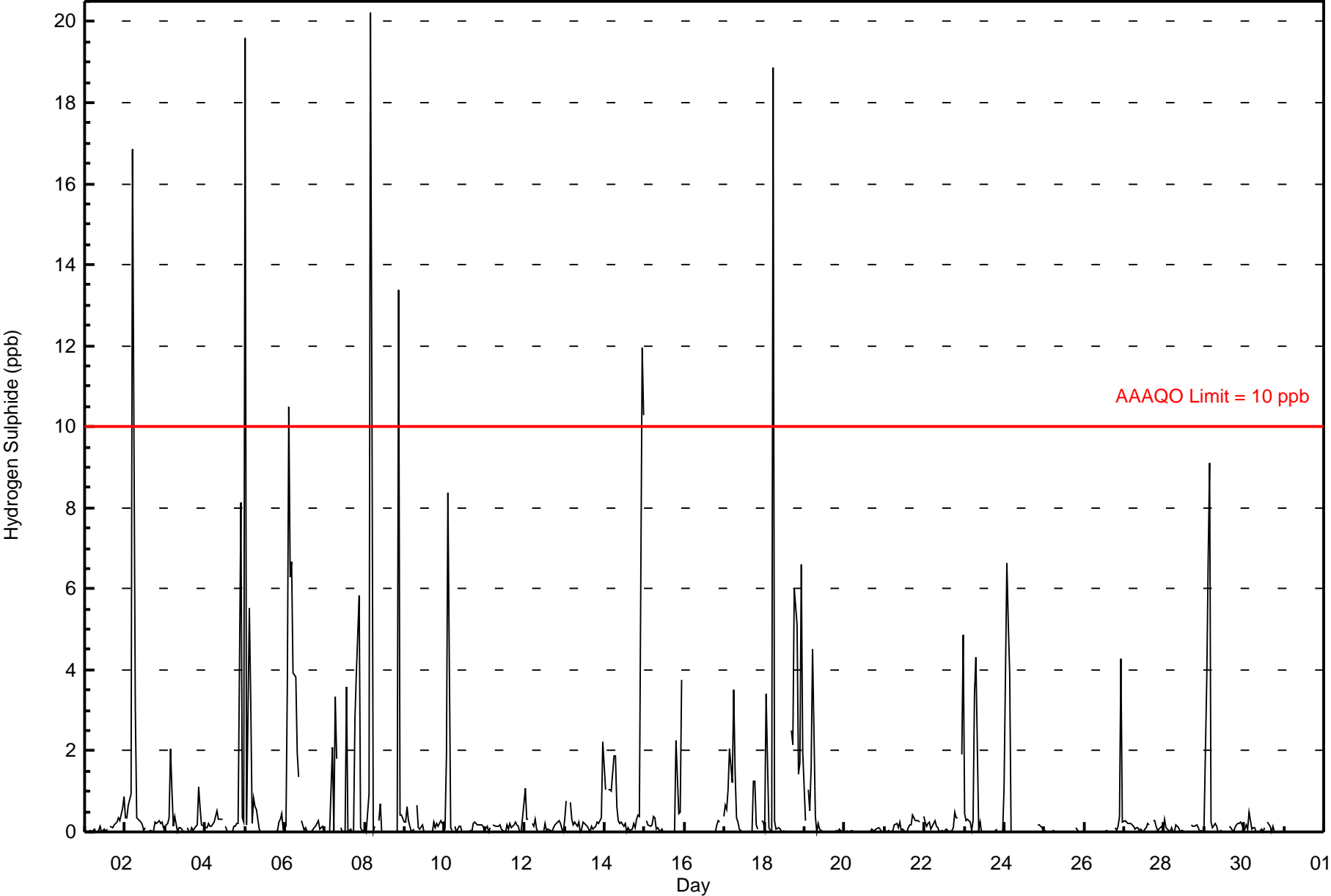
**Portable-Brooks - Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**August 1, 2008 to September 1, 2008**

Number of Exceedances (AAAQO): 1-hr: 9 24-hr: 0	Hours in Service: 744
Maximum Value: 20.2 ppb on Aug 8 04:00	Maximum Daily Average: 2.4 ppb on Aug 18
Minimum Value: 0 ppb on Aug 1 01:00	Hours of Data: 709
Minimum Daily Average: 0.0 ppb on Aug 31	Hours of Missing Data: 35
Maximum Diurnal Average: 1.7 ppb at hour 4	Hours of Calibration: 35
Monthly Average: 0.60 ppb	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 1.0 P <sub>99</sub> = 10.8	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0.1	0.9
2-Aug	0	0	1	1	17	10	3	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1.5	16.9
3-Aug	0	0	0	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0.3	2.1
4-Aug	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	8	0	0	0.5	8.1
5-Aug	20	0	6	3	0	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	19.6
6-Aug	0	4	11	6	7	4	4	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	10.5
7-Aug	0	0	0	0	2	0	3	2	A	0	0	0	0	4	0	0	0	0	3	4	6	0	0	0	1.0	5.8
8-Aug	0	0	1	20	11	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	13	0	0	0	2.1	20.2
9-Aug	0	1	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Aug	0	2	8	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	8.4
11-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.7
12-Aug	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
13-Aug	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3	2.2
14-Aug	1	A	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	10	1.5	12.0
15-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	A	0.4	3.7
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.4
17-Aug	1	1	1	2	1	4	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0.6	3.5
18-Aug	0	3	0	0	0	19	0	0	0	0	0	0	0	C	C	C	2	2	6	5	1	2	7	2	2.4	18.9
19-Aug	0	A	1	1	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.5
20-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
21-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
22-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	5	0.4	4.9
23-Aug	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	4.3
24-Aug	1	7	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.7	6.6
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	4	0	0.2	4.3
27-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3
29-Aug	0	4	7	9	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.9	9.1
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	0.9	0.8	1.4	1.7	1.5	1.5	0.7	0.4	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.4	0.5	0.9	0.5	1.1	0.8	Diurnal Average	
	19.6	6.6	10.5	20.2	16.9	18.9	3.8	4.3	1.4	0.7	0.3	0.3	0.2	3.6	0.2	0.2	2.5	2.2	6.0	5.1	13.4	8.1	12.0	10.3	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb

# Hourly Averages for H<sub>2</sub>S at Portable-Brooks August 2008



**Palliser Airshed Society**  
**Summary of Hourly Maximums**

**Portable-Brooks - Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**August 1, 2008 to September 1, 2008**

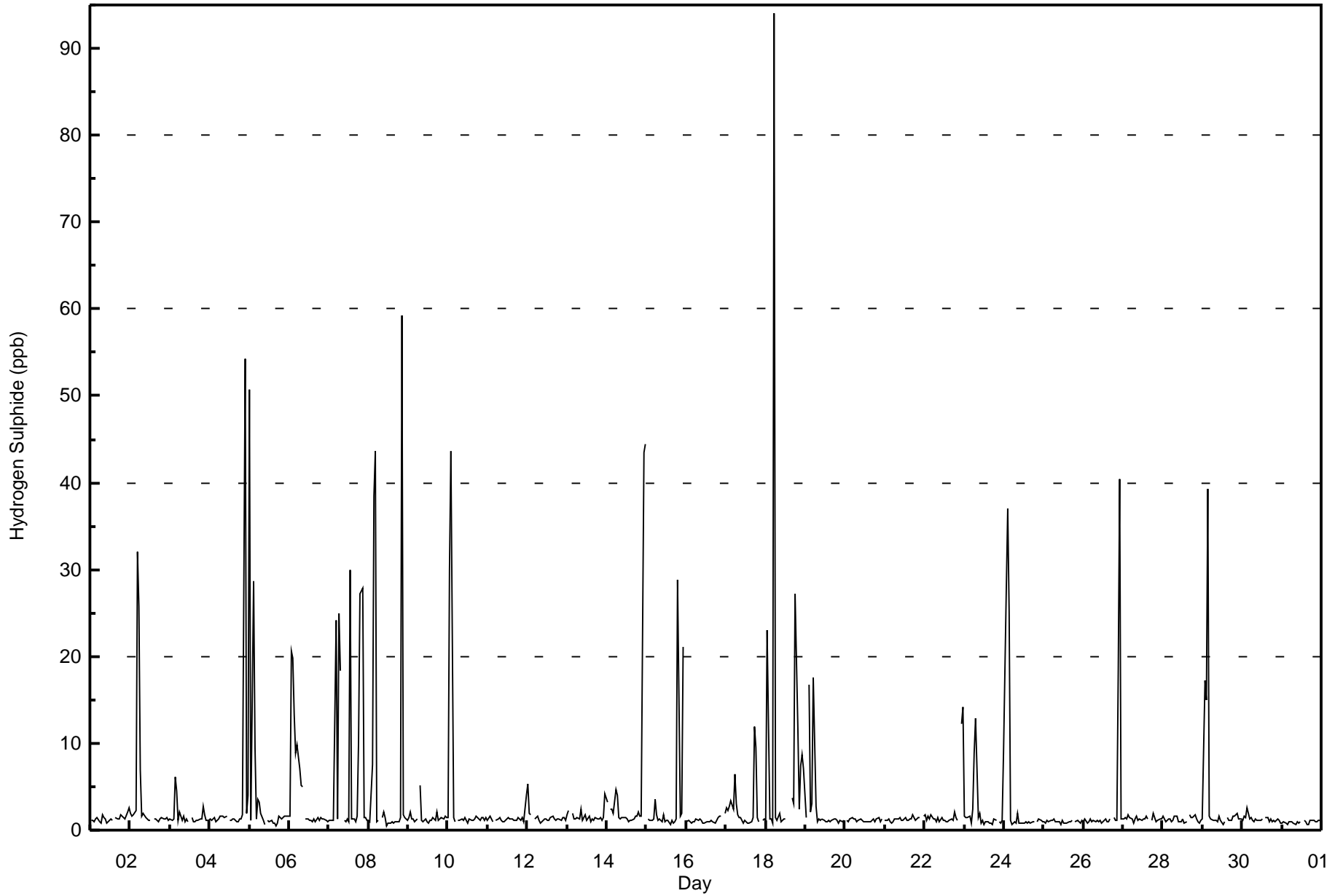
Maximum Value: 94.1 ppb on Aug 18 06:00	Maximum Daily Average: 9.6 ppb on Aug 18	Hours in Service: 744
Minimum Value: 0 ppb on Aug 5 17:00	Minimum Daily Average: 0.9 ppb on Aug 31	Hours of Data: 709
Maximum Diurnal Average: 6.6 ppb at hour 3	Minimum Diurnal Average: 1.1 ppb at hour 15	Hours of Missing Data: 35
Monthly Average: 3.11 ppb	Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.0 Median = 1.2 Q <sub>3</sub> = 1.5 P <sub>90</sub> = 3.1 P <sub>99</sub> = 43.7	Hours of Calibration: 35
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	1	1	1	2	1	1	1	1	1	1	A	2	1	1	2	2	1	1	2	3	1.4	2.5
2-Aug	2	2	2	2	32	26	7	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	4.1	32.1
3-Aug	1	1	1	6	4	1	2	1	2	1	1	1	A	1	1	1	1	1	1	1	3	2	1	1	1.7	6.1
4-Aug	1	1	1	2	1	1	2	2	2	1	2	A	1	1	1	1	1	1	1	1	2	54	2	4	3.8	54.2
5-Aug	51	1	29	10	1	4	3	2	1	1	A	1	1	1	1	1	0	1	2	1	1	2	2	2	5.1	50.6
6-Aug	2	21	20	13	9	10	7	5	5	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4.7	20.6
7-Aug	1	1	1	1	24	1	25	18	A	1	1	1	1	30	1	1	1	2	10	27	28	1	1	1	7.9	30.0
8-Aug	1	1	8	38	44	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	59	2	1	1	7.4	59.2
9-Aug	1	2	1	1	1	1	A	5	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	2	1.5	5.2
10-Aug	1	30	44	2	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	4.3	43.7
11-Aug	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.3	4.0
12-Aug	5	2	2	A	1	2	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1.5	5.3
13-Aug	2	2	A	2	1	1	1	1	2	1	1	2	1	2	1	1	1	1	1	1	1	1	4	1	1.6	4.2
14-Aug	3	A	2	2	2	5	4	2	1	2	1	1	1	1	1	1	2	2	2	2	2	44	44	5.6	44.4	
15-Aug	A	1	1	1	1	4	2	1	1	1	2	1	1	1	1	1	1	1	1	29	2	2	21	A	3.5	28.7
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	2	1.1	1.9
17-Aug	3	2	3	3	2	6	3	2	1	2	1	1	1	1	1	1	1	12	9	1	1	A	1	1	2.6	11.9
18-Aug	1	23	1	1	1	94	1	1	2	1	1	1	1	C	C	C	4	3	27	12	2	7	9	7	9.6	94.1
19-Aug	1	A	17	2	3	18	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.7	17.5
20-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1.2	1.5
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	A	2	1.3	1.8
22-Aug	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	A	12	14	2.3	14.1
23-Aug	2	1	1	2	1	2	9	13	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2.0	12.9
24-Aug	9	28	37	25	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	5.1	37.0
25-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.3
26-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	18	40	1	3.6	40.5
27-Aug	1	1	1	2	1	1	1	1	2	1	1	1	1	1	2	1	A	1	2	1	1	1	1	1	1.3	1.9
28-Aug	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	A	2	2	1	2	1	1	1	1	1.2	1.8
29-Aug	1	17	15	39	2	1	1	1	1	1	2	1	1	1	A	1	1	1	2	2	2	2	1	1	4.2	39.3
30-Aug	1	2	1	3	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.3	2.6
31-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2

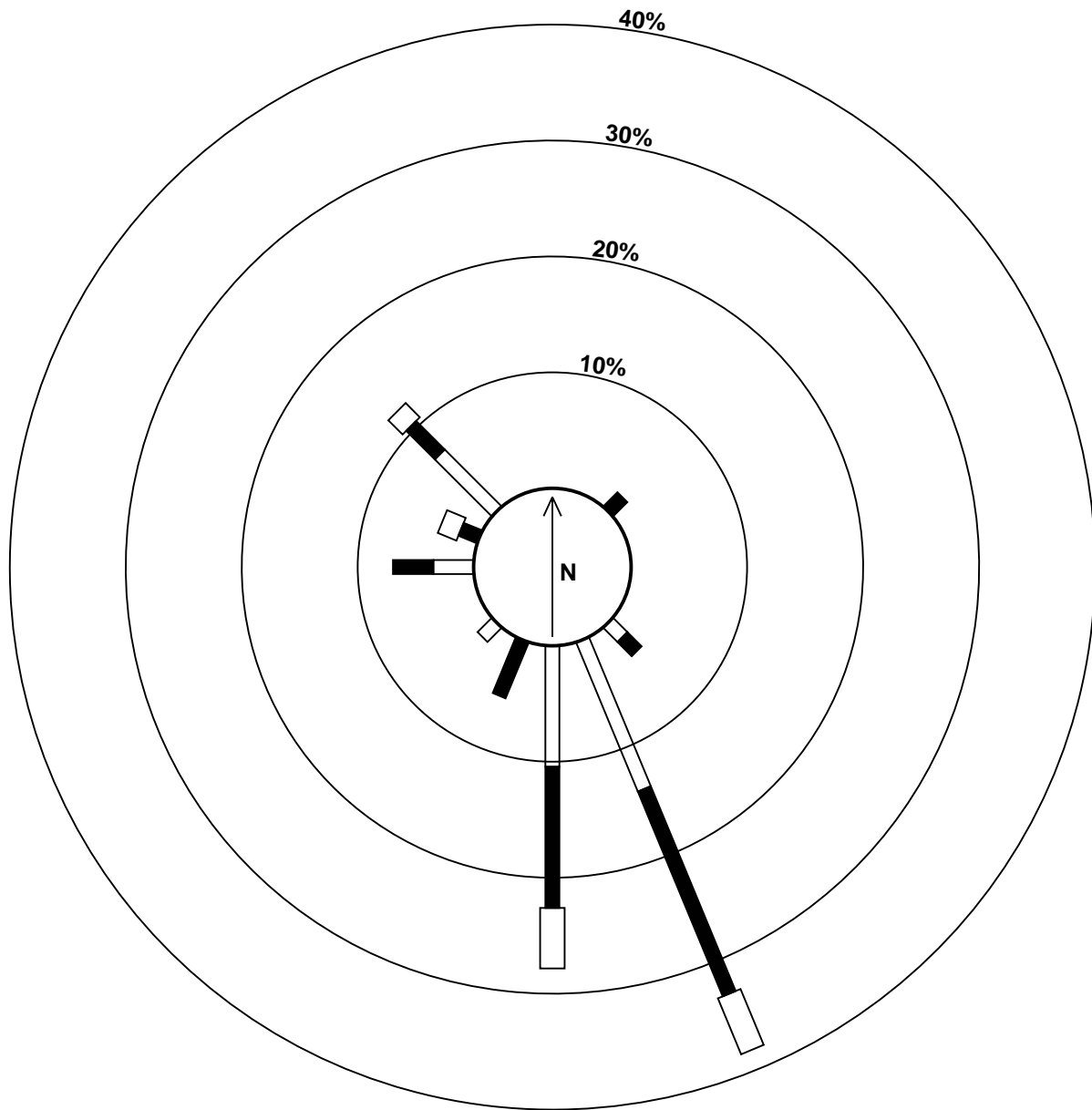
3.5	5.2	6.6	5.6	4.9	6.4	3.0	2.5	1.5	1.2	1.2	1.1	1.1	2.1	1.1	1.2	1.2	1.6	2.8	3.5	4.2	4.0	5.4	3.7	Diurnal Average
50.6	29.9	43.7	39.3	43.7	94.1	25.0	18.4	5.0	2.2	1.7	1.8	1.4	30.0	1.7	1.5	3.7	11.9	27.3	28.7	59.2	54.2	43.5	44.4	Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for H<sub>2</sub>S at Portable-Brooks August 2008



# Pollutant Rose for H<sub>2</sub>S at Portable-Brooks August 2008





**Palliser Airshed Society**  
**Summary of Hourly Averages**

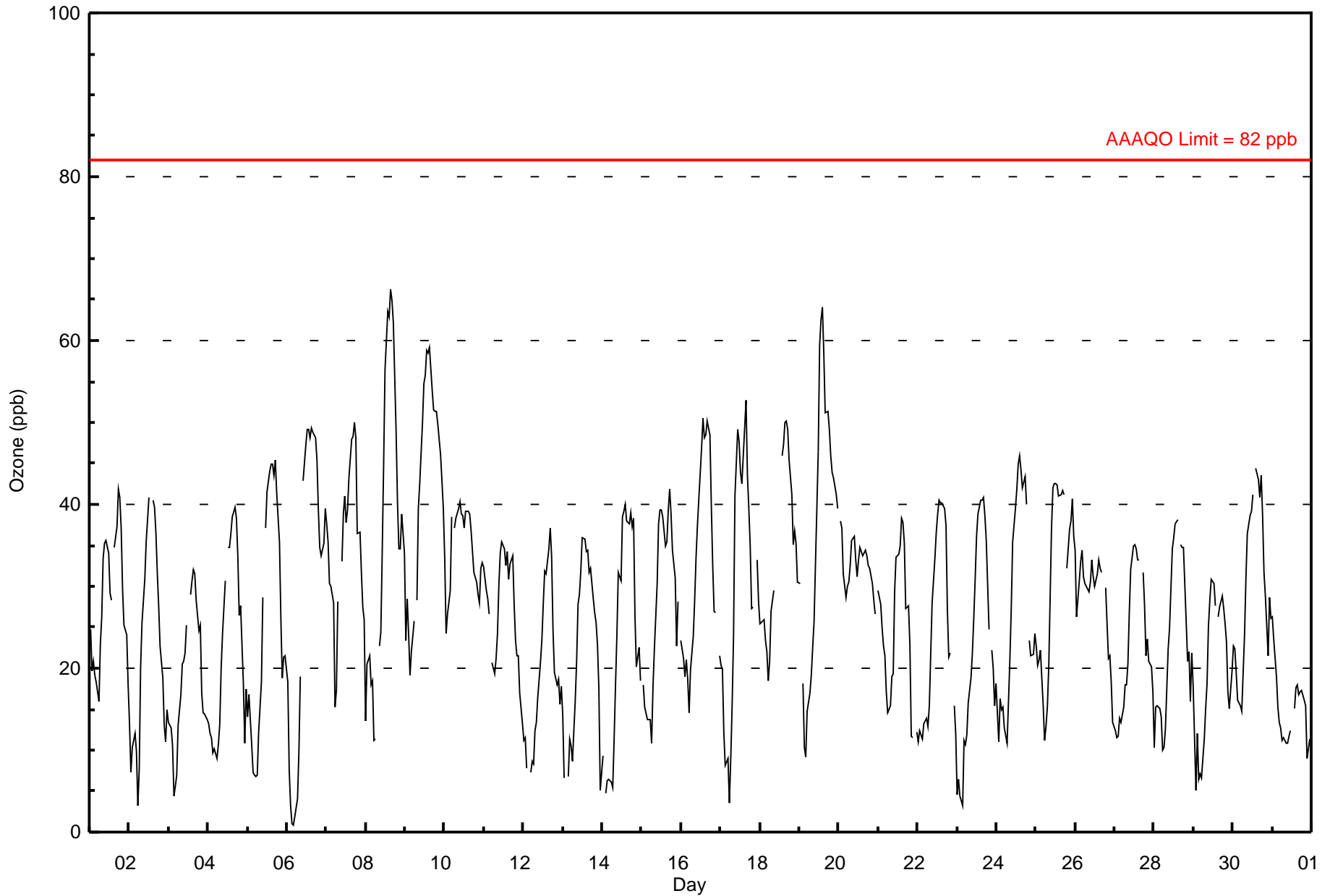
**Portable-Brooks - Ozone (O<sub>3</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Number of Exceedances (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 66.2 ppb on Aug 8 16:00	Maximum Daily Average: 42.5 ppb on Aug 9
Minimum Value: 1 ppb on Aug 6 05:00	Hours of Data: 708
Maximum Diurnal Average: 41.1 ppb at hour 15	Hours of Missing Data: 36
Monthly Average: 27.48 ppb	Hours of Calibration: 36
Minimum Daily Average: 14.9 ppb on Aug 31	Percent Operational Time: 100.0
Minimum Diurnal Average: 13.1 ppb at hour 6	
Percentiles: P <sub>1</sub> = 3.9 P <sub>10</sub> = 11.2 Q <sub>1</sub> = 17.3 Median = 27.7 Q <sub>3</sub> = 36.7 P <sub>90</sub> = 43.3 P <sub>99</sub> = 62.1	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	25	20	21	19	18	16	23	26	33	35	36	34	29	28	A	35	37	42	41	37	30	25	24	18	28.4	41.8																							
2-Aug	13	7	10	12	10	3	8	20	26	31	36	38	41	A	41	40	37	32	28	23	19	13	11	15	22.2	40.9																							
3-Aug	13	13	10	4	6	7	13	17	20	21	22	25	A	29	31	32	31	28	25	25	17	15	14	14	18.8	32.0																							
4-Aug	13	12	12	10	10	9	11	13	20	24	31	A	35	35	36	38	40	38	34	26	28	18	11	17	22.7	39.7																							
5-Aug	14	17	11	7	7	7	7	12	18	29	A	37	42	44	45	45	43	45	41	35	26	19	21	21	25.9	45.4																							
6-Aug	18	8	3	1	1	2	4	10	19	A	43	47	49	49	48	49	49	48	45	39	35	34	35	39	29.4	49.3																							
7-Aug	38	35	30	30	28	15	17	28	A	33	39	41	38	39	43	48	48	50	48	36	37	32	27	26	35.1	50.1																							
8-Aug	13	20	22	18	19	11	11	A	23	24	34	45	56	64	63	66	65	62	49	40	35	35	39	34	36.9	66.2																							
9-Aug	23	29	24	19	22	26	A	28	39	42	50	55	56	59	58	59	54	52	51	51	50	46	43	40	42.5	59.1																							
10-Aug	33	24	27	29	39	A	37	38	40	40	39	39	37	39	39	39	37	34	32	31	29	28	32	33	34.5	40.4																							
11-Aug	32	29	28	27	A	21	19	21	24	30	34	35	35	33	34	31	33	34	28	23	22	22	17	13	27.2	35.4																							
12-Aug	11	12	8	A	7	9	8	12	13	17	21	23	28	32	31	35	37	34	25	20	18	19	16	18	19.6	37.2																							
13-Aug	14	7	A	7	11	10	9	16	21	28	29	32	36	36	34	34	32	32	28	27	26	23	18	5	22.3	35.9																							
14-Aug	9	A	5	6	6	6	5	11	18	24	32	31	39	39	40	38	38	39	37	38	26	20	22	18	23.9	39.9																							
15-Aug	A	18	15	14	14	14	11	18	22	30	38	39	39	39	35	35	39	42	39	34	31	23	28	A	28.0	41.8																							
16-Aug	23	21	19	21	19	15	20	24	28	34	37	41	47	50	48	48	50	48	40	33	27	27	A	21	32.3	50.4																							
17-Aug	20	20	12	8	9	4	9	16	24	41	49	48	44	43	46	53	44	39	35	27	27	A	33	28	29.5	52.7																							
18-Aug	25	26	26	23	22	18	21	27	30	C	C	C	A	46	47	50	50	49	45	41	35	37	35	30	34.3	50.1																							
19-Aug	30	A	18	10	9	15	17	19	23	26	33	46	59	62	64	58	51	51	49	46	44	43	41	40	37.2	64.0																							
20-Aug	A	38	37	31	29	30	30	32	36	36	33	31	33	35	34	34	34	34	33	32	30	28	27	A	32.7	38.0																							
21-Aug	30	28	25	23	21	17	15	15	19	19	29	34	34	35	38	38	35	27	28	23	12	12	A	12	24.7	38.3																							
22-Aug	11	12	12	11	13	14	13	15	22	28	33	37	39	41	40	40	40	37	27	21	22	A	15	12	24.2	40.5																							
23-Aug	5	6	4	3	11	11	12	16	19	22	26	31	36	39	40	40	41	39	36	25	A	22	20	15	22.6	40.8																							
24-Aug	18	11	16	15	15	13	11	16	21	27	35	40	42	45	46	44	42	43	40	A	23	22	22	24	27.5	46.0																							
25-Aug	23	20	21	22	15	11	13	15	20	37	42	43	43	42	41	41	42	41	A	32	37	38	41	36	31.2	42.6																							
26-Aug	34	26	31	33	34	31	30	30	29	30	33	31	30	31	33	32	32	A	30	25	21	21	18	13	28.8	34.5																							
27-Aug	12	11	12	14	13	15	18	18	20	27	32	35	35	35	33	33	A	32	28	22	24	21	20	17	22.9	35.0																							
28-Aug	10	15	15	15	14	10	10	13	22	25	30	35	36	38	38	A	35	35	35	26	21	22	16	22	23.3	38.2																							
29-Aug	18	5	12	6	7	7	11	15	18	25	28	31	30	28	A	26	27	29	27	25	23	17	15	20	19.7	30.8																							
30-Aug	23	22	19	16	15	15	20	24	31	36	39	39	41	A	44	43	41	44	39	32	29	22	29	26	29.9	44.4																							
31-Aug	26	24	19	15	13	13	11	11	11	11	12	12	A	15	18	18	17	17	17	16	15	9	10	11	14.9	26.2																							
																								20.1	18.5	17.5	15.7	15.3	13.1	14.8	19.3	23.7	28.8	33.6	36.3	39.6	39.6	41.1	40.8	40.0	39.3	35.3	30.4	27.2	24.5	24.2	22.1	Diurnal Average	
																								37.6	38.0	37.1	33.0	38.5	31.2	37.2	38.3	39.5	42.5	50.1	54.7	59.5	63.5	64.0	66.2	64.9	62.2	51.4	51.3	49.8	46.1	42.8	39.6	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

# Hourly Averages for O<sub>3</sub> at Portable-Brooks August 2008



**Palliser Airshed Society  
Summary of Hourly Maximums**

**Portable-Brooks - Ozone (O<sub>3</sub>) - ppb  
August 1, 2008 to September 1, 2008**

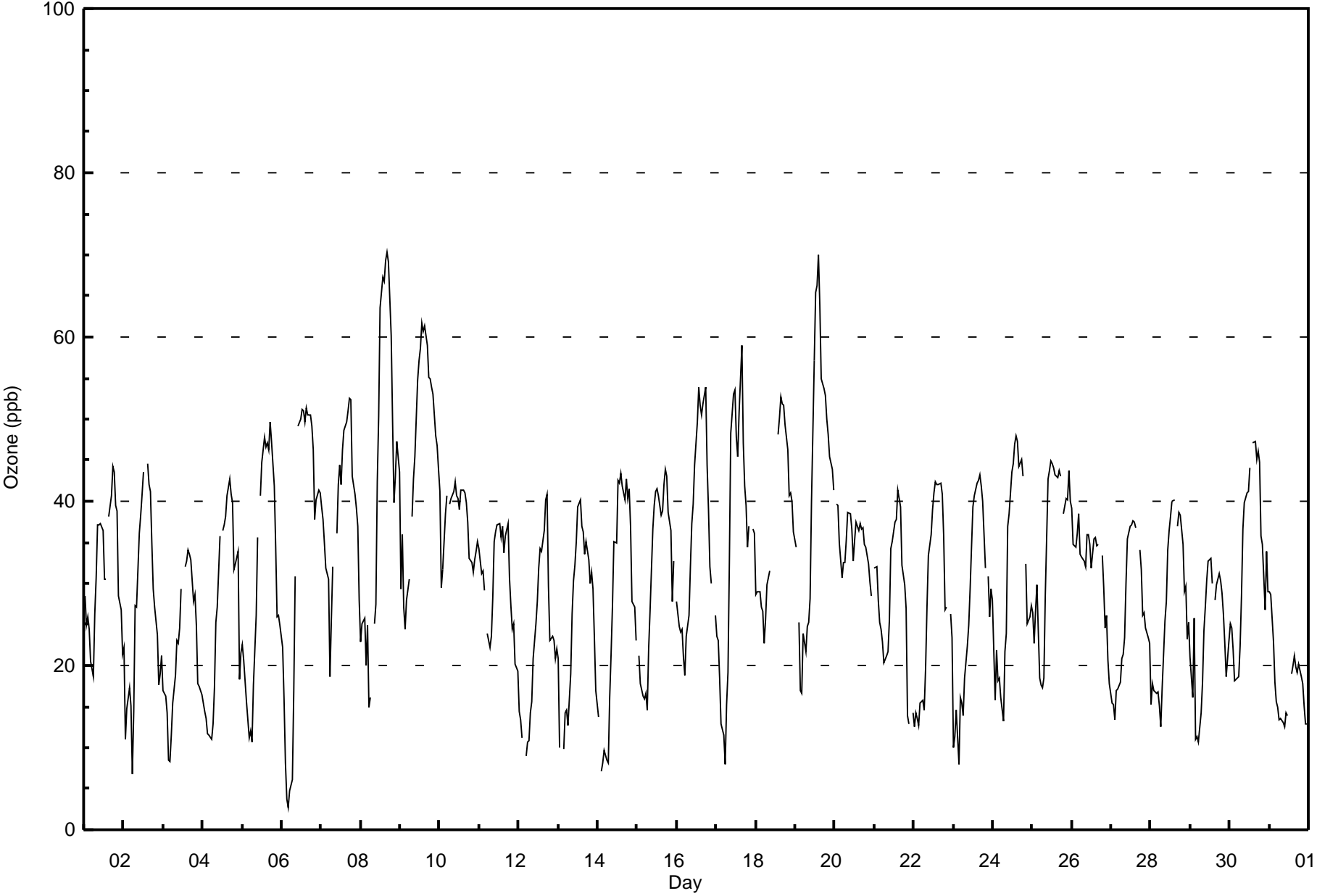
Maximum Value: 70.3 ppb on Aug 8 17:00	Maximum Daily Average: 46.5 ppb on Aug 9	Hours in Service: 744
Minimum Value: 3 ppb on Aug 6 05:00	Minimum Daily Average: 17.6 ppb on Aug 31	Hours of Data: 708
Maximum Diurnal Average: 44.0 ppb at hour 15	Minimum Diurnal Average: 16.9 ppb at hour 6	Hours of Missing Data: 36
Monthly Average: 31.36 ppb	Percentiles: P <sub>1</sub> = 7.9 P <sub>10</sub> = 14.6 Q <sub>1</sub> = 21.7 Median = 31.8 Q <sub>3</sub> = 40.2 P <sub>90</sub> = 47.1 P <sub>99</sub> = 66.0	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	28	25	26	24	21	19	26	31	37	37	37	37	30	30	A	38	41	44	43	40	39	29	27	21	31.8	44.3
2-Aug	22	11	15	17	15	7	14	27	27	36	38	41	44	A	45	42	41	35	29	27	24	18	19	21	26.8	44.6
3-Aug	17	16	14	8	8	11	15	19	23	23	25	29	A	32	33	34	33	33	28	29	25	18	18	16	22.1	34.1
4-Aug	15	14	14	12	11	11	13	17	25	27	36	A	36	37	38	41	43	41	40	32	32	34	18	21	26.5	42.6
5-Aug	23	21	16	13	11	12	11	18	26	36	A	41	45	48	47	47	46	50	47	42	34	26	26	25	30.8	49.7
6-Aug	22	16	8	4	3	5	6	17	31	A	49	50	51	51	50	51	51	51	49	46	38	40	41	41	33.5	51.4
7-Aug	39	38	35	32	31	19	26	32	A	36	42	44	42	46	49	50	51	53	52	43	41	39	37	28	39.3	52.6
8-Aug	23	25	26	20	25	15	16	A	25	27	42	50	64	67	67	69	70	69	60	50	40	43	47	44	42.8	70.3
9-Aug	29	36	27	24	28	30	A	38	43	45	55	57	59	62	61	61	59	55	55	54	53	48	47	44	46.5	61.7
10-Aug	41	29	32	39	41	A	40	40	41	42	41	40	39	41	41	41	40	37	33	33	31	33	34	35	37.6	42.4
11-Aug	34	31	31	29	A	24	22	24	28	35	36	37	37	36	37	34	36	37	31	27	24	25	20	19	30.2	37.3
12-Aug	14	13	11	A	9	11	11	14	16	21	25	28	32	34	34	36	40	41	30	23	24	23	21	22	23.2	40.8
13-Aug	21	10	A	10	14	15	13	19	26	30	32	35	39	40	37	36	34	35	33	30	31	29	23	17	26.5	40.1
14-Aug	14	A	7	8	10	8	8	16	21	27	35	35	43	42	43	42	40	43	40	41	37	28	27	23	27.8	43.4
15-Aug	A	21	18	16	16	17	15	22	27	37	40	41	42	41	38	39	42	44	43	39	36	28	33	A	31.5	43.8
16-Aug	28	25	24	24	21	19	24	26	32	37	40	44	50	54	52	51	52	54	44	39	32	30	A	26	36.0	54.0
17-Aug	24	23	19	13	12	8	15	19	33	48	53	54	48	45	51	59	47	42	39	34	37	A	37	36	34.6	59.0
18-Aug	29	29	29	27	27	23	26	30	31	C	C	C	A	48	50	53	52	52	49	46	41	41	40	36	37.9	52.7
19-Aug	34	A	25	17	17	24	22	25	25	28	40	57	65	66	70	64	55	54	53	50	48	45	44	41	42.2	70.0
20-Aug	A	40	40	35	31	32	32	35	39	39	37	33	35	37	36	37	37	37	35	34	32	30	29	A	35.1	39.6
21-Aug	32	32	28	25	24	23	20	21	22	26	34	35	37	38	41	40	39	32	30	27	14	13	A	14	28.2	41.4
22-Aug	12	14	14	13	15	16	15	20	27	33	36	39	41	42	42	42	42	41	36	27	27	A	26	23	28.0	42.4
23-Aug	10	11	15	8	16	15	14	19	22	25	29	34	39	41	42	42	43	42	40	32	A	31	26	29	27.2	43.1
24-Aug	28	16	22	18	19	16	13	22	24	37	38	44	45	47	48	47	44	45	43	A	32	25	26	27	31.6	47.9
25-Aug	26	23	27	30	18	18	17	18	29	43	44	45	45	44	43	43	44	43	A	38	40	40	44	40	34.9	44.9
26-Aug	39	35	34	36	39	34	33	33	32	36	36	35	32	35	36	35	35	A	33	30	25	26	21	18	32.4	39.1
27-Aug	15	15	13	17	17	18	21	21	23	30	35	37	37	38	38	37	A	34	32	26	26	25	23	23	26.2	37.7
28-Aug	15	18	17	17	17	15	13	17	25	28	34	36	38	40	40	A	37	39	38	35	29	30	23	25	27.2	40.2
29-Aug	21	16	26	11	11	11	14	18	24	27	30	33	33	30	A	28	30	31	30	29	26	23	19	23	23.7	33.1
30-Aug	25	25	22	18	18	19	22	28	37	40	41	41	44	A	47	47	45	46	45	36	35	27	34	29	33.5	47.3
31-Aug	29	29	23	18	16	15	13	14	13	13	14	A	19	20	21	20	19	20	19	18	15	13	13	17.6	29.0	

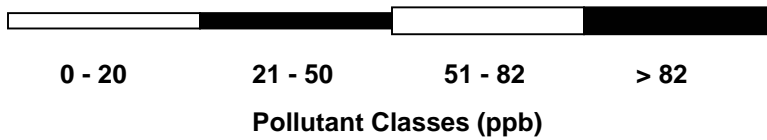
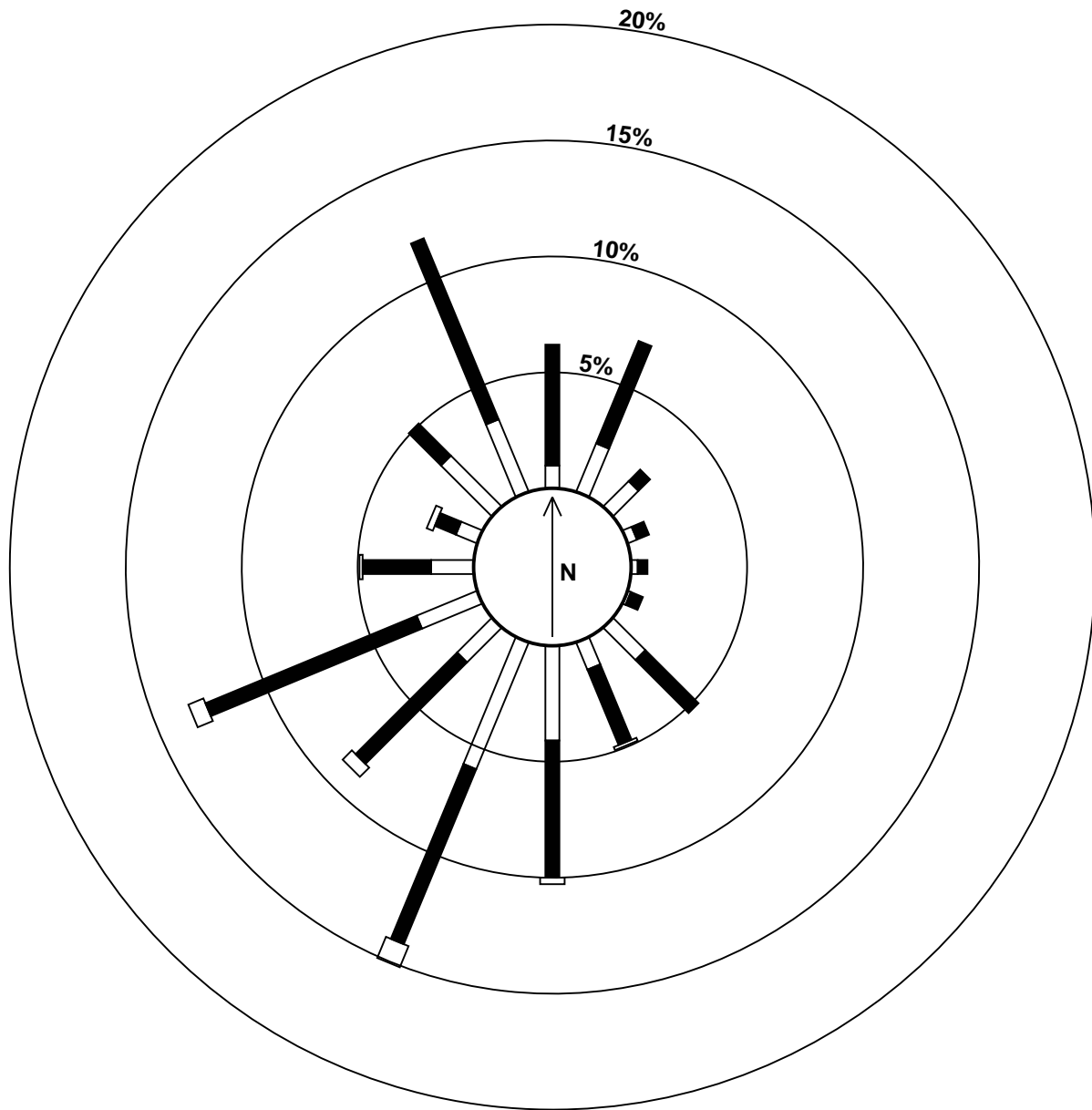
24.5	22.7	21.8	19.5	18.6	16.9	18.3	23.3	27.8	32.7	37.1	39.5	42.6	42.5	44.0	43.6	42.9	42.6	39.4	35.2	32.4	29.7	29.0	27.0	Diurnal Average	
41.1	39.6	39.5	38.5	40.7	33.6	39.7	40.3	42.6	48.3	54.8	57.2	65.5	67.2	70.0	69.3	70.3	69.1	60.2	53.8	53.1	47.9	47.3	43.9	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

**Hourly Maximums for O<sub>3</sub> at Portable-Brooks  
August 2008**



# Pollutant Rose for O<sub>3</sub> at Portable-Brooks August 2008



**Palliser Airshed Society**  
**Summary of Eight Hour Running Averages**

**Portable-Brooks - Ozone (O<sub>3</sub>) - ppb**  
**August 1, 2008 to September 1, 2008**

Number of Exceedences (AAAQO): 8-hr: 0	Hours in Service: 744
Maximum Value: 58.7 ppb on Aug 8 19:00	Hours of Data: 737
Minimum Value: 5.7 ppb on Aug 6 10:00	Hours of Missing Data: 7
	Hours of Calibration: 7
	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 8.0 P <sub>10</sub> = 12.9 Q <sub>1</sub> = 18.9 Median = 27.7 Q <sub>3</sub> = 34.6 P <sub>90</sub> = 41.6 P <sub>99</sub> = 55.3	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	32	29	27	25	23	21	21	21	22	24	26	28	29	31	32	33	34	34	35	36	36	35	34	32	35.7
2-Aug	29	24	21	17	15	12	10	10	12	15	18	21	25	28	33	36	37	38	36	34	31	29	25	22	37.6
3-Aug	19	17	15	12	11	10	10	10	11	12	14	16	18	21	24	26	27	28	29	29	27	25	23	21	28.7
4-Aug	19	17	15	13	12	12	11	11	12	14	16	17	20	24	28	31	34	36	37	35	34	32	29	27	36.6
5-Aug	23	21	18	15	13	11	11	10	11	12	12	17	22	27	32	37	41	43	43	43	41	38	35	32	43.1
6-Aug	29	24	19	15	12	9	7	6	6	6	11	18	25	32	38	44	48	48	48	47	45	43	42	41	48.2
7-Aug	39	38	36	35	34	31	29	28	26	26	27	29	30	34	37	40	41	43	44	44	44	43	41	38	44.5
8-Aug	34	30	27	24	22	20	18	16	18	18	20	24	29	37	44	47	52	57	59	58	55	52	49	45	58.7
9-Aug	40	35	32	30	28	27	25	25	27	29	32	38	42	47	49	52	54	55	55	55	54	53	51	48	55.5
10-Aug	46	42	39	36	35	33	33	33	33	36	37	39	39	39	39	39	39	38	37	36	35	34	33	32	45.7
11-Aug	31	31	30	30	30	29	27	25	24	24	25	26	27	29	31	32	33	33	33	31	30	28	26	24	33.5
12-Aug	21	18	16	15	13	11	10	10	10	11	12	14	16	19	22	25	28	30	31	30	29	27	25	23	30.6
13-Aug	20	17	16	14	13	12	11	11	12	15	16	19	23	26	29	31	33	33	33	32	31	30	27	24	33.1
14-Aug	21	19	16	13	10	8	6	7	8	10	14	17	21	25	29	33	35	37	38	38	37	35	32	30	38.5
15-Aug	29	26	23	19	17	16	15	15	16	17	20	23	26	30	33	35	37	38	38	38	37	35	34	34	38.5
16-Aug	31	28	26	24	22	21	20	20	21	22	25	27	31	35	39	42	44	46	47	46	43	40	39	35	46.6
17-Aug	31	27	23	19	17	13	13	12	13	15	20	25	29	34	39	43	46	46	44	41	39	39	37	33	45.8
18-Aug	31	29	28	27	26	25	24	24	24	24	24	N	N	N	N	N	N	N	48	47	46	44	43	40	48.0
19-Aug	38	36	32	28	24	21	19	17	16	17	19	23	30	36	42	46	50	53	55	55	53	51	48	46	55.3
20-Aug	45	43	41	39	37	35	34	33	33	33	32	32	33	33	34	34	34	34	33	34	33	32	32	31	44.9
21-Aug	30	30	29	27	26	24	23	22	20	19	20	21	23	25	28	31	33	34	34	32	29	27	25	21	33.8
22-Aug	18	16	13	12	12	12	12	13	14	16	19	22	25	28	32	35	37	38	38	36	34	33	29	25	38.4
23-Aug	20	16	12	10	8	9	8	9	10	12	15	18	22	25	29	32	34	37	38	37	37	35	32	28	37.7
24-Aug	25	21	18	17	17	15	14	14	15	17	19	22	26	30	34	38	40	42	43	43	41	37	34	31	43.2
25-Aug	28	25	22	22	21	20	19	18	17	19	22	25	28	32	35	39	41	42	42	40	40	39	39	38	41.8
26-Aug	37	35	34	35	34	33	32	31	31	31	31	31	31	31	31	31	32	32	31	31	29	28	26	23	37.1
27-Aug	20	19	17	15	14	14	14	14	15	17	20	22	25	27	29	31	33	34	33	31	29	27	26	23	33.5
28-Aug	22	20	18	17	16	15	13	13	14	16	17	20	23	26	29	32	34	35	36	35	32	30	27	26	35.8
29-Aug	24	20	18	15	14	12	11	10	10	13	15	18	21	23	25	27	28	29	28	28	27	25	24	23	28.5
30-Aug	22	22	21	19	18	18	19	19	20	22	24	27	31	33	36	39	41	42	42	40	39	37	35	32	41.6
31-Aug	31	28	26	24	22	21	18	17	15	13	12	12	12	12	13	14	15	16	16	17	17	16	15	14	30.7
Diurnal Maximums																									
45.7 43.0 41.3 39.2 37.0 35.1 33.6 32.6 33.4 35.7 37.4 38.8 42.4 47.1 48.5 52.4 54.2 56.9 58.7 58.2 55.4 52.7 50.8 48.3																									

N - Not Valid  
 Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 65 ppb

**Palliser Airshed Society**  
**Summary of Hourly Averages**

Portable-Brooks  
 August 1, 2008 to September 1, 2008  
 WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	14	15	12	14	10	7	14	11	19	19	20	22	25	25	26	30	25	17	13	8	2	1	2	5	13.6	30.2
Dir	191	186	195	191	198	212	210	225	243	242	235	231	244	249	250	250	253	259	257	260	284	263	272	295	235.6	249.8
2 Spd	4	1	5	4	5	5	5	4	9	9	5	4	7	9	9	12	11	10	8	7	8	7	4	6	5.8	11.6
Dir	344	2	318	328	313	265	321	344	20	33	63	304	355	339	343	345	354	354	356	345	343	5	26	343	349.6	345.0
3 Spd	6	4	5	3	5	3	2	4	5	3	4	4	6	5	10	12	7	8	5	4	1	4	4	5	3.8	12.1
Dir	348	351	258	309	214	231	268	287	317	287	267	313	313	267	249	250	264	350	345	277	268	243	245	257	279.9	250.0
4 Spd	5	5	6	6	6	5	2	4	6	5	5	6	7	8	7	6	6	6	4	2	3	6	9	3	3.0	8.5
Dir	246	242	239	235	238	237	255	317	327	303	299	316	325	336	340	333	333	356	1	73	137	207	208	196	288.4	207.7
5 Spd	5	6	4	4	7	4	3	7	7	7	4	11	10	12	12	14	11	10	6	4	4	3	3	4	3.4	14.0
Dir	156	205	188	218	201	172	126	42	73	102	354	340	14	29	19	10	354	11	7	352	347	323	331	339	15.1	10.0
6 Spd	3	5	5	2	1	1	3	3	3	6	10	10	11	12	14	13	14	12	9	10	14	16	18	20	6.8	20.3
Dir	287	309	294	284	308	281	197	175	144	206	215	206	183	183	187	178	181	189	181	132	130	131	130	133	170.8	133.2
7 Spd	23	20	18	17	11	6	7	18	10	6	10	7	4	22	13	21	18	17	13	7	11	14	14	11	12.0	22.5
Dir	133	137	145	151	163	197	177	164	192	187	204	213	256	159	143	151	185	172	166	161	135	135	129	120	157.4	132.7
8 Spd	9	11	7	9	6	6	6	7	3	3	4	2	3	4	7	4	6	9	7	5	9	10	11	14	5.0	14.3
Dir	132	139	153	169	182	178	199	213	334	351	284	316	300	281	214	249	203	185	204	179	177	197	198	189	190.9	189.4
9 Spd	11	4	7	10	8	5	7	9	9	8	6	8	8	8	12	13	14	16	17	18	11	11	7	6	4.4	17.6
Dir	202	288	2	45	63	53	320	357	359	63	159	224	225	220	206	208	205	178	205	202	232	213	238	254	213.2	202.5
10 Spd	7	6	8	10	12	11	12	17	19	22	17	18	17	19	18	16	14	13	12	13	14	12	13	13	13.4	21.7
Dir	208	185	189	207	227	233	238	239	241	244	252	253	253	247	251	254	246	244	238	244	245	235	243	235	240.1	243.8
11 Spd	12	9	14	13	12	10	9	10	8	7	7	10	10	11	8	5	7	9	9	7	7	8	6	3	5.1	14.3
Dir	235	229	239	243	239	214	226	238	247	265	315	336	356	337	336	333	346	4	24	6	332	332	324	311	289.3	238.6
12 Spd	3	10	5	4	5	3	4	5	7	7	8	6	8	12	10	9	8	6	8	7	4	8	2	4	4.6	11.7
Dir	321	333	320	267	257	270	266	311	322	320	334	312	324	339	355	332	328	18	42	46	68	91	35	330	337.5	338.9
13 Spd	4	5	4	5	5	5	5	5	5	7	6	8	11	14	13	14	14	11	8	7	3	2	3	7	5.3	13.8
Dir	295	240	235	231	233	247	241	258	278	326	325	331	329	337	338	337	345	342	345	18	3	331	265	260	316.1	336.9
14 Spd	6	3	4	5	7	7	4	7	10	15	14	17	20	15	15	13	11	11	4	1	7	13	15	12	5.4	20.1
Dir	264	298	11	305	308	312	324	329	8	27	9	9	18	13	13	3	11	19	15	328	125	137	161	184	10.5	18.4
15 Spd	12	10	10	9	10	9	7	9	10	11	15	13	12	12	9	9	13	13	11	10	14	18	18	14	11.2	18.4
Dir	191	189	187	186	189	186	193	192	196	192	194	187	192	194	197	191	184	188	186	164	152	151	158	180	182.5	157.7
16 Spd	13	13	13	14	13	12	14	16	17	13	10	3	6	11	14	11	8	5	11	11	9	4	5	5	2.3	17.3
Dir	192	188	185	178	175	174	179	186	196	188	198	235	337	1	20	20	16	352	11	26	27	26	346	357	176.6	195.7
17 Spd	4	2	4	4	5	2	1	5	5	2	7	11	13	18	19	20	19	15	11	13	16	18	2	10	7.0	20.1
Dir	325	204	256	265	296	46	70	45	9	164	128	143	163	180	168	157	177	170	140	128	131	135	102	121	152.9	157.2
18 Spd	13	17	14	13	13	10	11	20	20	20	21	25	29	31	29	29	27	27	22	23	26	25	24	21	20.5	30.7
Dir	133	169	202	194	192	166	170	176	187	190	186	177	176	172	170	171	170	170	160	153	150	151	155	151	169.6	171.8
19 Spd	16	11	7	4	5	9	11	5	7	7	7	8	8	9	7	16	32	19	17	16	14	16	18	14	9.1	31.5
Dir	152	163	213	39	129	168	191	250	331	332	255	257	253	259	264	243	244	235	211	209	210	214	215	236	223.4	243.8
20 Spd	15	16	13	7	8	7	10	14	17	19	21	19	22	19	17	22	15	19	17	12	11	12	12	15	14.6	22.3
Dir	239	240	236	218	212	219	235	236	242	246	247	247	242	238	219	209	221	242	242	238	213	227	236	239	234.2	241.5
21 Spd	14	9	8	9	9	8	5	4	4	6	10	12	13	14	12	13	14	18	13	9	10	17	20	21	7.2	21.1
Dir	244	235	208	211	212	212	217	261	281	241	251	255	253	252	332	346	337	336	333	331	325	336	342	344	295.3	343.9
22 Spd	19	19	15	14	13	12	11	10	10	12	10	10	7	6	6	4	4	2	6	9	11	11	13	11	5.0	19.3
Dir	339	339	338	336	337	336	335	336	339	345	347	343	325	311	275	254	275	275	90	130	135	140	150	155	339.7	338.8

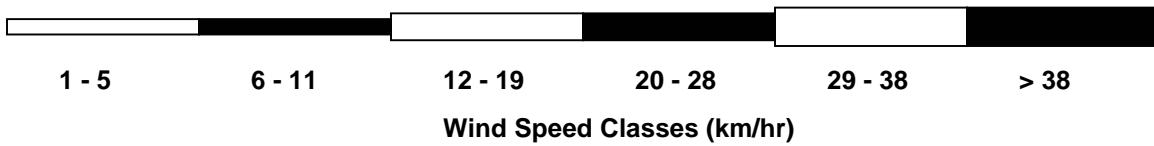
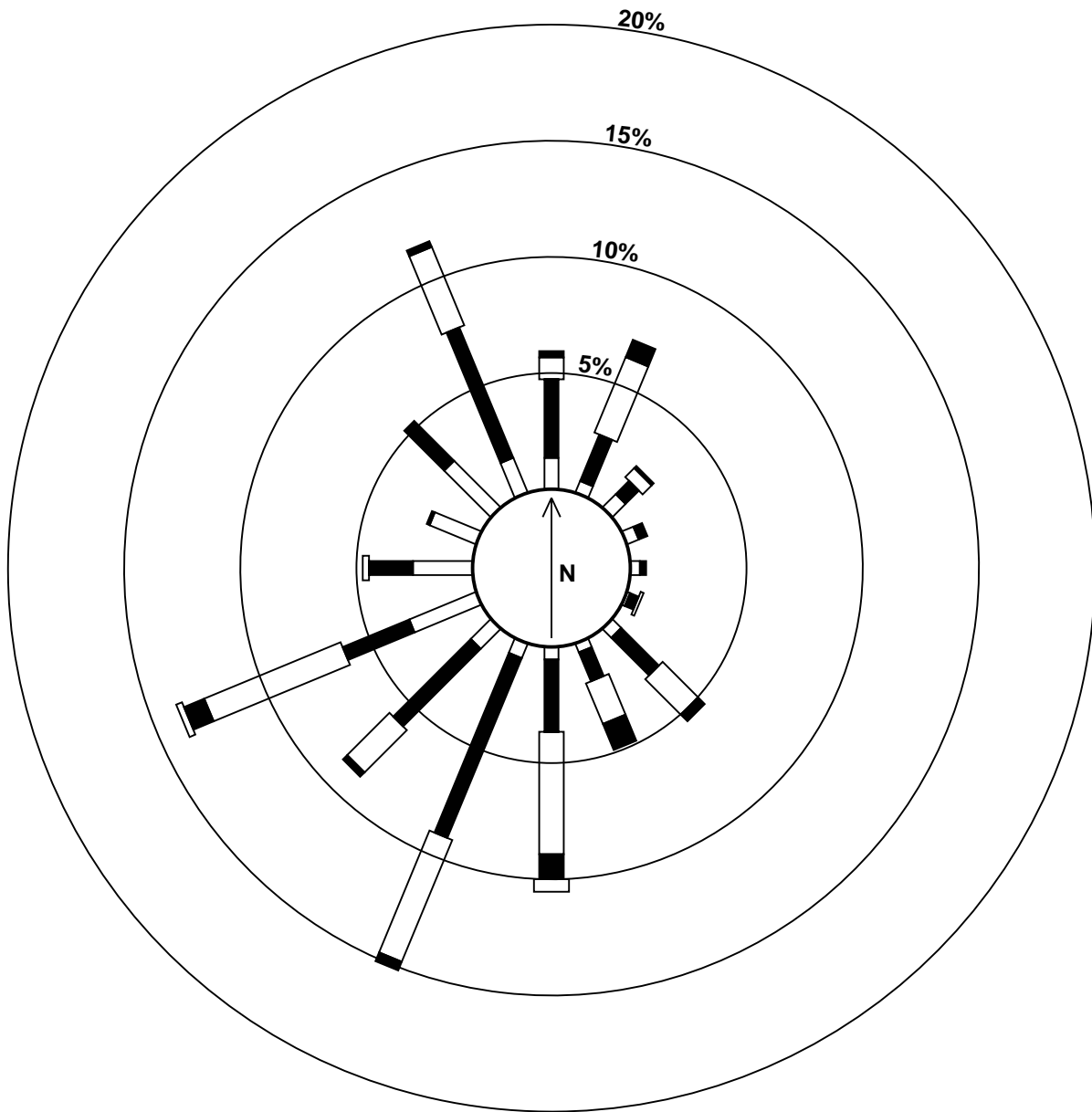
**Palliser Airshed Society**  
**Summary of Hourly Averages**

Portable-Brooks  
 August 1, 2008 to September 1, 2008  
 WS (km/h), WD (deg)

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	9	10	11	12	15	14	12	13	11	11	11	11	12	12	10	7	7	7	3	4	8	10	13	15	8.8	14.7
Dir	142	127	124	123	142	146	153	166	181	169	194	198	195	194	198	218	216	213	198	153	125	127	128	136	160.8	136.2
24 Spd	12	12	11	13	13	13	12	14	16	18	19	19	21	23	16	19	17	15	12	10	11	10	12	10	14.1	23.4
Dir	176	189	164	165	174	191	197	194	189	194	183	195	190	203	222	209	202	215	210	198	185	193	205	209	194.5	202.9
25 Spd	10	11	8	13	12	11	12	13	14	11	15	16	14	15	11	13	13	8	8	5	6	15	12	8	10.3	16.1
Dir	204	208	206	201	197	200	200	197	203	217	251	256	257	259	261	256	254	263	253	258	258	248	246	226	232.7	256.3
26 Spd	5	12	12	7	11	14	15	13	14	14	14	13	14	8	8	11	9	11	10	15	11	13	13	11	5.2	15.1
Dir	229	345	342	342	329	339	351	343	342	346	351	341	346	329	259	250	240	238	218	198	205	183	173	202	303.0	351.4
27 Spd	9	11	11	9	9	9	10	4	5	9	7	3	3	5	8	18	21	14	3	5	7	6	6	6	3.5	21.5
Dir	208	205	208	210	208	203	197	243	243	233	239	248	259	310	317	0	24	29	246	229	235	233	234	224	244.6	23.7
28 Spd	7	9	10	7	9	9	9	7	10	11	9	7	10	10	10	9	10	6	4	8	7	4	5	3	4.7	11.0
Dir	217	219	231	219	217	212	210	217	237	240	243	263	279	292	281	269	330	329	306	354	34	95	85	97	253.4	239.8
29 Spd	8	10	9	9	11	12	12	13	12	12	9	6	7	10	16	18	19	16	12	12	7	12	14	18	10.8	18.6
Dir	134	171	179	197	203	200	191	193	192	199	219	225	220	245	243	239	245	228	215	220	219	200	191	200	209.8	244.7
30 Spd	26	18	4	8	8	6	7	11	23	24	23	21	23	19	19	17	19	17	16	10	5	8	11	15	10.7	25.5
Dir	208	208	265	336	360	347	338	356	12	11	17	10	19	17	16	17	25	26	32	48	55	28	32	16	13.6	207.6
31 Spd	15	17	16	15	11	14	16	16	16	18	20	19	19	20	18	16	19	14	14	11	8	5	6	6	14.4	20.4
Dir	28	23	26	22	29	21	22	26	27	29	28	35	37	38	42	37	28	26	30	21	17	3	351	340	27.2	28.0
Spd	5.1	4.5	4.0	3.7	4.4	3.9	4.0	3.6	3.3	3.1	4.3	4.5	4.1	4.5	4.1	4.5	4.5	3.1	2.3	2.4	3.3	4.6	4.5	4.0	Diurnal Average	
Dir	196.7	202.3	211.6	205.7	208.7	209.3	215.8	226.1	254.9	249.1	248.9	260.9	266.4	256.2	258.2	251.0	254.7	248.0	224.0	189.8	169.1	174.1	184.8	197.3	Diurnal Maximum	
Spd	25.5	19.5	18.2	16.7	14.7	14.2	15.8	19.5	22.9	24.5	23.0	24.9	29.3	30.7	28.9	30.2	31.5	26.5	22.2	22.9	26.1	25.3	24.3	21.1	Diurnal Maximum	
Dir	207.6	137.3	145.1	150.5	142.2	145.9	21.6	176.4	12.1	11.1	16.6	177.4	176.3	171.8	170.4	249.8	243.8	169.7	160.2	153.0	150.5	151.2	155.4	343.9	Diurnal Maximum	
Maximum Speed Value: 32 km/h on Aug 19 17:00		Minimum Speed Value: 1 km/h on Aug 14 20:00																		Hours in Service:		744				
Maximum Daily Speed Average: 20.5 km/h on Aug 18		Minimum Daily Speed Average: 2.3 km/h on Aug 3																		Hours of Data:		744				
Maximum Diurnal Speed Average: 5.1 km/h at hour 1		Minimum Diurnal Speed Average: 2.3 km/h at hour 19																		Hours of Missing Data:		0				
Monthly Average Velocity: 3.42 km/h 223.78 deg		Speed Percentiles: P <sub>1</sub> = 1.5 P <sub>10</sub> = 4.0 Q <sub>1</sub> = 6.3 Median = 10.1 Q <sub>3</sub> = 13.8 P <sub>90</sub> = 18.4 P <sub>99</sub> = 25.2																		Percent Operational Time:		100.0				
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Percentage Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	2.28	6.32	5.24	1.48	0.00	0.00	15.32																			
NorthEast	0.81	2.15	2.55	0.67	0.00	0.00	6.18																			
East	0.94	0.54	0.00	0.00	0.00	0.00	1.48																			
SouthEast	0.67	2.28	3.76	1.34	0.00	0.00	8.06																			
South	0.94	6.59	11.16	1.48	0.54	0.00	20.70																			
SouthWest	2.15	11.16	8.74	2.02	0.13	0.00	24.19																			
West	4.84	4.03	2.42	0.40	0.13	0.00	11.83																			
NorthWest	3.63	7.12	1.48	0.00	0.00	0.00	12.23																			
Total	16.26	40.19	35.35	7.39	0.81	0.00	100.00																			



# Wind Rose for WS at Portable-Brooks August 2008



**Palliser Airshed Society**  
**Summary of Hourly Averages - Wind Speed (Scalar)**

**Portable-Brooks - Wind Speed (WS) - km/h**  
**August 1, 2008 to September 1, 2008**

Maximum Speed: 32 km/h on Aug 19 17:00	Maximum Daily Speed Average: 21.4 km/h on Aug 18	Hours in Service: 744
Minimum Speed: 2 km/h on Aug 14 20:00	Minimum Daily Speed Average: 5.7 km/h on Aug 3	Hours of Data: 744
Maximum Diurnal Speed Average: 14.5 km/h at hour 16	Minimum Diurnal Speed Average: 8.5 km/h at hour 6	Hours of Missing Data: 0
Monthly Average Speed: 11.10 km/h	Percentiles: P <sub>1</sub> = 2.8 P <sub>10</sub> = 5.0 Q <sub>1</sub> = 6.8 Median = 10.6 Q <sub>3</sub> = 14.0 P <sub>90</sub> = 18.7 P <sub>99</sub> = 25.4	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	14	15	13	14	10	7	14	12	19	19	21	22	26	25	26	30	25	18	13	8	4	2	3	5	15.3	30.4
2-Aug	5	3	5	5	5	5	5	5	10	9	6	6	9	9	10	12	11	10	8	7	8	7	6	6	7.2	12.0
3-Aug	6	5	5	4	6	3	4	5	6	4	4	5	6	6	11	13	8	10	7	5	3	4	4	5	5.7	12.5
4-Aug	5	5	6	6	6	5	3	5	6	6	7	7	8	9	8	7	7	6	4	2	3	6	9	4	5.8	8.9
5-Aug	6	6	5	5	7	4	6	8	7	8	7	11	11	12	13	14	12	10	6	4	4	3	3	4	7.4	14.1
6-Aug	3	5	5	2	3	3	4	4	6	7	11	11	12	13	15	14	15	12	9	10	14	16	18	20	9.7	20.3
7-Aug	23	20	18	17	12	6	8	18	12	8	10	9	5	22	14	22	19	17	13	7	11	14	14	11	13.8	22.5
8-Aug	9	11	7	9	6	7	6	7	5	4	5	5	5	5	7	5	6	9	8	5	9	10	11	14	7.4	14.4
9-Aug	12	5	8	10	9	5	8	10	9	10	9	8	8	10	13	13	15	16	18	18	12	11	8	7	10.5	17.9
10-Aug	8	7	8	10	12	11	12	17	19	22	18	18	17	19	19	16	14	13	12	13	14	12	13	13	14.1	21.8
11-Aug	12	9	14	13	12	10	9	10	9	8	8	10	10	11	9	5	7	10	9	7	7	8	6	4	9.2	14.3
12-Aug	4	10	6	5	6	4	5	6	7	7	8	7	8	12	11	10	9	9	8	7	7	8	3	4	7.1	12.0
13-Aug	4	5	4	5	5	5	5	5	6	8	7	8	12	14	14	14	14	12	8	7	4	2	4	8	7.4	14.0
14-Aug	6	6	5	5	7	7	5	7	11	16	14	18	20	16	16	13	12	11	4	2	7	13	15	12	10.3	20.4
15-Aug	12	10	11	9	10	10	7	10	10	11	15	14	13	13	10	10	13	13	11	10	14	18	19	14	11.9	18.5
16-Aug	13	13	13	14	13	12	15	16	17	14	11	6	6	12	15	11	8	6	11	11	10	4	5	5	10.8	17.5
17-Aug	5	3	4	5	6	3	2	6	6	6	9	11	14	18	20	21	19	16	12	13	16	18	9	11	10.5	20.6
18-Aug	13	17	15	14	13	10	11	20	20	20	22	25	30	31	29	29	27	27	22	23	26	25	24	21	21.4	30.9
19-Aug	16	12	7	5	6	11	11	6	8	7	8	9	9	10	8	16	32	20	18	16	14	17	18	14	12.4	31.6
20-Aug	15	16	13	7	8	7	10	14	17	19	21	19	23	19	17	22	15	19	17	12	11	12	12	16	15.0	22.5
21-Aug	14	10	8	9	9	9	6	6	5	6	11	13	14	14	13	13	15	18	13	10	11	18	21	21	11.8	21.3
22-Aug	19	19	15	14	13	12	11	11	11	12	11	11	8	7	7	6	5	3	6	9	11	11	13	11	10.7	19.5
23-Aug	10	10	11	12	15	14	12	13	11	12	12	11	12	12	11	7	8	7	3	4	8	10	13	15	10.6	14.8
24-Aug	12	12	12	14	13	13	12	14	17	18	19	19	21	24	17	19	17	16	13	10	11	10	12	10	14.8	23.7
25-Aug	10	11	9	13	12	11	12	13	14	12	16	16	14	15	11	13	14	9	8	6	7	15	12	9	11.7	16.3
26-Aug	6	12	12	8	11	14	15	14	14	14	14	13	14	8	8	11	9	11	11	15	11	13	13	11	11.9	15.3
27-Aug	9	11	11	9	9	9	10	5	6	9	8	5	5	7	11	20	22	14	4	5	7	6	6	7	8.9	21.6
28-Aug	7	9	10	7	9	9	9	7	10	11	9	9	11	11	10	10	12	6	5	8	9	6	5	4	8.6	12.4
29-Aug	8	10	9	10	11	12	12	13	12	12	9	7	8	11	16	18	19	17	13	12	7	12	14	19	12.2	18.8
30-Aug	26	18	6	9	8	6	8	12	23	25	23	21	23	20	19	17	19	18	16	11	6	9	11	15	15.3	25.5
31-Aug	15	17	17	16	11	14	16	16	16	18	21	19	19	20	18	17	19	14	14	11	8	5	6	6	14.7	20.6

10.6	10.4	9.4	9.2	9.1	8.5	8.9	10.1	11.3	11.7	12.0	12.1	13.0	14.0	13.7	14.5	14.4	12.7	10.5	9.3	9.4	10.6	10.7	10.6	Diurnal Average
25.5	19.6	18.2	16.7	14.8	14.2	15.9	19.6	23.0	24.6	23.4	25.3	29.6	30.9	29.2	30.4	31.6	26.6	22.2	22.9	26.1	25.3	24.4	21.3	Diurnal Maximum

All monthly, daily, and diurnal averages have been calculated using scalar methods

**Palliser Airshed Society**  
**Summary of Hourly Standard Deviations**

**Portable-Brooks - Wind Direction (WD) - deg**  
**August 1, 2008 to September 1, 2008**

Maximum Value: 94.4 deg on Aug 17 23:00																								Hours in Service:	744
Minimum Value: 1.9 deg on Aug 6 21:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 5.6 Q <sub>1</sub> = 8.2 Median = 13.7 Q <sub>3</sub> = 24.3 P <sub>90</sub> = 44.1 P <sub>99</sub> = 83.9																								Hours of Missing Data:	0
																								Hours of Calibration:	0
																								Percent Operational Time:	100.0
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	7	10	8	3	14	15	5	13	6	7	11	12	8	8	6	7	7	8	7	9	68	84	65	22	84.1
2-Aug	37	79	20	31	35	29	25	38	15	18	54	66	44	21	23	15	16	13	10	11	8	6	50	14	79.4
3-Aug	9	44	10	47	15	38	85	46	36	56	43	51	31	40	22	17	30	46	47	50	84	14	14	13	85.2
4-Aug	11	13	10	8	11	16	73	42	27	37	35	33	34	20	20	32	29	15	20	46	19	21	4	35	73.3
5-Aug	42	51	38	45	5	31	60	31	26	17	77	16	23	17	21	9	13	15	8	15	9	19	20	17	76.6
6-Aug	19	18	18	26	90	66	40	40	67	24	18	24	32	25	15	21	14	9	16	8	2	2	3	2	90.3
7-Aug	2	5	3	4	19	22	31	13	48	51	23	58	46	12	48	17	17	9	13	18	4	7	7	6	57.6
8-Aug	9	9	7	7	26	18	32	20	62	54	40	74	60	45	18	54	25	13	18	17	13	6	6	6	73.6
9-Aug	43	55	22	10	21	18	26	20	17	36	44	23	27	35	24	11	10	10	19	13	18	8	22	44	55.0
10-Aug	17	28	14	19	14	19	14	6	6	7	8	10	11	10	10	9	7	10	8	9	6	11	7	8	28.3
11-Aug	8	11	5	6	8	17	14	9	17	40	33	18	14	10	13	23	14	14	7	14	22	15	28	76	75.8
12-Aug	59	13	55	28	27	63	48	35	32	31	19	32	27	12	12	18	30	45	11	6	88	26	70	22	87.6
13-Aug	34	18	17	9	15	16	15	25	36	22	30	16	14	11	12	10	12	10	9	13	49	48	30	6	48.7
14-Aug	19	72	41	17	11	9	34	15	27	11	16	17	10	12	20	16	15	6	18	84	21	5	7	13	83.7
15-Aug	5	8	15	5	8	27	19	10	12	13	11	16	21	22	30	33	13	9	6	7	6	2	6	7	32.9
16-Aug	4	6	7	4	5	7	6	7	9	14	18	65	31	25	11	10	20	33	11	6	17	16	8	32	64.6
17-Aug	48	63	43	22	14	58	72	31	37	90	37	23	20	14	15	12	12	14	15	4	2	17	94	30	94.4
18-Aug	7	17	5	4	7	10	6	4	6	7	10	9	9	7	8	7	7	5	5	2	2	2	2	3	17.3
19-Aug	3	14	16	63	25	34	13	40	22	28	27	18	23	18	32	12	5	13	12	5	10	9	7	10	62.8
20-Aug	7	5	9	12	8	12	14	10	6	6	7	7	9	11	12	10	14	7	4	10	7	12	9	5	14.4
21-Aug	5	25	28	20	7	34	42	52	47	27	21	19	23	16	28	12	10	8	13	14	23	9	8	8	52.4
22-Aug	7	7	7	7	9	8	9	11	14	13	20	16	36	42	44	56	50	79	25	15	5	3	6	8	78.7
23-Aug	5	10	8	5	6	3	4	8	13	20	17	19	20	19	29	27	35	12	15	12	7	6	4	7	35.0
24-Aug	16	10	11	12	7	9	5	7	11	9	9	15	12	9	15	8	6	12	13	16	15	10	3	10	16.3
25-Aug	9	5	23	18	7	4	5	4	6	18	14	9	13	13	13	12	14	23	12	40	23	7	10	24	39.9
26-Aug	55	18	9	35	15	10	10	11	8	9	10	8	11	23	39	14	23	12	14	5	15	11	5	16	54.6
27-Aug	9	8	5	7	6	5	7	38	35	17	40	66	58	44	36	21	7	9	68	16	16	11	16	12	68.2
28-Aug	10	10	7	9	12	13	8	15	10	13	19	34	28	24	20	36	39	24	57	24	54	53	28	44	57.2
29-Aug	11	23	10	11	5	7	5	5	7	12	21	44	31	23	17	9	9	15	22	15	13	9	3	13	43.8
30-Aug	3	4	59	27	7	11	14	13	6	6	9	10	11	12	10	13	12	8	2	14	31	22	18	8	58.7
31-Aug	6	6	7	5	9	6	6	7	6	7	6	6	7	5	5	9	5	5	5	6	11	13	15	10	14.5
59.3	79.4	58.7	62.8	90.3	66.2	85.2	52.4	66.8	90.1	76.6	73.6	60.3	44.8	48.3	55.7	49.9	78.7	68.2	83.7	87.6	84.1	94.4	75.8		



**Palliser Airshed Society**  
**Passive Monitoring – August 2008**



## Palliser Airshed Society - Palliser Passive Stations for August 2008

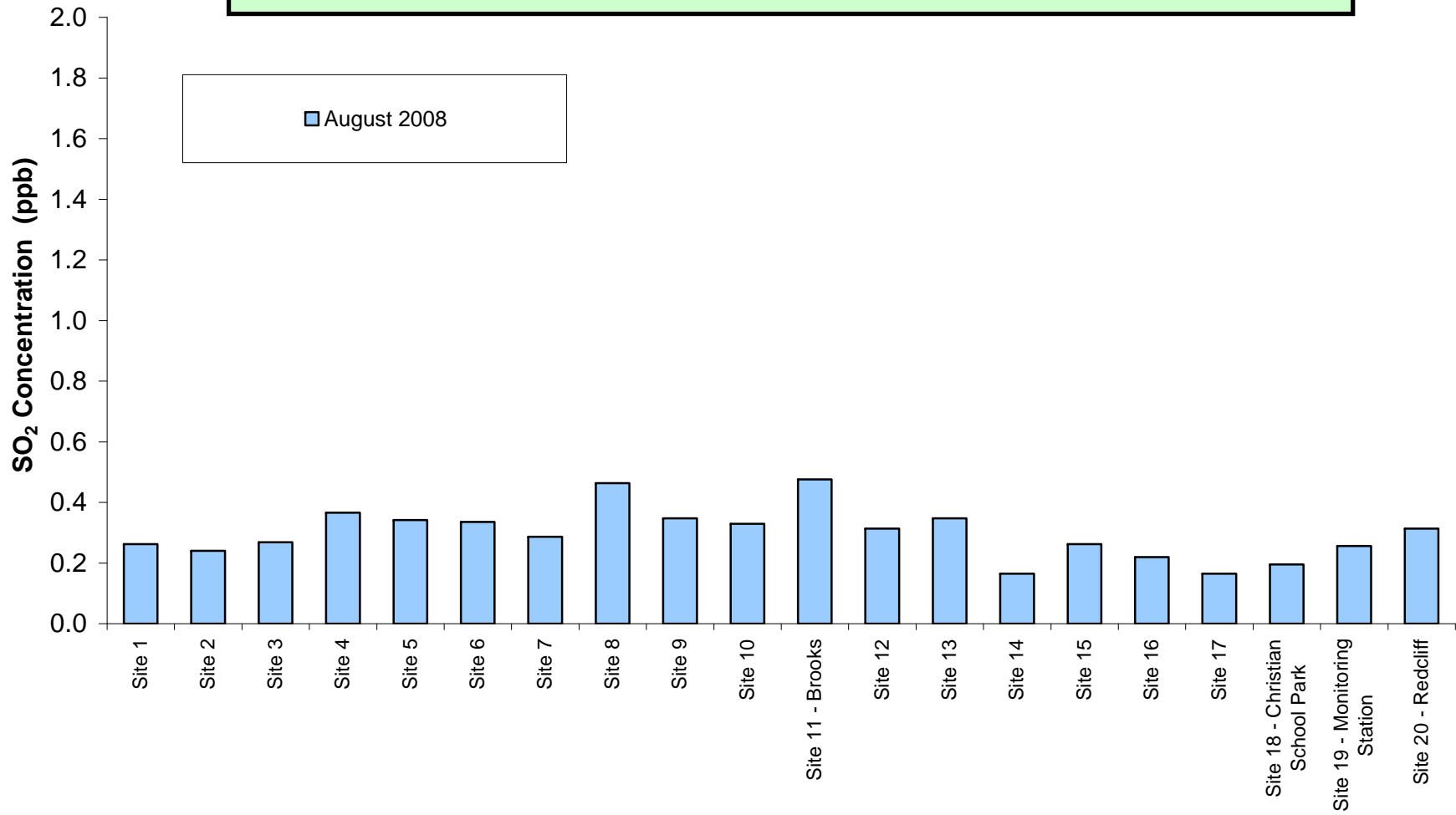
### Palliser Passive Monitoring Expansion

Station Number	Station	SO2 ppb	O3 ppb	NO2 ppb	Location		Elevation meter
	Name				Easting	Northing	
<b>Duplicates</b>							
2a	Site 2	0.2	35.3	1.0			
2b	Site 2	0.3	43.1	1.1			
12a	Site 12 - Brooks	0.3	28.1	1.6			
12b	Site 12 - Brooks	0.3	30.6	2.0			
1	Site 1	0.3	36.7	0.8	562434	5583139	719
2	Site 2	0.2	39.2	1.0	565416	5616277	
3	Site 3	0.3	35.5	0.6	533794	5675379	779
4	Site 4	0.4	34.3	0.6	554771	5717338	718
5	Site 5	0.3	33.8	1.0	494218	5715862	735
6	Site 6	0.3	34.7	1.2	433039	5673766	818
7	Site 7	0.3	33.2	1.6	400808	5620907	780
8	Site 8	0.5	37.8	1.2	498530	5621839	747
9	Site 9	0.3	39.9	1.7	487701	5591707	763
10	Site 10	0.3	37.5	1.9	478223	5613583	774
11	Site 11 - Brooks	0.5	30.9	2.4	439773	5604548	736
12	Site 12	0.3	29.3	1.8	450287	5587201	726
13	Site 13	0.3	39.7	0.6	464279	5548934	
14	Site 14	0.2	34.1	0.6	493206	5521201	870
15	Site 15	0.3	37.9	1.0	465824	5485742	874
16	Site 16	0.2	39.4	0.4	503827	5446942	903
17	Site 17	0.2	38.9	0.3	557668	5452307	942
18	Site 18 - Christian School Park	0.2	34.1	3.1	526575	5538135	709
19	Site 19 - Monitoring Station	0.3	38.3	3.3	522813	5544137	714
20	Site 20 - Redcliff	0.3	35.5	2.2	517479	5546059	725

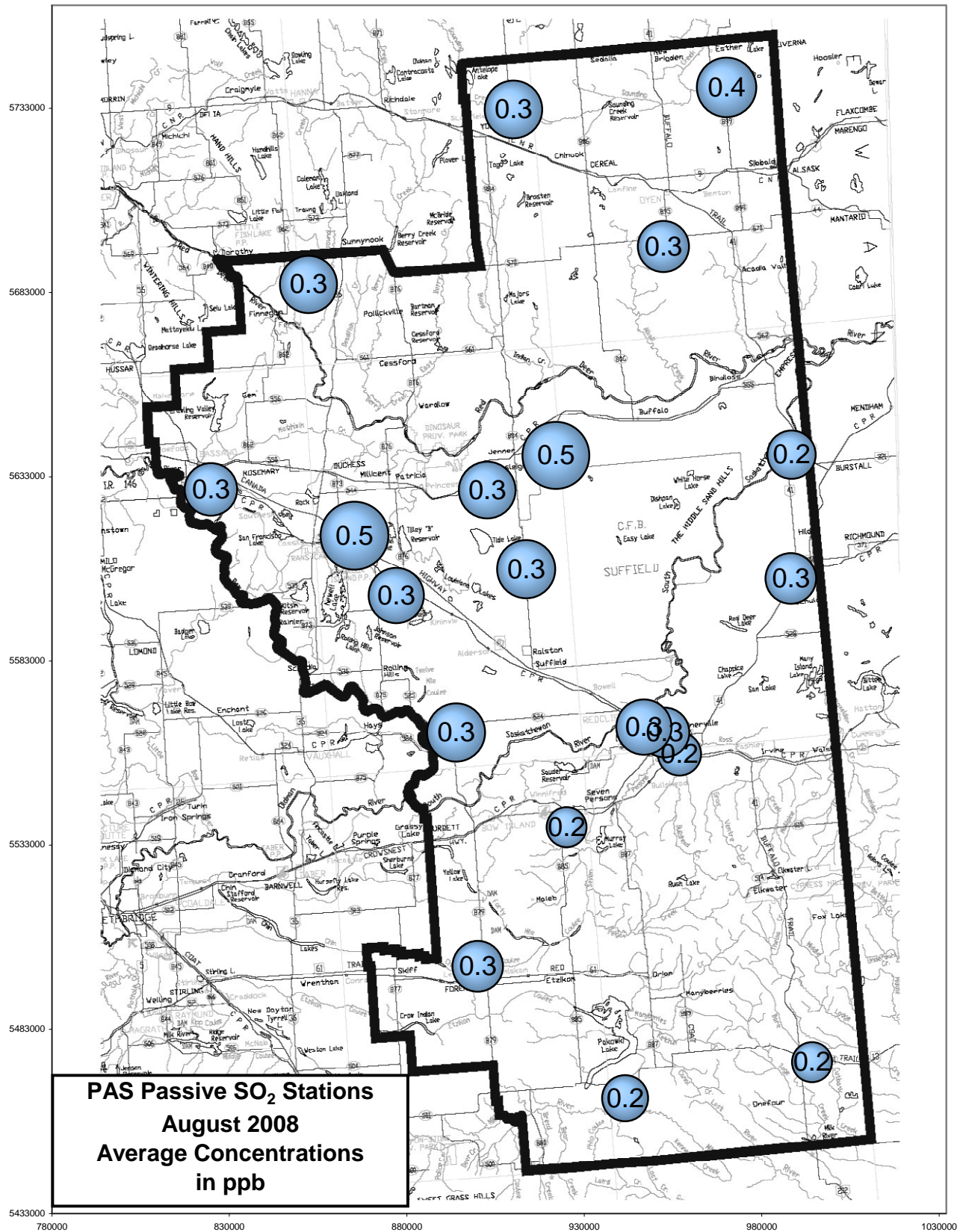
**BDL = Below Detection Limit**



**Alberta Ambient Air Quality Objective - Annual SO<sub>2</sub> Objective is 11 ppb**



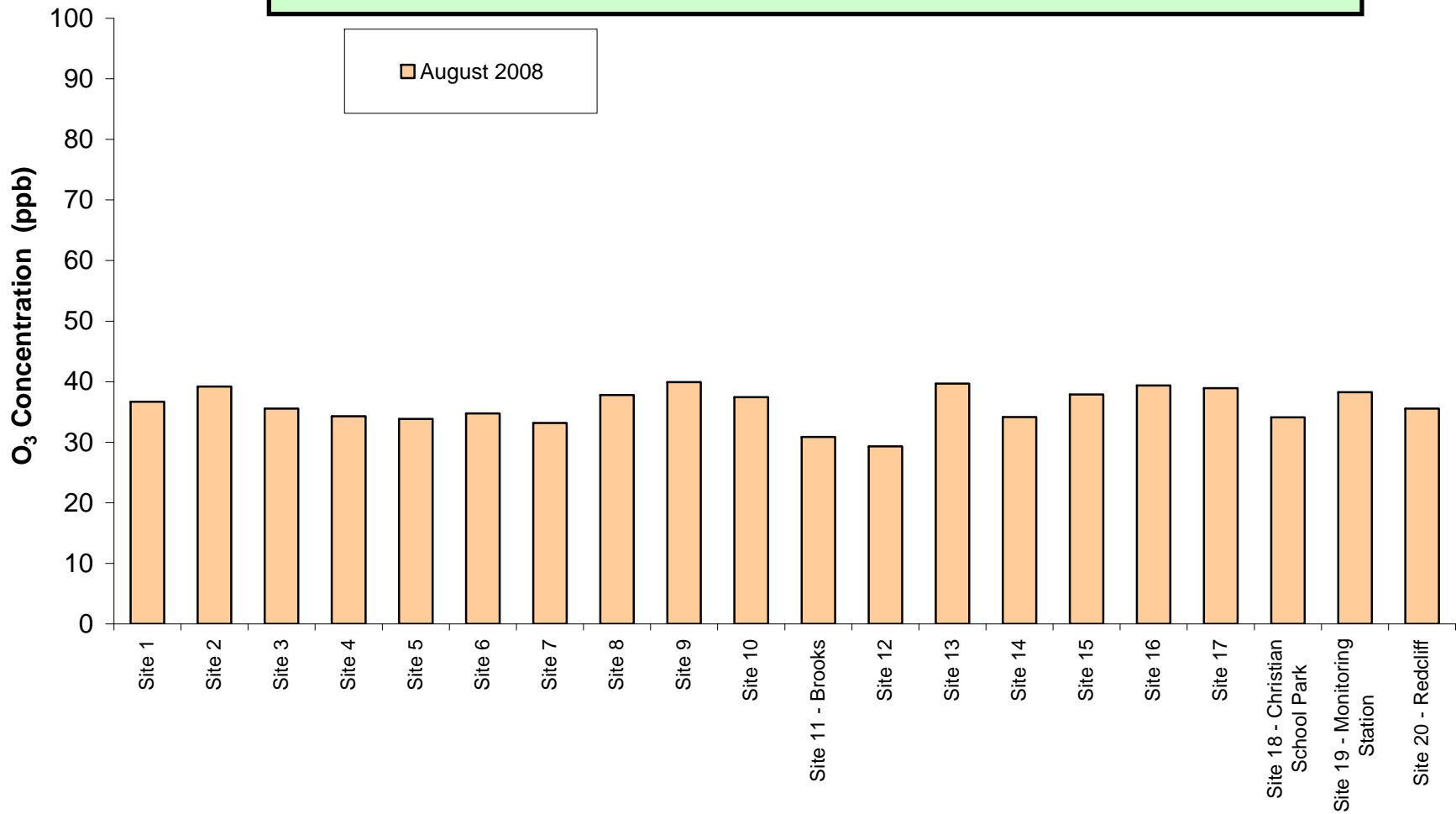
**PAS – Sulphur Dioxide Passive Summary Chart**



PAS – Sulphur Dioxide Passive Summary Bubble Chart

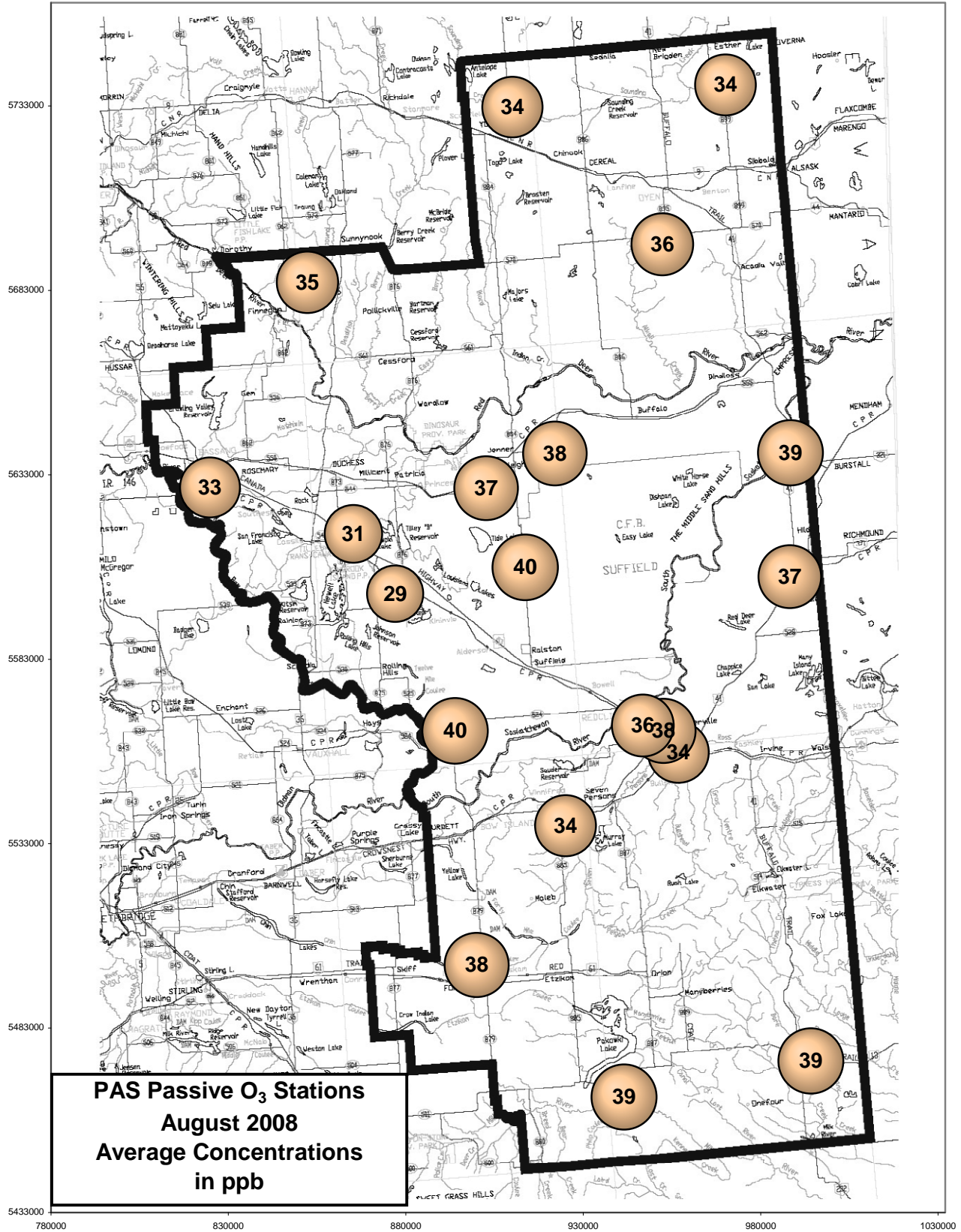


# Alberta Ambient Air Quality Objective - No Annual O<sub>3</sub> Objective



PAS – Ozone Passive Summary Chart

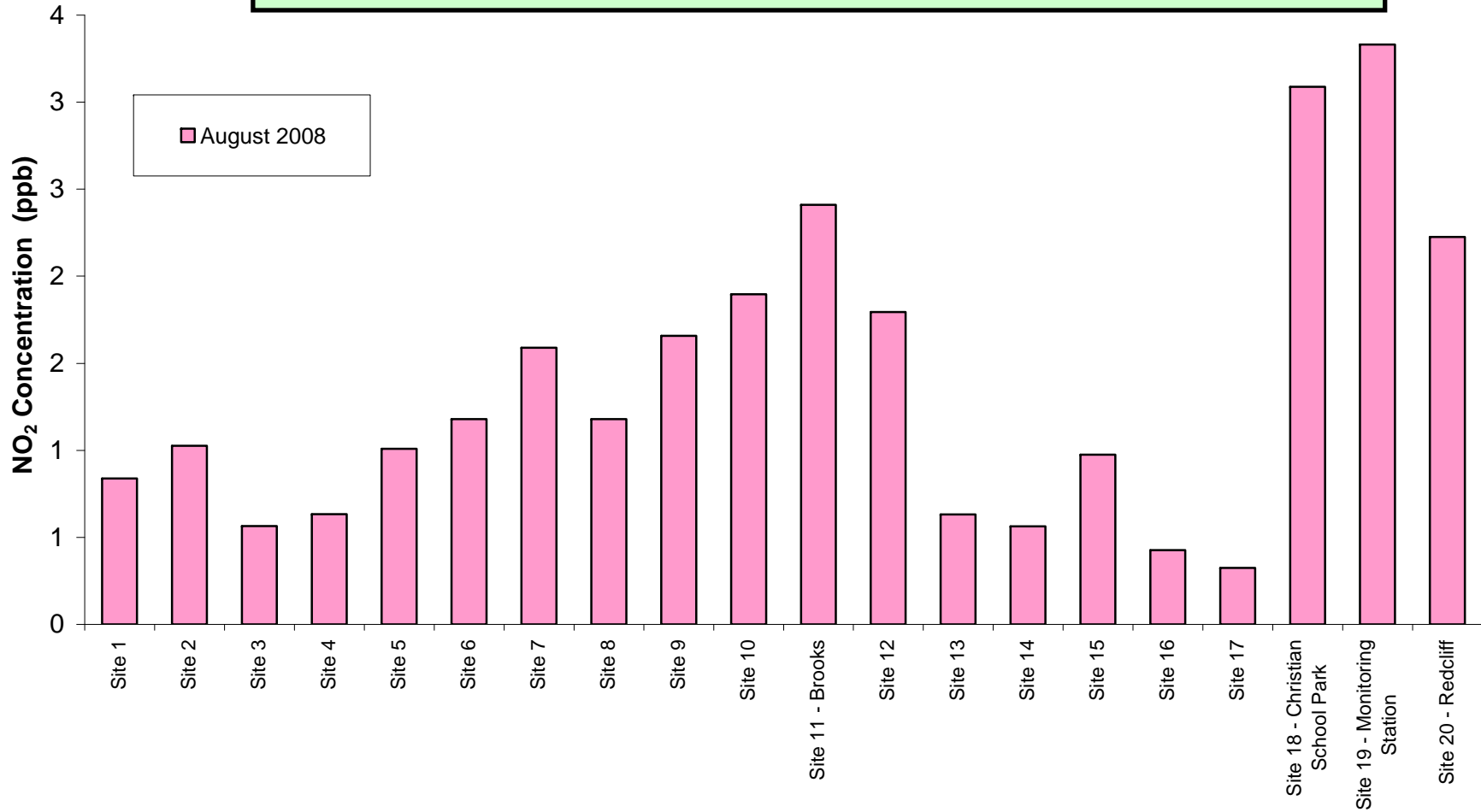




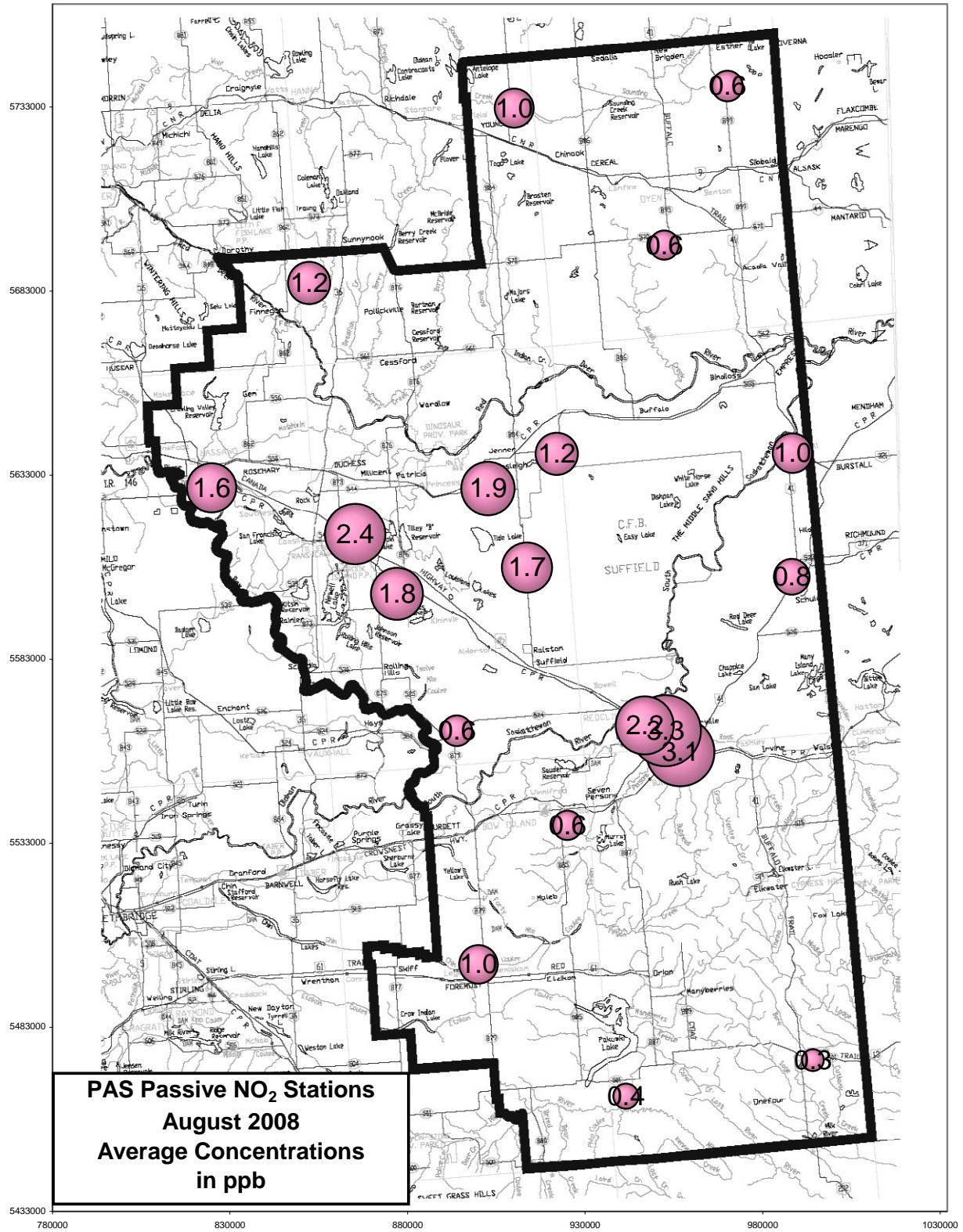
**PAS – Ozone Passive Summary Bubble Chart**



**Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 32 ppb**



**PAS – Nitrogen Dioxide Passive Summary Chart**



PAS – Nitrogen Dioxide Passive Summary Bubble Chart



# **Palliser Airshed Society August 2008 - Calibration Reports**

**Crescent Heights Station: O<sub>3</sub>, NO<sub>x</sub>, NO, NO<sub>2</sub>, THC, CO and PM<sub>2.5</sub>**

**Portable-Brooks: O<sub>3</sub>, SO<sub>2</sub>, and H<sub>2</sub>S**

# Calibration Report



Parameter **O3**

Air Monitoring Network **Palliser Airshed**

## Station Information

Calibration Date	August 12, 2008	Previous Calibration	July 30, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Calibration	Removal
			Other:

Start Time (MST)	13:03	End Time (MST)	15:29
Barometric Pressure	0.9 ATM	Station Temperature	20.0 Deg C
Calibrator	SABIO 2010	Serial Number	3750708
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.990772	Calculated slope	0.978721
Calculated intercept	-0.988367	Calculated intercept	-1.482108

Analyzer make	TEI 49i	Analyzer serial #	713021144
---------------	---------	-------------------	-----------

	Before		After	
Concentration range	0 - 500	ppb	0 - 500	ppb
O3 Background	0.5	ppb	0.5	ppb
O3 Coeff	1.033		1.033	
CellA	68067	Hz	68067	Hz
CellB	104782	Hz	104782	Hz
Pressure	706.3	mmHg	706.3	mmHg
Cell A Flow	723	ccm	723	ccm
Cell B Flow	712	ccm	712	ccm
Bench	36.2	Deg C	36.2	Deg C

## Calibration Data

Dilution air flow rate (cc/min)	Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5026	0.0	0.0	2.0	N/A
5026	300(0.82v)	298.0	306.3	0.9729
5026	200(0.52v)	182.0	187.4	0.9714
5026	100(0.32v)	103.0	106.0	0.9713
5026	0.0	0.0	2.0	0.0000
5026	400(1.1v)	297.6	306.3	0.9716
Average Correction Factor				0.9719

Calculated value of As Found Response: 300.5 ppm      Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	-3.2	ppb	-3.8	ppb
Auto span	146.0	ppb	147.2	ppb

Notes: No Adjustments Made..

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Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **O3**

Air Monitoring Network **Palliser Airshed**



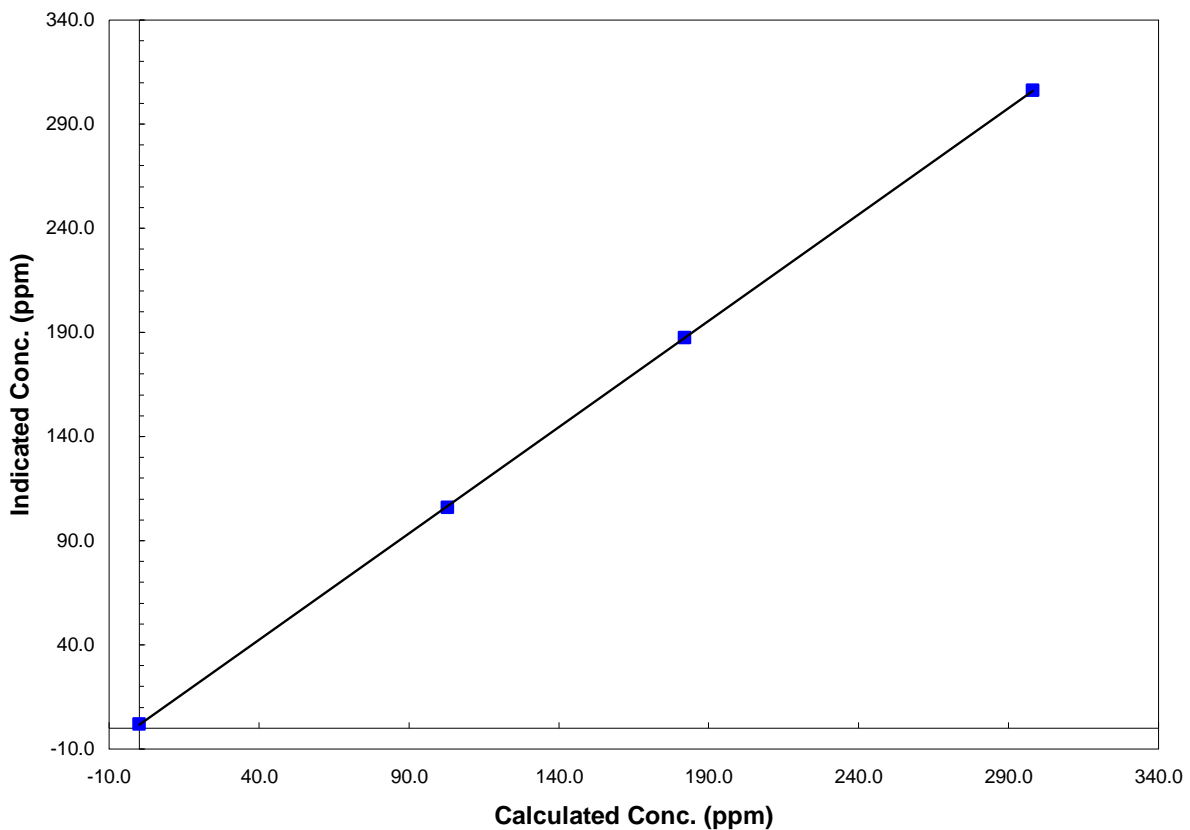
### Station Information

Calibration Date	August 12, 2008	Previous Calibration	July 30, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	13:03	End Time (MST)	15:29
Analyzer make/model	TEI 49i	Analyzer serial #	713021144

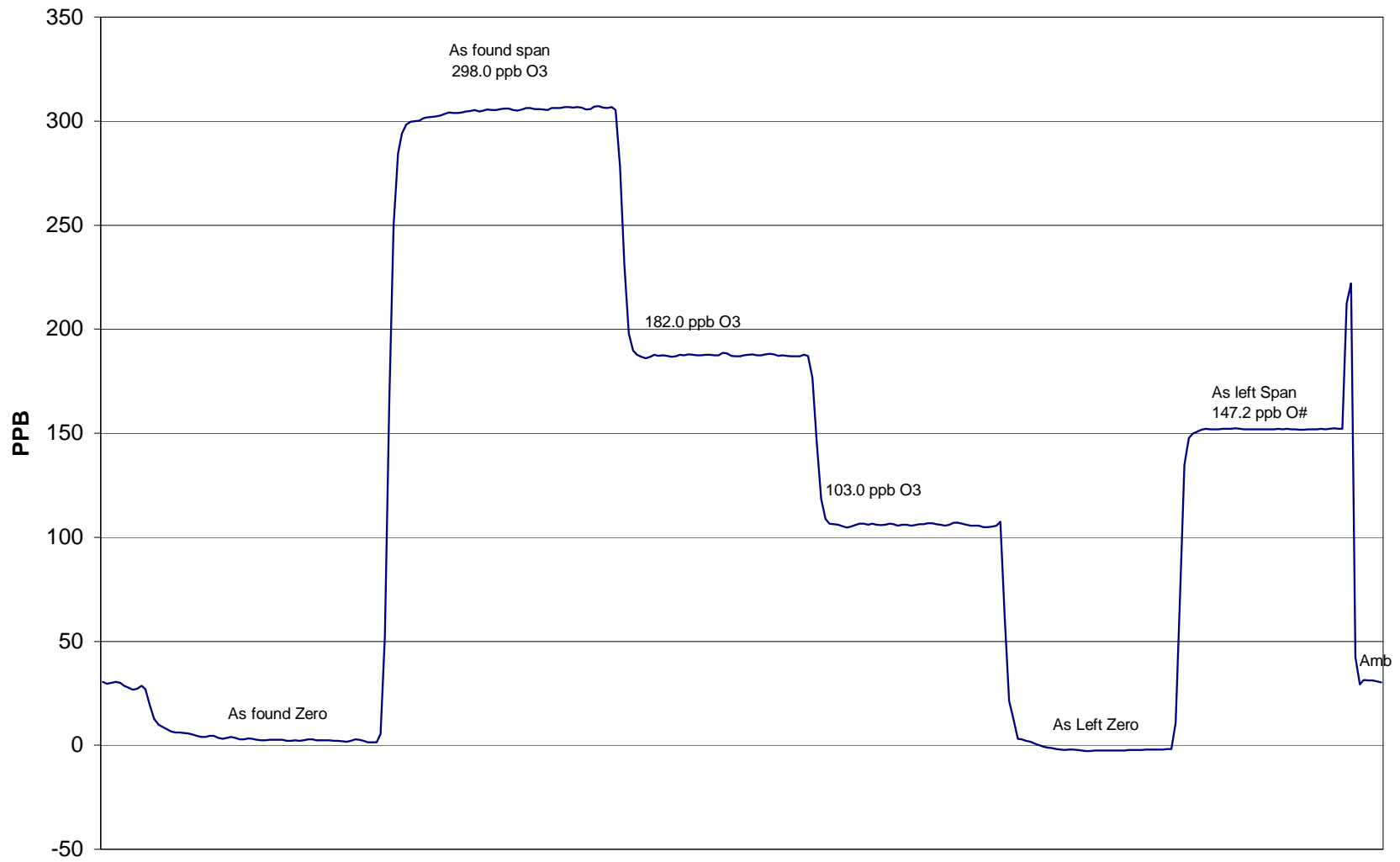
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
298.0	306.3	0.9729		
182.0	187.4	0.9714	Correlation Coefficient	0.999982
103.0	106.0	0.9713		
0.0	2.0	N/A	Slope	0.978721
			Intercept	-1.482108

## O3 Calibration Curve



### Cresecent Heights O3 Calibration



August 12, 2008

# Calibration Report

Parameter

NO<sub>x</sub>-NO-NO<sub>2</sub>

Air Monitoring Network

Palliser Airshed



## Station Information

Calibration Date	August 12, 2008	Previous Calibration	July 29, 2008		
Station Number	101	Station Location	Crescent Heights		
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal	<input type="checkbox"/> Other:	
Start Time (MST)	6:02	End Time (MST)	13:50		
Barometric Pressure	0.943	Atm	Station Temperature	20.0	Deg C
Calibrator	SABIO 2010	Serial Number	3750708		
NO Cal Gas Conc	50	ppm	Cal Gas Expiry Date	June 6 / 2010	
NO <sub>x</sub> Cal Gas Conc	50	ppm	Cal Gas Serial #	ALM051339	

## DACS Information

DACS make FOCUS AP1000 DACS serial No. 45270

Parameter		NO <sub>2</sub>	NO <sub>x</sub>	NO
Before	Data Slope	1.025590	1.000736	0.997854
	Data Offset	4.575904	-0.696060	0.907083
After	Data Slope	1.002734	1.002925	1.001590
	Data Offset	3.372057	-1.662816	-1.154603
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model API Model 200E Analyzer serial # 219

Test Point	Before		After	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	-9.0	mV	-21.1	mV
NO <sub>x</sub> offset	-5.5	mV	-17.0	mV
NO slope	1.329		1.031	
NO <sub>x</sub> slope	1.309		1.019	
R Cell Temp	49.9	Deg C	50.0	Deg C
PMT Temp	7.2	Deg C	7.1	Deg C
Azero	57.6	mV	59.4	mV
IZS Temp	37.1	Deg C	37.1	Deg C
R Cell Press	4.5	in Hg	4.7	in Hg
Sample Press	26.3	in Hg	26.5	in Hg
O <sub>3</sub> Flow	75.0	ccm	75.0	ccm
Sample Flow	452.0	ccm	451.0	ccm

Notes: Maintenance Performed, Span Adjustment Made



# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **Palliser Airshed**



## Station Information

Calibration Date: **August 12, 2008**

Station Location: **Crescent Heights**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	5025	0.00	0.0	0.0	0.0	1.8	1.5	-4.0	N/A	N/A
1	5025	40.20	396.8	396.8	0.0	397.6	397.8	-4.0	0.9980	0.9976
2	5026	20.20	200.2	200.2	0.0	200.5	200.0	-3.7	0.9984	1.0010
3	5025	10.10	100.3	100.3	0.0	102.0	101.6	-4.4	0.9830	0.9876
AFZ	5025	0.00	0.0	0.0	0.0	3.6	-2.1	1.3	0.0000	0.0000
AFS	5025	40.20	396.8	396.8	0.0	389.8	388.1	-1.9	1.0179	1.0226
Average Correction Factor									0.9932	0.9954

As Found Concentrations: NO<sub>x</sub>= 385.5 NO= 391.0 As Found Percent Change NO<sub>x</sub>= -2.9% NO= -1.5%

## GPT Calibration Data

Dilution Flow 5025 ccm Source Gas Flow 40.20 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-2.1	-2.1	0.0	1.8	1.5	-4.0	N/A	N/A	N/A	N/A
NO point	394.2	394.2	0.0	396.2	394.2	-1.8	0.9949	1.0000	N/A	N/A
300(0.82v)	394.2	91.9	302.2	393.9	91.9	297.6	1.0006	1.0000	1.0157	98.5%
200(0.52v)	394.2	209.8	184.4	394.7	209.8	180.9	0.9985	1.0000	1.0192	98.1%
100(0.32v)	394.2	290.1	104.1	394.9	290.1	101.1	0.9981	1.0000	1.0294	97.1%
Average Correction Factor							0.9991	1.0000	1.0214	97.9%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	1.3	2.7	0.9	ppb	3.5	-0.5	3.6	ppb
Auto span	266.3	268.1	7.3	ppb	235.1	227.7	6.4	ppb

Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **NO<sub>2</sub>**

Air Monitoring Network **Palliser Airshed**



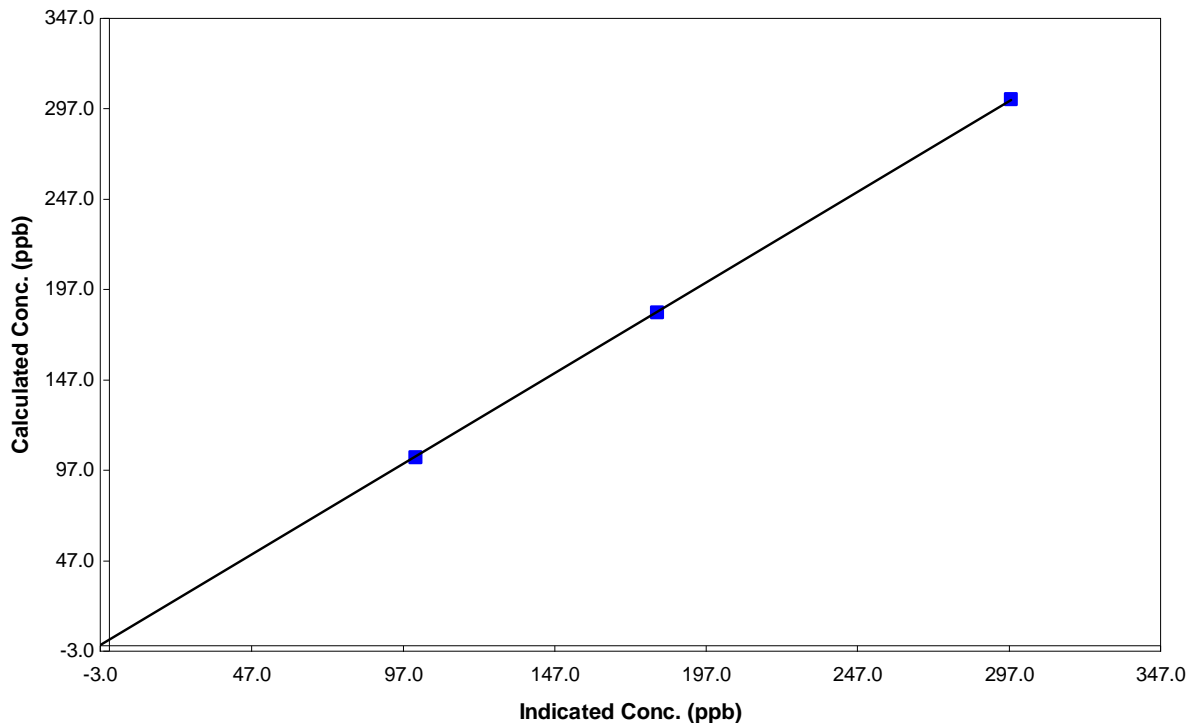
### Station Information

Calibration Date	August 12, 2008	Previous Calibration	July 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	6:02	End Time (MST)	13:50
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-4.0	N/A		
302.2	297.6	1.0157	Correlation Coefficient	0.999975
184.4	180.9	1.0192		
104.1	101.1	1.0294		
			Slope	1.002734
			Intercept	3.372057

**NO<sub>2</sub> Calibration Curve**



## Calibration Summary

Parameter **NO<sub>x</sub>**

Air Monitoring Network **Palliser Airshed**



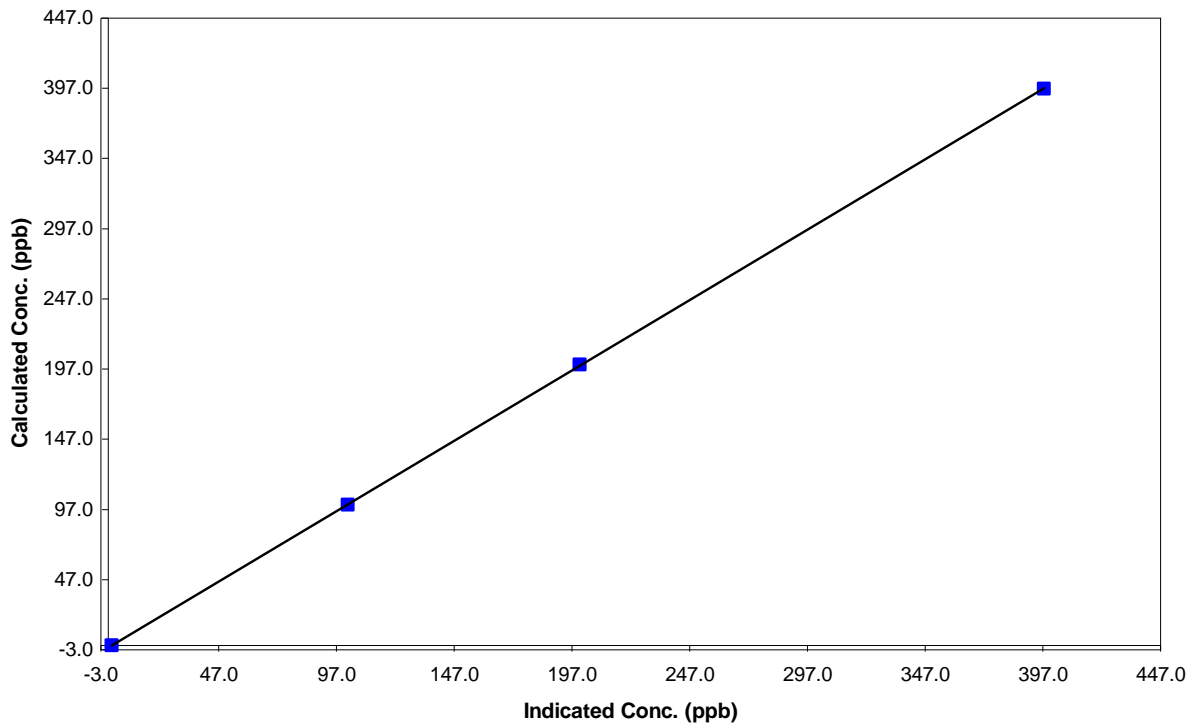
### Station Information

Calibration Date	August 12, 2008	Previous Calibration	July 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	6:02	End Time (MST)	13:50
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.8	N/A		
396.8	397.6	0.9980	Correlation Coefficient	0.999991
200.2	200.5	0.9984		
100.3	102.0	0.9830	Slope	1.002925
			Intercept	-1.662816

### NO<sub>x</sub> Calibration Curve



## Calibration Summary

Parameter **NO**

Air Monitoring Network **Palliser Airshed**



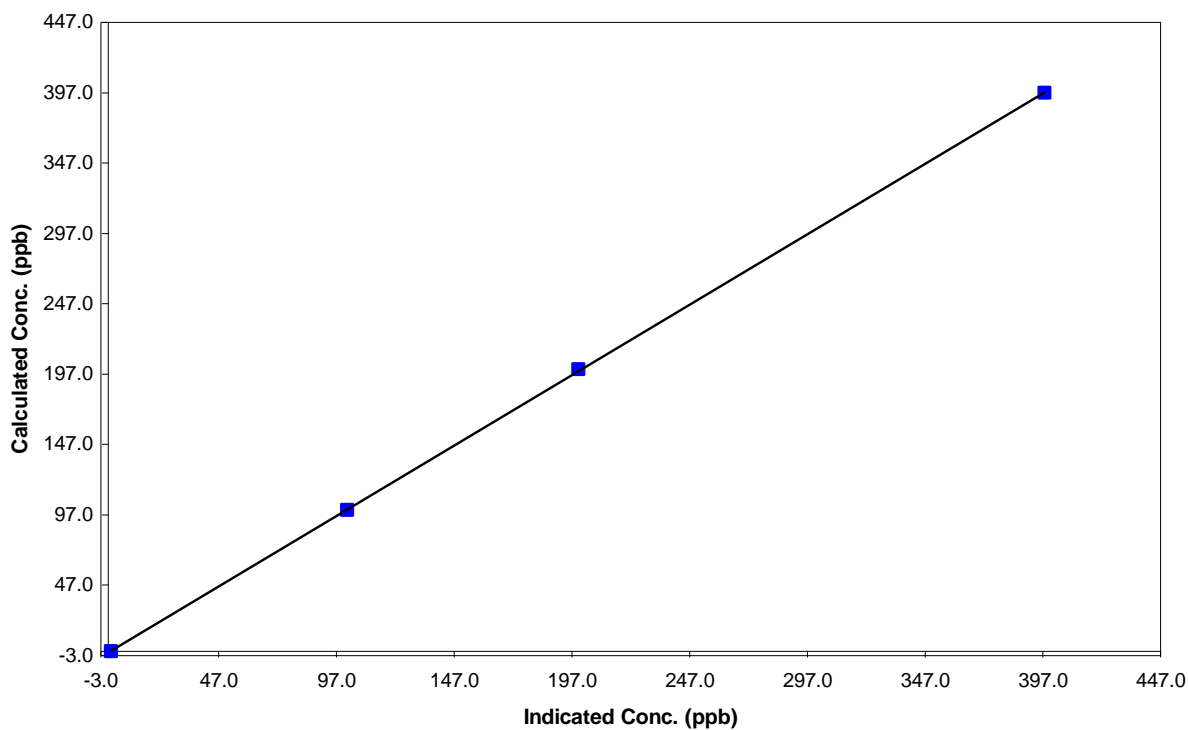
### Station Information

Calibration Date	August 12, 2008	Previous Calibration	July 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	6:02	End Time (MST)	13:50
Analyzer make	API Model 200E	Analyzer serial #	219

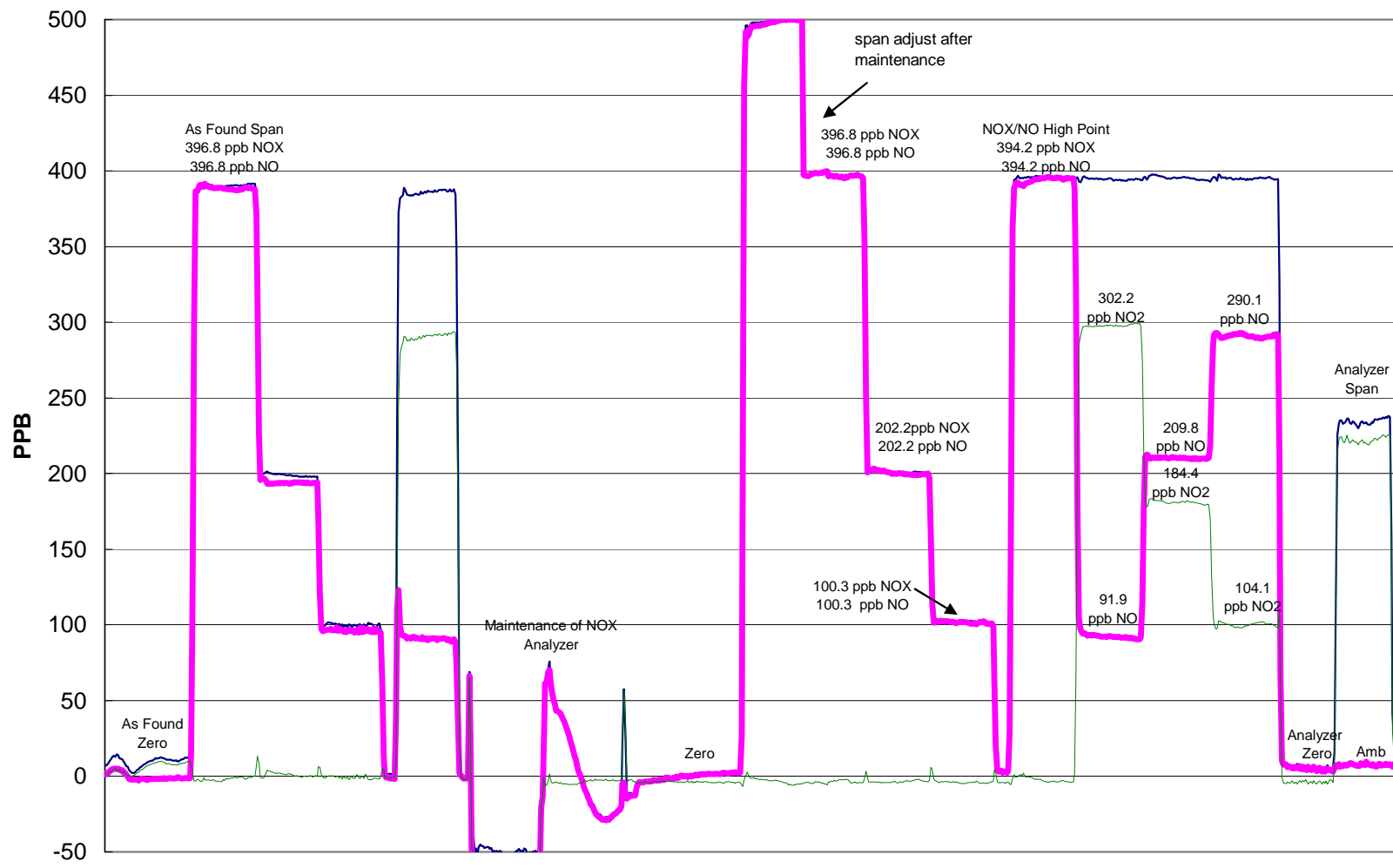
### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.5	N/A		
396.8	397.8	0.9976	Correlation Coefficient	0.999983
200.2	200.0	1.0010		
100.3	101.6	0.9876	Slope	1.001590
			Intercept	-1.154603

### NO Calibration Curve



### Crescent Heights NOx Calibration Graph



# Calibration Report

Parameter **THC**  
 Air Monitoring Network **Palliser Airshed**



## Station Information

Calibration Date	August 11, 2008	Previous Calibration	July 30, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Install	Removal
			Other:
Start Time (MST)	13:31	End Time (MST)	15:58
Barometric Pressure	0.9 ATM	Station Temperature	20.0 Deg C
Calibrator	SABIO	Serial Number	3750708
Cal Gas Concentration	708 ppm CH <sub>4</sub> / 299 ppm C <sub>3</sub> H <sub>8</sub>	Cal Gas Expiry Date	1/25/2009
Cal Gas CH4 equiv	1530.25 ppm	Cal Gas Cylinder #	LL-41839
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
Calculated slope	1.006488	Calculated slope	1.004180
Calculated intercept	0.097782	Calculated intercept	0.137873
Analyzer make	TEI 51C-LT	Analyzer serial #	0407505596

	Before		After	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.74	PSI	5.74	PSI
THC span counts	19864	raw	19864	raw
THC zero counts	1478	raw	1478	raw
V Bias	-326	Volts	-326	Volts

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
3020	0.00	0.00	-0.03	N/A
3021	80.10	39.53	39.32	1.0053
3021	40.20	20.10	19.70	1.0202
3021	10.10	5.10	4.91	1.0376
3020	0.00	0.00	-0.06	As Found Zero
3021	80.10	39.53	39.32	As Found Span
Average Correction Factor				1.0210

Calculated value of As Found Response: 39.725 ppm      Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.11	ppm
Auto span	24.38	ppm	24.34	ppm

Notes: No adjustments made...

Calibration Performed By: Brad Moyles

# Calibration Summary



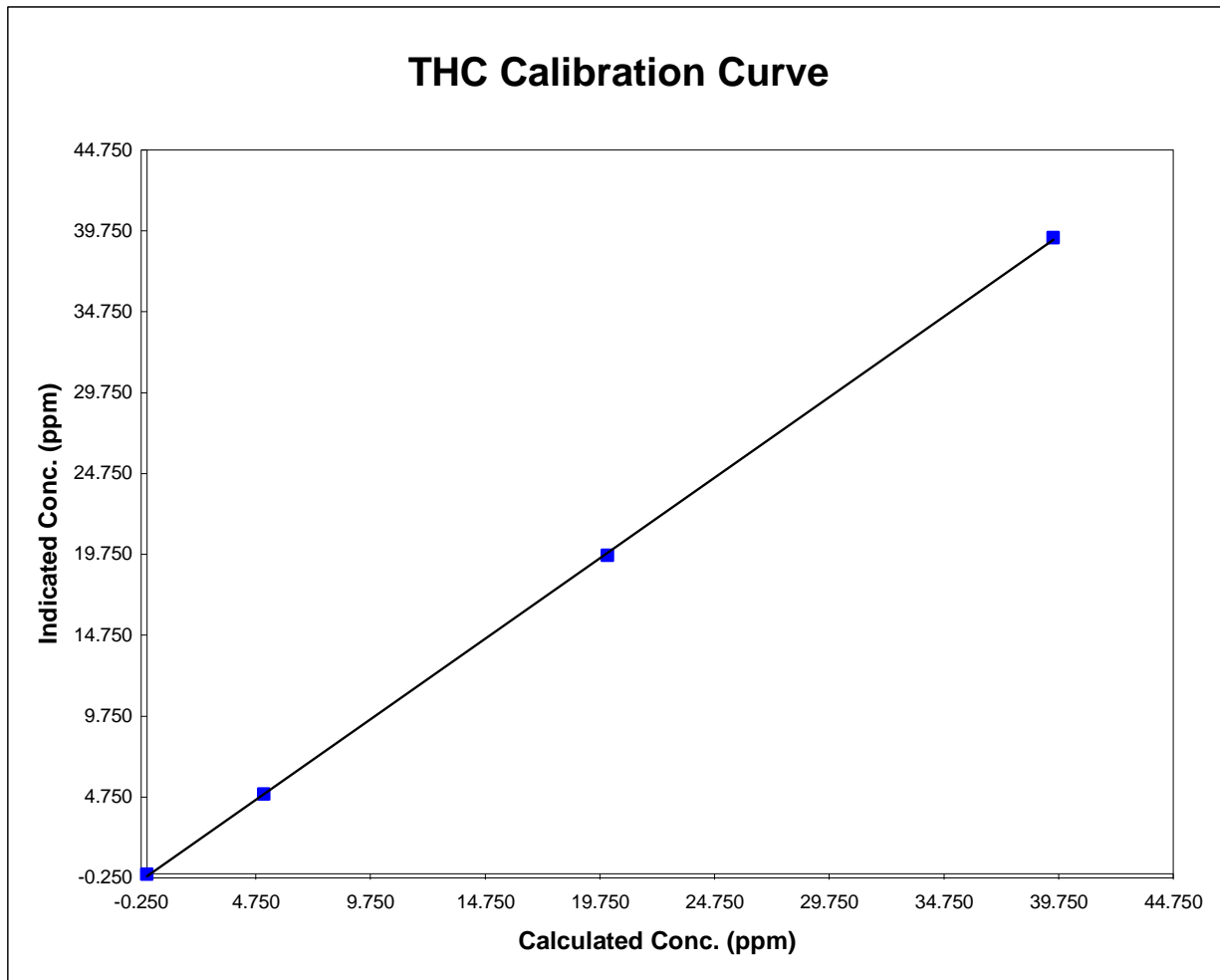
Parameter **THC**  
 Air Monitoring Network **Palliser Airshed**

## Station Information

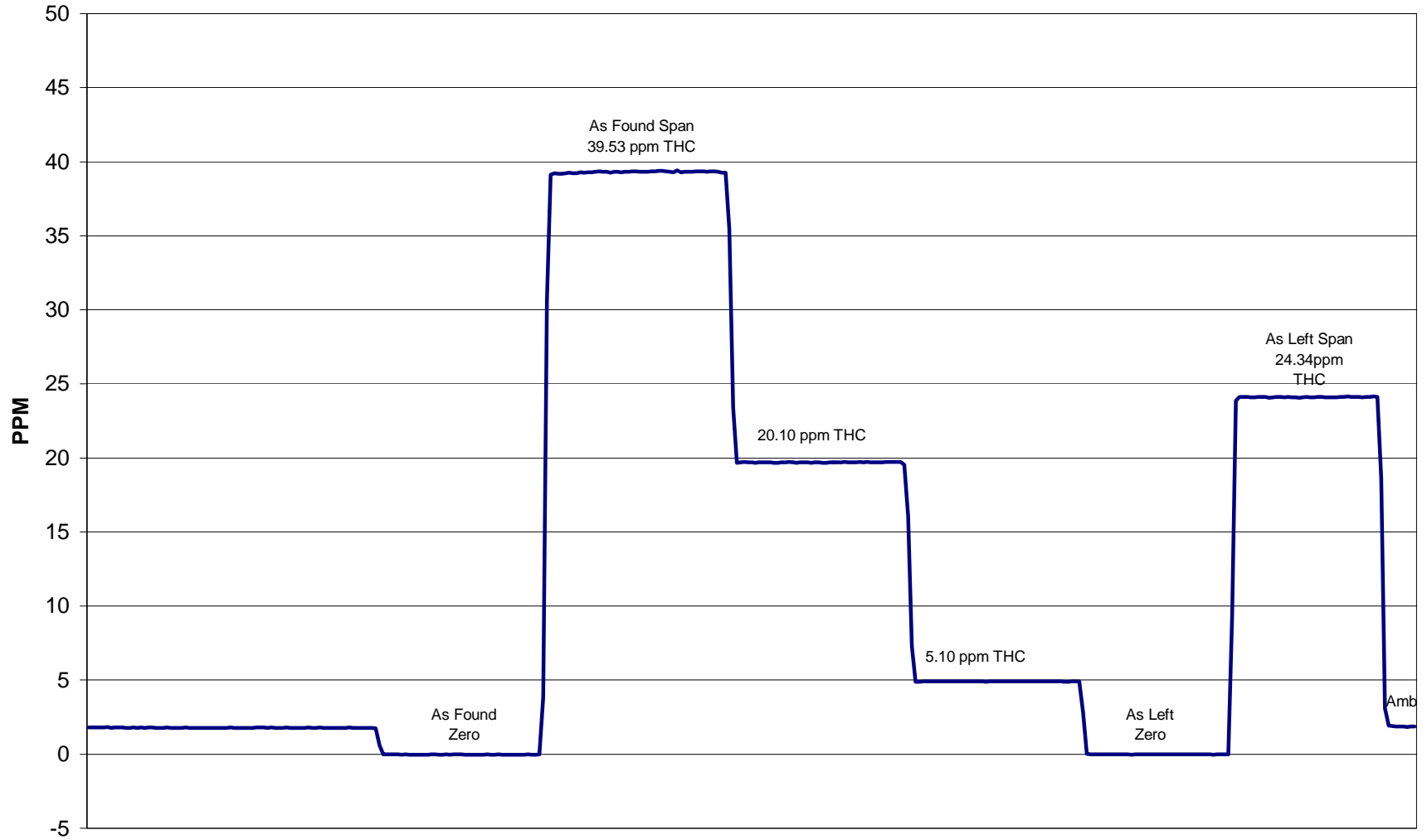
Calibration Date	August 11, 2008	Previous Calibration	July 30, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	13:31	End Time (MST)	15:58
Analyzer make/model	TEI 51C-LT	Analyzer serial #	0407505596

## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.026	N/A		
39.526	39.316	1.0053	Correlation Coefficient	0.999944
20.095	19.698	1.0202		
5.099	4.914	1.0376	Slope	1.004180
			Intercept	0.137873



### Crescent Heights THC Calibration



August 11, 2008



# Calibration Report

Parameter **THC**  
 Air Monitoring Network **Palliser Airshed**



## Station Information

Calibration Date	August 27, 2008	Previous Calibration	August 11, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	11:45	End Time (MST)	14:44
Barometric Pressure	0.9 ATM	Station Temperature	20.0 Deg C
Calibrator	SABIO	Serial Number	3750708
Cal Gas Concentration	708 ppm CH <sub>4</sub> / 299 ppm C <sub>3</sub> H <sub>8</sub>	Cal Gas Expiry Date	1/25/2009
Cal Gas CH4 equiv	1530.25 ppm	Cal Gas Cylinder #	LL-41839
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	<b>Before</b>		<b>After</b>
Calculated slope	1.004180	Calculated slope	0.998406
Calculated intercept	0.137873	Calculated intercept	0.121819
Analyzer make	TEI 51C-LT	Analyzer serial #	0407505596

	Before		After	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.74	PSI	5.72	PSI
THC span counts	19864	raw	19863	raw
THC zero counts	1478	raw	1492	raw
V Bias	-326	Volts	-326	Volts

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
3020	0.00	0.00	0.01	N/A
3020	80.10	39.54	39.58	0.9990
3021	40.20	20.10	19.82	1.0138
3020	10.10	5.10	4.94	1.0317
3020	0.00	0.00	0.01	As Found Zero
3020	80.10	39.54	39.58	As Found Span
Average Correction Factor				1.0148

Calculated value of As Found Response: 39.873 ppm      Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.11	ppm	-0.02	ppm
Auto span	24.34	ppm	23.29	ppm

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **THC**

Air Monitoring Network **Palliser Airshed**



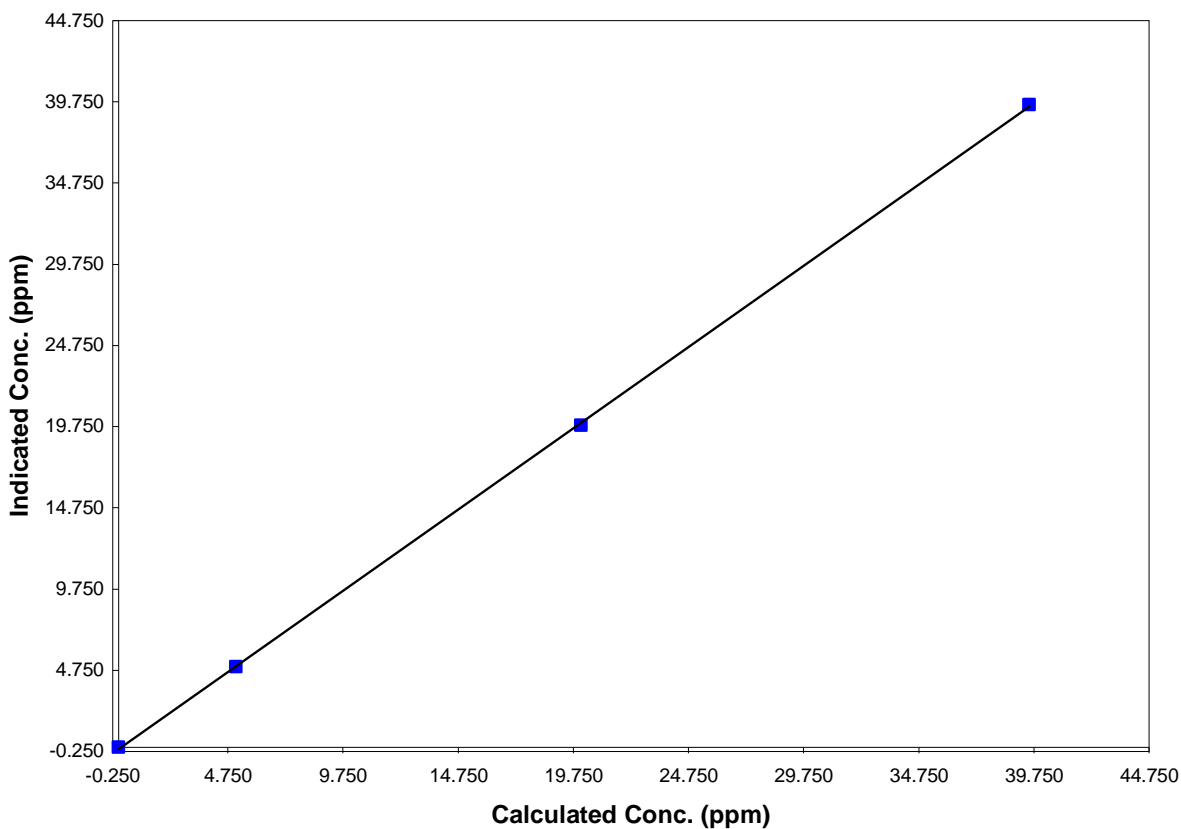
### Station Information

Calibration Date	August 27, 2008	Previous Calibration	August 11, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	11:45	End Time (MST)	14:44
Analyzer make/model	TEI 51C-LT	Analyzer serial #	0407505596

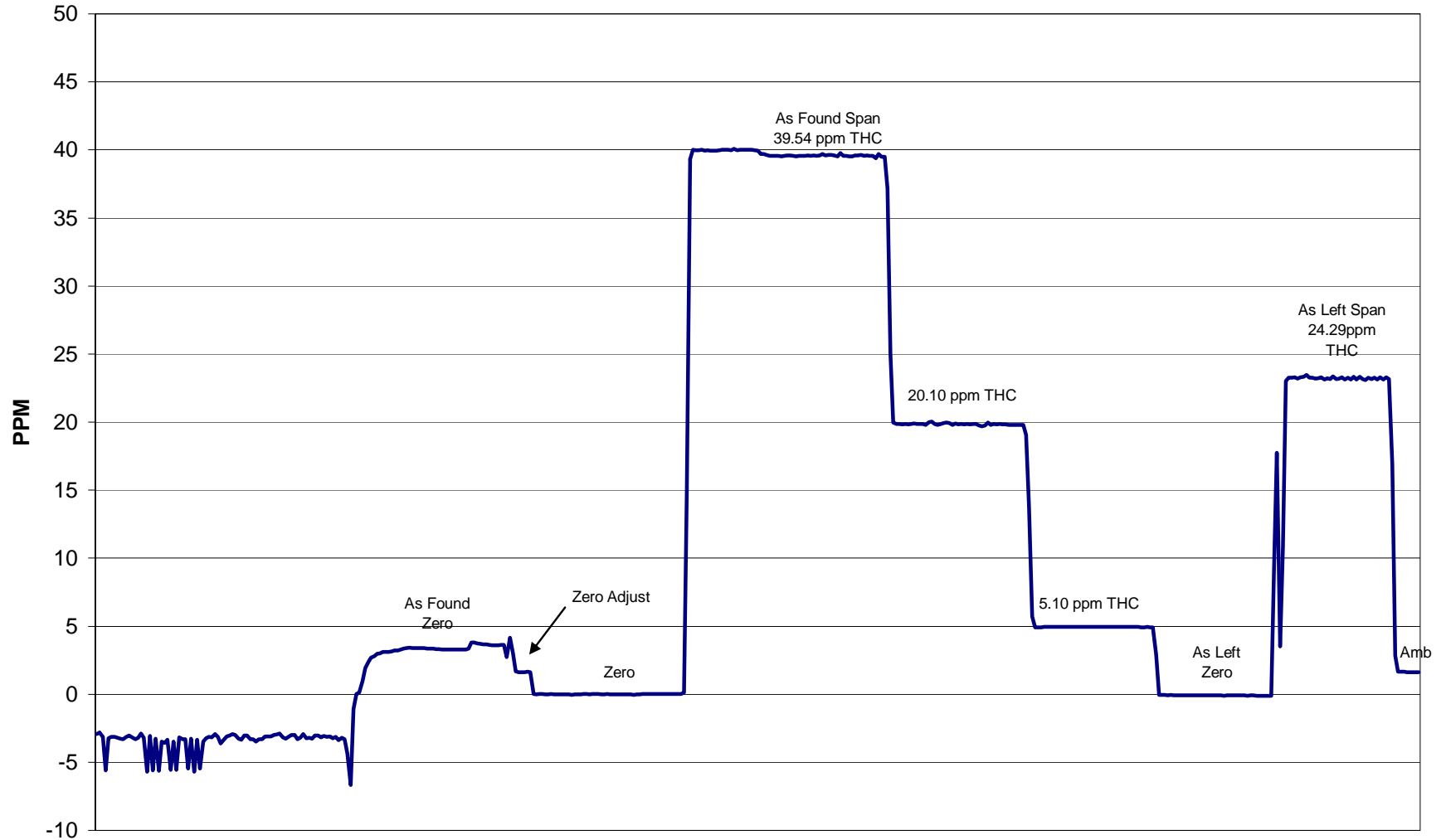
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.007	N/A		
39.538	39.576	0.9990	Correlation Coefficient	0.999936
20.095	19.823	1.0138		
5.101	4.944	1.0317	Slope	0.998406
			Intercept	0.121819

### THC Calibration Curve



# Crescent Heights THC Calibration



August 27, 2008

# Calibration Report



Parameter **CO**  
 Air Monitoring Network **Palliser**

## Station Information

Calibration Date	August 11, 2008	Previous Calibration	July 30, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	11:55	End Time (MST)	14:21
Barometric Pressure	0.90 ATM	Station Temperature	20.0 Deg C
Calibrator	SABIO 2010	Serial Number	3750708
Cal Gas Conc	3010 ppm	Cal Gas Expiry Date	April 1, 2010
		Cal Gas Cylinder #	ALM035956
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 1 volt	DACS channel #	11
	Before		After
Calculated slope	0.991478	Calculated slope	0.987737
Calculated intercept	-0.067047	Calculated intercept	-0.194271
Analyzer make	TEI Model 48C	Analyzer serial #	436609887

	Before		After	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO coefficient	1.106		1.106	
CO bkg setting	4.050		4.050	
Lamp ratio	1.110767		1.110412	
Lamp intensity	199174	Hz	199378	Hz
Sample Flow	1.010	LPM	1.016	LPM

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
3021	0.00	0.00	0.25	N/A
3021	40.20	39.53	40.25	0.9820
3020	20.20	20.00	20.39	0.9810
3021	10.10	10.03	10.32	0.9716
3021	0.00	0.00	0.25	0.0000
3021	40.20	39.53	40.25	0.9820
Average Correction Factor				0.9782

Calculated value of As Found Response: 39.597 ppm      Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.12	ppm	0.10	ppm
Auto span	19.75	ppm	19.50	ppm

Notes: No Adjustments Made

Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **CO**

Air Monitoring Network

**Palliser**

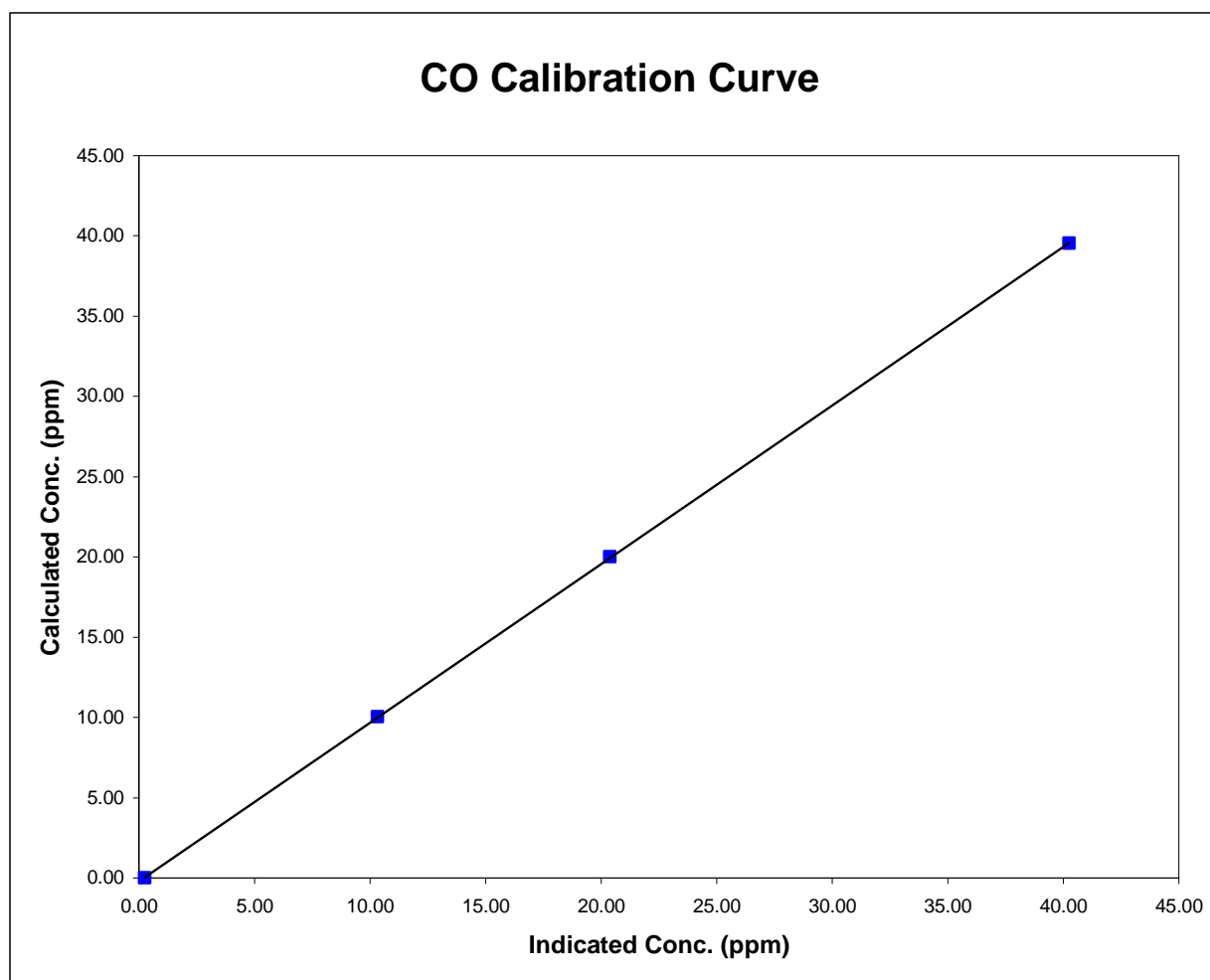


### Station Information

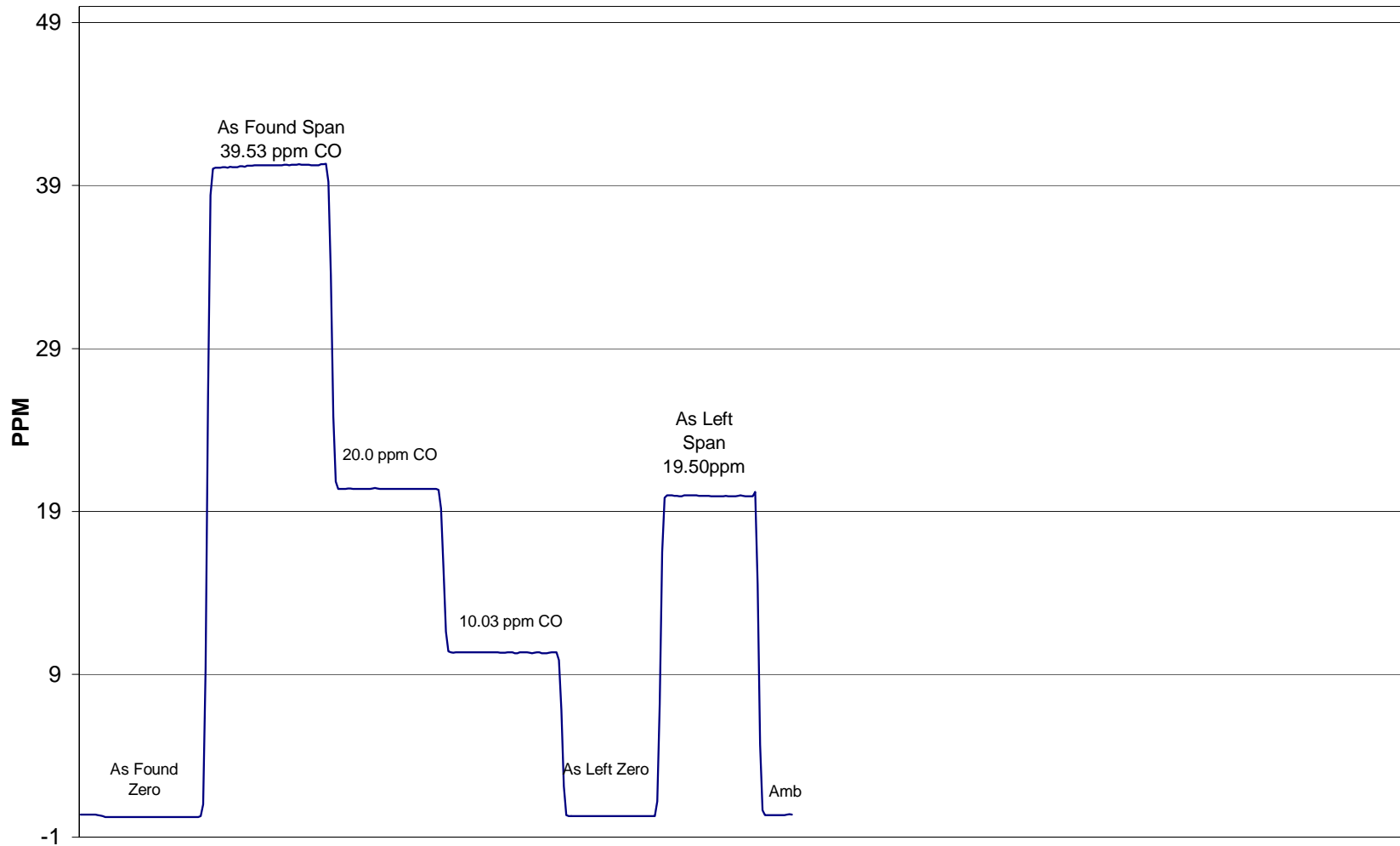
Calibration Date	August 11, 2008	Previous Calibration	July 30, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	11:55	End Time (MST)	14:21
Analyzer make/model	TEI Model 48C	Analyzer serial #	436609887

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.00	0.25	N/A		
39.53	40.25	0.9820	Correlation Coefficient	0.999991
20.00	20.39	0.9810		
10.03	10.32	0.9716		
			Slope	0.987737
			Intercept	-0.194271



# Crescent Heights CO Calibration



August 11, 2008

# Calibration Report



Parameter **O3**  
 Air Monitoring Network **PAS**

## Station Information

Calibration Date	August 18, 2008	Previous Calibration	July 21, 2008
Station Number	110	Station Location	Portable - Brooks
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="checkbox"/>
Start Time (MST)	9:19	End Time (MST)	12:30
Barometric Pressure	27.3 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 1 volt	DACS channel #	7
	Before		After
Calculated slope	0.987836	Calculated slope	1.003917
Calculated intercept	0.025102	Calculated intercept	-1.184791
Analyzer make	API Model 400E	Analyzer serial #	331

	Before		After	
Concentration range	0 - 500	ppb	0 - 500	ppb
Offset	-10.5	ppb	-10.8	ppb
Slope	0.988		1.02	
Lamp measure	4094.1	mV	4067.1	mV
Lamp Reference	4098.6	mV	4070.9	mV
Pressure	26.9	inches Hg	26.5	inches Hg
Sample Flow	514	ccm	491	ccm
Sample temp	41.1	Deg C	39.6	Deg C

## Calibration Data

Dilution air flow rate (cc/min)	Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5026	0.0	0.0	0.9	N/A
5026	300(0.82v)	298.0	298.0	1.0000
5026	200(0.52v)	182.0	182.2	0.9991
5026	100(0.32v)	103.0	104.4	0.9868
5026	0.0	0.0	0.9	As Found Zero
5026	300(0.82v)	298.0	281.2	As Found Span
Average Correction Factor				0.9953

Calculated value of As Found Response: 276.9 ppm      Percent Change of As Found: -1.5%

	before calibration		after calibration	
Auto zero	3.4	ppb	3.0	ppb
Auto span	223.7	ppb	240.0	ppb

Notes: Made Adjustment to O3 First Point...

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Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **O3**  
 Air Monitoring Network **PAS**



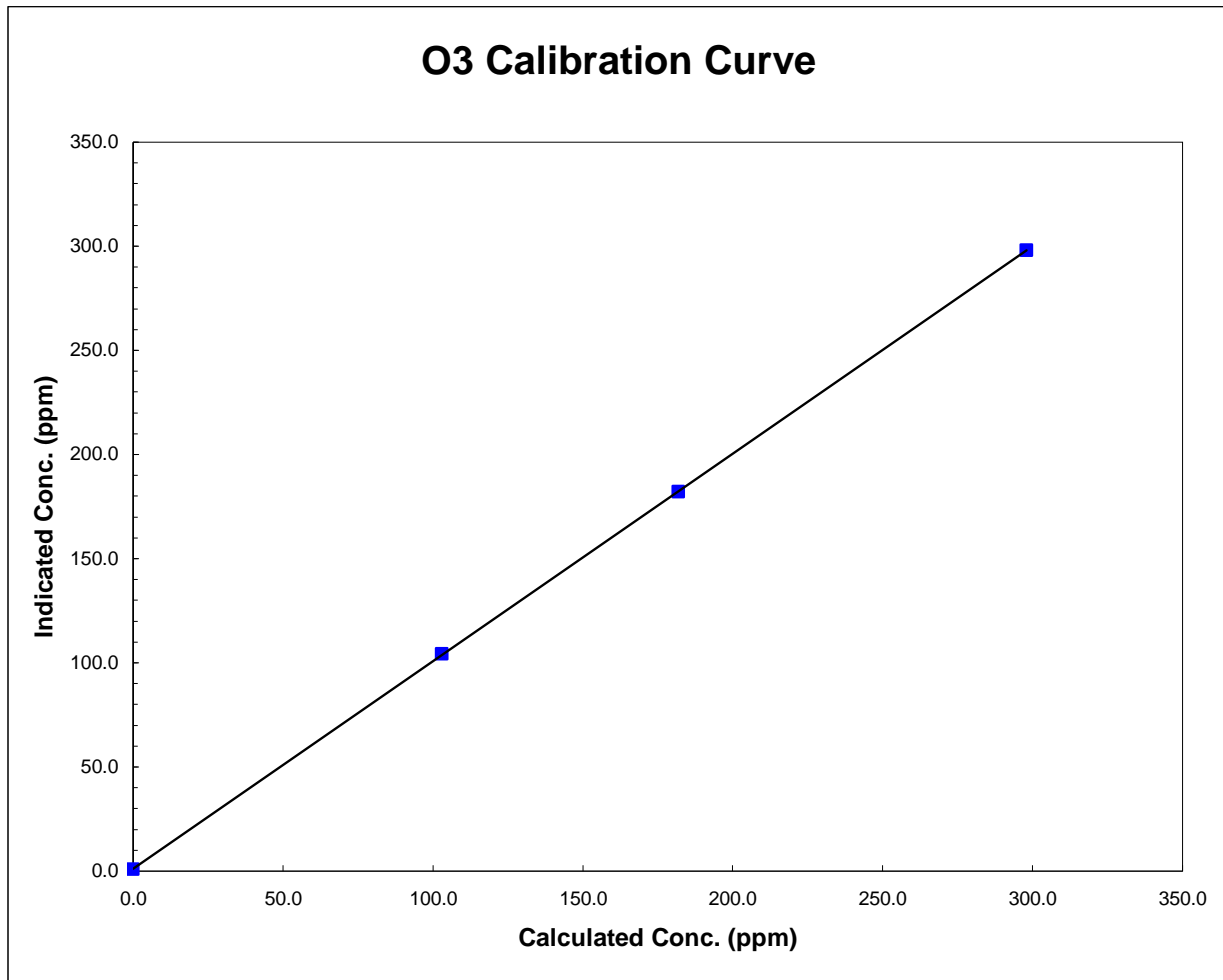
### Station Information

Calibration Date	August 18, 2008	Previous Calibration	July 21, 2008
Station Number	110	Station Location	Portable - Brooks
Start Time (MST)	9:19	End Time (MST)	12:30
Analyzer make/model	API Model 400E	Analyzer serial #	331

### Calibration Data

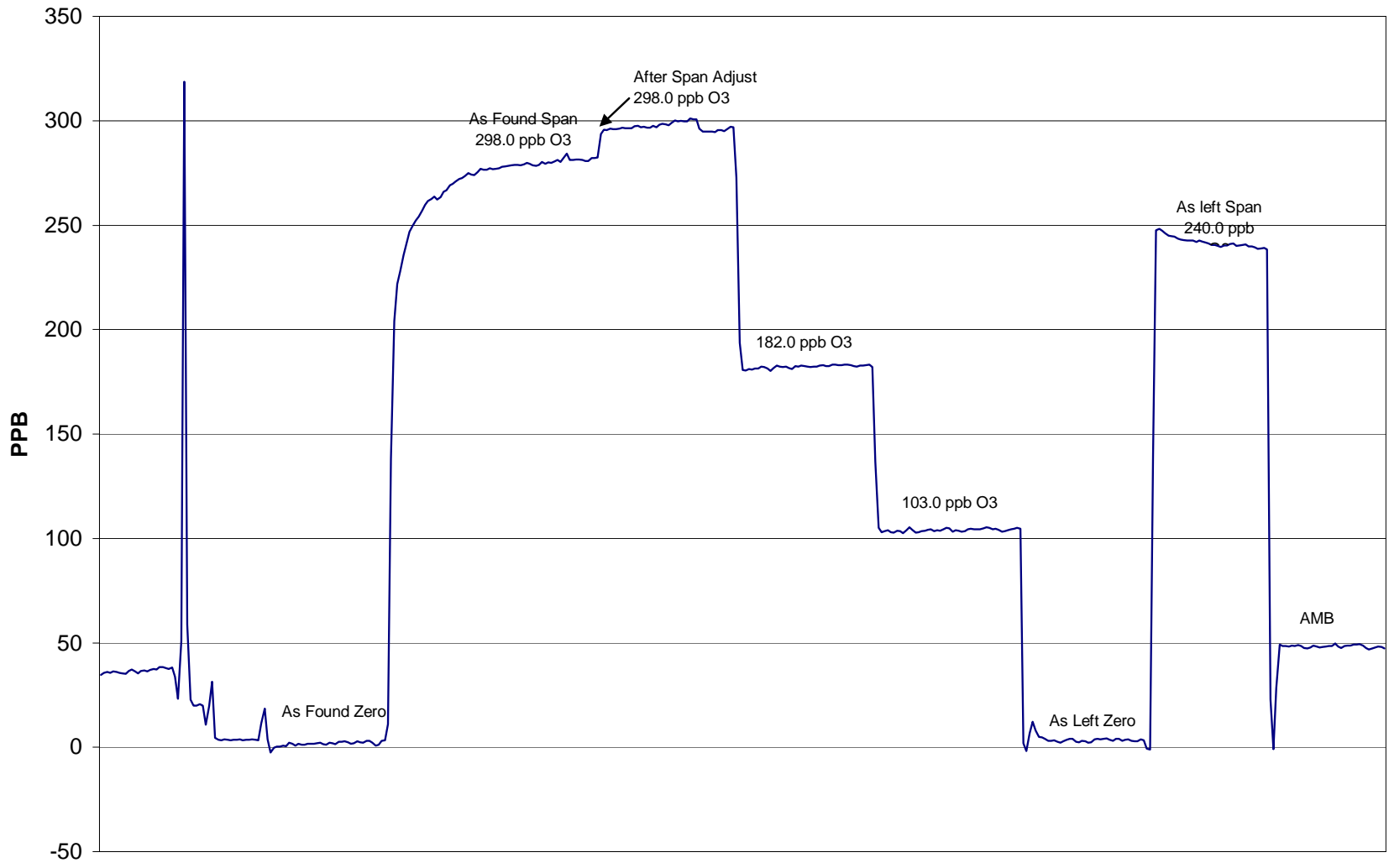
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
298.0	298.0	1.0000	Correlation Coefficient	0.999989
182.0	182.2	0.9991		
103.0	104.4	0.9868		
0.0	0.9	N/A		
			Slope	1.003917
			Intercept	-1.184791

## O3 Calibration Curve





# Portable Brooks O3 Calibration



August 18, 2008

# Calibration Report



Parameter **SO2**  
Air Monitoring Network **PAS**

## Station Information

Calibration Date	August 18, 2008	Previous Calibration	July 21, 2008
Station Number	110	Station Location	Portable - Brooks
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:

Start Time (MST)	11:28	End Time (MST)	14:22
Barometric Pressure	27.80 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	June 6, 2010
Gas Cert Reference	LL-16136		
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.975451	Calculated slope	0.992756
Calculated intercept	7.446052	Calculated intercept	2.165161

Analyzer make **TEI Model 43A** Analyzer serial # **NA**

	Before		After	
Concentration range	0-500	ppb	0-500	ppb
SO2 zero pot	1.5		1.5	
SO2 span pot	5.44		4.08	
Analyzer flow	0.5	LPM	0.5	LPM
UV Lamp voltage	858	V	857	V
Vacuum	22	in Hg	22	in Hg

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5026	0.00	0.0	-1.7	N/A
5026	40.20	403.1	404.2	0.9973
5026	20.20	203.4	202.2	1.0059
5026	10.10	101.9	100.2	1.0170
5026	0.00	0.0	-1.7	As found zero
5026	39.93	400.4	419.9	As found span
Average Correction Factor				1.0068

Calculated value of As Found Response: **418.769 ppm** Percent Change of As Found: **-4.6%**

	before calibration		after calibration	
Auto zero	-1.2	ppm	-1.6	ppm
Auto span	219.7	ppm	201.8	ppm

Notes: Made Span Adjust to SO2 first point....

Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAS**

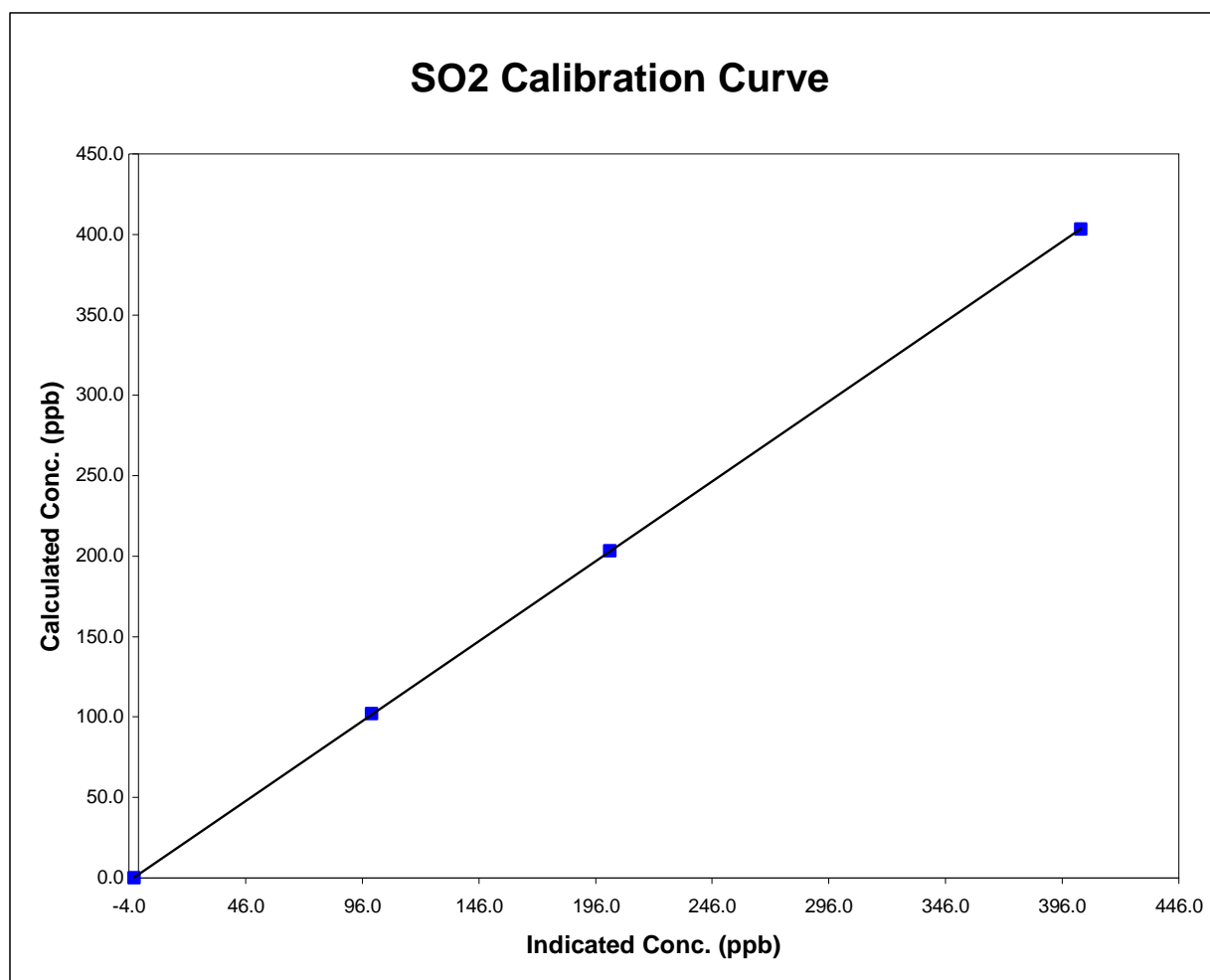


### Station Information

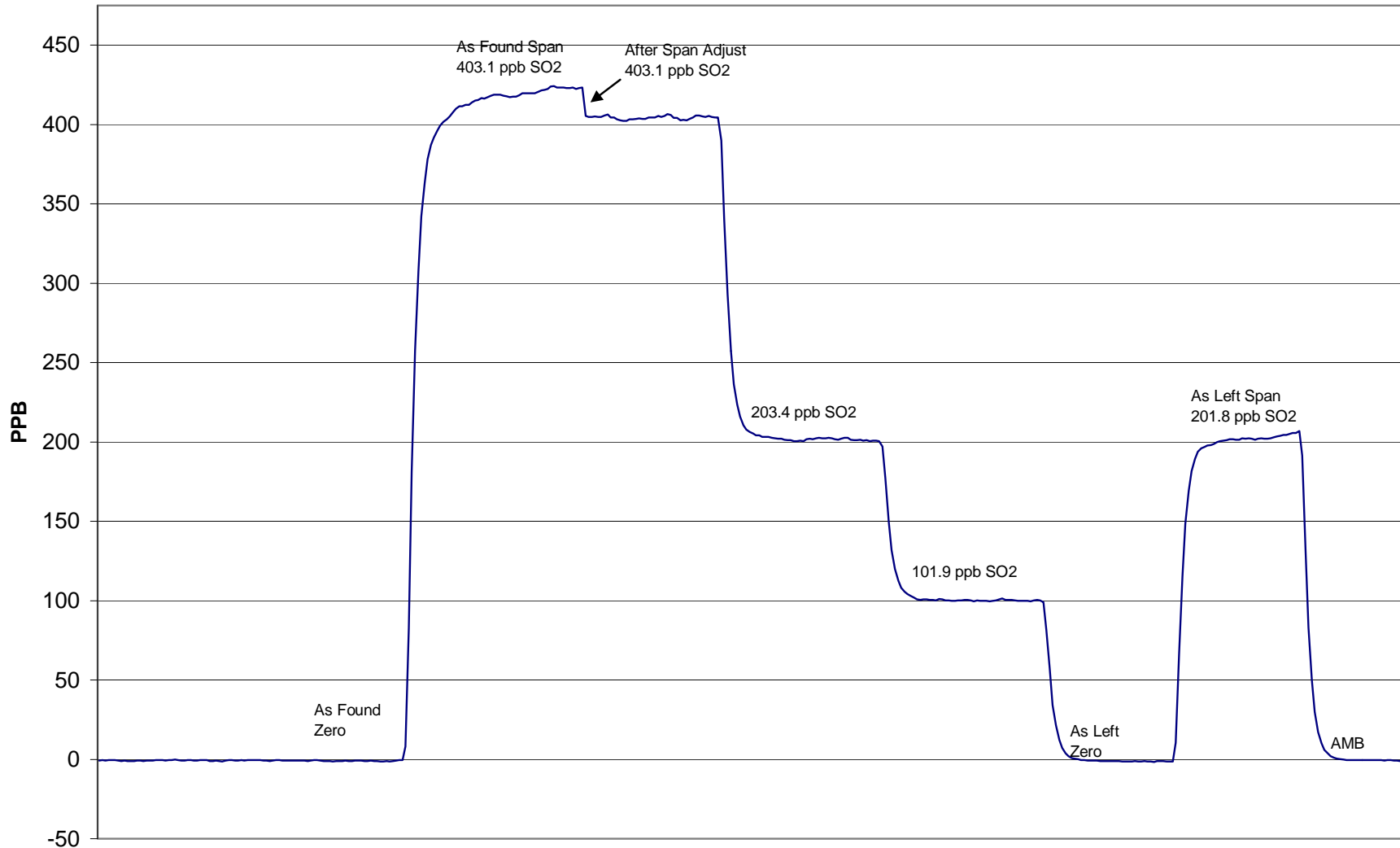
Calibration Date	August 18, 2008	Previous Calibration	July 21, 2008
Station Number	110	Station Location	Portable - Brooks
Start Time (MST)	11:28	End Time (MST)	14:22
Analyzer make/model	TEI Model 43A	Analyzer serial #	NA

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.7	N/A		
403.1	404.2	0.9973	Correlation Coefficient	0.999993
203.4	202.2	1.0059		
101.9	100.2	1.0170		
			Slope	0.992756
			Intercept	2.165161



# Portable Brooks SO2 Calibration



August 18, 2008

# Calibration Report



Parameter **H2S**

Air Monitoring Network **PAS**

## Station Information

Calibration Date	August 18, 2008	Previous Calibration	July 21, 2008
Station Number	110	Station Location	Portable Brooks
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		Other:	16:50
Start Time (MST)	13:29	End Time (MST)	15:49
Barometric Pressure	27.8 inches Hg	Station Temperature	22.0 Deg C
Calibrator	SABIO 2010	Serial Number	3750708
Cal Gas Concentration	5.12 ppm	Cal Gas Expiry Date	April 2, 2009
Gas Cert Reference	BLM003489		
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.989418	Calculated slope	0.996773
Calculated intercept	-0.680293	Calculated intercept	-0.927723
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	Before		After	
Concentration range	0 - 100	ppb	0 - 100	ppb
H2S zero pot	9.60		9.60	
H2S span pot	7.35		7.35	
Analyzer flow	0.900	LPM	0.900	LPM
UV Lamp voltage	924	V	922	V
Vacuum	21.5	in Hg	21.5	in Hg

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4021	0.00	0.0	0.6	N/A
4021	70.20	87.9	88.6	0.9918
4021	40.20	50.7	52.6	0.9637
4021	10.10	12.8	13.8	0.9274
4021	0.00	0.0	0.6	As found zero
4021	70.20	87.9	88.6	As found span
Average Correction Factor				0.9609

Calculated value of As Found Response: 86.40 ppm      Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	1.3	ppm	0.9	ppm
Auto span	45.7	ppm	45.3	ppm

Notes:

Calibration Performed By: Brad Moyles

## Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAS**



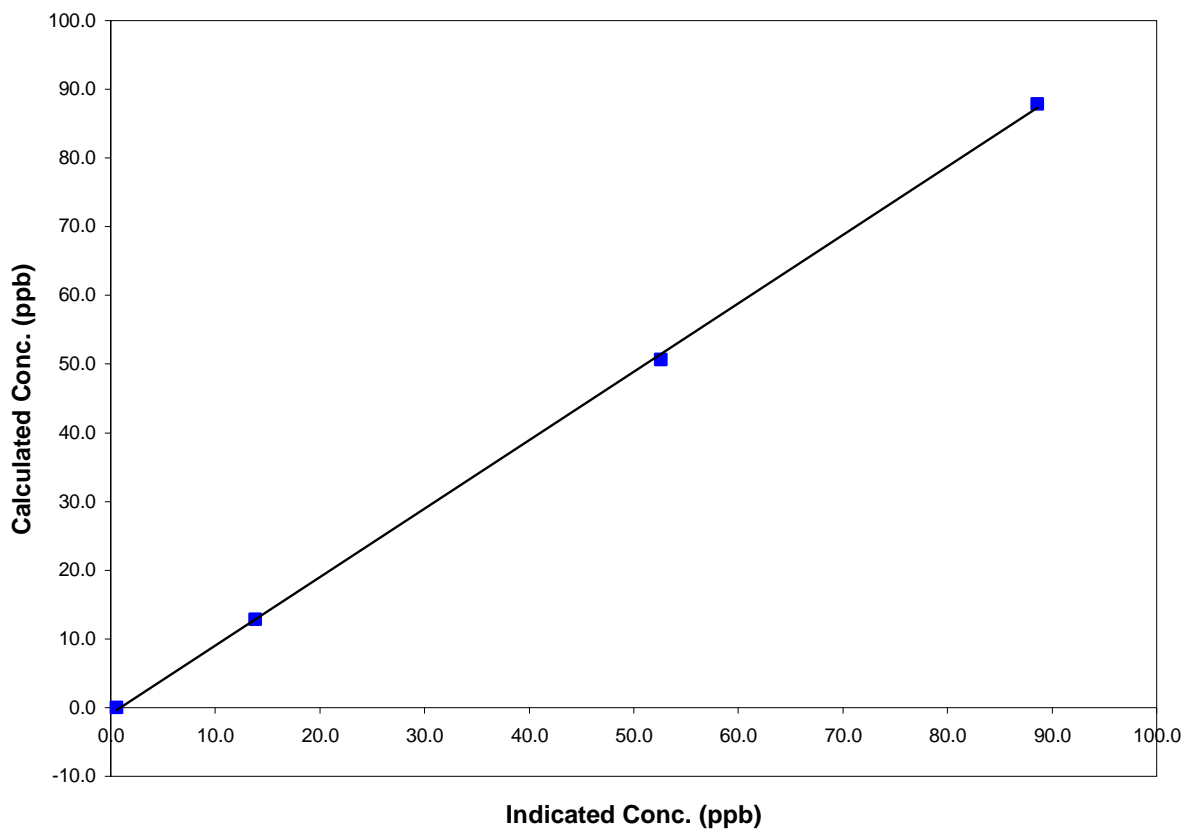
### Station Information

Calibration Date	August 18, 2008	Previous Calibration	July 21, 2008
Station Number	110	Station Location	Portable Brooks
Start Time (MST)	13:29	End Time (MST)	15:49
Analyzer make/model	TEI Model 43A	Analyzer serial #	43A-25575-221

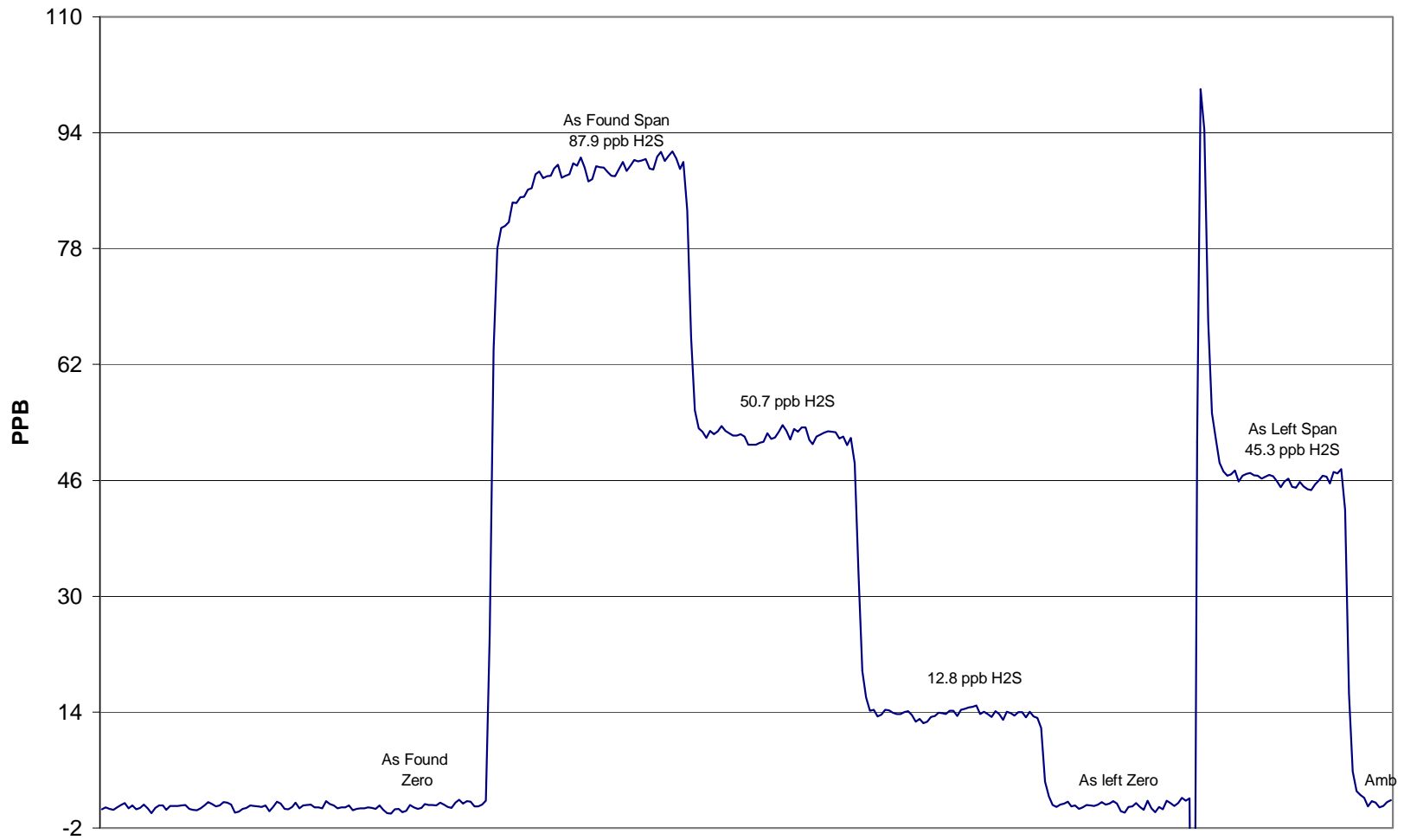
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
87.9	88.6	0.9918	Correlation Coefficient	0.999782
50.7	52.6	0.9637		
12.8	13.8	0.9274		
			Slope	0.996773
			Intercept	-0.927723

### H2S Calibration Curve



# Portable Brooks H<sub>2</sub>S Calibration



August 18, 2008