

Hinton Pulp
A division of West Fraser Mills Limited
Hinton, Alberta

AIR QUALITY MONITORING
October 2017
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta

November 15, 2017

Hinton Pulp
A Division of West Fraser Mills Ltd.
Mr. Phil Whitney
760 Switzer Drive
Hinton, AB T7V 1V7

Dear Mr. Whitney:

**Monthly Ambient Air Quality Monitoring Report for October 2017
For Hinton Pulp – A Division of West Fraser Mills Ltd.**

Enclosed are the reports for the continuous ambient air quality monitoring station of the West Central Airshed Society network.

Network Station is AMS 906 Hinton
Identified as:

The person responsible for this reporting is Gary Redmond, Executive Director of West Central Airshed Society.

The following operational notes are included as required by the Air Monitoring Directive:

1. Concentrations in excess of the Clean Air (Maximum Levels) Regulation:

There were no readings in October in excess of the AAAQO for PM_{2.5}, TRS, or H₂S, as indicated in Air Monitoring Directive Section III.A.3. (a).

2. Operational times less than 90 percent:

All analyzers and meteorological equipment returned operational times greater than 90%.

3. Monitoring Notes:

AMS 906 (Hinton)

The wind instrument returned an uptime of 97.5% due to malfunctioning, attributed to cold temperatures and precipitation causing the instrument to freeze up. All other analyzers and meteorological sensors returned uptimes of 100% for the month of October.

If additional information is required, please call (587) 499-4900.

Sincerely,

A handwritten signature in black ink, appearing to read 'PAT ANDERSEN', written in a cursive style.

Patrick Andersen
Environmental Specialist

Forest Products Industry Monthly Report Summary

Hinton
Plant Name/Location

Hinton Pulp - A Division of West Fraser Mills Ltd.
Company

License Number	Report Date	
	Year	Month
	2017	October

TOTAL EMISSIONS FOR MONTH (IN TONNES)

POLLUTANT	INCINERATOR STACK	FLARE	MISCELLANEOUS
SO ₂			

"HOURS" OF EXCEEDED STACK LICENSED LIMITS (CEM)

POLLUTANT	STACK TYPE	1-HR AVG CONCENTRATION	1-HR AVG MASS EMISSION	24-HR AVG MASS EMISSION	STACK TOP TEMP.	% TIME STACK MONITOR OPERATIONAL
SO ₂						

STATIC AMBIENT MONITORING

PARAMETER	NO. OF STATIONS	PEAK READING	AVG. OF NETWORK	NO. OF STATIONS OVER GUIDELINES
T.S.				
H ₂ S				

CONTINUOUS AMBIENT MONITORING

PARAMETER	STATION NUMBER	% TIME OPERATIONAL	1-HR AVERAGE		24-HR AVERAGE	
			MAXIMUM CONCENTRATION (ppm)	NO. READINGS > REGULATIONS	MAXIMUM CONCENTRATION (ppm)	NO. READINGS > REGULATIONS
Wind	906	100.0	n/a	n/a	n/a	n/a
TRS	906	100.0	0.008	0	0.002	0
PM _{2.5}	906	100.0	27.4 µg/m ³	0	11.41 µg/m ³	0
H ₂ S	906	100.0	0.006	0	0.002	0

SIGNATURE OF COMPANY REPRESENTATIVE

FOR ALBERTA ENVIRONMENT USE ONLY

WEST CENTRAL AIRSHED SOCIETY

**CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT
CONTINUOUS AIR QUALITY**

**AMS 906
HINTON
OCTOBER 2017**

Operations and Data Collection by:
West Central Airshed Society
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:
West Central Airshed Society
Drayton Valley, Alberta

Summary Report

Continuous air quality/meteorological monitoring measurements

West Central Airshed Society

Hinton Pulp / Hinton Station 906													October 2017		24 Hour Average Max (ppm)
Parameter	Calibration Hours	Number of Data	Percent Uptime	Mean	Min	Max	Percentile					Exceedences			
							P10	Q1	Median	Q3	P90	1-hour	24-hour		
TRS (ppb)	35	709	100.0	0.8	0.0	8.0	0.1	0.2	0.4	1.1	1.9	0	0	0.002	
SO ₂ (ppb)	37	707	100.0	0.1	0.0	2.0	0.0	0.0	0.0	0.1	0.3	0	-	0.001	
H ₂ S (ppb)	35	709	100.0	0.6	0.0	6.0	0.2	0.3	0.4	0.7	1.4	0	0	0.002	
O ₃ (ppb)	36	708	100.0	19.8	0.4	45.0	2.5	9.1	21.8	29.1	33.8	0	-	0.032	
NO (ppb)	38	706	100.0	1.5	0.0	36.1	0.0	0.1	0.4	1.2	3.7	-	-	-	
NO ₂ (ppb)	38	706	100.0	2.5	0.1	11.7	0.5	1.2	2.2	3.3	4.9	0	0	0.004	
NO _x (ppb)	38	706	100.0	4.0	0.0	42.5	0.6	1.4	2.8	4.7	8.8	-	-	-	
Particulate Matter 2.5 microns (µm ³)	0	744	100.0	5.9	0.1	27.4	0.8	2.0	4.3	8.7	13.4	0	0	11.41 ug/m3	
Wind Speed (kph)	0	725	97.5	4.2	0.0	16.1	0.7	1.4	3.2	6.1	9.6	-	-	-	
Temperature (°C)	0	744	100.0	4.3	-7.9	22.8	-2.1	0.2	3.5	8.3	11.8	-	-	-	
Relative Humidity (%)	0	744	100.0	64.1	13.1	98.0	33.1	43.6	65.5	84.4	94.2	-	-	-	
Std Dev Wind Direction (deg)	0	725	97.5	49.5	13.7	104.7	26.9	34.6	44.6	61.2	81.4	-	-	-	
Std Dev Wind Speed (kph)	0	725	97.5	3.1	0.4	11.1	1.2	1.6	2.4	4.0	6.5	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
October 2017

Maximum Value: 8.18 ppb on Oct 19 07:00		Maximum Daily Average: 2.38 ppb on Oct 21		Hours in Service: 744																													
Minimum Value: 0 ppb on Oct 24 14:00		Minimum Daily Average: 0.15 ppb on Oct 10		Hours of Data: 709																													
Maximum Diurnal Average: 1.36 ppb at hour 9		Minimum Diurnal Average: 0.36 ppb at hour 16		Hours of Missing Data: 35																													
Monthly Average: 0.789 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 1.1 P ₉₀ = 1.9 P ₉₉ = 5.0		Hours of Calibration: 35																													
				Percent Operational Time: 100.0																													
Day	Hourly Period Ending At																								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-Oct	2	0	0	Z	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.35	1.95							
2-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.19	0.53							
3-Oct	0	0	0	Z	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.18	0.52							
4-Oct	0	0	0	Z	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0.38	1.25							
5-Oct	0	0	0	Z	1	1	1	1	2	3	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0.60	2.59							
6-Oct	0	0	0	Z	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.37	1.05							
7-Oct	0	1	1	Z	1	1	1	1	2	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0.64	2.35							
8-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0.33	1.47							
9-Oct	1	1	1	Z	2	5	4	2	3	3	2	1	0	0	0	0	0	0	1	1	1	0	0	0	1.32	4.75							
10-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.15	0.24							
11-Oct	0	0	0	Z	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.19	0.55							
12-Oct	0	0	0	Z	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.32	1.44							
13-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.15	0.41							
14-Oct	2	1	1	Z	1	1	2	1	0	0	0	1	3	1	2	1	1	1	2	2	0	1	0	0	1.12	2.88							
15-Oct	2	2	1	Z	0	1	2	1	1	2	1	1	1	0	1	1	1	1	2	2	0	1	2	1	1.23	2.22							
16-Oct	1	0	3	Z	3	1	0	0	0	0	0	0	0	1	1	1	2	2	1	0	2	3	1	0	1.05	3.40							
17-Oct	1	1	1	Z	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	2	1	0	1	0.61	1.96							
18-Oct	3	1	2	Z	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.58	3.19							
19-Oct	0	1	1	Z	1	5	8	7	5	3	2	0	1	0	1	0	1	0	0	0	0	0	0	0	1.62	8.18							
20-Oct	0	0	1	Z	1	2	2	3	2	4	1	2	1	1	1	1	1	0	1	1	3	1	1	2	1.39	3.66							
21-Oct	3	1	1	Z	6	5	4	5	7	7	5	4	2	0	0	1	1	0	0	0	0	0	0	0	2.38	6.95							
22-Oct	0	0	0	Z	1	4	1	1	1	1	2	2	2	1	1	1	1	2	3	3	2	2	2	2	1.44	4.25							
23-Oct	1	2	3	Z	2	0	1	1	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1.34	2.68							
24-Oct	1	1	1	Z	2	2	3	3	4	3	1	2	0	0	0	0	0	0	0	0	0	0	0	2	1.16	4.33							
25-Oct	3	1	1	Z	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.68	2.75							
26-Oct	0	0	0	Z	0	0	0	0	0	1	2	2	C	C	C	C	1	0	0	0	1	1	1	0	0.63	2.28							
27-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0.36	2.84							
28-Oct	0	1	1	Z	1	1	1	2	2	3	2	1	1	1	1	1	1	0	0	1	1	0	0	1	1.00	3.37							
29-Oct	0	0	0	Z	1	1	1	2	4	2	2	0	0	0	0	0	0	0	0	1	1	1	1	1	0.76	3.82							
30-Oct	1	0	0	Z	1	1	1	1	1	1	0	0	0	0	0	0	2	7	2	1	1	3	2	2	1.24	6.61							
31-Oct	2	1	1	Z	2	2	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.70	2.21							
		0.83	0.64	0.74	--	1.04	1.23	1.25	1.27	1.36	1.30	0.89	0.72	0.53	0.38	0.48	0.36	0.53	0.58	0.69	0.64	0.55	0.67	0.70	0.75	Diurnal Average							
		3.19	2.45	3.40	--	5.70	5.06	8.18	7.01	6.82	6.95	5.24	4.48	2.88	1.36	1.74	1.41	2.38	6.61	2.53	2.68	2.79	3.43	3.08	2.84	Diurnal Maximum							
Z - zerospan		C - Calibration																															
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 10 ppb				24-hr 3 ppb																											



WCAS - Hinton
Summary of Hourly Averages

Sulphur Dioxide (SO₂) - ppb
October 2017

Maximum Value: 1.99 ppb on Oct 9 09:00		Maximum Daily Average: 0.66 ppb on Oct 23		Hours in Service: 744																													
Minimum Value: 0.0 ppb on Oct 1 14:00		Minimum Daily Average: 0.00 ppb on Oct 5		Hours of Data: 707																													
Maximum Diurnal Average: 0.20 ppb at hour 5		Minimum Diurnal Average: 0.04 ppb at hour 21		Hours of Missing Data: 37																													
Monthly Average: 0.111 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 1.4		Hours of Calibration: 37																													
				Percent Operational Time: 100.0																													
Day	Hourly Period Ending At																								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-Oct	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.05							
2-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.02							
3-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.04							
4-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.04							
5-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00							
6-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.04							
7-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01							
8-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.05							
9-Oct	0.3	0.3	0.2	Z	1.0	0.7	1.0	1.5	2.0	0.9	1.4	0.4	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.44	1.99							
10-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00							
11-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.03							
12-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.02							
13-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.03							
14-Oct	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.7	0.6	0.7	0.6	0.5	0.1	0.0	0.0	0.0	0.0	0.21	0.70							
15-Oct	0.6	0.5	0.1	Z	0.1	0.4	1.0	0.8	1.0	1.1	0.2	0.7	1.2	0.3	0.6	0.7	0.9	0.7	0.6	0.4	0.0	0.1	0.7	0.2	0.56	1.22							
16-Oct	0.1	0.1	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.1	0.2	0.1	0.07	0.34							
17-Oct	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.13							
18-Oct	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.12							
19-Oct	0.0	0.0	0.0	Z	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.18							
20-Oct	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.14							
21-Oct	0.0	0.0	0.0	Z	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.22							
22-Oct	0.0	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.7	0.4	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.7	0.16	0.73							
23-Oct	0.4	0.5	0.2	Z	0.3	0.0	0.0	0.0	0.0	0.1	0.7	0.6	0.6	0.9	0.6	0.7	1.1	0.6	1.3	1.0	0.9	1.3	1.9	1.5	0.66	1.87							
24-Oct	1.0	0.9	0.9	Z	1.6	1.2	0.9	0.6	0.6	0.5	1.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.48	1.57							
25-Oct	1.7	1.0	1.2	Z	1.6	1.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	1.71							
26-Oct	0.0	0.0	0.0	Z	0.2	0.0	0.0	C	C	C	C	C	C	0.1	0.3	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	--	0.34							
27-Oct	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.03	0.06							
28-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.07	0.33							
29-Oct	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.04	0.06							
30-Oct	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.20							
31-Oct	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.09	0.34							
		0.14	0.12	0.10	--	0.20	0.13	0.12	0.12	0.13	0.11	0.11	0.12	0.11	0.10	0.12	0.11	0.13	0.08	0.11	0.07	0.04	0.06	0.11	0.11	Diurnal Average							
		1.71	0.99	1.21	--	1.57	1.25	1.00	1.47	1.99	1.14	1.42	1.17	1.22	0.90	0.68	0.71	1.10	0.67	1.31	1.04	0.90	1.33	1.87	1.52	Diurnal Maximum							
Z - zerospan		C - Calibration																															
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb				24-hr 48 ppb																											



WCAS - Hinton
Summary of Hourly Averages

Hydrogen Sulphide (H2S) - ppb
October 2017

Maximum Value: 5.77 ppb on Oct 19 07:00		Maximum Daily Average: 1.82 ppb on Oct 21		Hours in Service: 744																													
Minimum Value: 0 ppb on Oct 15 14:00		Minimum Daily Average: 0.21 ppb on Oct 13		Hours of Data: 709																													
Maximum Diurnal Average: 1.10 ppb at hour 9		Minimum Diurnal Average: 0.32 ppb at hour 16		Hours of Missing Data: 35																													
Monthly Average: 0.648 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.4 P ₉₉ = 3.6		Hours of Calibration: 35																													
				Percent Operational Time: 100.0																													
Day	Hourly Period Ending At																								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-Oct	2	0	0	Z	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.44	1.97							
2-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.33	0.72						
3-Oct	0	0	0	Z	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	0.53							
4-Oct	0	1	1	Z	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0.46	1.32							
5-Oct	0	0	0	Z	1	0	1	1	2	3	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0.63	2.55							
6-Oct	1	0	0	Z	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.39	1.04							
7-Oct	0	1	1	Z	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.64	2.12							
8-Oct	0	0	0	Z	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.42	1.09							
9-Oct	1	1	1	Z	1	3	2	2	2	2	1	1	0	0	0	0	0	0	1	1	1	1	0	1	0.99	2.79							
10-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.39							
11-Oct	0	0	0	Z	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.30	0.57							
12-Oct	0	0	0	Z	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.43	1.31							
13-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	0.38							
14-Oct	1	1	1	Z	1	1	1	1	0	0	0	0	2	1	1	1	1	1	2	1	0	0	0	0	0.73	1.54							
15-Oct	2	1	1	Z	0	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0.65	1.51							
16-Oct	0	0	2	Z	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	2	1	0	0.48	2.02							
17-Oct	1	1	1	Z	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0.42	1.22							
18-Oct	2	1	1	Z	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	1.95							
19-Oct	0	1	0	Z	0	3	6	5	3	2	1	0	1	0	1	0	1	0	0	0	0	0	0	0	1.12	5.77							
20-Oct	0	0	1	Z	1	1	2	2	2	3	1	1	0	1	1	1	0	0	0	1	2	1	1	1	0.95	2.64							
21-Oct	2	1	1	Z	4	4	3	3	5	5	4	3	2	0	0	1	1	0	0	0	1	0	0	0	1.82	5.14							
22-Oct	0	0	0	Z	1	3	1	1	1	1	1	1	1	1	1	0	1	1	2	2	1	1	1	1	1.04	3.05							
23-Oct	1	2	2	Z	1	0	1	1	2	2	1	1	0	1	1	1	1	0	1	1	0	1	1	1	0.89	1.89							
24-Oct	1	0	1	Z	2	2	2	3	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0.82	3.28							
25-Oct	2	1	1	Z	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.55	2.08							
26-Oct	0	0	0	Z	1	1	1	0	1	1	2	2	C	C	C	C	1	0	0	1	1	1	1	0	0.66	1.77							
27-Oct	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0.43	2.06							
28-Oct	0	1	1	Z	0	1	1	2	2	3	1	1	1	1	1	0	1	0	0	1	1	0	0	1	0.80	2.73							
29-Oct	0	0	0	Z	1	1	1	1	3	2	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0.76	2.97							
30-Oct	1	0	1	Z	1	1	1	1	1	1	0	0	0	0	0	0	2	5	1	1	1	3	2	2	1.07	5.24							
31-Oct	2	1	1	Z	2	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.61	1.75							
		0.69	0.58	0.61	--	0.80	0.94	0.98	1.00	1.10	1.06	0.73	0.61	0.45	0.35	0.40	0.32	0.41	0.48	0.56	0.53	0.48	0.59	0.58	0.63	Diurnal Average							
		2.00	1.71	1.89	--	4.13	3.71	5.77	4.89	5.09	5.14	3.81	3.28	1.75	0.97	1.15	0.85	1.66	5.24	1.78	1.97	1.92	2.80	2.02	2.08	Diurnal Maximum							
Z - zerospan		C - Calibration																															
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 10 ppb				24-hr 3 ppb																											



WCAS - Hinton
Summary of Hourly Averages

Ozone (O₃) - ppb
October 2017

Maximum Value: 45.01 ppb on Oct 6 12:00		Maximum Daily Average: 32.12 ppb on Oct 15		Hours in Service: 744																																												
Minimum Value: 0.4 ppb on Oct 6 08:00		Minimum Daily Average: 8.57 ppb on Oct 12		Hours of Data: 708																																												
Maximum Diurnal Average: 30.39 ppb at hour 16		Minimum Diurnal Average: 12.28 ppb at hour 7		Hours of Missing Data: 36																																												
Monthly Average: 19.773 ppb		Percentiles: P₁ = 0.7 P₁₀ = 2.5 Q₁ = 9.1 Median = 21.8 Q₃ = 29.1 P₉₀ = 33.8 P₉₉ = 39.4		Hours of Calibration: 36																																												
				Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At																								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-Oct	10.3	9.3	8.2	Z	7.2	3.1	2.8	4.4	10.7	23.5	23.9	24.1	25.3	30.4	27.9	25.1	21.4	19.7	20.2	21.0	21.5	21.9	23.3	22.5	17.73	30.42																						
2-Oct	20.4	21.6	23.1	Z	26.4	24.1	24.3	25.3	25.7	27.7	28.5	30.1	32.3	33.5	33.6	34.1	34.0	31.2	28.7	19.0	10.4	8.1	4.5	3.8	23.92	34.14																						
3-Oct	6.5	3.8	2.8	Z	4.3	2.9	1.3	4.5	13.2	22.9	28.7	33.7	37.9	38.8	39.2	39.9	39.5	37.2	31.0	18.7	6.8	5.8	4.2	3.6	18.58	39.85																						
4-Oct	4.8	4.9	3.0	Z	3.0	2.6	2.2	3.0	7.3	17.7	23.2	26.4	30.0	35.1	39.6	37.1	33.2	26.0	5.2	1.6	2.1	1.8	1.1	1.4	13.58	39.60																						
5-Oct	0.9	0.7	0.8	Z	0.7	0.8	0.7	0.9	2.9	9.4	15.4	19.4	22.6	25.0	26.3	26.1	24.7	23.0	19.5	9.7	1.8	2.1	1.7	2.0	10.31	26.26																						
6-Oct	1.7	2.1	1.9	Z	1.2	1.4	0.9	0.4	11.0	37.7	41.3	45.0	43.7	40.6	36.9	36.6	35.7	34.4	34.7	37.7	29.2	20.4	10.6	7.5	22.29	45.01																						
7-Oct	13.2	9.7	11.0	Z	3.6	3.8	2.6	2.8	11.7	16.9	28.3	30.4	28.6	26.6	24.9	28.2	29.7	29.4	27.5	18.5	19.0	14.6	22.2	21.0	18.44	30.40																						
8-Oct	20.8	20.7	25.1	Z	23.5	23.3	23.0	20.5	18.1	23.9	28.0	29.3	30.7	31.1	32.6	30.4	29.5	32.2	28.6	22.0	3.5	3.5	5.1	19.9	22.83	32.58																						
9-Oct	26.1	28.3	31.1	Z	28.7	30.0	29.8	27.4	27.9	26.6	30.2	33.9	37.2	37.3	36.4	36.1	36.8	35.0	30.0	28.7	27.6	27.7	24.7	16.7	30.19	37.35																						
10-Oct	16.6	21.3	24.8	Z	10.6	5.7	5.2	5.9	7.4	13.5	15.9	17.5	20.5	19.1	17.1	18.6	18.1	15.1	13.3	12.4	13.1	13.4	13.8	11.2	14.36	24.77																						
11-Oct	10.3	8.5	9.1	Z	11.6	12.6	10.3	8.7	11.7	12.1	11.1	13.2	14.3	14.6	15.0	16.6	17.3	12.9	10.4	12.8	14.8	15.3	14.8	12.1	12.62	17.27																						
12-Oct	11.4	8.2	6.3	Z	6.7	3.5	0.8	1.0	1.5	4.6	9.9	12.8	14.8	20.5	24.3	19.6	15.6	8.8	3.3	3.7	2.2	4.1	6.4	7.0	8.57	24.33																						
13-Oct	7.4	8.5	9.7	Z	10.4	8.9	8.3	9.8	10.8	11.1	13.6	15.6	14.6	14.5	15.9	17.8	17.0	11.5	2.9	0.8	1.2	2.7	2.4	0.9	9.40	17.76																						
14-Oct	0.6	0.6	0.7	Z	21.0	23.6	21.4	23.7	27.5	28.5	29.2	28.5	26.2	27.7	24.8	26.1	26.3	27.7	20.6	26.7	24.6	12.4	6.9	6.7	20.09	29.19																						
15-Oct	22.6	25.7	27.3	Z	25.9	25.5	24.4	27.6	28.8	30.4	32.6	33.8	33.9	36.9	36.1	37.2	34.6	33.4	33.7	37.9	40.8	38.8	33.0	38.0	32.12	40.77																						
16-Oct	36.4	35.8	31.5	Z	19.4	14.9	14.2	12.4	11.5	13.4	25.3	21.5	22.2	25.6	29.6	33.5	32.8	29.4	29.8	33.4	32.4	28.0	24.5	25.9	25.37	36.36																						
17-Oct	24.2	22.2	27.5	Z	27.1	27.9	16.3	14.6	13.6	21.0	20.0	21.2	23.6	24.8	22.1	32.7	23.0	25.0	33.3	30.9	30.1	27.7	33.8	27.3	24.78	33.80																						
18-Oct	26.2	17.3	13.8	Z	27.9	14.9	11.5	26.6	11.3	4.7	12.9	15.2	20.9	22.5	24.8	37.4	34.1	32.4	37.4	34.1	32.8	33.8	33.0	30.5	24.17	37.44																						
19-Oct	28.3	21.7	6.7	Z	1.0	0.6	0.7	0.7	1.1	3.6	17.3	35.9	37.7	40.8	39.4	38.7	33.2	33.3	26.9	21.7	14.3	7.4	7.7	5.5	18.44	40.75																						
20-Oct	4.4	3.0	1.9	Z	3.5	14.1	11.6	9.8	5.6	5.3	8.8	21.3	23.6	26.1	26.0	28.6	26.2	22.2	16.9	8.8	3.2	1.3	0.7	0.8	11.91	28.58																						
21-Oct	0.7	0.8	0.7	Z	1.2	0.6	0.6	0.7	1.0	2.7	10.4	14.3	29.6	35.1	38.7	38.0	37.6	37.1	30.4	9.2	2.8	6.2	7.4	7.3	13.60	38.69																						
22-Oct	12.1	13.8	13.7	Z	27.2	26.3	19.2	4.8	6.6	3.9	18.3	28.2	30.2	32.4	35.5	39.3	36.6	35.9	32.9	32.2	34.4	34.3	34.7	32.8	25.44	39.28																						
23-Oct	34.7	27.4	30.0	Z	27.0	21.7	8.7	2.0	18.1	33.7	34.4	35.7	35.9	33.6	32.9	33.2	32.2	33.8	29.9	30.7	33.8	32.8	30.5	32.5	28.93	35.92																						
24-Oct	34.5	34.9	34.3	Z	29.8	31.4	30.2	32.2	29.8	30.9	33.3	32.5	30.8	31.5	29.8	28.5	24.5	25.8	22.9	21.2	18.3	13.8	19.0	29.3	28.23	34.87																						
25-Oct	30.5	35.3	34.8	Z	32.6	30.0	30.5	32.6	27.6	27.4	26.6	24.6	22.6	21.2	21.6	22.4	20.9	20.7	20.8	21.7	19.8	12.8	8.3	7.2	24.03	35.32																						
26-Oct	7.2	4.6	1.9	Z	1.0	0.7	1.0	C	C	C	C	C	24.8	27.4	30.8	33.8	28.4	23.1	9.7	2.5	2.8	2.2	7.5	27.5	13.16	33.81																						
27-Oct	29.6	28.7	28.1	Z	28.8	28.1	26.1	24.2	24.5	23.7	24.2	25.0	26.1	26.7	27.0	26.9	25.7	25.3	21.8	22.8	23.1	21.8	20.7	20.5	25.19	29.59																						
28-Oct	21.3	19.2	17.7	Z	4.4	7.0	3.8	10.5	3.0	5.7	12.0	6.5	7.4	10.2	23.1	28.6	21.8	23.7	25.9	27.4	29.1	29.1	28.9	28.4	17.17	29.13																						
29-Oct	25.1	25.6	19.2	Z	16.2	13.0	9.6	7.8	8.4	7.1	27.1	31.1	31.9	31.9	32.6	32.4	31.2	19.4	3.1	3.7	3.1	1.2	1.8	1.6	16.71	32.55																						
30-Oct	1.6	1.7	1.8	Z	0.8	0.9	11.6	21.0	18.4	25.4	30.5	30.6	30.9	30.7	31.4	30.4	28.1	24.1	21.1	15.7	12.8	8.9	3.7	1.5	16.68	31.40																						
31-Oct	1.3	2.4	7.7	Z	29.5	29.9	27.1	25.7	26.8	26.8	24.7	15.3	18.2	23.5	25.7	28.2	28.3	25.1	27.7	25.5	25.6	27.9	25.8	23.4	22.70	29.93																						
																								15.87	15.11	14.72	--	14.92	14.00	12.28	13.05	14.12	18.06	22.85	25.09	26.75	28.26	29.09	30.39	28.32	26.24	22.59	19.77	17.33	15.54	14.93	15.36	Diurnal Average
																								36.36	35.81	34.84	--	32.64	31.39	30.47	32.59	29.84	37.65	41.27	45.01	43.73	40.75	39.60	39.85	39.49	37.17	37.44	37.89	40.77	38.78	34.68	37.98	Diurnal Maximum
Z - zerospan C - Calibration																																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82.5 ppb 24-hr -- ppb																																																



WCAS - Hinton
Eight Hour Running Averages

Ozone (O₃) - ppb
October 2017

Maximum Value: 39.69 ppb on Oct 6 17:00 Maximum Daily Average: 29.95 ppb on Oct 24 Minimum Value: 0.8 ppb on Oct 21 08:00 Minimum Daily Average: 9.64 ppb on Oct 5 Maximum Diurnal Average: 27.16 ppb at hour 18 Minimum Diurnal Average: 14.23 ppb at hour 8 Monthly Average: 19.580 ppb Percentiles: P ₁ = 0.9 P ₁₀ = 6.1 Q ₁ = 12.0 Median = 21.0 Q ₃ = 26.9 P ₉₀ = 32.0 P ₉₉ = 36.7																								Hours in Service:	744	
																								Hours of Data:	735	
																								Hours of Missing Data:	9	
																								Hours of Calibration:	9	
																								Percent Operational Time:	100.0	
Day	Hourly Period Ending At																								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-Oct	20.3	18.5	16.7	15.5	12.4	10.6	7.8	6.5	6.5	8.6	10.8	12.5	14.7	18.1	21.3	23.9	25.2	24.7	24.2	23.9	23.4	22.3	21.8	21.4	17.15	25.20
2-Oct	21.3	21.5	21.9	22.0	22.7	23.1	23.2	23.6	24.4	25.2	26.0	26.5	27.3	28.4	29.6	30.7	31.7	32.2	32.2	30.8	28.1	24.9	21.2	17.4	25.66	32.19
3-Oct	14.0	10.6	7.3	5.7	4.8	4.1	3.6	3.7	4.7	7.4	11.1	13.9	18.1	22.6	27.4	31.8	35.1	36.9	37.1	35.3	31.4	27.3	22.9	18.4	18.13	37.14
4-Oct	14.0	10.0	6.5	4.7	4.2	3.7	3.4	3.3	3.7	5.5	8.4	10.7	14.0	18.1	22.8	27.1	30.3	31.3	29.1	26.0	22.5	18.3	13.5	9.1	14.18	31.33
5-Oct	5.0	1.9	1.3	1.2	1.1	0.9	0.9	0.8	1.1	2.3	4.4	6.3	9.0	12.0	15.2	18.4	21.1	22.8	23.3	22.1	19.5	16.7	13.6	10.6	9.64	23.33
6-Oct	7.7	5.1	2.9	1.9	1.8	1.7	1.6	1.4	2.7	7.8	13.4	17.4	22.7	27.6	32.1	36.6	39.7	39.3	38.5	37.5	35.7	33.2	29.9	26.3	19.35	39.69
7-Oct	23.5	20.4	17.4	14.5	10.9	8.5	7.4	6.7	6.5	7.5	10.0	12.5	15.6	18.5	21.3	24.4	26.7	28.2	28.1	26.7	25.5	24.0	23.6	22.7	17.96	28.24
8-Oct	21.6	20.5	20.2	20.5	21.1	22.4	22.5	22.4	22.0	22.5	22.9	23.7	24.6	25.6	26.8	28.0	29.5	30.5	30.6	29.6	26.2	22.8	19.3	18.0	23.91	30.55
9-Oct	17.6	17.1	17.4	16.8	20.4	24.2	27.7	28.8	29.0	28.8	28.7	29.3	30.4	31.3	32.1	33.2	34.3	35.4	35.3	34.7	33.5	32.3	30.8	28.4	28.23	35.35
10-Oct	25.9	24.2	23.5	22.8	20.4	17.2	14.4	12.9	11.6	10.4	9.2	10.2	11.5	13.1	14.6	16.2	17.5	17.7	17.4	16.8	15.9	15.1	14.7	13.8	16.13	25.90
11-Oct	12.8	12.0	11.5	11.3	11.1	11.0	10.5	10.2	10.4	10.9	11.2	11.4	11.8	12.0	12.6	13.6	14.3	14.4	14.3	14.2	14.3	14.4	14.4	13.8	12.43	14.39
12-Oct	13.1	12.5	12.0	11.9	10.7	9.0	7.0	5.4	4.0	3.5	4.0	5.1	6.1	8.2	11.2	13.5	15.3	15.8	15.0	13.8	12.3	10.2	8.0	6.4	9.74	15.78
13-Oct	5.4	5.3	6.1	6.5	7.7	8.3	8.6	9.0	9.5	9.9	10.4	11.1	11.6	12.3	13.2	14.2	15.0	15.1	13.7	11.9	10.2	8.7	7.0	4.9	9.82	15.07
14-Oct	2.9	1.5	1.2	1.3	4.1	7.1	9.8	13.1	16.9	20.9	25.0	25.4	26.1	26.6	27.0	27.3	27.2	27.1	26.0	25.7	25.6	23.6	21.4	19.0	17.99	27.31
15-Oct	18.5	18.3	19.1	18.0	18.2	20.1	22.6	25.6	26.4	27.1	27.9	28.6	29.6	31.1	32.5	33.7	34.5	34.8	35.0	35.5	36.3	36.6	36.2	36.3	28.43	36.55
16-Oct	36.5	36.8	36.5	36.3	33.3	29.8	27.2	23.5	19.9	16.7	15.8	16.6	16.9	18.3	20.2	22.8	25.5	27.5	28.1	29.6	30.8	31.1	30.5	29.5	26.66	36.79
17-Oct	28.5	27.6	27.3	26.4	25.7	25.6	24.4	22.8	21.3	21.1	20.1	20.2	19.8	19.4	20.1	22.4	23.6	24.0	25.7	26.9	27.7	28.1	29.6	28.9	24.47	29.57
18-Oct	29.3	28.3	25.9	25.2	24.8	23.0	19.8	19.7	17.6	15.8	15.7	15.6	14.7	15.7	17.4	18.7	21.6	25.0	28.1	30.5	31.9	33.4	34.4	33.5	23.57	34.38
19-Oct	32.8	31.5	27.6	26.7	22.1	17.4	12.8	8.5	4.6	2.1	3.6	7.6	12.2	17.2	22.0	26.8	30.8	34.5	35.7	34.0	31.0	26.9	22.9	18.7	21.25	35.73
20-Oct	15.1	11.4	8.2	6.3	4.8	5.7	6.3	6.9	7.1	7.4	8.4	10.0	12.5	14.0	15.8	18.2	20.8	22.9	23.9	22.3	19.8	16.7	13.5	10.0	12.83	23.88
21-Oct	6.8	4.1	2.1	1.2	0.9	0.8	0.8	0.8	0.8	1.1	2.4	3.9	7.5	11.8	16.5	21.2	25.8	30.1	32.6	31.9	28.6	25.0	21.1	17.2	12.29	32.58
22-Oct	14.0	11.1	9.1	9.0	12.5	15.4	17.1	16.7	15.9	14.5	15.2	16.8	17.2	17.9	20.0	24.3	28.1	32.0	33.9	34.4	34.9	35.1	35.0	34.2	21.43	35.13
23-Oct	34.0	32.9	32.6	32.6	31.6	29.8	26.0	21.7	19.3	20.2	20.8	22.7	23.8	25.3	28.3	32.2	34.0	34.0	33.4	32.8	32.5	32.4	32.1	32.0	29.03	33.97
24-Oct	32.3	32.5	33.0	33.3	32.8	32.6	32.5	32.5	31.8	31.2	31.1	31.3	31.4	31.4	30.9	30.2	29.6	28.3	26.9	25.3	23.1	21.7	21.8	21.8	29.95	33.34
25-Oct	22.6	23.8	25.3	25.9	27.9	30.2	31.9	32.3	31.9	30.8	29.6	29.0	27.7	26.6	25.5	24.3	23.4	22.6	21.9	21.5	21.1	20.1	18.4	16.5	25.45	32.33
26-Oct	14.8	12.8	10.4	8.8	6.1	4.4	3.4	2.7	Z	Z	Z	C	C	C	C	C	C	28.0	25.4	22.6	19.8	16.7	13.8	13.0	--	28.05
27-Oct	13.1	13.8	16.1	18.1	21.8	25.5	28.1	27.6	26.9	26.2	25.6	25.6	25.2	25.1	25.2	25.5	25.6	25.9	25.6	25.3	24.9	24.3	23.5	22.7	23.63	28.12
28-Oct	22.2	21.4	20.9	20.6	18.0	15.8	13.4	12.0	9.4	7.4	6.6	6.6	7.0	7.4	9.8	12.1	14.4	16.7	18.4	21.0	23.7	26.1	26.8	26.8	16.03	26.82
29-Oct	27.2	27.4	26.6	26.5	24.6	22.3	19.6	16.7	14.3	11.6	12.8	15.1	17.0	19.4	22.3	25.3	28.2	29.7	26.7	23.3	19.7	15.8	12.0	8.1	20.51	29.71
30-Oct	4.4	2.2	2.1	1.8	1.5	1.5	2.9	5.6	8.0	11.4	15.5	17.4	21.2	24.9	27.4	28.6	29.8	29.6	28.4	26.6	24.3	21.6	18.1	14.5	15.38	29.76
31-Oct	11.1	8.4	6.7	5.5	7.9	10.9	14.2	17.7	21.3	24.8	27.2	25.7	24.3	23.5	23.4	23.7	23.8	23.6	24.0	25.3	26.2	26.7	26.7	26.1	19.95	27.23
18.34 16.95 15.99 15.45 15.09 14.92 14.56 14.23 14.32 14.69 15.79 16.96 18.39 20.12 22.16 24.31 26.09 27.16 27.09 26.42 25.25 23.66 21.89 20.01																								Diurnal Average		
36.48 36.79 36.51 36.32 33.26 32.56 32.52 32.48 31.92 31.24 31.09 31.26 31.39 31.40 32.53 36.60 39.69 39.28 38.46 37.55 36.32 36.55 36.16 36.27																								Diurnal Maximum		
Z - zerospan C - Calibration																										



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Oxide (NO) - ppb
October 2017

Maximum Value: 36.10 ppb on Oct 19 08:00		Maximum Daily Average: 6.31 ppb on Oct 19		Hours in Service: 744																							
Minimum Value: 0.0 ppb on Oct 1 02:00		Minimum Daily Average: 0.22 ppb on Oct 9		Hours of Data: 706																							
Maximum Diurnal Average: 4.98 ppb at hour 8		Minimum Diurnal Average: 0.32 ppb at hour 18		Hours of Missing Data: 38																							
Monthly Average: 1.485 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 1.2 P ₉₀ = 3.7 P ₉₉ = 18.7		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								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-Oct	0.0	0.0	0.0	Z	1.0	1.1	1.9	0.8	0.9	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	1.89	
2-Oct	0.0	0.0	0.0	Z	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.3	0.6	0.2	1.0	1.1	1.1	0.22	1.14	
3-Oct	0.4	0.9	2.6	Z	1.8	6.5	14.5	3.1	0.5	0.5	0.7	0.6	0.4	0.5	0.5	0.3	0.3	0.2	0.0	0.3	3.5	1.1	1.3	3.5	1.92	14.54	
4-Oct	1.0	0.3	0.1	Z	1.3	0.6	3.2	9.0	1.6	1.0	0.9	1.1	1.3	1.0	0.8	0.1	0.2	1.2	11.7	13.4	4.7	1.5	2.7	1.7	2.63	13.43	
5-Oct	1.0	1.4	2.6	Z	5.8	8.8	5.5	2.8	5.2	3.0	1.0	0.7	0.4	0.3	0.7	0.7	0.4	0.0	0.2	3.0	8.8	4.6	2.2	7.3	2.88	8.81	
6-Oct	1.3	0.9	0.7	Z	8.2	20.3	7.9	17.1	11.0	0.3	0.6	0.3	0.1	0.2	0.4	0.3	0.4	0.1	0.0	0.2	0.8	0.3	0.3	0.5	3.13	20.26	
7-Oct	0.3	0.1	0.0	Z	2.6	3.9	8.1	8.5	2.4	0.4	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.6	0.5	0.0	0.0	0.1	1.24	8.46	
8-Oct	0.1	0.2	0.0	Z	0.1	0.0	0.0	1.1	1.3	0.7	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	5.6	2.5	2.9	0.4	0.68	5.62	
9-Oct	0.1	0.0	0.0	Z	0.2	0.2	0.3	0.4	0.5	0.7	0.6	0.6	0.3	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.22	0.73	
10-Oct	0.0	0.0	0.1	Z	0.3	0.3	1.9	2.4	1.6	1.7	1.7	1.4	1.1	1.2	1.4	1.2	0.9	1.0	0.6	0.7	0.1	0.0	0.0	0.2	0.87	2.35	
11-Oct	0.0	0.0	0.0	Z	0.2	0.8	0.6	1.7	0.3	0.5	1.5	0.4	0.6	0.6	0.2	0.2	0.4	0.4	0.5	0.5	0.5	0.1	0.1	0.0	0.44	1.70	
12-Oct	0.0	0.0	0.5	Z	0.5	2.1	4.8	12.5	9.2	3.1	3.9	2.4	2.7	1.9	1.4	0.2	0.1	0.7	1.0	0.9	0.9	0.4	0.2	0.1	2.16	12.53	
13-Oct	0.1	0.1	0.3	Z	0.5	0.7	2.3	1.5	1.0	1.4	1.2	2.0	1.3	1.4	1.0	1.1	1.2	0.5	6.2	10.3	5.6	0.9	1.2	3.3	1.96	10.34	
14-Oct	3.6	2.9	2.5	Z	0.3	0.2	0.3	0.1	0.2	0.2	0.2	0.6	1.2	0.9	1.4	1.2	1.3	0.4	0.4	0.1	0.0	0.3	0.2	0.1	0.81	3.60	
15-Oct	0.1	0.1	0.0	Z	0.4	0.1	0.3	0.2	0.5	0.3	0.3	0.9	1.1	0.3	0.6	0.5	0.6	0.4	0.2	0.1	0.0	0.1	0.1	0.0	0.32	1.06	
16-Oct	0.0	0.0	0.0	Z	1.5	1.1	2.6	1.8	2.3	2.3	0.6	0.7	1.5	1.0	0.6	0.1	0.1	0.4	0.3	0.0	0.0	0.1	0.1	0.0	0.74	2.59	
17-Oct	0.0	0.0	0.0	Z	0.1	0.2	2.8	2.4	1.1	0.5	0.7	1.3	0.9	0.8	1.2	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.55	2.80	
18-Oct	0.0	0.1	0.3	Z	0.2	0.3	5.4	0.7	7.0	5.7	1.1	1.6	0.8	0.4	1.6	1.0	0.5	0.4	0.7	0.6	0.6	0.1	0.1	0.0	1.27	7.02	
19-Oct	0.0	0.2	0.8	Z	5.6	13.6	24.7	36.1	27.3	22.5	5.2	0.5	0.6	0.5	0.4	0.2	0.2	0.2	1.5	2.6	0.1	0.9	0.8	0.6	6.31	36.10	
20-Oct	0.9	0.8	0.9	Z	1.6	0.1	0.1	0.6	3.4	1.2	0.4	0.3	0.4	0.4	0.2	0.2	0.2	0.4	0.1	0.4	1.8	6.4	6.4	8.2	1.55	8.23	
21-Oct	6.1	1.8	3.1	Z	8.0	6.8	19.3	21.2	13.6	11.7	4.4	2.9	1.1	0.4	0.3	0.5	0.2	0.2	0.8	3.2	3.7	1.6	0.4	0.3	4.84	21.15	
22-Oct	0.2	0.1	0.1	Z	0.1	0.0	1.8	6.2	5.2	9.8	1.8	0.2	0.8	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.23	9.78	
23-Oct	0.0	0.2	0.0	Z	0.3	0.1	8.4	11.5	1.0	0.1	0.7	0.8	0.6	0.8	0.4	0.4	0.2	0.1	0.2	0.2	0.1	0.2	0.4	0.3	1.18	11.48	
24-Oct	0.2	0.2	0.2	Z	0.4	0.3	0.2	0.1	0.3	0.5	0.5	0.4	0.1	0.4	0.4	0.5	0.9	0.2	0.7	0.3	0.2	0.3	0.1	0.2	0.32	0.89	
25-Oct	0.2	0.0	0.1	Z	0.3	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.7	0.1	0.2	0.2	0.1	0.2	0.1	0.2	1.2	0.4	0.3	0.27	1.22
26-Oct	0.3	0.4	1.1	Z	2.8	5.2	5.4	C	C	C	C	C	C	C	0.9	0.3	0.2	0.5	2.3	3.6	2.2	3.4	0.2	0.0	--	5.43	
27-Oct	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.3	0.5	0.7	0.7	0.6	0.5	0.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.69	
28-Oct	0.0	0.0	0.0	Z	1.6	1.9	10.3	4.4	9.7	5.3	0.7	4.0	2.0	1.1	0.7	0.5	0.5	0.3	0.0	0.0	0.0	0.3	0.0	0.0	1.89	10.32	
29-Oct	0.0	0.0	0.1	Z	0.7	0.7	2.4	1.6	0.9	3.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.3	4.6	3.4	3.9	4.0	3.8	3.5	1.52	4.57	
30-Oct	8.9	3.1	2.8	Z	8.7	8.3	1.1	0.1	0.1	0.3	0.3	0.5	0.7	1.0	0.9	0.9	0.5	0.1	0.2	0.2	1.9	0.8	2.0	4.4	2.08	8.94	
31-Oct	2.8	1.4	0.4	Z	0.0	0.0	0.2	1.3	0.8	0.5	0.4	1.7	1.1	0.7	0.5	0.8	0.7	0.3	0.3	0.2	0.0	0.1	0.0	0.0	0.62	2.75	
		0.89	0.49	0.63	--	1.79	2.74	4.42	4.98	3.64	2.61	1.02	0.90	0.76	0.65	0.58	0.40	0.35	0.32	1.07	1.47	1.49	1.04	0.87	1.17	Diurnal Average	
		8.94	3.14	3.13	--	8.73	20.26	24.71	36.10	27.29	22.54	5.20	4.01	2.72	1.90	1.57	1.22	1.26	1.32	11.73	13.43	8.79	6.43	6.35	8.23	Diurnal Maximum	
Z - zerospan		C - Calibration																									
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr --- ppb		24-hr --- ppb																							



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
October 2017

Maximum Value: 11.70 ppb on Oct 4 19:00		Maximum Daily Average: 3.78 ppb on Oct 30		Hours in Service: 744																							
Minimum Value: 0.1 ppb on Oct 17 23:00		Minimum Daily Average: 1.02 ppb on Oct 1		Hours of Data: 706																							
Maximum Diurnal Average: 3.85 ppb at hour 8		Minimum Diurnal Average: 1.39 ppb at hour 16		Hours of Missing Data: 38																							
Monthly Average: 2.521 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.2 Median = 2.2 Q ₃ = 3.3 P ₉₀ = 4.9 P ₉₉ = 8.6		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								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-Oct	0.8	0.8	1.3	Z	2.0	2.7	3.8	2.8	2.8	0.4	0.3	0.4	0.4	0.2	0.3	0.6	0.7	0.5	0.5	0.4	0.5	0.4	0.4	0.4	1.02	3.85	
2-Oct	0.5	0.5	0.4	Z	0.7	0.4	0.9	0.6	0.7	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.5	1.3	4.5	5.2	5.0	6.1	6.7	1.59	6.72	
3-Oct	4.6	6.0	5.8	Z	4.1	5.3	6.5	3.0	1.5	1.3	1.5	1.1	0.8	0.9	1.0	1.2	1.5	1.6	3.0	4.1	4.5	3.3	3.1	3.2	2.99	6.51	
4-Oct	2.0	1.7	2.2	Z	2.7	3.2	5.0	4.6	2.5	1.8	1.7	2.2	2.1	3.0	2.9	1.0	1.7	5.1	11.7	10.5	7.0	4.6	4.3	3.0	3.75	11.70	
5-Oct	2.5	2.0	1.8	Z	1.6	1.4	1.4	1.1	2.6	2.8	1.5	1.1	0.8	0.8	1.0	1.5	2.2	1.9	2.4	5.3	6.9	4.9	4.2	4.1	2.42	6.89	
6-Oct	3.4	2.9	2.7	Z	3.4	6.4	5.3	5.5	5.4	1.9	2.3	1.3	0.9	1.3	2.2	1.9	2.1	2.3	1.5	0.5	1.0	2.2	3.8	2.7	2.73	6.38	
7-Oct	2.5	2.7	2.4	Z	4.2	4.9	5.4	6.9	4.2	1.4	0.4	0.4	0.4	1.0	0.6	0.2	0.2	0.3	1.2	3.7	3.2	1.8	0.8	2.8	2.25	6.92	
8-Oct	1.2	1.0	0.3	Z	0.7	0.4	0.6	2.7	2.7	1.8	0.6	0.2	0.2	0.6	0.1	0.1	0.2	0.1	0.2	1.8	8.3	6.3	4.5	1.8	1.59	8.32	
9-Oct	2.0	1.7	1.2	Z	3.1	2.8	3.1	4.6	3.5	3.9	2.5	1.5	0.7	0.6	0.8	1.0	1.0	1.0	2.3	1.7	2.0	1.7	2.0	2.2	2.03	4.61	
10-Oct	1.5	1.5	0.7	Z	2.9	3.1	5.4	4.8	4.5	3.0	2.5	2.1	1.8	2.2	2.4	1.8	1.8	2.2	2.1	2.2	1.4	1.1	0.8	1.4	2.32	5.40	
11-Oct	0.8	1.1	1.6	Z	0.8	1.3	1.8	2.4	1.1	1.3	2.1	0.7	0.7	0.8	0.5	0.5	0.9	1.3	1.8	1.8	1.6	1.1	1.5	1.3	1.25	2.35	
12-Oct	1.6	1.6	1.6	Z	2.5	3.9	3.8	4.0	3.0	1.8	2.8	2.3	2.3	1.6	1.3	0.8	0.6	1.8	4.0	2.7	3.2	1.3	1.7	2.1	2.27	3.97	
13-Oct	2.2	1.9	2.0	Z	2.0	2.5	3.3	2.5	1.8	1.9	1.7	1.8	1.7	1.9	1.6	1.9	2.2	2.5	5.8	5.2	4.5	1.8	2.3	3.2	2.53	5.79	
14-Oct	3.6	3.1	2.6	Z	2.1	1.5	2.9	2.3	1.3	1.2	1.3	1.9	3.0	2.3	3.8	3.5	4.2	2.5	4.7	0.6	0.5	2.1	2.6	1.8	2.41	4.69	
15-Oct	4.5	2.3	1.2	Z	1.3	2.6	3.9	2.6	3.5	3.5	1.2	2.4	2.8	1.1	2.3	2.8	4.8	4.9	4.5	2.2	0.3	1.0	4.9	1.1	2.69	4.92	
16-Oct	1.6	1.4	0.8	Z	5.3	5.3	3.3	3.2	4.4	3.8	2.2	2.8	3.2	2.3	2.1	0.6	0.7	2.4	2.1	0.2	0.2	2.2	4.0	2.7	2.48	5.34	
17-Oct	2.7	3.3	2.4	Z	1.8	1.4	6.1	6.4	5.8	3.2	3.1	2.6	2.2	2.6	3.7	0.3	0.6	0.3	0.2	0.1	0.4	2.4	0.1	3.0	2.38	6.43	
18-Oct	2.6	3.2	3.5	Z	1.1	3.2	6.6	4.9	5.1	4.2	2.0	2.8	2.0	1.8	3.1	1.8	2.8	2.2	1.4	2.0	1.8	1.1	0.8	0.9	2.65	6.56	
19-Oct	1.0	1.9	3.8	Z	3.3	4.1	4.7	6.4	6.4	9.7	4.7	1.2	1.9	1.7	1.9	1.5	2.9	2.7	4.1	4.5	2.5	2.6	2.1	2.0	3.37	9.71	
20-Oct	1.6	2.2	2.7	Z	2.5	1.7	1.6	1.6	5.2	3.7	1.7	1.8	1.8	1.7	1.1	1.4	1.6	2.6	3.0	2.6	3.2	4.5	3.5	3.4	2.47	5.21	
21-Oct	3.7	2.2	2.6	Z	4.0	3.7	4.7	4.5	3.7	4.4	4.0	4.4	2.2	1.2	0.8	1.9	1.4	1.1	2.9	8.8	8.7	5.8	4.6	3.3	3.67	8.83	
22-Oct	2.2	2.1	2.0	Z	1.7	1.7	4.5	8.3	8.1	7.3	4.0	1.9	2.5	3.1	1.3	0.4	1.3	1.0	1.9	0.9	1.1	2.0	1.9	3.2	2.80	8.28	
23-Oct	1.3	4.2	1.0	Z	2.1	3.2	6.9	10.7	5.1	0.9	2.7	2.4	2.3	3.0	3.2	3.3	3.9	2.7	4.4	3.8	3.0	3.7	4.8	4.1	3.59	10.66	
24-Oct	3.1	2.9	2.9	Z	4.9	4.3	4.2	2.2	3.9	2.9	2.7	2.8	1.1	1.3	1.3	1.7	3.1	1.5	2.0	1.9	2.5	3.7	2.1	4.1	2.73	4.93	
25-Oct	4.4	2.8	4.2	Z	4.8	5.3	3.8	1.1	0.7	0.9	0.5	0.4	0.8	0.9	0.5	0.7	0.9	0.9	1.0	0.5	1.0	3.1	2.8	2.3	1.92	5.29	
26-Oct	1.7	2.4	3.5	Z	3.1	3.0	2.8	C	C	C	C	C	C	C	2.6	1.6	2.6	4.2	7.3	6.7	4.2	4.6	3.0	0.8	--	7.34	
27-Oct	0.6	0.5	0.8	Z	0.7	0.9	1.2	1.6	1.0	1.3	1.1	1.0	0.9	1.0	1.3	1.1	1.6	1.3	2.1	1.4	1.0	1.3	1.3	1.1	1.13	2.11	
28-Oct	0.6	0.9	0.8	Z	1.7	3.5	4.8	4.4	6.1	5.1	3.2	4.6	3.2	2.4	2.7	2.1	3.2	1.4	0.6	1.2	0.7	0.3	0.4	0.4	2.35	6.15	
29-Oct	0.7	0.9	2.2	Z	1.5	2.0	4.0	4.0	2.6	3.4	0.7	0.3	0.2	0.3	0.2	0.3	0.3	4.4	9.8	8.4	7.3	6.7	6.4	6.6	3.19	9.84	
30-Oct	7.0	5.1	4.6	Z	4.9	4.4	3.2	2.5	2.8	2.2	0.9	1.1	1.3	2.0	1.8	2.6	3.8	3.1	4.3	4.8	6.1	4.7	6.3	7.3	3.78	7.32	
31-Oct	7.0	5.9	3.4	Z	2.4	2.4	3.0	3.5	2.4	2.0	1.8	4.4	3.6	2.4	2.8	2.7	2.7	3.0	1.9	1.7	0.6	0.4	0.4	0.2	2.65	6.96	
		2.44	2.34	2.23	--	2.57	2.98	3.83	3.85	3.47	2.78	1.93	1.82	1.60	1.55	1.66	1.39	1.87	2.04	3.10	3.12	3.04	2.83	2.82	2.68	Diurnal Average	
		7.04	5.95	5.84	--	5.34	6.38	6.86	10.66	8.12	9.71	4.71	4.58	3.63	3.06	3.75	3.46	4.82	5.13	11.70	10.50	8.70	6.73	6.39	7.32	Diurnal Maximum	
Z - zerospan																											
C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																											



WCAS - Hinton
Summary of Hourly Averages

NOx (NO_x) - ppb
October 2017

Maximum Value: 42.51 ppb on Oct 19 08:00		Maximum Daily Average: 9.70 ppb on Oct 19		Hours in Service: 744																							
Minimum Value: 0.0 ppb on Oct 8 18:00		Minimum Daily Average: 1.32 ppb on Oct 1		Hours of Data: 706																							
Maximum Diurnal Average: 8.87 ppb at hour 8		Minimum Diurnal Average: 1.79 ppb at hour 16		Hours of Missing Data: 38																							
Monthly Average: 4.028 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 1.4 Median = 2.8 Q ₃ = 4.7 P ₉₀ = 8.8 P ₉₉ = 23.1		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								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-Oct	0.8	0.8	1.3	Z	3.0	3.8	5.8	3.7	3.8	0.4	0.3	0.5	0.5	0.3	0.4	0.8	0.8	0.5	0.5	0.4	0.5	0.4	0.4	0.4	1.32	5.79	
2-Oct	0.5	0.5	0.4	Z	0.8	0.4	1.1	0.7	0.8	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.5	1.6	5.1	5.5	6.1	7.2	7.9	1.83	7.90	
3-Oct	5.1	6.9	8.5	Z	5.9	11.8	21.1	6.1	2.0	1.9	2.2	1.7	1.3	1.3	1.5	1.5	1.8	1.8	3.0	4.3	8.0	4.4	4.4	6.7	4.92	21.11	
4-Oct	3.1	1.9	2.3	Z	4.0	3.8	8.3	13.7	4.1	2.8	2.6	3.3	3.4	4.1	3.7	1.1	1.9	6.4	23.5	24.0	11.7	6.1	7.0	4.7	6.41	24.03	
5-Oct	3.5	3.4	4.5	Z	7.5	10.2	6.9	4.0	7.8	5.8	2.5	1.8	1.2	1.1	1.7	2.3	2.6	1.9	2.6	8.4	15.7	9.5	6.5	11.5	5.34	15.74	
6-Oct	4.8	3.8	3.4	Z	11.7	26.7	13.3	22.7	16.4	2.3	2.9	1.7	1.0	1.5	2.6	2.2	2.5	2.4	1.5	0.7	1.8	2.5	4.1	3.2	5.90	26.73	
7-Oct	2.8	2.8	2.5	Z	6.8	8.8	13.6	15.4	6.6	1.8	0.5	0.5	0.7	1.2	0.8	0.3	0.3	0.3	1.4	4.3	3.8	1.8	0.8	2.9	3.51	15.42	
8-Oct	1.4	1.3	0.3	Z	0.8	0.4	0.6	3.8	4.0	2.6	0.8	0.2	0.3	0.9	0.0	0.0	0.1	0.0	0.1	1.9	14.0	8.8	7.4	2.1	2.25	13.98	
9-Oct	2.1	1.7	1.2	Z	3.3	3.0	3.4	5.0	4.0	4.7	3.0	2.2	1.0	1.1	1.1	1.1	1.1	0.9	2.3	1.6	2.0	1.8	2.0	2.2	2.26	5.03	
10-Oct	1.5	1.6	0.8	Z	3.3	3.4	7.4	7.2	6.2	4.8	4.3	3.5	2.9	3.5	3.9	3.0	2.8	3.3	2.7	2.9	1.5	1.1	0.8	1.6	3.21	7.37	
11-Oct	0.8	1.1	1.6	Z	1.1	2.1	2.5	4.1	1.5	1.8	3.6	1.1	1.3	1.5	0.7	0.6	1.3	1.8	2.3	2.3	2.1	1.2	1.6	1.4	1.71	4.08	
12-Oct	1.7	1.6	2.2	Z	3.1	6.1	8.6	16.6	12.3	4.9	6.7	4.7	5.1	3.5	2.6	1.0	0.7	2.5	5.1	3.7	4.2	1.7	1.9	2.3	4.47	16.57	
13-Oct	2.3	2.0	2.3	Z	2.5	3.2	5.6	4.0	2.8	3.3	3.0	3.8	3.1	3.4	2.6	3.0	3.4	3.0	12.0	15.6	10.2	2.6	3.6	6.6	4.52	15.56	
14-Oct	7.3	6.1	5.2	Z	2.5	1.7	3.3	2.4	1.5	1.4	1.5	2.5	4.2	3.2	5.2	4.7	5.5	2.9	5.2	0.7	0.6	2.5	2.9	1.9	3.25	7.26	
15-Oct	4.7	2.4	1.2	Z	1.8	2.8	4.3	2.8	4.1	3.8	1.5	3.4	3.9	1.5	3.0	3.3	5.5	5.3	4.8	2.3	0.3	1.1	5.1	1.2	3.05	5.51	
16-Oct	1.7	1.4	0.9	Z	6.9	6.5	5.9	5.0	6.7	6.2	2.9	3.6	4.7	3.4	2.7	0.7	0.7	2.8	2.4	0.2	0.2	2.3	4.1	2.8	3.25	6.85	
17-Oct	2.7	3.3	2.4	Z	1.9	1.6	9.0	8.9	6.9	3.7	3.8	4.0	3.1	3.4	4.9	0.5	0.7	0.4	0.3	0.2	0.4	2.5	0.1	3.1	2.94	8.96	
18-Oct	2.7	3.3	3.9	Z	1.3	3.5	12.1	5.6	12.1	9.9	3.1	4.5	2.9	2.2	4.7	2.7	3.4	2.7	2.0	2.6	2.4	1.2	0.9	1.0	3.94	12.13	
19-Oct	1.0	2.1	4.6	Z	8.9	17.7	29.5	42.5	33.8	32.3	9.9	1.8	2.6	2.2	2.2	1.7	3.1	2.9	5.5	7.2	2.6	3.5	2.9	2.6	9.70	42.51	
20-Oct	2.5	3.0	3.6	Z	4.1	1.8	1.7	2.2	8.7	4.9	2.1	2.2	2.2	2.1	1.3	1.6	1.8	3.0	3.1	3.0	5.1	11.0	9.9	11.7	4.03	11.67	
21-Oct	9.9	4.0	5.8	Z	12.0	10.6	24.0	25.7	17.3	16.2	8.4	7.3	3.3	1.5	1.1	2.4	1.6	1.3	3.7	12.1	12.4	7.4	5.0	3.6	8.54	25.67	
22-Oct	2.4	2.2	2.1	Z	1.8	1.8	6.3	14.5	13.3	17.1	5.9	2.2	3.4	4.4	1.7	0.3	1.3	1.0	1.9	0.9	1.1	2.1	2.0	3.3	4.04	17.14	
23-Oct	1.4	4.5	1.1	Z	2.4	3.4	15.4	22.2	6.1	1.1	3.5	3.2	2.9	3.8	3.7	3.7	4.2	2.9	4.6	4.0	3.1	4.0	5.3	4.4	4.81	22.23	
24-Oct	3.3	3.0	3.2	Z	5.4	4.6	4.4	2.3	4.2	3.4	3.2	3.2	1.1	1.7	1.7	2.3	4.0	1.7	2.7	2.2	2.7	4.1	2.2	4.3	3.08	5.42	
25-Oct	4.6	2.9	4.3	Z	5.2	5.9	4.1	1.3	0.8	1.0	0.6	0.6	1.2	1.6	0.6	0.9	1.2	1.0	1.2	0.5	1.2	4.3	3.2	2.6	2.21	5.88	
26-Oct	2.0	2.8	4.6	Z	6.0	8.3	8.4	C	C	C	C	C	C	C	3.5	1.9	2.8	4.8	9.7	10.3	6.4	8.1	3.3	0.7	--	10.34	
27-Oct	0.5	0.5	0.9	Z	0.7	1.0	1.4	1.9	1.3	1.8	1.7	1.7	1.4	1.5	1.7	1.5	1.8	1.4	2.1	1.4	1.0	1.2	1.3	1.1	1.34	2.08	
28-Oct	0.6	0.9	0.8	Z	3.3	5.4	15.2	8.8	15.9	10.4	3.9	8.6	5.3	3.5	3.4	2.7	3.8	1.6	0.6	1.2	0.7	0.7	0.4	0.4	4.26	15.91	
29-Oct	0.7	0.8	2.4	Z	2.2	2.8	6.5	5.6	3.5	6.9	0.9	0.4	0.3	0.4	0.3	0.4	0.4	5.8	14.5	11.9	11.2	10.8	10.2	10.2	4.73	14.47	
30-Oct	16.0	8.3	7.5	Z	13.7	12.8	4.4	2.6	2.9	2.5	1.2	1.6	2.0	3.0	2.7	3.6	4.3	3.3	4.5	5.0	8.0	5.5	8.4	11.7	5.89	16.03	
31-Oct	9.8	7.4	3.8	Z	2.4	2.4	3.3	4.8	3.2	2.5	2.2	6.1	4.8	3.2	3.4	3.5	3.4	3.3	2.2	1.9	0.6	0.5	0.4	0.2	3.28	9.76	
		3.35	2.86	2.88	--	4.39	5.76	8.29	8.87	7.15	5.42	2.97	2.74	2.38	2.21	2.25	1.79	2.23	2.37	4.18	4.61	4.55	3.90	3.72	3.88	Diurnal Average	
		16.03	8.29	8.48	--	13.69	26.73	29.49	42.51	33.78	32.31	9.94	8.63	5.25	4.43	5.19	4.72	5.53	6.38	23.52	24.03	15.74	11.00	10.21	11.71	Diurnal Maximum	
Z - zerospan		C - Calibration																									
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr --- ppb				24-hr --- ppb																					



WCAS - Hinton
Summary of Hourly Averages

PM2.5 (PM_{2.5}) - µg/m³
October 2017

Maximum Value: 27.37 µg/m ³ on Oct 6 06:00		Maximum Daily Average: 11.41 µg/m ³ on Oct 23		Hours in Service: 744																							
Minimum Value: 0.1 µg/m ³ on Oct 7 18:00		Minimum Daily Average: 1.39 µg/m ³ on Oct 11		Hours of Data: 744																							
Maximum Diurnal Average: 7.38 µg/m ³ at hour 9		Minimum Diurnal Average: 4.55 µg/m ³ at hour 14		Hours of Missing Data: 0																							
Monthly Average: 5.928 µg/m ³		Percentiles: P ₁ = 0.3 P ₁₀ = 0.8 Q ₁ = 2.0 Median = 4.3 Q ₃ = 8.7 P ₉₀ = 13.4 P ₉₉ = 21.3		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								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-Oct	2.7	2.2	2.0	2.4	4.0	4.8	4.3	3.6	7.8	1.3	0.8	0.6	0.6	0.8	0.8	0.9	0.5	0.5	0.6	1.2	0.6	0.4	0.4	0.5	1.85	7.83	
2-Oct	0.5	0.5	0.4	0.4	1.4	1.0	1.1	1.0	1.2	0.8	0.8	0.9	1.0	1.2	1.2	1.3	0.9	0.5	1.1	5.1	8.9	12.4	7.8	7.4	2.46	12.44	
3-Oct	2.5	2.3	2.7	3.3	3.3	4.5	11.1	2.3	2.1	2.0	3.2	3.5	3.1	3.2	3.5	4.2	4.1	4.1	5.3	5.3	7.0	2.9	3.9	6.2	3.97	11.12	
4-Oct	2.6	3.8	5.5	5.5	5.0	5.4	7.2	8.8	5.3	5.7	6.2	7.1	9.4	12.4	10.8	5.7	7.3	18.7	24.0	17.0	14.2	11.6	9.4	7.6	9.01	23.97	
5-Oct	5.0	4.5	4.9	4.1	5.8	5.5	5.2	4.4	8.0	8.7	4.8	5.0	4.5	4.0	4.4	5.6	6.2	5.1	6.6	11.4	18.8	15.0	7.4	3.8	6.60	18.83	
6-Oct	3.8	5.3	4.9	5.3	8.2	27.4	6.2	9.4	8.5	6.5	6.7	6.2	5.6	3.6	4.1	2.8	2.6	2.3	0.8	0.8	0.4	1.6	5.1	8.8	5.70	27.37	
7-Oct	2.9	1.6	1.8	2.0	3.5	3.3	4.3	6.2	4.5	2.2	0.9	0.9	0.8	0.9	0.7	0.6	0.3	0.1	0.4	1.2	4.9	1.3	2.0	4.3	2.14	6.21	
8-Oct	2.9	1.4	0.5	0.5	0.4	0.3	0.3	5.3	2.0	3.0	1.2	0.6	0.7	0.9	0.5	0.9	1.0	0.9	1.1	3.2	12.1	9.4	5.9	3.2	2.43	12.11	
9-Oct	4.8	6.1	7.1	11.6	12.6	11.7	13.2	18.1	20.2	16.0	11.5	7.2	2.1	1.9	1.8	2.9	3.0	2.6	4.1	2.9	3.1	2.4	3.5	2.6	7.21	20.21	
10-Oct	1.6	0.7	0.5	0.7	0.9	1.7	3.2	3.5	6.4	4.9	5.6	5.5	6.5	7.0	6.4	4.9	4.3	3.2	4.8	25.8	6.1	1.0	0.7	0.8	4.45	25.82	
11-Oct	0.6	0.9	1.9	1.0	0.3	0.3	0.4	0.7	0.4	0.6	1.6	0.5	0.5	0.7	0.4	0.5	0.8	2.2	8.2	3.1	3.7	2.0	1.0	1.0	1.39	8.20	
12-Oct	1.0	1.2	2.7	3.1	1.7	2.0	2.1	17.1	7.0	7.6	15.8	6.0	5.5	3.8	2.2	1.9	1.5	2.3	4.9	4.6	6.5	6.3	4.0	3.5	4.77	17.13	
13-Oct	3.5	4.0	4.0	3.5	3.3	3.6	3.5	3.4	3.5	2.9	2.7	3.2	3.4	3.7	3.5	3.9	4.9	5.8	14.4	15.1	9.7	4.6	6.9	10.1	5.30	15.12	
14-Oct	11.1	8.2	7.9	8.0	8.0	7.6	11.2	9.4	6.4	5.4	6.7	7.5	11.5	9.1	11.1	10.4	12.6	6.9	14.9	2.7	2.8	9.2	7.1	5.1	8.37	14.91	
15-Oct	13.4	7.1	2.8	1.8	2.1	7.8	11.3	7.3	12.3	10.4	4.3	9.2	11.7	6.1	10.3	11.1	15.7	15.3	14.7	8.1	1.4	3.3	14.1	3.6	8.56	15.69	
16-Oct	5.3	4.1	5.4	2.5	5.6	6.3	5.3	6.5	5.2	6.2	3.0	4.1	4.0	4.9	7.5	2.6	3.5	12.3	10.4	1.1	0.8	9.5	17.0	6.9	5.83	17.03	
17-Oct	7.6	6.4	6.7	2.7	0.4	0.4	1.7	1.7	1.7	2.1	4.0	1.7	1.6	1.7	1.9	0.3	0.3	0.3	0.5	0.6	0.9	2.5	0.5	2.7	2.13	7.60	
18-Oct	2.6	2.1	6.1	2.1	1.4	4.2	6.2	7.6	6.9	6.0	3.7	3.2	3.3	5.0	9.1	9.8	3.1	3.1	1.0	1.1	0.9	0.4	0.4	0.8	3.76	9.80	
19-Oct	0.5	2.4	2.2	3.5	10.2	12.8	13.2	17.5	14.6	14.6	7.0	1.6	5.3	5.1	5.3	2.5	5.6	2.3	3.4	13.3	4.7	2.7	3.6	6.3	6.67	17.50	
20-Oct	3.4	6.3	5.0	16.5	5.1	2.0	1.4	1.2	2.6	3.6	1.4	2.3	1.6	2.0	2.4	1.4	3.1	2.8	2.5	2.5	4.0	15.3	10.1	11.1	4.57	16.46	
21-Oct	9.1	9.6	7.8	16.0	7.0	7.8	10.2	15.3	18.1	19.8	23.2	22.0	7.2	3.3	2.7	5.8	3.9	1.7	3.0	12.9	16.0	7.7	4.8	5.2	10.01	23.21	
22-Oct	2.2	3.6	2.8	3.3	4.0	2.8	2.5	11.9	25.2	9.0	8.6	6.6	8.4	11.5	3.8	0.8	4.3	3.3	5.6	2.6	3.8	7.4	6.5	11.5	6.33	25.20	
23-Oct	4.1	16.9	4.1	7.4	5.8	1.8	6.9	13.5	3.5	3.3	10.9	13.7	12.5	13.9	10.8	12.6	12.2	10.3	16.4	15.0	13.4	19.9	22.8	22.0	11.41	22.77	
24-Oct	20.4	17.5	14.6	19.8	19.2	18.0	15.9	7.9	15.7	10.7	10.4	8.8	1.5	0.8	0.6	0.4	1.3	1.2	2.8	1.7	1.9	3.2	3.5	15.4	8.89	20.43	
25-Oct	17.3	14.8	19.6	17.3	19.7	19.4	11.8	3.8	0.9	0.4	0.5	0.4	0.6	0.9	1.2	2.0	1.4	1.1	2.0	1.2	1.3	4.5	4.4	3.4	6.24	19.67	
26-Oct	6.3	6.9	5.2	5.8	5.5	7.9	8.2	10.6	10.1	10.4	11.2	6.1	6.7	3.8	12.4	13.1	11.9	9.8	19.8	13.4	8.3	9.6	10.9	6.3	9.18	19.79	
27-Oct	6.1	6.3	7.5	8.2	8.5	9.5	9.8	10.5	10.7	9.9	10.6	11.0	10.6	11.8	13.6	9.5	10.8	12.2	13.8	11.5	11.5	13.2	15.4	12.3	10.62	15.40	
28-Oct	8.8	10.5	9.3	9.4	10.6	20.7	13.5	9.1	11.1	10.2	10.3	11.7	11.3	9.6	16.0	14.4	18.1	5.4	3.2	3.9	2.5	1.3	1.0	0.9	9.27	20.67	
29-Oct	0.8	0.8	7.1	2.7	1.9	1.9	2.2	3.1	2.6	3.5	1.8	0.4	0.3	0.3	0.3	0.3	0.4	8.9	14.2	11.3	12.6	19.4	16.8	5.3	4.95	19.37	
30-Oct	7.8	4.3	9.6	14.6	8.3	7.2	2.2	1.5	1.4	3.9	1.2	1.6	1.7	2.0	2.4	3.9	7.0	4.4	3.1	4.5	4.4	3.3	15.4	15.7	5.47	15.67	
31-Oct	11.5	8.7	4.2	3.1	5.6	6.0	5.2	2.7	3.0	2.7	3.3	5.9	5.6	5.5	7.0	4.4	3.8	4.8	2.9	2.0	1.2	1.0	0.8	0.9	4.25	11.51	
		5.57	5.51	5.38	6.07	5.78	6.95	6.47	7.25	7.38	6.28	5.92	5.33	4.82	4.55	5.12	4.56	5.05	4.99	6.79	6.65	6.09	6.59	6.87	6.29	Diurnal Average	
		20.43	17.54	19.58	19.81	19.67	27.37	15.86	18.07	25.20	19.84	23.21	21.98	12.54	13.94	15.98	14.39	18.11	18.72	23.97	25.82	18.83	19.89	22.77	22.00	Diurnal Maximum	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 µl/m ³ 24-hr 30 µl/m ³																											

WEST CENTRAL AIRSHED SOCIETY

**CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT
METEOROLOGICAL DATA**

**AMS 906
HINTON
OCTOBER 2017**

Operations and Data Collection by:
West Central Airshed Society
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:
West Central Airshed Society
Drayton Valley, Alberta



WCAS - Hinton
Summary of Hourly Averages

External Temperature (ET) - C
October 2017

Maximum Value: 22.80 C on Oct 5 16:00																								Hours in Service: 744		
Maximum Daily Average: 12.45 C on Oct 24																								Hours of Data: 744		
Minimum Value: -7.9 C on Oct 30 06:00																								Hours of Missing Data: 0		
Minimum Daily Average: -1.59 C on Oct 13																								Hours of Calibration: 0		
Maximum Diurnal Average: 8.55 C at hour 16																								Percent Operational Time: 100.0		
Minimum Diurnal Average: 1.58 C at hour 7																										
Monthly Average: 4.262 C																										
Percentiles: P ₁ = -6.8 P ₁₀ = -2.1 Q ₁ = 0.2 Median = 3.5 Q ₃ = 8.3 P ₉₀ = 11.8 P ₉₉ = 17.2																										
Day	Hourly Period Ending At																								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-Oct	0.7	0.5	0.8	1.1	1.5	1.7	2.0	2.3	3.7	5.7	6.1	5.5	6.3	6.4	6.0	5.2	4.8	4.2	3.5	3.0	2.7	2.4	2.4	2.2	3.36	6.35
2-Oct	1.9	1.7	1.2	0.5	0.5	0.4	0.3	0.0	-0.2	0.2	0.8	1.8	3.2	3.7	4.7	4.8	4.7	3.7	2.0	0.5	-1.5	-2.5	-3.1	-3.1	1.09	4.79
3-Oct	-3.8	-4.6	-5.4	-6.2	-6.8	-7.0	-7.5	-7.5	-3.6	0.7	4.0	6.6	8.8	11.4	13.4	14.2	14.4	13.5	11.5	7.3	3.3	1.9	0.7	0.1	2.47	14.38
4-Oct	-0.7	-1.2	-1.6	-1.7	-1.8	-2.1	-2.1	-1.8	0.6	4.8	8.4	11.1	13.9	16.0	17.3	18.0	17.0	13.7	9.7	7.3	5.5	4.2	3.1	6.49	17.99	
5-Oct	2.1	1.5	0.6	0.1	-0.3	-0.9	-0.9	-0.8	3.4	8.6	12.6	15.1	17.6	19.8	21.8	22.8	22.8	21.3	18.8	15.8	11.3	8.8	6.9	5.6	9.77	22.80
6-Oct	5.0	4.5	3.1	2.5	2.6	4.0	4.6	4.4	7.5	15.3	16.5	16.9	14.4	13.9	12.6	11.8	11.2	10.2	9.6	6.5	4.2	3.6	2.5	1.4	7.86	16.86
7-Oct	1.3	0.3	0.1	-0.4	-0.7	-0.6	-0.9	-0.7	1.6	4.1	6.7	8.0	7.7	7.5	6.2	6.4	7.2	6.4	5.4	4.3	3.4	2.2	2.6	2.8	3.37	8.03
8-Oct	2.3	1.7	1.3	0.8	0.9	0.8	-0.1	-0.6	0.9	3.9	5.6	6.8	8.5	9.7	9.8	8.8	8.6	9.1	5.9	3.9	1.9	0.2	-0.7	2.9	3.87	9.78
9-Oct	6.0	7.1	7.7	7.8	8.1	8.3	8.3	8.2	8.4	8.7	9.3	11.3	11.2	12.3	12.7	12.5	12.2	10.8	9.1	7.9	7.5	7.0	6.7	4.8	8.91	12.68
10-Oct	4.4	4.4	2.1	0.9	0.4	0.3	0.3	0.4	0.5	0.7	0.9	1.1	1.4	1.7	1.5	1.4	1.3	1.0	0.5	0.4	0.4	0.4	0.4	0.3	1.12	4.39
11-Oct	0.2	0.2	0.3	0.1	-0.2	-0.7	-0.8	-1.0	-1.3	-1.2	-0.7	0.3	0.5	0.8	0.9	0.9	1.0	0.5	0.0	-0.3	-0.8	-1.2	-1.6	-1.7	-0.25	1.00
12-Oct	-1.8	-2.1	-2.8	-3.1	-3.1	-3.2	-3.8	-4.2	-3.7	-2.8	-0.7	0.7	1.7	2.7	2.8	2.7	2.3	1.4	0.7	0.5	0.2	0.0	-0.6	-0.7	-0.70	2.81
13-Oct	-0.9	-0.9	-1.0	-1.3	-1.7	-1.8	-1.8	-1.9	-1.8	-1.5	-1.1	-0.6	-0.3	-0.1	-0.4	0.0	-0.1	-0.8	-1.7	-2.8	-3.2	-3.4	-4.0	-5.2	-1.59	-0.02
14-Oct	-5.7	-5.8	-5.4	-3.1	-0.1	0.6	1.1	1.7	2.5	3.0	3.5	4.2	5.2	5.7	6.2	6.7	6.7	5.9	4.9	4.2	2.6	0.0	-1.6	-1.3	1.75	6.75
15-Oct	5.6	6.5	6.3	5.8	6.4	7.5	8.5	8.6	9.9	10.1	10.3	12.8	12.9	13.4	13.4	13.3	12.2	10.9	10.0	9.3	8.9	9.2	10.2	9.6	9.66	13.44
16-Oct	9.8	10.1	8.5	8.1	7.4	5.7	3.3	2.3	2.7	5.3	8.2	8.6	9.1	10.3	13.0	14.0	12.4	11.5	11.6	11.5	10.9	10.6	10.8	10.3	9.01	13.99
17-Oct	9.3	9.1	9.9	9.5	8.6	8.7	8.3	8.1	8.5	9.5	9.6	7.7	4.9	5.2	5.5	5.0	4.4	3.4	2.5	1.6	1.0	1.0	1.0	0.9	5.97	9.86
18-Oct	0.3	-0.8	-2.3	-1.2	-0.9	-1.0	-0.3	2.7	0.8	-0.3	0.0	0.9	2.9	3.3	4.4	5.3	4.8	4.3	4.2	3.6	3.1	3.4	3.0	2.6	1.78	5.30
19-Oct	2.3	1.6	-0.3	-1.7	-2.2	-2.3	-2.7	-2.7	-1.5	2.9	6.5	9.4	10.7	11.6	10.9	9.7	8.5	7.4	5.4	3.9	2.0	0.1	-0.7	-0.8	3.26	11.60
20-Oct	-0.9	-0.6	-0.1	0.5	1.0	2.3	2.3	1.9	2.4	2.9	3.3	4.3	3.8	3.5	3.7	4.3	4.6	4.0	2.5	0.8	-0.7	-1.6	-2.4	-2.8	1.63	4.57
21-Oct	-3.0	-3.3	-3.3	-3.7	-3.6	-4.1	-4.6	-4.1	-3.6	-1.4	2.0	3.4	6.9	7.6	7.9	7.6	6.7	5.3	3.7	0.5	-1.6	-1.8	-1.5	-1.4	0.45	7.92
22-Oct	-1.4	-1.2	-1.0	0.1	3.0	3.6	2.9	-0.2	1.1	2.5	4.3	6.4	8.7	10.9	10.2	9.5	8.5	7.4	5.9	4.0	4.6	6.3	6.8	7.5	4.60	10.92
23-Oct	6.5	5.6	4.1	4.6	3.8	1.5	-0.1	-0.6	1.7	6.7	9.0	9.6	9.2	9.5	9.2	9.6	9.5	9.4	9.1	8.9	9.7	10.6	11.3	11.7	7.09	11.69
24-Oct	11.9	11.8	12.1	12.5	12.4	13.2	13.0	12.3	13.3	15.3	16.5	17.1	16.6	15.3	14.1	13.6	12.4	10.6	9.2	8.4	7.9	7.2	7.9	14.4	12.45	17.05
25-Oct	14.6	15.3	15.3	15.0	14.5	13.6	11.7	10.3	7.3	7.0	6.0	3.4	3.0	2.7	2.8	2.6	2.6	2.2	1.4	1.0	0.6	-0.6	-2.5	-2.9	6.13	15.34
26-Oct	-3.3	-4.0	-4.7	-5.5	-5.9	-6.0	-5.9	-5.0	-4.1	-3.0	-1.2	4.3	7.8	9.5	11.5	11.6	10.7	8.9	4.8	1.2	-0.4	-0.5	0.8	7.2	1.20	11.63
27-Oct	8.0	7.3	7.2	7.3	7.5	7.1	6.6	6.2	6.5	7.8	9.2	10.9	12.4	13.9	15.4	16.2	16.0	14.5	12.8	12.4	11.8	11.2	10.5	9.8	10.35	16.20
28-Oct	9.3	8.4	7.3	5.1	4.0	6.0	5.3	8.3	6.6	7.5	9.3	8.5	8.2	8.4	10.5	10.1	9.3	8.5	7.4	7.0	6.6	5.9	5.3	4.9	7.40	10.55
29-Oct	4.1	2.7	2.3	1.9	1.1	0.8	0.5	0.0	-0.1	1.3	4.9	5.6	5.4	5.0	5.7	5.0	4.2	2.3	-0.4	-2.1	-2.7	-3.5	-4.3	-4.8	1.46	5.66
30-Oct	-5.5	-6.6	-7.3	-7.6	-7.8	-7.9	-5.4	-2.1	-2.4	0.0	1.7	3.2	3.9	4.8	6.3	8.1	7.7	4.4	2.8	1.1	-0.6	-2.1	-2.6	-2.7	-0.69	8.06
31-Oct	-1.8	-1.0	-0.1	4.6	6.5	7.5	6.6	4.8	4.5	4.0	3.6	3.7	3.7	3.5	3.3	3.3	3.1	2.5	2.1	2.2	1.1	0.6	0.4	-0.3	2.85	7.46
2.48 2.20 1.77 1.73 1.78 1.80 1.58 1.59 2.32 4.14 5.65 6.73 7.42 8.06 8.49 8.55 8.15 7.16 5.78 4.39 3.28 2.62 2.21 2.40																								Diurnal Average		
14.65 15.32 15.34 15.02 14.51 13.64 13.00 12.33 13.32 15.27 16.51 17.05 17.62 19.78 21.75 22.80 22.77 21.33 18.80 15.84 11.80 11.19 11.25 14.37																								Diurnal Maximum		



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
October 2017

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	1.1	1.1	0.4	0.2	0.6	0.4	0.9	1.3	1.4	2.8	3.3	3.3	3.1	6.0	4.2	3.0	2.5	4.0	4.1	2.1	2.7	3.1	2.3	2.0	1.96	5.99	
Dir	WSW	W	W	W	S	E	SW	W	SW	WNW	NW	NNW	NNW	NW	NNW	N	N	NNW	NNW	NNW	NNW	NNW	NW	NW	NW	NW	
2 Spd	2.0	3.2	4.5	1.9	0.8	1.5	0.9	3.6	2.5	3.1	4.1	3.6	5.5	4.8	5.0	3.4	3.1	2.9	1.5	1.6	2.0	1.5	1.5	3.7	2.16	5.46	
Dir	NNW	NW	NNW	NW	SW	W	WSW	NNW	NNW	NW	NW	NNW	NNW	NW	NW	NW	NW	N	N	SSW	SW	SSW	SW	SSW	NW	NNW	
3 Spd	2.8	2.0	1.5	0.7	1.7	1.5	0.4	1.0	1.4	2.7	4.6	8.8	12.5	11.8	10.9	9.5	9.4	9.1	3.9	2.1	0.7	0.2	0.6	1.1	3.94	12.54	
Dir	SW	SSW	S	SSW	WSW	SSW	NW	WNW	WNW	WNW	WSW	SW	SW	SSW	SSW	SW	SW	SSW	SW	W	W	NNW	SW	W	SW	SW	
4 Spd	0.9	0.7	1.1	0.7	1.3	1.0	0.5	1.1	2.0	2.3	3.0	3.4	2.5	2.0	1.0	2.2	2.3	1.3	0.7	0.1	1.3	0.9	1.0	0.6	0.92	3.39	
Dir	SW	WSW	WSW	WSW	SW	W	WSW	WSW	WNW	W	W	W	W	SW	NW	N	NNE	NE	E	SW	WSW	WSW	SW	WSW	W	W	
5 Spd	0.6	0.6	0.7	2.0	0.9	1.3	1.5	1.0	1.6	3.1	3.5	4.8	7.6	9.9	9.1	7.1	4.5	2.0	2.8	1.3	0.7	0.7	1.0	2.0	2.40	9.92	
Dir	WSW	WSW	WSW	WSW	SW	WSW	WSW	W	WNW	W	WSW	SW	SW	SSW	SSW	SSW	SW	WSW	SW	SW	ENE	E	E	ENE	SW	SSW	
6 Spd	2.2	1.6	0.5	0.5	1.5	0.9	2.6	1.8	2.3	10.3	9.5	11.4	13.0	11.4	10.4	11.4	9.9	8.6	4.0	6.9	2.4	2.0	1.0	1.1	4.38	12.96	
Dir	NE	ENE	ENE	S	SW	SE	ENE	ENE	SW	SW	SW	SW	SW	SW	SW	SW	WSW	SW	W	W	WSW	SSW	SSE	S	SW	SW	
7 Spd	5.3	2.5	2.6	2.0	0.5	1.3	0.1	1.1	2.6	2.0	3.4	3.4	2.5	1.5	2.4	5.5	5.8	5.0	1.8	2.2	1.6	0.9	2.1	6.1	1.92	6.11	
Dir	SW	SW	W	W	E	SW	NNE	SW	SW	WNW	WNW	WNW	WNW	W	WNW	NW	NW	NW	WNW	NNE	S	NW	WSW	SSW	W	SSW	
8 Spd	2.8	1.2	2.9	3.0	2.2	4.4	2.3	1.5	6.0	3.7	4.7	7.0	5.7	4.4	5.3	5.1	3.8	3.7	1.7	0.9	1.0	1.2	1.7	1.9	2.16	7.05	
Dir	NE	W	NNW	NW	NNE	NW	NNW	SSW	SSW	WSW	WNW	NW	WNW	WSW	NW	NNW	WNW	WNW	W	SW	E	E	NE	W	WNW	NW	
9 Spd	3.3	7.2	10.4	9.2	9.4	8.4	7.6	7.8	6.2	5.8	8.3	12.0	14.4	16.0	9.9	9.0	11.1	10.0	4.3	2.8	4.3	3.2	0.6	2.5	7.32	16.01	
Dir	W	WSW	SW	WSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	SW	SSW	SW	NE	SW	SW	
10 Spd	2.9	7.3	6.9	1.7	AF	AF	AF	AF	AF	AF	AF	3.4	4.5	6.2	5.8	5.0	6.7	6.9	4.2	3.0	2.3	1.5	0.9	0.6	--	7.33	
Dir	ENE	NE	ENE	NE	AF	AF	AF	AF	AF	AF	AF	NE	NE	NE	NE	NE	ENE	ENE	NE	NE	NE	NE	NNE	N	AF	AF	
11 Spd	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	0.9	0.0	2.8	1.6	1.7	1.9	3.2	3.0	3.1	3.4	1.9	0.5	--	3.42
Dir	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	SW	S	NNW	NNW	NE	NE	ENE	E	E	ENE	NNE	--	ENE	
12 Spd	1.2	0.7	1.3	1.7	3.0	1.2	0.4	0.3	1.0	1.0	2.1	2.7	4.3	6.5	4.1	1.8	0.7	0.6	0.2	0.7	1.2	3.0	4.1	5.7	0.51	6.53	
Dir	NE	NNE	E	E	ENE	NE	NNE	ENE	NW	NW	WNW	SW	SSW	S	S	W	WNW	SSW	WSW	ENE	NE	ENE	ENE	ENE	ESE	S	
13 Spd	6.0	5.5	4.7	3.0	3.7	2.4	4.2	4.5	4.4	5.2	5.0	4.6	3.7	3.7	3.7	2.8	2.3	0.5	1.0	0.2	1.2	0.4	0.3	0.1	2.85	6.02	
Dir	ENE	ENE	NE	NE	NE	NE	NE	ENE	ENE	ENE	NE	NE	ENE	NE	ENE	ENE	ENE	N	ESE	N	SSW	NW	SSW	NE	ENE	ENE	
14 Spd	0.9	0.7	0.7	1.9	3.2	3.1	4.0	8.3	10.9	11.6	11.9	14.0	11.4	12.5	8.2	9.2	9.1	11.3	5.0	2.9	0.7	2.7	1.5	1.0	5.50	14.02	
Dir	ENE	NE	ENE	W	W	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WNW	NW	NE	NE	W	WSW	WSW
15 Spd	6.1	4.5	6.3	7.8	8.1	9.5	9.6	10.8	12.2	9.9	6.0	9.3	13.0	14.3	12.6	12.4	12.4	9.5	10.1	7.8	6.1	5.2	6.2	2.7	8.66	14.32	
Dir	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	W	W	WSW	WNW	WSW	SW	
16 Spd	1.3	0.2	3.4	3.2	2.1	1.9	4.2	2.3	2.7	3.9	3.9	3.3	5.3	5.3	2.9	6.1	6.3	6.0	6.9	8.0	6.2	3.0	3.0	1.9	1.44	8.02	
Dir	NW	NE	WSW	WSW	SSW	NE	ENE	E	ENE	NE	NE	NE	NE	NE	WNW	WNW	WSW	WSW	WSW	WNW	WNW	W	WSW	WSW	WNW	WNW	
17 Spd	1.2	1.6	4.6	5.4	7.9	6.9	6.3	4.3	2.4	5.2	3.8	2.0	1.7	4.7	4.2	5.2	2.8	3.5	5.8	4.2	3.2	5.0	3.6	6.8	3.65	7.91	
Dir	SW	SW	SW	SW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	SE	SW	WSW	WNW	NW	WNW	WNW	WNW	W	SW	W	SW	WSW	SW
18 Spd	3.5	1.4	1.2	1.3	0.9	1.9	0.4	2.1	0.8	2.7	4.3	4.1	2.4	1.5	3.6	7.4	2.7	4.8	6.1	7.2	6.7	10.7	7.3	5.9	1.63	10.72	
Dir	SW	W	ENE	W	NW	N	W	SW	NNE	NE	ENE	NE	NE	ENE	ESE	SE	S	ESE	SSW	SSW	SSW	SSW	SW	SW	S	SSW	
19 Spd	4.1	3.0	0.3	0.5	0.7	0.4	0.7	0.6	1.2	0.3	0.6	10.4	8.3	7.4	6.5	10.7	5.1	6.9	0.6	3.5	1.2	2.6	1.9	0.7	2.42	10.65	
Dir	SW	SW	SW	SSE	S	SW	SSW	E	SE	W	SSE	SW	SW	SW	WSW	SW	SW	SW	SE	SE	N	NE	ENE	ENE	SW	SW	
20 Spd	1.0	0.5	0.1	1.3	0.6	1.8	1.2	1.1	1.4	1.4	1.7	4.4	4.1	4.2	3.2	3.7	2.2	4.7	2.2	1.6	1.6	1.6	0.3	1.3	1.51	4.74	
Dir	E	SE	WSW	ENE	NNW	WSW	WNW	W	SW	W	W	SW	WSW	WSW	WNW	SW	WSW	SW	WSW	WSW	W	SSE	ENE	S	WSW	SW	
21 Spd	0.7	1.4	0.4	1.4	1.6	0.6	0.5	1.3	0.7	0.7	0.8	0.6	3.4	5.3	9.1	6.3	7.2	8.0	4.0	0.8	1.1	1.2	0.6	1.3	1.66	9.09	
Dir	SE	ENE	WSW	SSW	SSW	ENE	W	SSE	NNE	SE	NE	WSW	SW	WSW	SW	SW	SW	SW	SSW	E	E	ENE	NE	ENE	SW	SW	
22 Spd	3.3	2.0	2.7	3.3	3.9	4.5	3.0	1.4	2.5	0.7	3.9	3.4	6.6	9.4	5.0	6.3	4.8	3.7	3.0	1.9	6.5	7.1	7.7	9.4	3.06	9.39	
Dir	ENE	ENE	ENE	NE	WSW	SW	SSW	ENE	S	ENE	WSW	W	SW	WSW	WSW	WNW	WSW	W	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
October 2017

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	5.8	6.0	1.6	3.3	1.0	1.9	0.9	0.4	1.9	3.6	6.7	9.8	12.5	8.7	9.2	8.6	8.6	10.9	9.0	8.4	10.8	13.5	12.6	13.4	6.85	13.48	
Dir	WSW	WSW	WNW	W	WNW	W	N	SE	W	W	WSW	WSW	SW	WSW	SW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	
24 Spd	15.0	16.1	15.2	15.3	9.8	10.1	6.0	4.2	4.3	3.2	8.1	4.4	1.9	5.9	4.7	3.0	6.2	5.8	4.0	6.3	7.8	6.8	0.7	8.6	3.00	16.15	
Dir	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	SW	WSW	N	NE	NNE	NE	NE	NE	ENE	ENE	ENE	ENE	NNE	WSW	WSW	WSW	
25 Spd	7.2	12.9	13.6	10.8	12.6	9.7	6.5	5.4	5.2	3.3	6.6	6.5	1.0	0.9	4.1	4.5	2.6	3.6	3.1	2.2	0.7	1.4	0.5	2.3	3.47	13.61	
Dir	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WNW	NW	WNW	NNW	NNW	ENE	W	NW	N	N	N	N	NW	N	E	NE	ENE	W	WSW	
26 Spd	1.6	1.1	0.5	0.6	0.8	1.3	1.9	0.3	0.7	1.7	1.7	3.2	5.4	11.2	6.5	3.3	4.5	3.7	0.7	0.8	0.7	0.5	2.1	8.0	1.36	11.24	
Dir	ENE	ENE	ENE	ENE	ENE	E	NE	NNE	SE	ENE	NW	W	SW	SSW	SW	WSW	SW	SW	ENE	NE	ENE	NE	WNW	SW	SW	SSW	
27 Spd	10.1	9.8	9.1	10.0	9.3	8.2	9.1	9.6	9.9	9.5	10.6	12.2	12.6	11.8	7.8	7.6	7.5	6.1	3.5	6.4	7.1	6.3	5.7	7.5	8.61	12.60	
Dir	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	SW	
28 Spd	6.2	3.8	2.2	0.6	2.0	0.8	1.4	4.0	0.7	2.4	4.6	2.7	1.7	0.5	6.6	4.5	3.7	2.1	2.5	3.7	2.2	1.9	2.3	1.8	1.83	6.63	
Dir	WSW	W	W	SSW	N	SSW	SSW	SSW	S	WSW	WSW	ENE	ENE	SW	SW	SSW	SW	NNE	W	SW	WSW	WSW	W	W	WSW	SSW	
29 Spd	1.7	0.9	1.4	0.3	1.0	1.0	0.7	2.2	1.8	1.0	4.9	6.0	5.7	4.9	4.4	5.0	2.0	0.7	1.2	2.1	1.2	0.4	1.0	1.3	1.39	6.00	
Dir	WNW	WNW	S	SE	WNW	NW	W	WSW	W	WNW	WNW	NW	NNW	N	NNW	NNW	NW	SE	S	SSW	S	SSW	SSW	SSW	NW	NW	
30 Spd	0.7	0.5	1.6	0.8	0.3	1.2	4.2	4.6	3.2	7.1	10.3	11.7	12.0	11.5	11.7	5.5	3.9	2.9	2.9	0.4	1.3	0.9	0.5	0.4	3.61	11.99	
Dir	SE	E	NE	ENE	W	NNW	W	W	W	WSW	SW	SW	SW	SW	SSW	SW	WSW	WSW	WSW	NNW	WSW	WSW	S	ENE	SW	SW	
31 Spd	0.3	0.6	1.3	5.3	5.1	5.6	6.8	9.0	12.3	9.7	4.6	3.5	6.6	6.1	6.4	9.5	10.3	6.1	8.6	6.6	3.2	0.8	3.2	4.6	4.68	12.33	
Dir	ESE	NE	NNW	WSW	WSW	WSW	SW	SSW	SSW	SW	SW	SSW	SW	SW	SW	SW	SW	SW	SW	SW	NW	NNE	NE	N	SW	SSW	
Spd	1.67	1.75	1.73	2.27	2.33	2.34	1.87	2.19	2.48	2.87	3.23	3.76	4.14	4.52	4.01	3.55	3.34	2.94	2.20	1.72	1.40	1.09	1.21	2.08	Diurnal Average		
Dir	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	Diurnal Maximum	
Spd	15.03	16.15	15.17	15.32	12.56	10.06	9.58	10.80	12.33	11.56	11.88	14.02	14.38	16.01	12.62	12.37	12.45	11.30	10.11	8.42	10.80	13.48	12.62	13.38	Diurnal Maximum		
Dir	243.64	243.78	244.69	245.89	242.99	249.90	245.13	238.18	207.40	237.61	239.71	239.92	222.40	219.73	237.69	236.76	242.64	236.19	246.16	237.09	240.38	242.43	243.99	245.95			
Maximum Speed Value: 16.1 kph on Oct 24 02:00 Maximum Daily Speed Average: 8.66 kph on Oct 15 Maximum Diurnal Speed Average: 4.52 kph at hour 14																		Minimum Speed Value: 0.0 kph on Oct 11 14:00 Minimum Daily Speed Average: 0.51 kph on Oct 4 Minimum Diurnal Speed Average: 1.09 kph at hour 22						Hours in Service: 744 Hours of Data: 725 Hours of Missing Data: 19			
Monthly Average Velocity: 2.519 kph 243.72 deg All monthly, daily, and diurnal averages have been calculated using vector methods																		Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.7 Q ₁ = 1.4 Median = 3.2 Q ₃ = 6.1 P ₉₀ = 9.6 P ₉₉ = 14.3						Percent Operational Time: 97.5			
AF - Analyzer Failure																											
Frequency Distribution																											
		Speed Range (kph)																									
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																				
North	39	3	0	0	0	0	42																				
NorthEast	93	18	0	0	0	0	111																				
East	42	0	0	0	0	0	42																				
SouthEast	17	1	0	0	0	0	18																				
South	31	2	0	0	0	0	33																				
SouthWest	102	132	42	0	0	0	276																				
West	115	23	0	0	0	0	138																				
NorthWest	52	13	0	0	0	0	65																				
Total	491	192	42	0	0	0	725																				



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
October 2017

Maximum Value: 97.98 % on Oct 11 04:00 Maximum Daily Average: 94.03 % on Oct 10 Minimum Value: 13.1 % on Oct 3 17:00 Minimum Daily Average: 37.30 % on Oct 9 Maximum Diurnal Average: 74.22 % at hour 8 Minimum Diurnal Average: 47.35 % at hour 16 Monthly Average: 64.056 % Percentiles: P ₁ = 19.6 P ₁₀ = 33.1 Q ₁ = 43.6 Median = 65.5 Q ₃ = 84.4 P ₉₀ = 94.2 P ₉₉ = 97.6																								Hours in Service:	744																								
																								Hours of Data:	744																								
																								Hours of Missing Data:	0																								
																								Hours of Calibration:	0																								
																								Percent Operational Time:	100.0																								
Day	Hourly Period Ending At																								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-Oct	83.3	85.0	83.6	82.8	82.4	84.5	83.3	83.5	78.1	68.3	65.8	75.7	69.0	61.6	62.3	66.7	70.2	70.1	70.2	70.0	71.1	72.1	69.1	70.6	74.14	85.00																							
2-Oct	73.4	71.7	71.7	74.7	65.0	68.4	64.5	63.1	61.9	58.4	55.4	50.1	43.0	39.6	36.3	34.0	34.2	39.7	46.2	54.0	66.8	74.5	77.2	75.5	58.30	77.23																							
3-Oct	78.0	79.8	82.7	85.0	87.3	88.9	88.4	90.1	78.9	59.9	42.0	29.7	22.5	17.9	14.7	13.6	13.1	16.2	21.4	38.2	59.6	67.5	73.7	76.8	55.25	90.14																							
4-Oct	80.1	83.4	85.5	86.0	85.7	86.4	86.2	84.8	76.7	54.7	39.7	31.3	25.0	21.4	19.0	22.8	25.1	27.9	42.2	59.8	71.5	79.4	82.6	86.0	60.14	86.43																							
5-Oct	90.7	92.8	93.8	95.0	95.2	95.7	96.2	96.6	91.3	64.1	48.5	39.8	32.9	27.8	24.3	22.7	23.2	26.1	30.7	39.5	56.2	65.8	72.7	76.3	62.41	96.61																							
6-Oct	78.2	80.1	84.4	87.2	88.1	80.6	75.1	76.3	58.8	23.4	20.4	19.6	26.7	31.1	36.3	39.0	40.1	43.1	45.3	68.8	87.0	91.3	93.3	95.2	61.23	95.24																							
7-Oct	92.6	92.5	92.4	93.7	94.9	95.4	94.4	92.4	78.9	74.4	55.4	45.4	49.6	52.2	63.4	51.6	40.4	40.9	42.6	54.6	66.6	72.2	76.6	77.1	70.41	95.36																							
8-Oct	82.1	86.6	79.2	79.3	78.3	74.4	74.5	75.1	70.9	54.7	47.5	43.5	37.5	31.2	28.7	32.9	33.1	28.3	39.6	49.4	60.0	69.3	74.2	57.5	57.83	86.63																							
9-Oct	41.7	36.3	33.9	34.5	35.4	36.1	36.6	37.2	37.5	37.6	36.0	30.0	29.3	27.1	26.4	27.2	27.5	31.7	38.0	43.7	47.1	49.9	52.5	62.3	37.30	62.25																							
10-Oct	64.3	72.8	90.7	94.5	95.7	96.2	96.6	96.9	97.1	97.1	96.9	96.7	96.2	95.5	95.9	96.0	96.2	96.5	97.0	97.4	97.6	97.7	97.7	97.8	94.03	97.76																							
11-Oct	97.8	97.9	98.0	98.0	96.6	90.3	89.7	89.2	90.4	91.4	89.2	84.4	78.6	74.9	78.5	77.0	74.1	80.2	84.2	82.3	82.8	86.4	92.5	93.5	87.42	97.98																							
12-Oct	94.1	94.6	95.5	96.0	94.9	94.3	94.9	95.5	95.2	93.2	85.6	81.0	74.2	62.1	55.7	69.0	74.9	82.2	87.4	90.6	92.1	94.1	94.2	94.0	86.88	96.00																							
13-Oct	93.3	93.7	92.6	94.1	94.6	94.8	93.5	93.9	94.4	93.1	91.1	90.4	89.3	91.9	92.2	89.1	86.0	90.3	93.6	94.8	95.6	94.8	94.0	94.0	92.72	95.65																							
14-Oct	95.3	95.0	94.7	87.5	71.2	64.8	61.1	57.9	52.7	51.3	50.9	47.6	44.9	42.3	42.7	41.6	41.1	43.8	49.2	53.1	58.8	73.4	80.9	81.5	61.80	95.29																							
15-Oct	51.8	48.2	47.8	50.5	49.3	46.5	44.0	43.0	39.0	39.0	32.0	31.1	28.3	27.6	27.6	28.6	35.1	39.0	41.8	42.4	42.2	39.1	40.3	39.71	51.77																								
16-Oct	39.8	38.0	45.4	47.5	52.0	60.1	67.1	71.5	71.1	63.1	53.7	55.4	54.8	50.7	43.5	39.1	43.9	45.4	43.9	43.7	46.2	48.4	47.7	48.9	50.86	71.46																							
17-Oct	53.2	55.3	55.2	57.2	62.1	62.9	64.7	65.8	68.6	66.9	69.5	74.2	89.3	86.4	79.6	73.1	77.2	73.5	57.4	61.1	61.0	56.7	53.7	51.7	65.69	89.30																							
18-Oct	55.8	64.9	74.0	65.8	63.3	68.6	64.3	45.8	63.1	75.0	71.7	66.6	56.8	54.2	51.3	49.9	56.1	59.5	61.8	66.7	70.8	71.8	77.3	80.6	63.98	80.57																							
19-Oct	82.0	84.5	90.3	94.7	95.6	96.2	96.5	96.0	94.2	82.0	66.5	51.1	44.6	37.9	42.4	46.1	52.6	57.1	66.9	75.1	80.4	87.3	91.6	92.1	75.16	96.54																							
20-Oct	92.7	92.4	91.4	91.7	93.5	94.4	93.6	94.5	94.3	93.1	94.4	85.7	83.1	82.9	83.8	78.4	77.7	81.8	86.4	93.5	95.5	96.7	96.4	96.6	90.19	96.72																							
21-Oct	96.0	96.2	96.0	95.6	95.6	95.1	95.2	95.8	96.7	94.5	81.2	71.4	47.8	35.0	27.5	30.1	33.9	37.9	46.0	60.8	71.8	73.2	73.9	76.1	71.81	96.70																							
22-Oct	74.0	71.9	72.7	72.2	63.4	59.9	61.0	75.2	71.7	68.6	66.6	60.3	45.8	32.5	33.3	29.2	35.4	38.2	42.0	47.7	47.6	41.7	36.7	35.6	53.47	75.20																							
23-Oct	43.6	54.8	60.8	54.7	54.4	62.1	69.2	71.6	60.6	41.4	29.7	27.0	27.4	28.1	28.5	28.8	30.9	33.6	37.4	39.5	37.9	36.8	36.3	35.0	42.92	71.56																							
24-Oct	34.4	35.8	36.5	37.0	39.3	37.4	39.4	43.1	41.6	37.2	33.3	33.0	36.8	44.5	50.2	52.6	57.8	65.2	71.3	74.9	75.5	76.5	70.3	36.4	48.34	76.53																							
25-Oct	32.0	25.8	24.0	24.4	26.8	33.3	43.6	52.6	83.2	82.3	74.7	68.1	65.7	64.1	62.7	61.9	61.7	64.2	65.7	66.8	67.2	72.4	81.6	84.9	57.90	84.89																							
26-Oct	87.4	91.8	93.2	93.3	93.6	93.8	93.8	93.2	92.1	91.2	89.2	59.7	39.9	33.1	26.7	27.9	28.8	33.4	50.4	66.5	75.0	75.9	70.9	43.6	68.51	93.82																							
27-Oct	39.3	41.9	42.0	41.5	41.1	42.5	45.9	48.7	49.2	46.4	43.1	39.4	36.6	33.8	31.3	30.2	31.6	35.3	40.8	41.5	43.5	45.9	48.9	50.8	41.30	50.82																							
28-Oct	52.2	56.2	60.2	69.6	75.1	67.3	69.6	56.6	64.9	63.7	54.6	60.4	68.0	79.5	69.0	68.9	73.8	61.7	58.9	53.9	50.2	48.5	50.2	51.0	61.84	79.53																							
29-Oct	55.4	58.4	62.3	69.8	74.8	76.2	77.1	80.3	82.7	77.5	55.2	49.4	47.6	48.9	41.7	40.3	42.4	50.9	63.4	68.9	72.5	77.0	79.6	80.7	63.87	82.73																							
30-Oct	82.2	85.2	87.2	87.9	90.2	91.1	78.4	58.7	60.8	46.1	35.3	29.1	26.8	23.6	21.2	19.3	21.7	31.8	33.7	41.9	47.6	59.1	65.0	66.7	53.77	91.11																							
31-Oct	67.1	65.8	64.6	47.5	46.9	46.5	59.7	76.0	75.9	82.8	87.8	92.0	90.1	87.7	85.9	81.3	80.0	84.9	90.0	87.0	92.0	85.1	79.1	81.4	76.55	92.04																							
																								70.45	71.91	73.62	73.85	73.62	73.69	74.14	74.22	73.31	66.85	60.32	55.48	51.97	49.28	47.83	47.35	48.82	51.83	56.20	62.17	67.40	70.44	71.92	70.66	Diurnal Average	
																								97.83	97.93	97.97	97.98	96.65	96.20	96.62	96.93	97.06	97.06	96.91	96.68	96.20	95.49	95.86	96.02	96.18	96.49	97.00	97.36	97.55	97.66	97.73	97.76	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
October 2017

Maximum Value: 11.09 kph on Oct 24 01:00		Maximum Daily Average: 6.57 kph on Oct 15		Hours in Service: 744																																													
Minimum Value: 0.4 kph on Oct 12 07:00		Minimum Daily Average: 1.35 kph on Oct 12		Hours of Data: 725																																													
Maximum Diurnal Average: 4.27 kph at hour 14		Minimum Diurnal Average: 2.36 kph at hour 21		Hours of Missing Data: 19																																													
Monthly Average: 3.124 kph		Percentiles: P ₁ = 0.7 P ₁₀ = 1.2 Q ₁ = 1.6 Median = 2.4 Q ₃ = 4.0 P ₉₀ = 6.5 P ₉₉ = 9.4		Hours of Calibration: 0																																													
				Percent Operational Time: 97.5																																													
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-Oct	1.2	1.2	0.7	0.7	1.2	1.2	1.2	1.8	1.7	2.5	2.2	2.8	2.7	2.7	2.8	2.4	2.2	2.8	3.1	2.3	2.8	2.9	3.9	2.5	2.15	3.89																							
2-Oct	2.3	3.1	3.0	2.1	2.2	1.8	2.4	2.6	2.3	2.1	2.4	2.5	2.9	2.8	2.6	2.4	2.4	1.9	1.7	2.0	1.7	1.5	1.5	1.3	2.23	3.11																							
3-Oct	2.2	1.4	1.7	1.3	1.5	1.6	0.9	1.2	1.3	1.7	4.6	5.3	5.8	5.5	5.0	4.5	4.2	4.3	3.5	1.8	1.3	1.0	1.3	1.3	2.67	5.84																							
4-Oct	1.4	1.0	1.2	1.1	1.3	0.9	1.0	1.1	1.4	1.9	2.1	2.1	2.4	2.4	1.5	1.6	1.8	1.4	1.0	1.1	1.2	1.2	1.2	0.9	1.42	2.42																							
5-Oct	0.9	0.9	0.8	1.5	1.3	1.2	1.2	1.0	1.0	1.7	2.9	3.7	4.3	4.6	4.2	4.0	3.9	2.3	2.5	1.4	1.5	1.3	1.5	2.16	4.57																								
6-Oct	1.6	2.2	1.3	1.5	1.5	1.6	1.6	1.7	4.5	6.7	6.9	6.4	7.7	8.4	7.7	8.1	7.7	6.7	3.8	6.9	3.8	2.0	2.1	2.0	4.35	8.39																							
7-Oct	2.1	2.0	2.0	1.5	1.1	1.5	1.0	1.4	1.6	1.4	2.4	2.2	2.0	2.1	2.8	2.6	3.2	3.1	2.2	2.3	1.8	1.5	2.5	2.4	2.03	3.19																							
8-Oct	2.4	2.0	2.9	1.9	2.2	3.1	2.2	1.9	2.7	3.1	3.1	3.6	3.0	3.8	2.9	3.1	2.1	2.9	1.8	1.3	1.0	1.3	1.6	2.3	2.42	3.76																							
9-Oct	3.7	6.2	7.4	7.0	6.7	7.2	7.7	7.0	5.8	5.5	6.7	7.7	7.4	8.2	7.4	6.5	6.8	5.7	4.2	2.5	3.0	2.0	1.8	1.5	5.65	8.17																							
10-Oct	2.2	4.0	3.7	1.4	AF	AF	AF	AF	AF	AF	AF	AF	2.0	2.1	2.7	2.9	2.9	2.7	2.7	2.0	1.7	1.6	1.2	0.9	AF	2.31	3.99																						
11-Oct	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	1.2	1.8	2.4	1.7	1.6	1.4	1.8	2.0	1.7	1.7	1.7	0.7	1.64	2.42																							
12-Oct	1.2	0.8	1.1	1.1	0.9	1.1	0.4	0.6	1.1	1.0	1.5	2.7	2.4	2.1	1.8	1.3	0.9	1.4	0.5	1.1	1.3	1.4	2.2	2.4	1.35	2.71																							
13-Oct	2.7	1.9	2.5	2.3	2.2	1.9	2.5	2.2	1.9	2.3	2.3	1.9	2.3	1.9	1.6	1.7	1.8	0.6	1.0	0.7	1.2	0.6	1.0	0.6	1.73	2.74																							
14-Oct	1.0	1.0	1.2	2.8	3.5	3.3	4.3	6.2	6.8	7.2	7.7	8.9	8.1	8.4	7.1	6.7	7.6	6.8	4.6	3.0	1.4	1.5	1.5	1.6	4.67	8.88																							
15-Oct	5.3	4.4	3.8	4.3	3.8	6.3	7.7	7.2	8.5	8.4	5.4	7.3	9.5	8.6	8.5	8.2	8.5	8.2	8.5	6.8	4.1	4.7	5.9	3.8	6.57	9.52																							
16-Oct	3.2	2.4	3.1	2.5	2.5	1.9	2.0	2.2	2.2	2.3	2.6	2.0	3.1	2.9	3.5	5.0	5.9	5.7	6.8	5.2	3.6	3.4	3.0	2.3	3.29	6.77																							
17-Oct	2.8	2.8	3.9	3.3	3.0	2.9	2.2	2.0	1.9	2.8	3.0	3.7	3.7	3.2	3.5	2.9	2.2	2.3	3.1	2.0	2.4	3.0	2.2	3.8	2.85	3.89																							
18-Oct	2.3	2.1	1.4	1.6	1.4	2.1	3.2	2.2	1.5	1.9	2.4	2.1	2.2	1.5	2.9	2.7	3.2	3.5	4.7	2.7	3.5	4.0	4.3	3.6	2.63	4.72																							
19-Oct	2.8	3.4	1.4	1.4	1.5	1.2	1.7	1.3	1.8	1.4	2.9	6.3	5.4	6.2	5.2	5.0	4.4	3.7	2.1	2.4	1.4	1.7	1.7	1.3	2.81	6.31																							
20-Oct	1.6	1.5	1.9	1.6	1.9	1.7	1.2	1.3	1.4	1.3	1.5	3.4	4.6	4.8	2.3	3.1	2.4	2.3	2.2	1.1	1.3	1.5	0.9	1.7	2.02	4.78																							
21-Oct	1.9	1.8	1.8	1.8	2.0	1.0	1.1	1.3	1.4	1.8	1.7	1.3	2.8	3.9	5.1	4.8	4.6	4.5	3.5	1.6	1.4	1.5	1.0	1.4	2.29	5.13																							
22-Oct	1.8	1.9	2.3	3.0	3.0	3.2	3.3	1.4	1.6	1.2	3.9	2.9	4.6	7.3	5.5	4.4	4.1	2.9	2.9	1.9	5.5	6.0	5.8	6.3	3.61	7.33																							
23-Oct	4.6	4.7	2.1	3.0	2.1	1.6	1.7	1.6	1.8	3.1	5.9	7.5	8.2	7.5	7.3	7.2	6.3	8.1	6.5	5.9	6.8	10.1	8.9	10.5	5.54	10.51																							
24-Oct	11.1	10.7	9.6	10.5	7.9	8.7	5.6	4.0	4.3	3.7	5.8	4.0	2.6	2.9	3.0	2.8	3.3	3.5	2.8	3.0	3.7	3.7	3.8	7.1	5.33	11.09																							
25-Oct	6.6	9.1	9.5	9.2	9.2	8.1	6.1	4.0	4.2	3.2	6.0	5.8	3.8	2.8	2.7	2.7	1.9	2.1	2.6	1.8	1.1	1.2	1.1	1.3	4.42	9.45																							
26-Oct	1.2	1.1	0.7	1.2	1.7	1.5	1.6	1.7	1.6	1.6	1.4	2.0	3.8	4.1	4.6	3.1	3.6	2.3	1.3	1.1	1.3	1.2	1.6	4.9	2.09	4.91																							
27-Oct	5.5	5.4	5.1	4.9	4.8	4.4	4.4	4.7	5.1	4.8	5.3	6.5	6.5	5.4	5.4	4.8	4.3	3.6	3.2	4.4	4.5	4.6	4.8	4.4	4.87	6.49																							
28-Oct	4.5	3.3	1.6	1.5	2.1	2.5	2.5	5.8	3.4	1.9	3.6	1.8	2.7	2.7	3.6	3.2	3.8	2.8	2.3	2.4	2.4	2.2	2.2	1.8	2.77	5.78																							
29-Oct	2.0	1.3	1.9	2.5	1.3	1.2	1.8	1.3	1.4	1.3	3.0	3.4	3.6	3.1	2.8	3.1	1.6	1.2	1.5	1.7	1.1	0.7	1.0	1.4	1.88	3.61																							
30-Oct	1.2	1.1	1.5	1.1	0.9	1.4	2.6	3.8	2.6	5.5	5.1	5.5	5.0	4.3	5.4	4.0	2.5	3.5	2.2	1.0	1.0	1.0	0.9	2.67	5.48																								
31-Oct	0.7	1.5	1.8	4.2	3.9	4.6	4.6	3.6	4.1	4.3	3.7	2.6	4.3	3.9	3.7	4.0	3.7	2.9	4.4	4.6	3.1	2.5	2.7	3.2	3.45	4.64																							
																								2.79	2.87	2.77	2.78	2.71	2.78	2.75	2.69	2.80	3.02	3.66	4.00	4.23	4.27	4.11	3.87	3.73	3.45	3.04	2.61	2.36	2.40	2.47	2.70	Diurnal Average	
																								11.09	10.65	9.60	10.49	9.15	8.67	7.73	7.24	8.47	8.42	7.70	8.88	9.52	8.56	8.51	8.16	8.55	8.16	8.52	6.88	6.77	10.10	8.93	10.51	Diurnal Maximum	
AF - Analyzer Failure																																																	



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Direction (WD) - deg
October 2017

Maximum Value: 104.70 deg on Oct 6 09:00 Maximum Daily Average: 66.96 deg on Oct 21 Minimum Value: 13.7 deg on Oct 3 00:00 Minimum Daily Average: 32.26 deg on Oct 10 Maximum Diurnal Average: 58.86 deg at hour 23 Minimum Diurnal Average: 38.60 deg at hour 16 Monthly Average: 49.548 deg Percentiles: P ₁ = 18.4 P ₁₀ = 26.9 Q ₁ = 34.6 Median = 44.6 Q ₃ = 61.2 P ₉₀ = 81.4 P ₉₉ = 99.9																								Hours in Service:	744																								
																								Hours of Data:	725																								
																								Hours of Missing Data:	19																								
																								Hours of Calibration:	0																								
																								Percent Operational Time:	97.5																								
Day	Hourly Period Ending At																								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-Oct	37.9	42.1	62.2	89.9	91.3	87.8	76.6	66.1	66.1	49.7	36.6	49.5	60.2	26.1	40.7	47.3	48.2	43.0	38.5	69.8	68.7	60.2	89.1	79.7	59.48	91.34																							
2-Oct	67.4	66.3	43.6	60.3	88.9	59.5	93.9	37.5	54.1	42.5	31.3	47.7	33.6	40.1	31.1	50.4	49.5	33.4	54.6	70.3	39.5	68.5	44.4	13.7	50.92	93.94																							
3-Oct	36.8	40.7	82.5	74.3	34.8	59.5	84.5	53.9	39.3	39.3	50.6	35.8	26.7	25.6	26.0	28.6	26.5	22.6	35.8	41.1	89.6	89.8	78.7	66.2	49.55	89.77																							
4-Oct	66.4	58.6	49.6	51.3	53.0	38.3	57.2	52.1	29.8	44.0	41.9	41.4	62.1	69.9	80.2	50.4	36.5	33.2	45.9	82.7	29.8	28.8	42.6	59.9	50.23	82.71																							
5-Oct	77.7	69.5	29.6	24.6	42.1	41.1	30.5	28.0	25.9	30.2	47.3	45.8	34.3	25.3	27.9	36.9	42.8	52.8	40.2	78.8	82.7	83.5	63.0	53.6	46.43	83.49																							
6-Oct	45.0	67.3	88.7	91.5	59.1	80.9	32.8	53.7	104.7	35.6	41.3	34.4	34.1	44.9	42.6	39.0	44.9	42.6	47.0	48.3	64.6	61.5	92.7	82.6	57.49	104.70																							
7-Oct	21.2	40.2	45.2	44.5	73.0	55.7	97.7	67.9	40.1	26.4	31.3	33.3	43.3	66.3	56.8	23.5	26.0	27.6	52.8	56.4	73.9	69.9	75.4	19.9	48.68	97.73																							
8-Oct	66.2	78.7	56.9	32.1	60.7	40.2	48.8	81.0	26.0	47.8	44.7	26.9	30.4	50.1	29.5	25.6	27.0	40.0	43.6	50.0	37.1	43.9	53.2	66.6	46.12	81.02																							
9-Oct	57.9	47.3	38.4	41.3	41.1	47.2	56.0	50.0	55.4	55.1	45.1	39.0	29.2	28.4	43.0	36.9	33.4	31.2	49.2	46.7	37.8	44.9	97.5	28.4	45.02	97.54																							
10-Oct	23.3	25.0	20.6	33.4	AF	AF	AF	AF	AF	AF	AF	AF	AF	29.7	22.7	23.3	28.5	33.6	23.0	20.2	29.8	38.9	41.7	51.0	48.0	55.6	AF	32.26	55.62																				
11-Oct	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	69.6	92.6	34.6	42.5	54.4	32.4	24.3	32.1	28.9	25.2	31.9	38.4	42.23	92.58																						
12-Oct	30.7	21.9	29.3	26.5	16.0	30.3	16.5	59.1	64.4	41.8	39.9	61.9	48.4	24.7	35.7	38.8	40.1	84.2	87.4	65.3	46.5	18.6	41.0	19.9	41.21	87.37																							
13-Oct	20.8	16.2	29.1	39.9	31.2	39.1	25.8	23.1	18.5	21.1	21.6	26.6	37.8	34.4	21.1	33.7	40.0	31.4	65.5	56.8	57.5	51.0	75.3	94.1	37.98	94.10																							
14-Oct	34.0	73.1	64.6	75.7	58.2	59.9	61.2	39.6	34.3	37.0	36.4	35.6	39.6	39.4	48.7	42.0	46.5	34.0	49.0	52.0	86.4	28.5	41.9	79.9	49.90	86.40																							
15-Oct	48.8	48.6	29.8	25.5	23.7	37.3	44.3	38.2	40.4	47.3	49.8	47.1	43.5	34.6	37.5	37.5	40.3	46.1	45.3	46.1	40.5	47.3	58.1	84.4	43.42	84.39																							
16-Oct	89.5	101.6	54.7	56.5	77.7	60.6	34.1	64.6	59.9	32.8	48.0	29.8	29.4	34.5	79.3	44.9	50.3	56.3	54.9	34.6	24.4	63.8	53.3	72.6	54.50	101.60																							
17-Oct	102.3	97.2	51.6	35.6	21.0	22.3	18.6	25.2	39.6	29.9	44.8	80.6	93.2	47.4	49.6	32.4	39.3	28.7	25.5	22.6	36.7	35.7	27.2	16.3	42.63	102.26																							
18-Oct	30.7	62.3	68.9	51.4	70.2	56.4	94.3	58.5	86.8	44.7	37.8	32.4	57.9	60.2	60.7	23.5	73.8	50.1	55.2	24.0	30.3	20.4	29.9	34.3	50.61	94.33																							
19-Oct	41.4	54.2	92.4	86.0	91.8	87.1	91.0	83.5	79.9	92.9	90.8	31.7	36.0	48.5	45.4	27.7	40.5	28.6	95.7	57.6	71.4	33.8	57.6	87.6	64.69	95.66																							
20-Oct	73.9	90.9	91.3	63.1	99.9	38.9	38.4	48.7	38.8	31.9	47.7	41.8	43.0	45.3	37.3	37.1	47.0	23.1	41.2	30.0	68.1	66.5	81.1	82.5	54.48	99.89																							
21-Oct	85.0	80.7	100.2	58.3	73.3	82.8	82.3	72.3	76.9	91.1	71.1	81.2	48.5	38.3	33.3	45.3	35.2	31.5	72.4	81.4	74.2	63.4	71.5	57.0	66.96	100.17																							
22-Oct	55.7	62.9	70.9	78.7	39.1	43.2	79.3	66.1	56.0	87.8	62.8	46.9	42.6	42.0	46.5	34.6	45.2	41.7	45.0	46.6	42.5	39.2	39.5	36.8	52.15	87.83																							
23-Oct	43.0	44.7	66.0	48.4	91.5	40.7	83.1	99.9	44.0	43.7	48.0	42.6	37.1	49.2	44.3	47.7	41.6	40.0	38.2	41.0	34.5	40.5	41.0	44.4	49.79	99.92																							
24-Oct	39.2	37.3	36.8	37.9	45.5	47.5	49.9	46.0	56.9	59.5	39.9	50.1	54.2	26.1	40.8	55.5	31.4	40.3	49.1	29.0	31.6	42.3	90.8	45.8	45.14	90.83																							
25-Oct	49.6	39.0	38.5	47.8	41.1	45.9	50.0	41.2	53.0	57.7	52.9	56.4	97.1	89.1	44.7	40.1	34.7	29.5	50.7	43.3	71.2	35.5	76.1	34.6	50.83	97.14																							
26-Oct	37.5	32.2	39.4	90.4	83.3	51.4	54.3	88.4	92.9	61.3	42.5	36.6	43.8	19.6	40.6	56.1	41.7	28.3	91.8	68.3	59.7	78.3	56.7	35.6	55.45	92.94																							
27-Oct	28.8	28.5	32.4	26.3	26.9	31.8	27.6	26.0	26.2	26.7	28.4	32.2	27.6	27.4	39.1	38.2	33.6	33.5	47.9	41.9	34.3	39.7	43.2	30.0	32.42	47.85																							
28-Oct	39.4	38.4	47.7	87.1	70.2	100.0	86.3	81.2	93.8	49.8	48.3	32.2	60.2	98.3	32.2	57.2	67.4	78.5	57.2	38.0	70.0	57.4	44.5	44.6	61.66	99.97																							
29-Oct	59.9	56.4	88.6	92.6	74.6	53.5	77.3	41.4	45.8	66.6	41.3	39.6	34.2	35.3	30.2	31.5	28.9	79.8	65.5	56.1	33.1	66.6	48.7	57.5	54.37	92.55																							
30-Oct	80.1	65.0	54.5	68.7	79.2	41.5	34.8	39.6	40.6	35.1	29.1	24.8	22.9	21.9	26.5	42.3	38.6	36.8	40.2	79.1	29.8	44.5	71.2	58.1	46.04	80.07																							
31-Oct	68.5	64.4	76.5	45.1	40.5	39.2	29.3	24.4	19.5	25.5	65.4	63.4	47.3	40.8	37.5	26.3	21.5	25.8	30.7	44.0	55.2	95.2	51.9	33.9	44.66	95.25																							
																								51.94	55.04	56.01	56.15	58.58	52.41	57.11	53.71	52.06	46.72	44.88	42.34	44.88	43.69	41.19	38.60	40.23	39.90	50.94	50.83	51.66	51.36	58.86	51.96	Diurnal Average	
																								102.26	101.60	100.17	92.55	99.89	99.97	97.73	99.92	104.70	92.88	90.75	81.24	97.14	98.25	80.23	57.23	73.81	84.21	95.66	82.71	89.56	95.25	97.54	94.10	Diurnal Maximum	
AF - Analyzer Failure																																																	

WEST CENTRAL AIRSHED SOCIETY

**CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT**

**END OF REPORT
OCTOBER 2017**