Fox Creek

AIR QUALITY MONITORING
May 2016
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta

West Central
Airshed Society

June 22nd, 2016

Director, Central Region
Alberta Environmental Protection
4th Floor, Oxbridge Place
9820 106 Street
Edmonton, Alberta T5K 2J6

Dear Sir:

Monthly Ambient Air Quality Monitoring Report for May 2016 for Fox Creek

Enclosed is the report for the Fox Creek continuous ambient air quality monitoring station of the West Central Airshed Society network.

The person responsible for this reporting is Robert Scotten, 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 excess of guidelines as indicated in Air Monitoring Directive Section III.A.3. (a&b) for SO_2, NO_2, O_3, and $PM_{2.5}$.

2. Operational times less than 90 percent:

There were no operational times less than 90 percent in May.

3. Monitoring Notes:

The wind instrument failed to return valid data from May 19 18:00 MST to May 20 07:00 MST, resulting in an uptime of 97.9%. All other analyzers and meteorological equipment returned uptimes of 99.9% in May due to a power outage.

If additional information is required please contact Patrick Andersen at (780) 514-3533 or (403) 505-1041.

Sincerely,

Robert Scotten
Executive Director

Patrick Andersen
Environmental Specialist

WEST CENTRAL AIRSHED SOCIETY

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

FOX CREEK
MAY 2016

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 **West Central Airshed Society**

Continuous air quality/meteorlogical monitoring measurements

WCAS / Fox Creek **May 2016**

Parameter	Calibration Hours	Number of Data	Percent Uptime	Mean	Min	Max	P10	Q1	Median	Q3	P90	Exceedences 1-hour	Exceedences 24-hour	24 Hour Average Max (ppm)
							-------	-------	Percentile	---------	-------			
SO_2 (ppb)	4	739	99.9	0.124	0.0	7.3	0.0	0.0	0.0	0.0	0.1	0	0	0.002
H_2S (ppb)	5	738	99.9	0.033	0.0	2.0	0.0	0.0	0.0	0.0	0.1	0	0	0.000
O_3 (ppb)	5	738	99.9	29.4	0.8	62.2	11.2	15.8	28.6	42.1	48.5	0	-	0.049
NO (ppb)	4	739	99.9	0.4	0.0	24.0	0.0	0.0	0.0	0.1	0.9	-	-	-
NO_2 (ppb)	4	739	99.9	2.0	0.0	16.4	0.0	0.1	0.8	2.8	6.6	0	0	0.004
NO_x (ppb)	4	739	99.9	2.9	0.0	35.1	0.4	0.7	1.5	3.8	7.7	-	-	-
Particulate Matter 2.5 microns (μ/m^3)	2	741	99.9	4.2	0.0	37.8	0.0	1.2	2.8	5.5	9.8	0	0	13.94 ug/m3
Temperature (^oC)	0	743	99.9	10.3	-2.3	28.9	1.5	4.4	9.5	15.0	20.5	-	-	-
Wind Speed (kph)	0	728	97.9	6.9	0.4	26.7	2.0	3.7	6.3	9.2	12.5	-	-	-

WCAS - Fox Creek
Summary of Hourly Averages

Sulphur Dioxide (SO_2) - ppb
May 2016

Maximum Value: 7.30 ppb on May 6 09:00

Maximum Daily Average: 1.55 ppb on May 7

Minimum Value: 0.0 ppb on May 1 01:00

Minimum Daily Average: 0.00 ppb on May 5

Maximum Diurnal Average: 0.58 ppb at hour 9

Minimum Diurnal Average: 0.00 ppb at hour 1

Monthly Average: 0.124 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.1 P_{99} = 4.2

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	4
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	0.0	0.0	0.0	0.0	0.0	0.5	1.8	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	1.77
2-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.33
3-May	0.0	0.0	0.1	1.0	0.8	0.3	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.96
4-May	0.0	0.0	0.0	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	0.0	0.00	0.06
5-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-May	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.3	7.3	1.6	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	7.30
7-May	0.0	0.6	2.1	3.7	3.5	5.1	4.1	6.3	4.2	4.7	2.1	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.55	6.34
8-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
10-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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	0.02	0.34
11-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
12-May	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	6.04
13-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.2	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	0.13	2.86
14-May	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.5	0.9	0.6	0.5	0.5	0.4	0.2	0.2	0.3	0.4	0.2	0.2	0.4	0.4	0.4	0.2	0.28	0.86
15-May	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.1	0.0	PF	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.43
16-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.4	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	0.17	2.36
17-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
18-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
19-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
22-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
23-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
24-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.3	1.3	0.8	0.6	0.2	0.3	0.3	0.2	0.5	0.3	0.1	0.3	0.4	0.3	0.0	0.33	2.30
25-May	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.40
26-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.48
27-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
28-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	1.44
29-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
30-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
31-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
	0.00	0.02	0.07	0.15	0.33	0.19	0.23	0.44	0.58	0.42	0.16	0.11	0.04	0.05	0.03	0.02	0.02	0.03	0.01	0.01	0.02	0.02	0.02	0.01	Diurnal Average	
	0.00	0.58	2.13	3.72	6.04	5.09	4.14	6.34	7.30	4.67	2.07	1.44	0.59	0.44	0.31	0.31	0.27	0.52	0.25	0.16	0.41	0.39	0.35	0.15	Diurnal Maximum	

C - Calibration PF - Power Failure

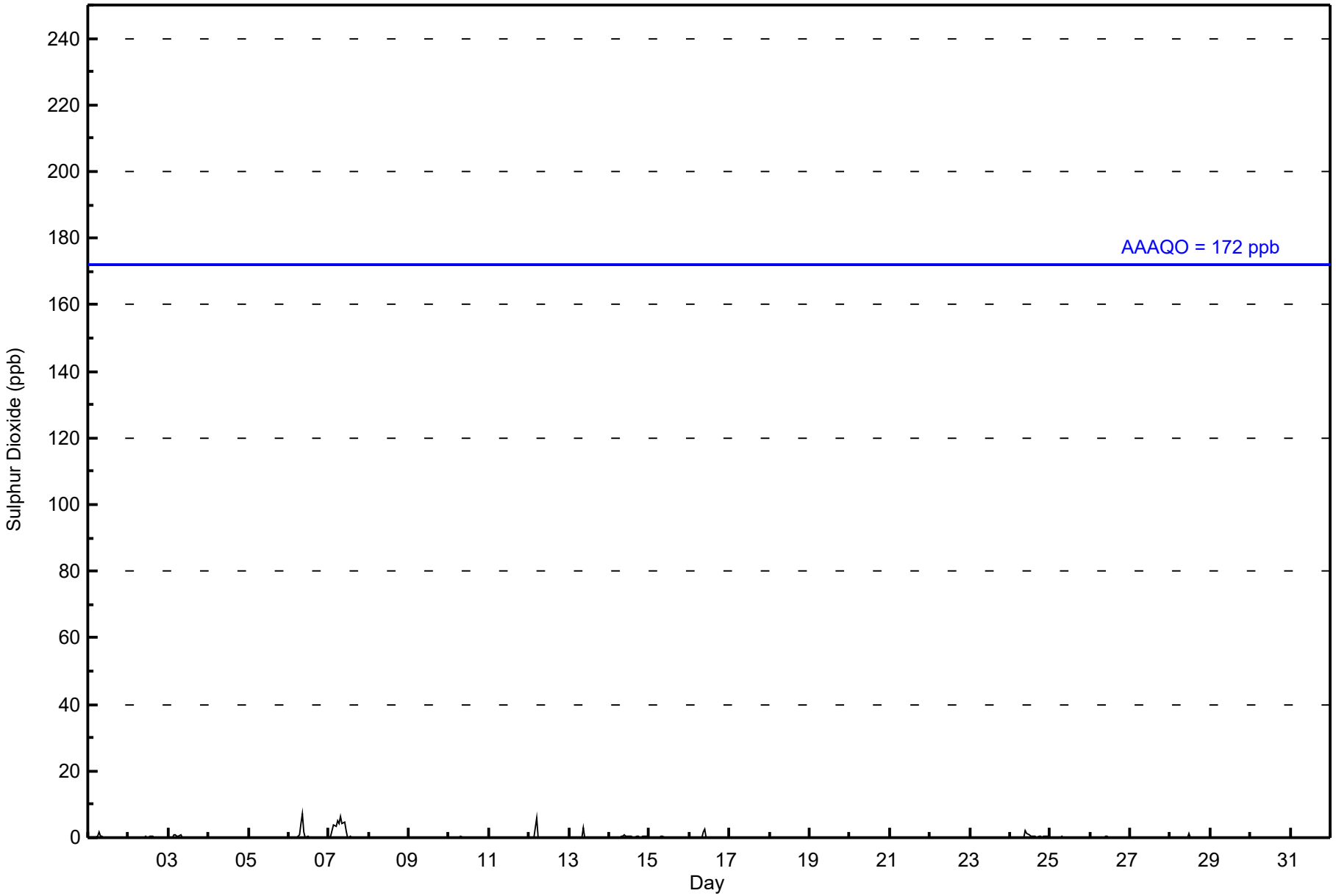
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

West Central Airshed Society

Hourly Averages

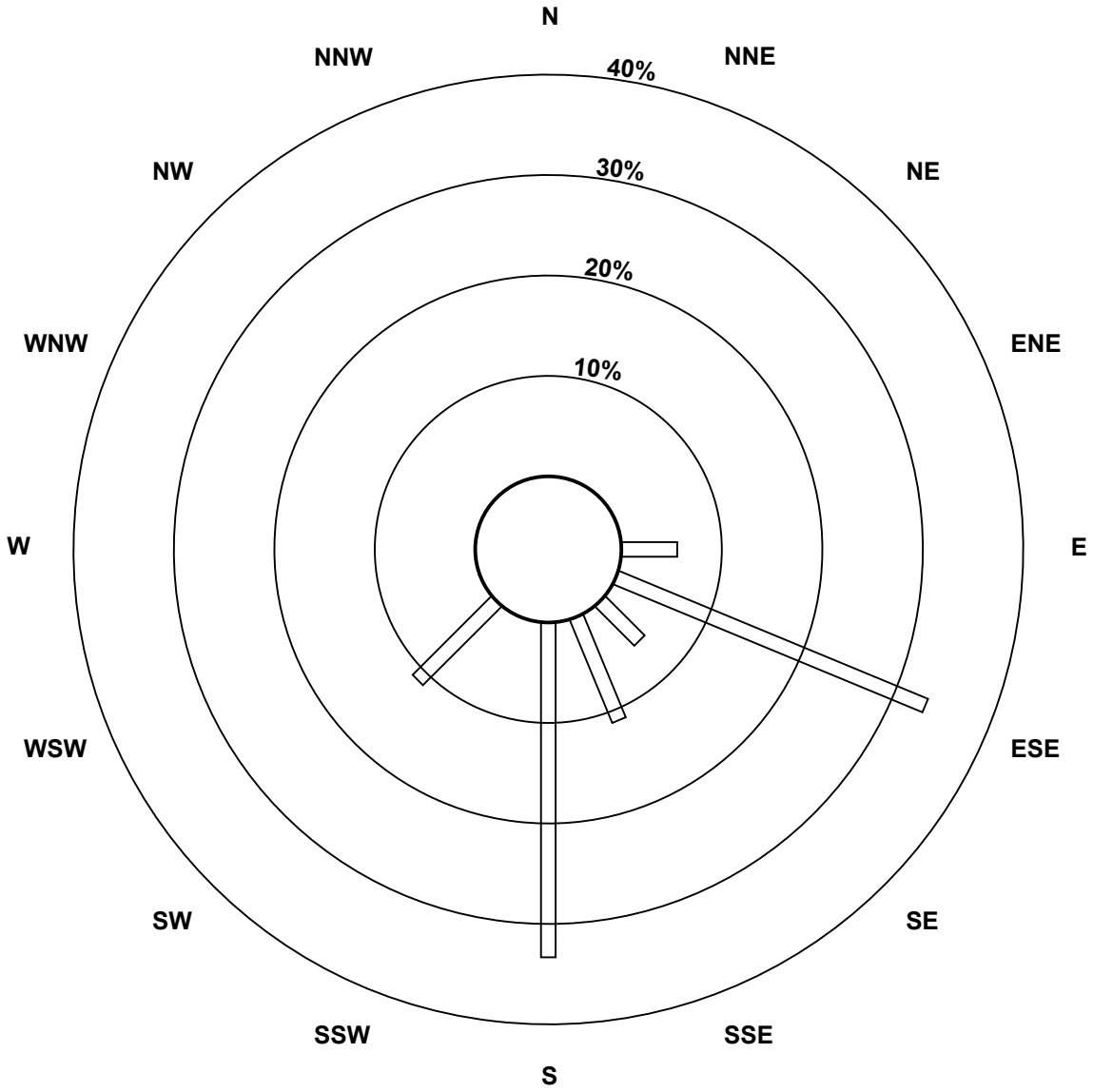
Sulphur Dioxide (SO_2) - ppb

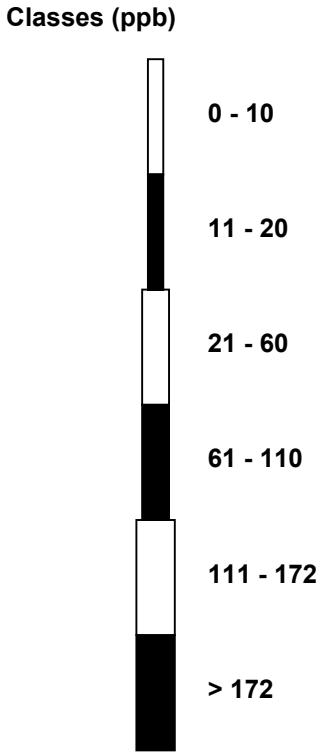
Fox Creek - May 2016



Sulphur Dioxide (SO_2) - ppb

Fox Creek - May 2016





WCAS - Fox Creek
Summary of Hourly Averages

Hydrogen Sulphide (H_2S) - ppb
May 2016

Maximum Value: 2.25 ppb on May 23 21:00

Maximum Daily Average: 0.18 ppb on May 18

Minimum Value: 0 ppb on May 1 13:00

Minimum Daily Average: 0.00 ppb on May 9

Maximum Diurnal Average: 0.10 ppb at hour 21

Minimum Diurnal Average: 0.01 ppb at hour 20

Monthly Average: 0.033 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.1 P_{99} = 0.4

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	5
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.20
2-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.13	0.43
3-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.16
4-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.13
5-May	0	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	0.13
6-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.17
7-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0.10
8-May	0	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
9-May	0	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
10-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.13
11-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.10	0.36
12-May	0	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	0.11
13-May	0	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
14-May	0	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
15-May	0	0	0	0	0	0	0	0	0	0	0	PF	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0.13
16-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0.09
17-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04	0.15
18-May	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.18	0.78
19-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0.15
20-May	0	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
21-May	0	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	0.11
22-May	0	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
23-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.14	2.25
24-May	0	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	0.32
25-May	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.00	0.00
26-May	0	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
27-May	0	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
28-May	0	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
29-May	0	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
30-May	0	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	0.06
31-May	0	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	0.07
	0.04	0.05	0.04	0.04	0.05	0.07	0.07	0.06	0.04	0.04	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.10	0.04	0.02	0.03	Diurnal Average	
	0.25	0.24	0.28	0.20	0.31	0.78	0.59	0.38	0.15	0.32	0.24	0.12	0.16	0.13	0.10	0.09	0.14	0.10	0.11	0.09	2.25	0.22	0.17	0.20	Diurnal Maximum	

C - Calibration PF - Power Failure

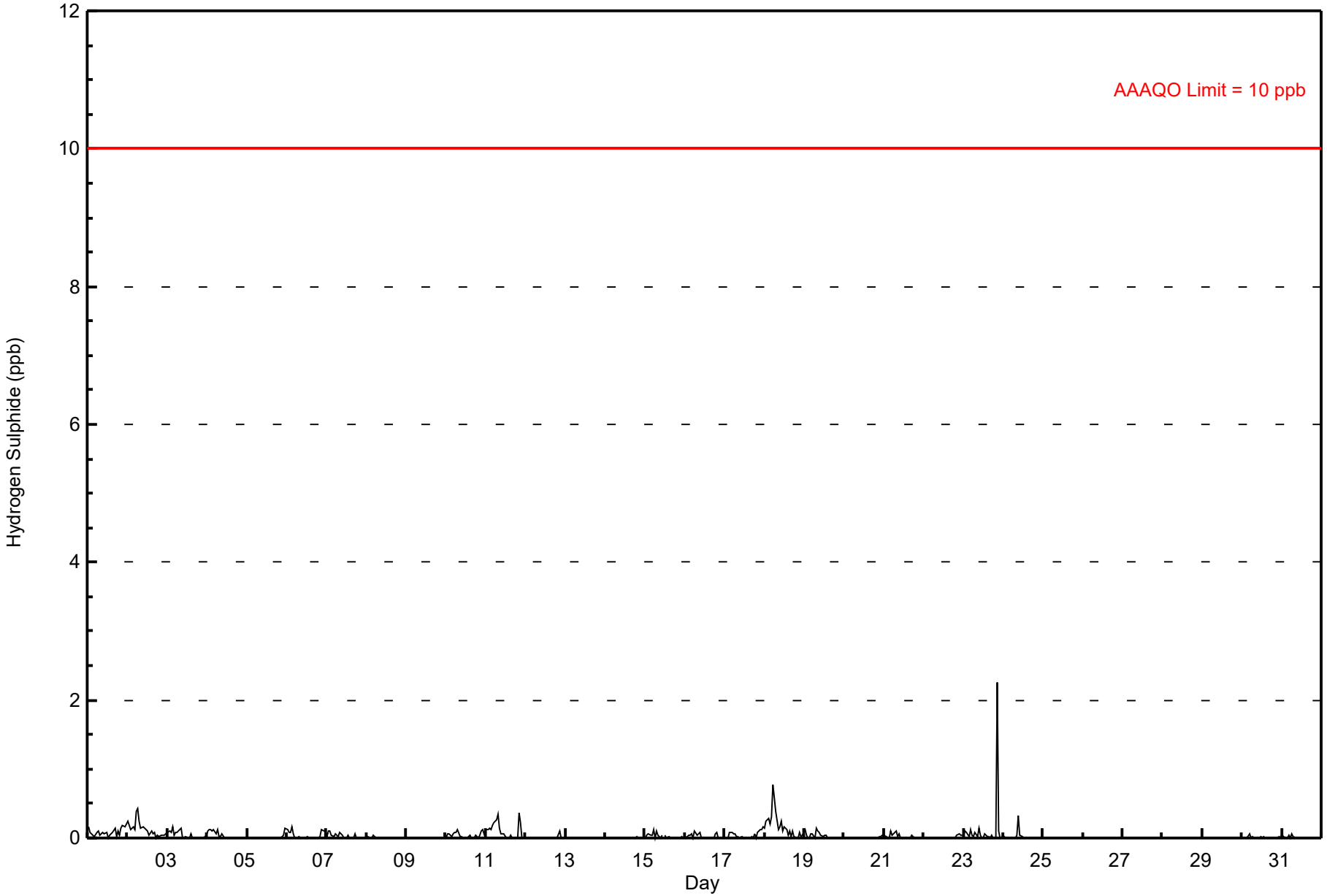
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

West Central Airshed Society

Hourly Averages

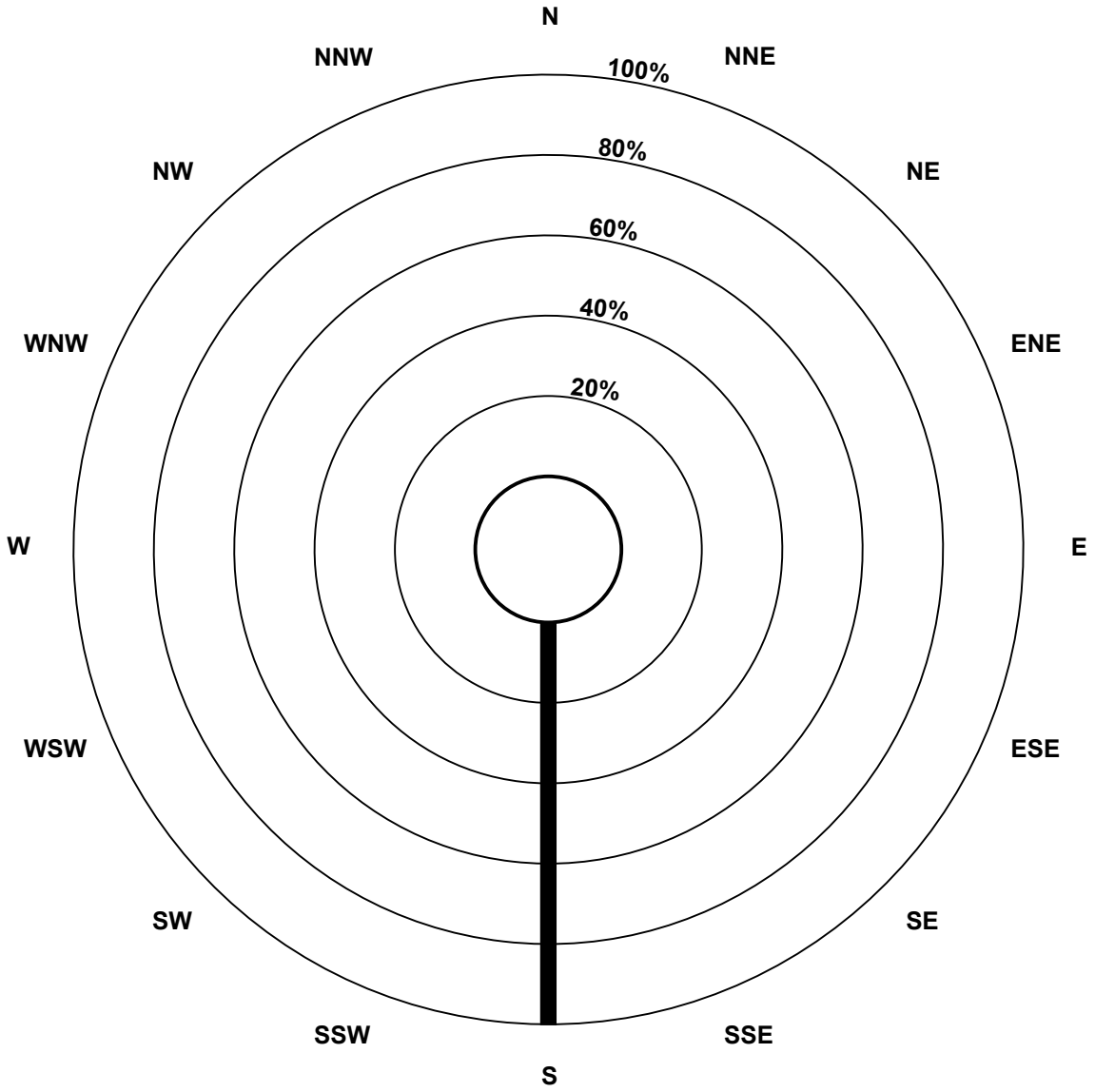
Hydrogen Sulphide (H_2S) - ppb

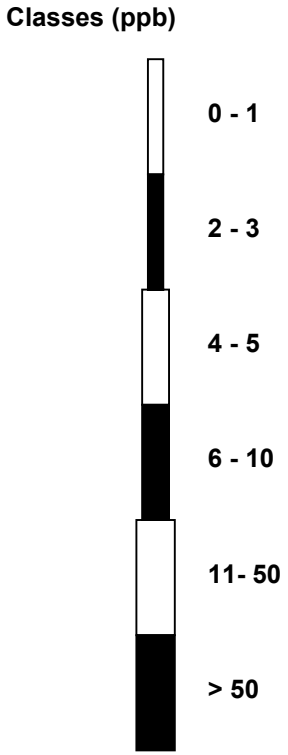
Fox Creek - May 2016



Hydrogen Sulphide (H_2S) - ppb

Fox Creek - May 2016





WCAS - Fox Creek
Summary of Hourly Averages

Ozone (O_3) - ppb
May 2016

Maximum Value: 62.22 ppb on May 16 13:00

Maximum Daily Average: 49.06 ppb on May 16

Minimum Value: 0.8 ppb on May 2 06:00

Minimum Daily Average: 12.51 ppb on May 19

Maximum Diurnal Average: 40.38 ppb at hour 16

Minimum Diurnal Average: 16.05 ppb at hour 6

Monthly Average: 29.353 ppb

Percentiles: P_1 = 2.4 P_{10} = 11.2 Q_1 = 15.8 Median = 28.6 Q_3 = 42.1 P_{90} = 48.5 P_{99} = 60.7

Hours in Service:	744
Hours of Data:	738
Hours of Missing Data:	6
Hours of Calibration:	5
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	15.2	12.5	15.1	16.5	17.4	17.9	25.9	30.6	32.9	37.3	37.3	38.0	38.6	38.2	37.2	37.5	37.1	35.6	35.8	30.2	18.1	8.7	10.7	12.5	26.54	38.65
2-May	11.5	10.7	8.6	5.0	1.8	0.8	2.7	20.4	28.5	31.9	38.6	42.4	43.4	44.4	44.1	45.8	48.1	47.8	43.7	32.7	29.0	30.9	29.3	23.4	27.73	48.13
3-May	25.1	27.1	32.5	31.7	35.7	33.3	30.8	39.1	44.9	48.1	52.5	54.0	54.3	55.4	56.8	56.9	55.1	54.4	53.9	52.2	46.6	28.6	23.4	27.1	42.47	56.91
4-May	29.7	19.6	23.2	20.6	17.1	17.0	19.2	22.1	30.5	36.1	44.9	45.6	45.5	45.7	43.2	41.9	40.8	40.4	40.1	42.1	39.4	44.2	45.9	46.4	35.05	46.42
5-May	47.9	51.1	51.3	48.3	42.1	41.2	39.4	39.7	41.4	43.5	44.6	45.8	46.7	47.7	48.9	51.0	50.5	49.8	49.3	48.5	32.9	22.4	24.0	18.5	42.77	51.32
6-May	16.4	20.1	24.8	20.2	16.0	18.3	23.5	31.3	37.6	42.3	44.8	46.9	49.2	50.3	50.2	50.6	50.3	49.8	46.6	40.3	20.2	11.1	12.8	20.7	33.09	50.57
7-May	25.3	26.1	26.0	28.4	27.8	30.1	33.2	33.9	38.8	40.8	46.3	46.2	45.3	46.3	47.1	46.6	47.0	47.7	49.0	41.5	43.2	38.5	38.0	44.7	39.07	49.00
8-May	38.9	30.4	27.4	32.7	30.8	26.6	33.7	35.3	40.8	41.8	40.2	38.0	36.7	36.7	36.0	33.4	30.5	29.5	28.8	32.8	28.8	22.3	21.1	20.9	32.26	41.84
9-May	19.6	19.9	20.4	20.3	19.6	20.8	24.9	25.7	34.1	38.5	41.1	43.6	42.9	40.8	41.2	41.1	40.8	39.8	39.2	38.1	28.9	13.0	6.6	6.8	29.49	43.61
10-May	5.2	6.5	4.1	10.7	5.6	8.8	14.5	17.9	31.4	36.4	41.1	42.4	43.9	44.7	45.1	46.1	47.1	48.0	46.6	43.2	24.9	11.5	16.6	15.3	27.40	47.96
11-May	8.4	4.1	4.5	2.4	3.3	4.0	9.2	19.8	30.7	36.7	37.7	41.5	42.5	42.1	43.5	42.5	41.4	40.3	39.5	38.8	40.9	43.3	40.6	38.1	28.99	43.48
12-May	36.5	35.7	32.3	20.0	Z	7.8	26.8	38.2	41.1	44.8	48.8	47.5	47.5	46.9	47.0	47.4	47.6	47.6	46.1	45.0	42.1	37.4	20.9	11.4	37.67	48.82
13-May	12.7	12.8	13.5	19.7	19.8	11.6	18.8	31.2	40.9	43.7	45.3	46.5	47.2	47.8	48.0	48.1	48.1	48.6	48.4	46.6	34.9	20.9	15.2	20.4	32.95	48.58
14-May	20.9	17.1	12.8	12.1	12.5	11.8	19.6	29.6	45.6	52.6	50.0	53.2	57.0	58.0	57.8	58.8	59.8	60.9	59.2	57.2	52.8	46.4	44.5	40.2	41.27	60.88
15-May	33.1	33.3	27.2	16.3	28.0	28.5	36.5	46.0	52.2	56.9	58.1	PF	59.2	59.5	59.7	60.7	60.8	60.7	60.2	59.6	56.2	53.1	52.6	51.9	48.27	60.83
16-May	46.5	45.1	45.9	35.0	30.4	34.9	39.0	43.6	45.2	49.8	57.2	60.5	62.2	61.1	60.8	57.0	56.5	55.4	52.0	48.6	46.6	45.6	46.8	51.6	49.06	62.22
17-May	50.4	34.3	23.5	23.0	18.4	11.0	28.4	34.4	36.6	38.1	39.1	41.0	43.1	45.2	44.9	44.1	43.2	41.2	40.4	35.9	24.9	13.4	13.5	10.5	32.44	50.39
18-May	12.8	12.0	10.8	11.3	4.9	3.5	2.0	7.2	21.0	25.2	23.0	20.7	21.0	23.7	23.8	23.4	25.2	20.4	16.7	30.0	27.5	19.4	15.3	6.5	16.97	30.05
19-May	3.8	8.6	11.0	14.7	11.7	12.1	13.1	13.1	14.0	14.1	13.3	12.2	11.9	12.1	12.3	12.6	13.1	13.3	13.4	13.6	14.0	14.2	14.5	13.8	12.51	14.68
20-May	13.2	12.8	12.7	13.5	14.1	14.3	14.3	15.0	14.9	15.8	17.3	19.0	20.2	21.1	21.5	21.7	21.6	21.0	20.2	18.3	15.9	13.5	10.4	10.9	16.38	21.68
21-May	10.2	11.2	12.2	13.2	11.7	13.6	14.6	15.9	16.9	17.4	18.3	19.4	19.9	18.3	17.9	16.7	14.7	14.1	14.0	12.8	12.5	12.0	9.9	10.8	14.50	19.86
22-May	12.4	13.4	14.1	12.7	12.6	11.9	12.0	13.0	14.4	15.5	15.4	15.9	15.6	15.6	15.7	16.0	16.0	15.5	15.3	15.8	16.3	16.3	15.8	15.6	14.71	16.32
23-May	15.1	14.3	13.4	10.6	8.7	5.1	14.7	18.3	22.5	23.1	28.7	36.2	37.0	39.8	44.2	46.1	44.6	46.3	45.9	40.9	16.3	5.2	10.5	13.1	25.02	46.26
24-May	15.4	19.2	21.8	16.4	14.6	18.5	23.0	28.9	30.8	39.3	43.1	45.1	47.1	48.2	49.3	49.7	49.7	52.5	50.3	46.7	44.7	41.6	37.9	30.9	36.03	52.55
25-May	24.6	18.1	18.4	14.2	10.4	11.2	17.8	23.5	30.9	C	C	C	C	37.0	40.9	38.8	40.5	39.1	40.8	37.8	25.4	7.8	6.9	5.2	24.45	40.87
26-May	2.7	1.7	2.0	6.6	7.2	10.2	13.0	21.8	35.3	43.7	42.2	47.2	49.3	51.3	47.8	48.2	41.5	35.8	34.9	36.5	36.8	28.4	17.0	11.2	28.01	51.34
27-May	24.3	27.7	27.2	26.2	21.3	21.9	23.4	25.1	19.8	21.6	24.3	27.6	33.3	35.4	36.0	36.7	31.9	31.5	30.6	29.0	29.8	29.5	29.8	29.9	28.08	36.74
28-May	30.6	30.4	26.5	25.8	25.6	21.7	22.4	23.2	22.6	21.0	25.8	31.8	35.3	38.3	39.2	39.3	39.6	35.9	35.3	32.3	22.8	11.6	2.9	1.2	26.71	39.56
29-May	12.0	24.5	23.1	10.3	11.9	11.9	11.0	12.1	13.3	15.6	18.1	19.4	23.0	25.7	28.7	31.5	31.6	31.4	28.1	26.5	24.4	21.2	21.1	15.0	20.48	31.65
30-May	14.1	9.7	13.0	7.1	7.9	12.8	14.1	17.1	20.3	25.7	28.1	29.5	28.4	28.5	29.6	27.1	27.2	27.1	26.7	25.6	20.6	7.1	3.6	3.2	18.92	29.57
31-May	2.9	4.0	4.4	4.2	2.3	4.4	8.9	13.5	24.9	26.9	28.1	30.3	31.0	31.1	32.5	34.6	33.3	32.3	32.6	31.9	28.0	20.0	21.1	20.9	20.99	34.59
	20.56	19.80	19.47	17.73	16.37	16.05	20.33	25.36	30.80	34.14	36.44	37.49	39.28	39.90	40.35	40.38	39.84	39.16	38.18	36.48	30.49	23.84	21.91	20.91	Diurnal Average	
	50.39	51.09	51.32	48.28	42.10	41.16	39.39	45.98	52.17	56.92	58.15	60.51	62.22	61.06	60.77	60.67	60.83	60.88	60.20	59.63	56.22	53.11	52.59	51.92	Diurnal Maximum	

Z - zerospan C - Calibration PF - Power Failure

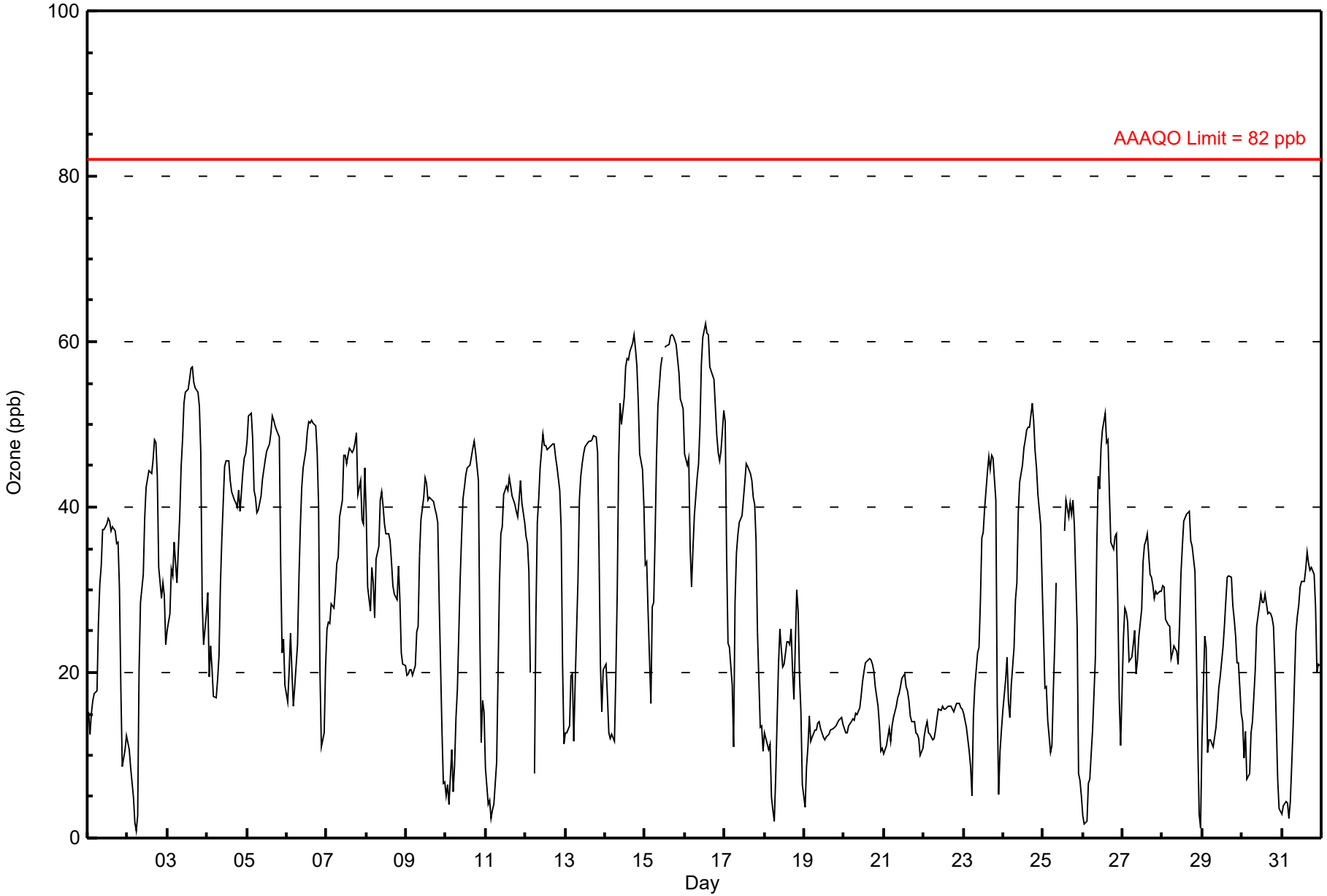
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82.5 ppb 24-hr -- ppb

West Central Airshed Society

Hourly Averages

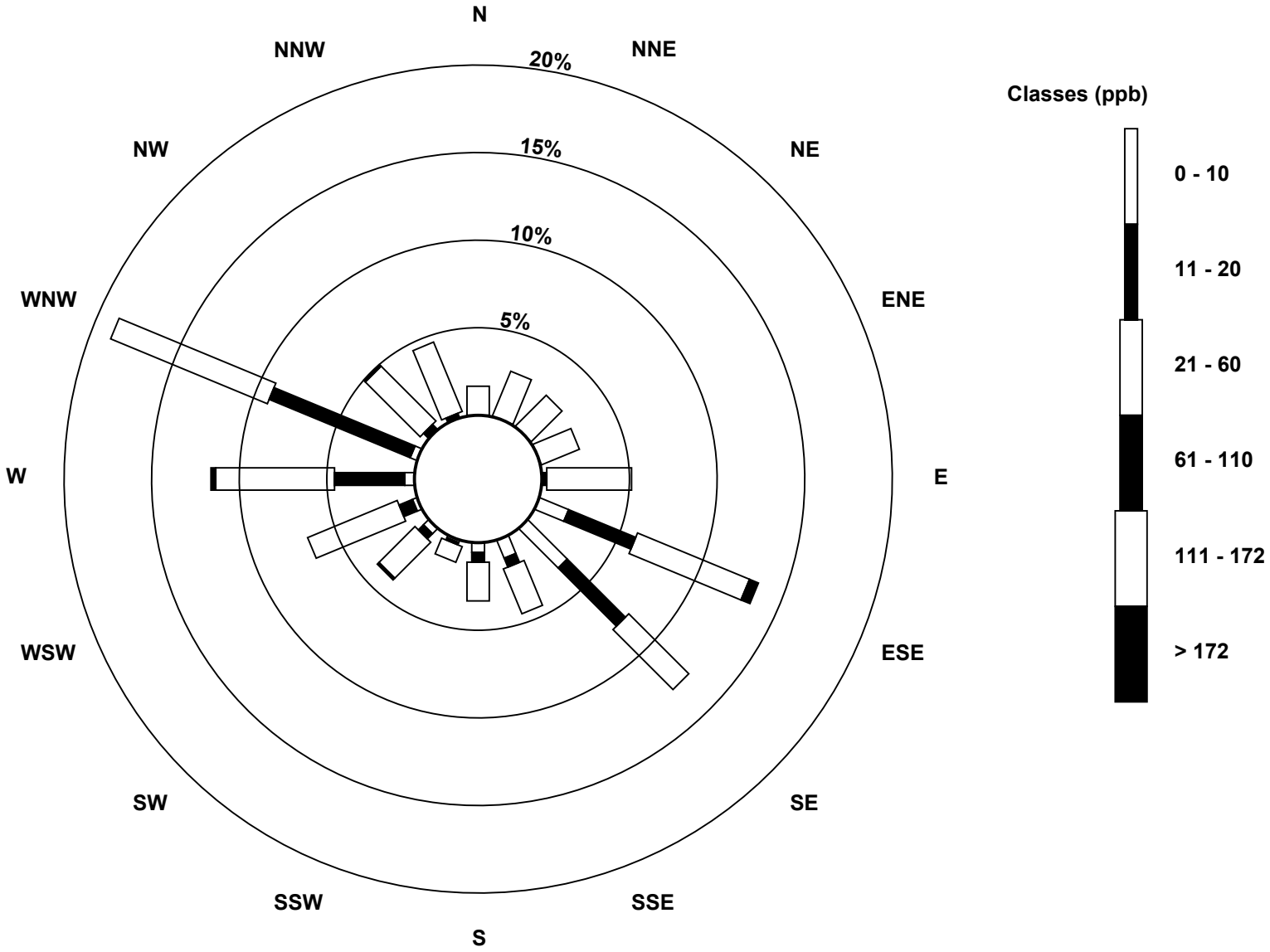
Ozone (O_3) - ppb

Fox Creek - May 2016



Ozone (O_3) - ppb

Fox Creek - May 2016



WCAS - Fox Creek
Summary of Hourly Averages

Nitrogen Oxide (NO) - ppb
May 2016

Maximum Value: 24.05 ppb on May 2 07:00

Maximum Daily Average: 2.33 ppb on May 2

Minimum Value: 0.0 ppb on May 1 01:00

Minimum Daily Average: 0.01 ppb on May 9

Maximum Diurnal Average: 2.48 ppb at hour 7

Minimum Diurnal Average: 0.01 ppb at hour 17

Monthly Average: 0.366 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.9 P_{99} = 5.0

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	4
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	0.0	0.0	0.0	0.0	0.1	0.7	1.8	1.9	2.1	0.2	0.5	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.33	2.14
2-May	0.0	0.0	0.0	0.0	2.0	22.9	24.0	2.1	0.7	0.2	0.1	0.0	0.0	0.0	1.1	0.0	0.0	0.9	1.9	0.0	0.0	0.0	0.0	0.0	2.33	24.05
3-May	0.0	0.0	0.0	0.0	0.0	0.4	1.4	1.1	0.5	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	1.4	1.1	0.5	0.3	0.0	0.0	0.0	0.30	1.44
4-May	0.0	0.1	0.0	0.0	0.1	0.6	1.2	1.6	2.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	2.53
5-May	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.1	0.0	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	0.3	0.05	0.54
6-May	0.0	0.0	0.0	0.7	0.5	0.6	2.1	2.2	1.5	0.5	0.0	0.3	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.1	0.6	0.0	0.43	2.20
7-May	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.4	0.8	1.3	0.1	0.1	0.0	0.1	0.0	0.2	0.3	3.7	0.1	0.0	0.0	0.0	0.0	0.0	0.38	3.67
8-May	0.0	0.0	0.0	0.5	0.1	1.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	1.09
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.01	0.07
10-May	0.3	0.8	0.7	0.1	1.6	3.2	3.9	6.8	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.79	6.79
11-May	0.0	0.1	0.2	0.3	0.9	5.5	5.3	3.2	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.71	5.54
12-May	0.0	0.0	0.5	0.6	0.0	4.0	2.1	0.2	0.0	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	0.2	0.0	0.32	3.98
13-May	0.0	0.1	0.1	0.0	0.0	7.9	4.8	1.4	0.4	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.4	0.0	0.0	0.8	0.0	0.0	0.68	7.91
14-May	0.0	0.0	0.0	0.0	0.2	2.7	3.7	3.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	3.72
15-May	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.24
16-May	0.0	0.0	0.0	0.0	0.5	0.0	0.9	0.4	1.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.16	0.98
17-May	0.0	0.0	0.0	0.0	0.0	4.1	2.0	0.1	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	0.1	0.0	0.0	0.26	4.07
18-May	0.0	0.0	0.0	0.0	0.3	2.5	9.7	5.6	0.2	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.5	0.9	0.3	0.1	0.0	0.3	0.1	0.92	9.68
19-May	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.30
20-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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	0.4	0.2	0.04	0.41
21-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.39
22-May	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.29
23-May	0.0	0.0	0.0	0.0	0.0	1.7	0.9	0.6	0.0	0.5	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	0.16	1.72
24-May	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.9	0.9	0.0	0.1	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19	1.05
25-May	0.1	0.0	0.0	0.0	0.3	2.9	2.6	1.4	0.4	C	C	C	C	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.41	2.85
26-May	0.0	0.0	0.0	0.0	0.1	3.2	4.1	3.9	0.6	1.1	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.62	4.10
27-May	0.2	0.2	0.2	0.3	0.0	0.9	0.1	0.2	0.8	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.17	0.94
28-May	0.4	0.7	1.8	0.3	0.6	0.1	0.0	0.3	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.7	0.25	1.76
29-May	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.03	0.32
30-May	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.9	0.4	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.8	0.8	0.22	1.65
31-May	1.0	0.0	0.0	0.0	1.8	6.3	3.6	3.7	0.2	0.0	0.1	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	0.71	6.33
	0.09	0.09	0.11	0.10	0.30	2.32	2.48	1.42	0.51	0.22	0.05	0.05	0.08	0.02	0.07	0.03	0.01	0.23	0.16	0.03	0.04	0.10	0.12	0.10	Diurnal Average	
	0.97	0.95	1.76	0.74	2.00	22.91	24.05	6.79	2.53	1.30	0.47	0.62	1.59	0.20	1.11	0.48	0.28	3.67	1.89	0.52	0.85	1.65	1.10	0.79	Diurnal Maximum	

C - Calibration PF - Power Failure

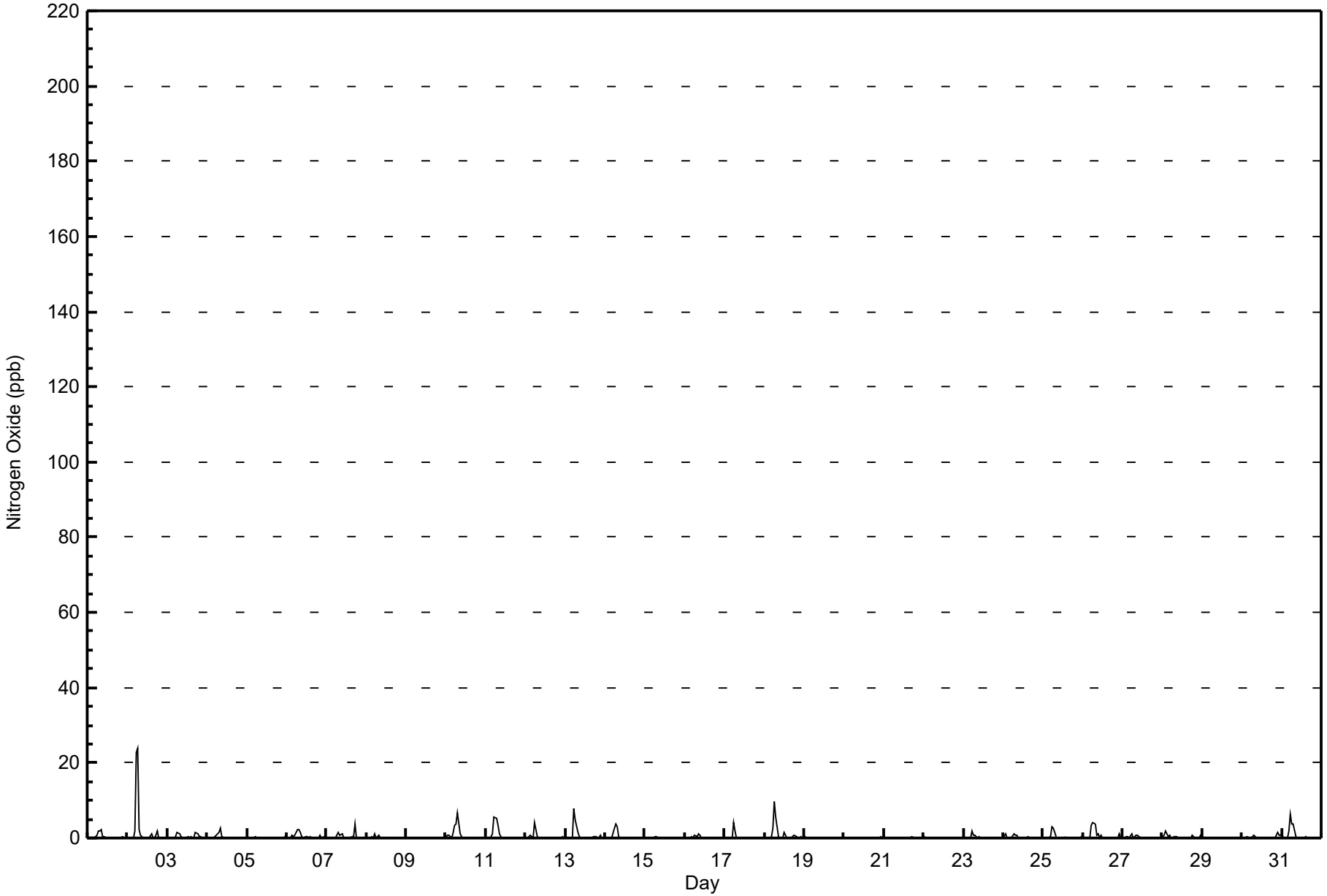
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ppb 24-hr --- ppb

West Central Airshed Society

Hourly Averages

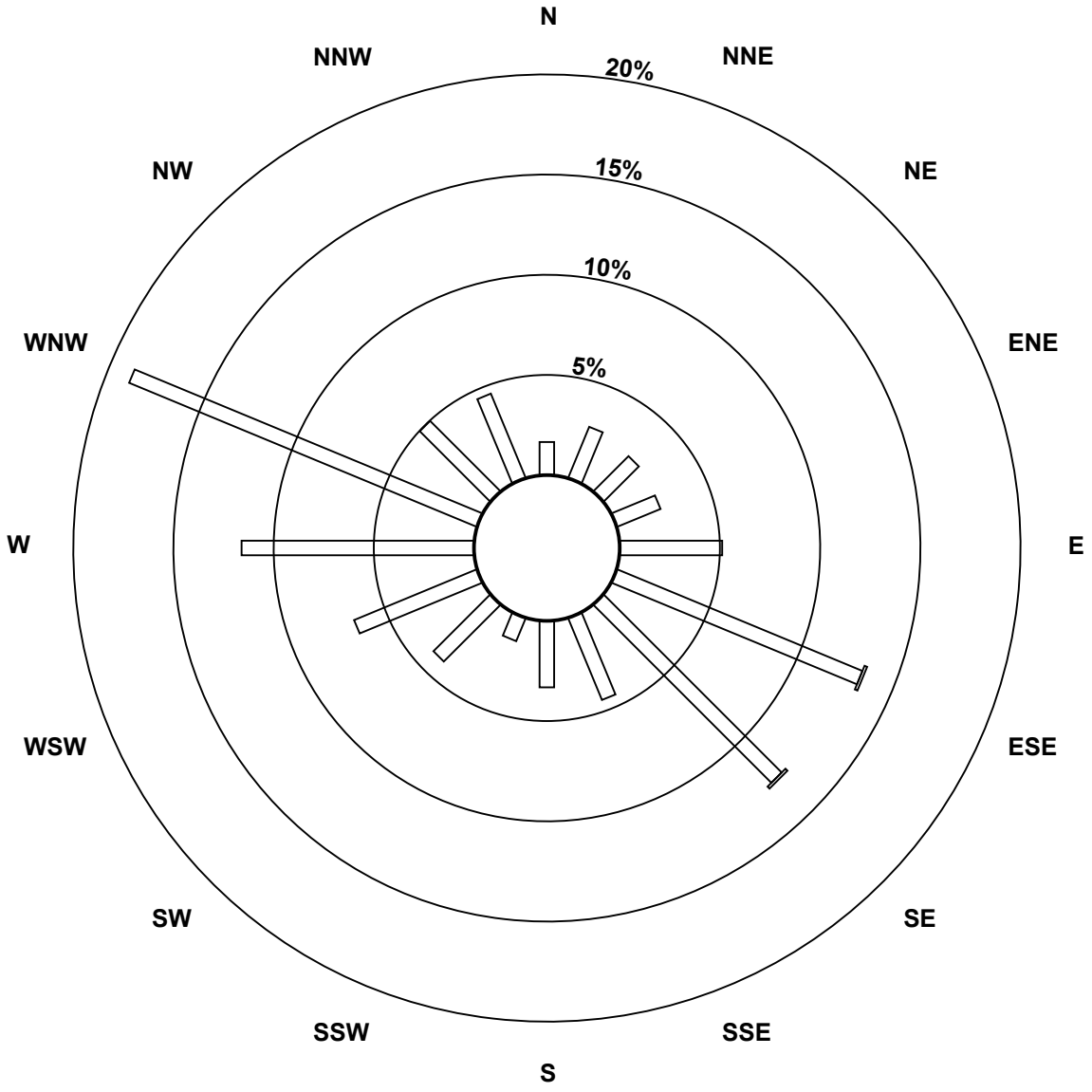
Nitrogen Oxide (NO) - ppb

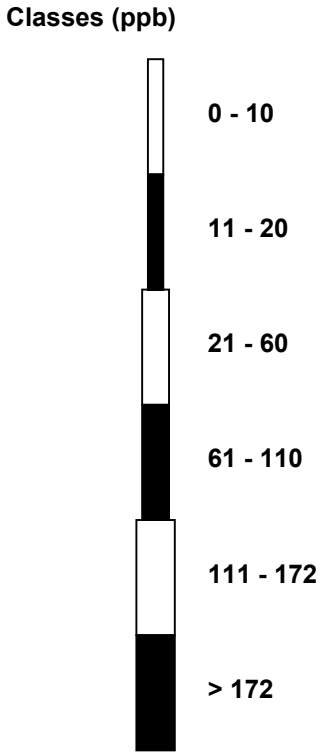
Fox Creek - May 2016



Nitrogen Oxide (NO) - ppb

Fox Creek - May 2016





WCAS - Fox Creek
Summary of Hourly Averages

Nitrogen Dioxide (NO_2) - ppb
May 2016

Maximum Value: 16.41 ppb on May 1 06:00

Maximum Daily Average: 4.13 ppb on May 1

Minimum Value: 0.0 ppb on May 1 12:00

Minimum Daily Average: 0.34 ppb on May 20

Maximum Diurnal Average: 6.01 ppb at hour 6

Minimum Diurnal Average: 0.18 ppb at hour 14

Monthly Average: 2.046 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.8 Q_3 = 2.8 P_{90} = 6.6 P_{99} = 10.9

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	4
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	12.2	4.4	4.9	5.5	9.8	16.4	10.1	5.6	3.5	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.0	10.6	6.6	5.4	4.13	16.41
2-May	5.9	5.8	7.5	6.6	8.6	11.6	9.9	3.6	1.2	0.7	0.4	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.7	5.6	6.9	5.6	4.4	4.3	3.76	11.61
3-May	3.0	6.7	8.1	9.3	7.3	9.9	11.1	4.8	1.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.9	1.0	5.0	7.3	7.6	3.56	11.05
4-May	5.3	8.2	5.3	5.5	8.7	11.3	11.1	6.6	7.5	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.1	3.02	11.25
5-May	0.0	0.0	0.4	0.1	0.7	1.7	2.6	1.8	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	2.0	6.2	3.8	6.0	1.11	6.24
6-May	7.6	5.0	4.8	5.1	6.7	7.8	7.7	6.4	3.7	1.4	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.7	0.9	9.2	12.9	7.6	6.6	3.94	12.92
7-May	5.9	7.4	10.6	9.1	10.0	8.8	6.6	7.5	3.7	3.8	1.5	0.0	0.0	0.2	0.0	0.0	0.0	2.6	0.4	1.3	0.2	0.0	0.0	0.0	3.32	10.55
8-May	0.0	0.0	0.0	0.3	0.5	3.4	1.4	1.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.6	0.7	2.6	1.5	1.2	0.65	3.45
9-May	1.5	1.7	1.8	1.4	0.6	1.0	0.3	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	6.3	7.7	4.6	1.32	7.66
10-May	6.0	8.8	9.8	7.2	9.5	10.5	7.7	8.4	1.9	1.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	4.2	10.8	4.6	3.8	4.00	10.78
11-May	3.3	5.2	3.5	4.1	5.1	7.5	6.5	5.1	2.4	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.3	0.4	1.91	7.45
12-May	0.0	0.8	0.3	3.8	8.1	8.5	3.1	1.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3	1.3	7.5	10.6	1.96	10.58
13-May	6.0	6.3	8.2	5.3	5.1	16.4	9.2	3.6	1.9	0.4	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.9	1.3	10.7	9.1	5.4	3.78	16.36
14-May	4.6	5.8	3.2	3.8	9.2	13.8	10.0	6.9	2.0	1.8	1.0	1.0	0.9	0.9	0.7	0.7	0.9	0.8	0.8	1.5	4.2	4.4	1.8	3.4	3.51	13.80
15-May	3.2	6.1	4.0	9.3	6.1	4.8	3.2	2.5	2.3	1.2	0.8	PF	0.6	0.6	0.6	0.8	0.5	0.6	0.8	0.8	2.0	3.4	3.2	2.2	2.59	9.27
16-May	1.5	1.5	1.2	1.3	5.6	5.2	4.7	2.2	3.4	3.9	1.5	1.5	0.7	0.5	0.4	0.0	0.0	0.4	0.4	0.7	0.0	0.2	0.9	0.1	1.58	5.61
17-May	0.0	1.1	3.0	3.0	4.0	9.7	4.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5	7.2	4.4	5.7	1.87	9.67
18-May	2.8	2.2	2.9	2.1	4.1	5.6	9.5	7.6	0.7	0.0	0.6	0.0	1.8	0.0	0.0	0.0	0.0	1.4	1.2	0.9	0.8	2.1	1.8	1.5	2.07	9.55
19-May	2.1	2.4	1.3	1.1	0.9	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.4	0.53	2.40
20-May	0.9	0.9	1.0	0.5	0.3	0.0	0.1	0.1	0.7	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	1.0	1.4	0.34	1.37
21-May	2.0	0.4	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	1.1	0.6	1.1	1.2	0.3	0.5	1.4	0.41	2.05
22-May	1.6	1.1	1.3	1.4	1.4	1.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.4	1.2	1.0	0.8	0.9	1.2	1.1	0.5	0.1	0.7	1.5	0.81	1.55
23-May	1.9	1.7	2.4	2.1	2.4	2.2	1.1	1.0	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.5	1.8	1.4	1.01	4.45
24-May	0.9	1.8	0.9	1.5	4.0	1.6	2.3	1.9	1.9	0.9	0.5	0.7	0.3	0.2	0.2	0.6	0.2	1.0	1.6	2.5	2.8	4.3	4.4	3.6	1.69	4.38
25-May	3.3	4.5	2.7	3.5	7.0	7.7	6.3	3.5	2.1	C	C	C	C	0.7	0.4	0.4	0.5	0.9	0.2	0.4	1.0	6.6	4.5	3.3	2.97	7.68
26-May	3.8	4.1	3.1	2.7	4.4	8.8	8.8	7.7	2.7	2.4	1.2	1.0	0.4	0.4	0.4	0.4	0.8	1.1	0.9	0.7	0.7	1.2	1.4	2.3	2.57	8.82
27-May	1.4	1.9	1.6	2.2	1.9	2.5	3.3	3.1	1.5	1.5	1.4	0.8	0.5	0.4	0.4	1.1	1.3	0.7	1.4	1.7	1.3	0.8	1.0	0.9	1.45	3.32
28-May	1.3	0.6	1.1	0.5	0.8	0.6	0.6	0.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.0	0.0	1.0	1.8	1.1	0.51	1.84
29-May	1.1	0.7	1.3	0.5	0.5	0.5	0.5	0.4	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	0.5	1.0	0.38	1.25
30-May	1.7	1.1	1.9	1.4	1.6	2.3	1.8	0.6	0.6	0.5	0.5	0.3	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	3.8	4.0	1.13	4.19
31-May	4.0	3.6	2.1	1.8	3.4	4.4	3.5	2.8	0.7	0.5	0.4	0.0	0.0	0.0	0.2	0.0	0.5	0.9	1.4	0.7	1.5	5.5	2.3	1.1	1.72	5.52
	3.05	3.29	3.23	3.30	4.46	6.01	4.80	3.21	1.59	0.88	0.43	0.26	0.25	0.18	0.19	0.19	0.23	0.46	0.51	0.77	1.62	3.85	3.10	2.98	Diurnal Average	
	12.23	8.79	10.55	9.32	10.02	16.41	11.10	8.40	7.47	3.92	1.53	1.50	1.81	0.86	1.18	1.08	1.34	2.63	1.60	5.59	9.23	12.92	9.08	10.58	Diurnal Maximum	

C - Calibration PF - Power Failure

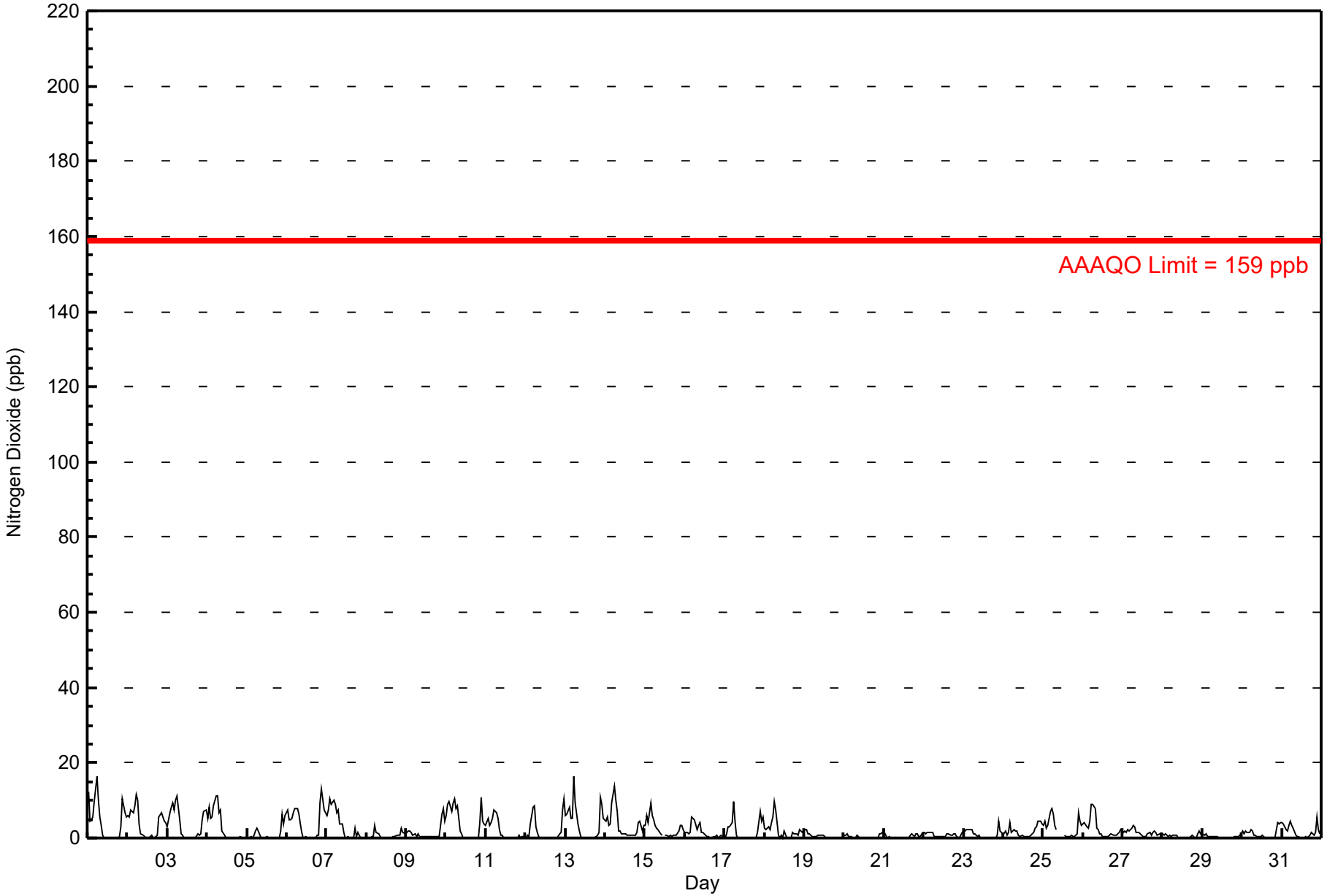
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

West Central Airshed Society

Hourly Averages

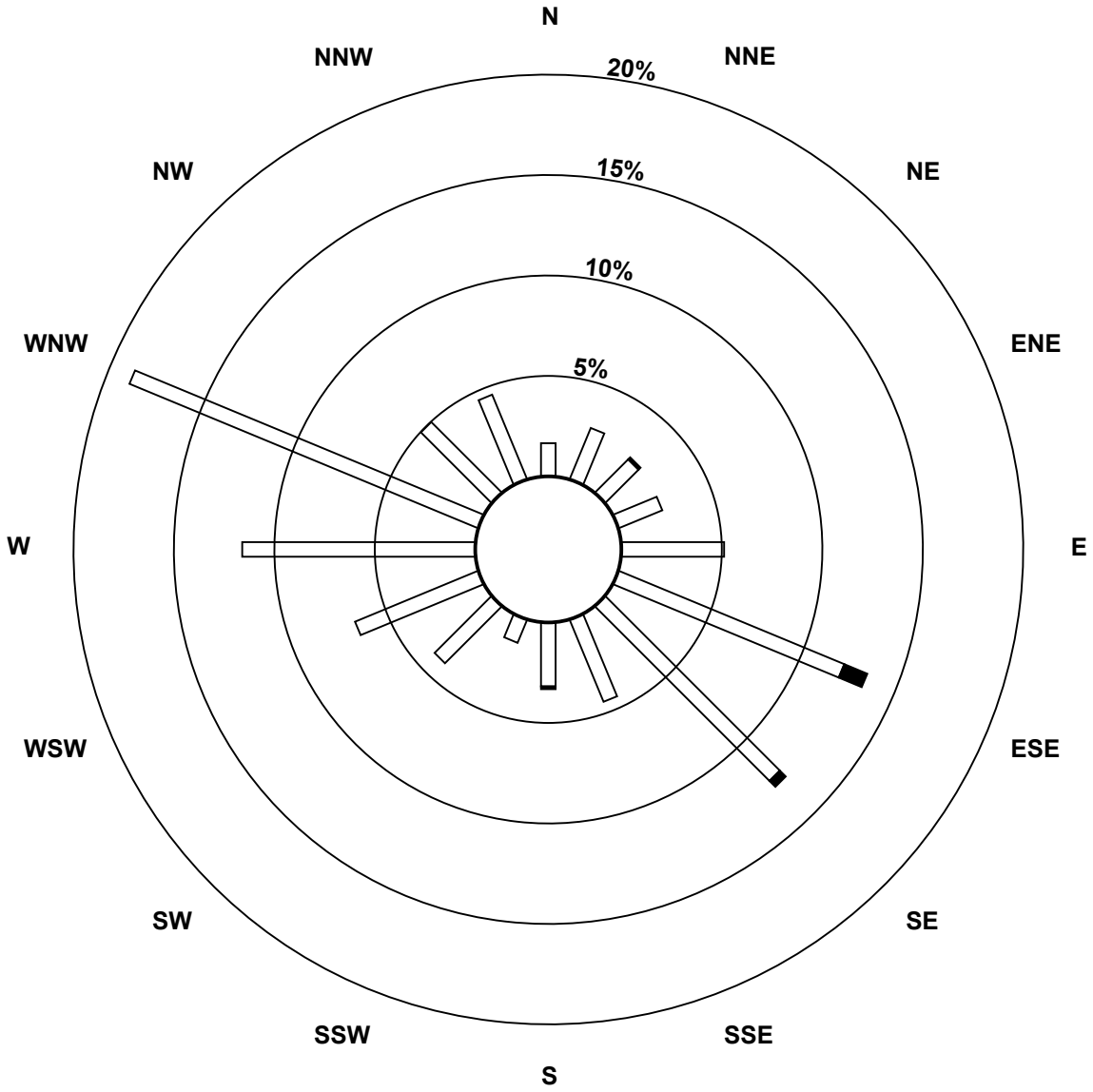
Nitrogen Dioxide (NO_2) - ppb

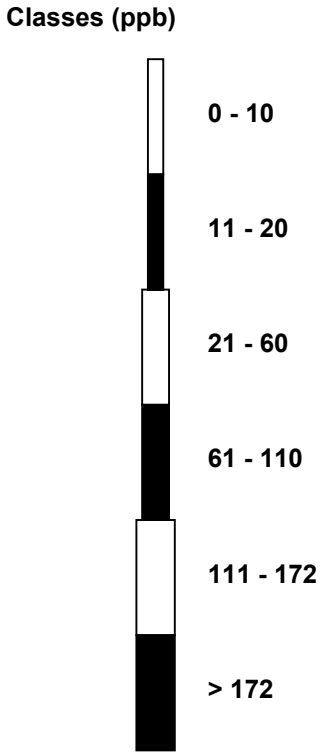
Fox Creek - May 2016



Nitrogen Dioxide (NO_2) - ppb

Fox Creek - May 2016





WCAS - Fox Creek
Summary of Hourly Averages

NOx (NO_x) - ppb
May 2016

Maximum Value: 35.08 ppb on May 2 06:00

Maximum Daily Average: 6.61 ppb on May 2

Minimum Value: 0.0 ppb on May 17 01:00

Minimum Daily Average: 0.62 ppb on May 29

Maximum Diurnal Average: 8.89 ppb at hour 6

Minimum Diurnal Average: 0.63 ppb at hour 16

Monthly Average: 2.902 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.4 Q_1 = 0.7 Median = 1.5 Q_3 = 3.8 P_{90} = 7.7 P_{99} = 14.5

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	4
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	12.8	4.7	5.3	6.0	10.4	17.8	12.3	8.0	6.3	1.5	1.2	0.7	0.4	0.3	0.5	0.2	0.2	0.3	0.1	0.8	3.4	11.5	7.2	5.9	4.90	17.80
2-May	6.4	6.2	8.1	7.2	11.2	35.1	34.5	6.2	2.2	1.6	1.2	0.5	0.4	0.3	2.3	0.5	0.5	1.8	3.2	6.3	7.3	6.0	5.0	4.6	6.61	35.08
3-May	3.4	7.1	8.5	9.7	7.7	10.7	12.9	6.3	2.3	1.8	0.3	0.1	0.9	0.1	1.0	0.2	0.4	1.8	2.9	2.0	1.8	5.5	7.7	8.1	4.30	12.93
4-May	5.7	8.9	5.7	6.0	9.5	12.5	12.9	8.7	10.6	2.8	1.2	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.9	0.6	0.6	0.6	3.78	12.89
5-May	0.5	0.6	1.1	0.6	1.5	2.9	3.6	2.5	0.8	0.7	0.6	0.8	0.9	0.8	0.9	0.7	0.6	0.6	0.7	0.6	2.6	6.8	4.3	7.0	1.79	6.99
6-May	8.2	5.5	5.3	6.5	7.9	9.0	10.4	9.4	5.9	2.5	0.7	1.7	1.1	0.9	1.0	0.5	0.6	0.8	1.5	1.6	10.9	13.9	9.0	7.2	5.09	13.89
7-May	6.5	8.0	11.3	9.8	10.8	9.8	7.9	9.7	5.2	5.7	2.4	0.8	0.8	1.0	0.6	0.8	0.8	6.9	1.1	2.0	0.7	0.4	0.4	0.4	4.32	11.27
8-May	0.4	0.3	0.3	1.3	1.1	5.0	1.8	2.4	0.8	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.9	1.0	0.8	0.9	2.8	1.8	1.6	1.13	5.00
9-May	1.8	2.0	2.1	1.6	0.8	1.4	0.6	1.3	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	6.9	8.3	5.3	1.70	8.29
10-May	7.1	10.1	11.2	8.0	11.5	14.3	12.1	15.9	3.5	2.3	0.9	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	4.8	11.6	5.1	4.4	5.38	15.85
11-May	3.8	6.0	4.3	5.1	6.8	13.6	12.6	9.0	4.4	1.9	1.6	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.7	1.5	0.6	0.8	1.1	3.25	13.56
12-May	0.5	1.5	1.6	5.2	6.1	13.3	6.1	2.4	1.3	0.6	0.4	0.5	0.8	0.5	0.5	0.6	0.6	0.6	0.8	0.8	2.1	1.9	8.5	11.4	2.87	13.27
13-May	6.7	7.3	9.1	6.0	5.8	25.1	14.8	5.7	3.2	1.3	0.9	1.0	0.9	0.8	0.8	0.8	0.9	1.4	1.5	1.6	2.0	12.3	10.0	6.1	5.25	25.06
14-May	5.3	6.5	4.0	4.5	10.3	17.4	14.5	10.8	3.1	2.7	2.0	1.7	1.6	1.6	1.3	1.3	1.6	1.5	1.5	2.1	4.9	5.2	2.5	4.1	4.67	17.37
15-May	3.9	6.8	4.7	10.0	6.8	5.9	4.3	3.7	3.2	2.0	1.5	PF	1.2	1.2	1.2	1.5	1.1	1.2	1.4	1.3	2.5	3.8	3.6	2.6	3.28	9.96
16-May	2.1	1.9	1.6	1.7	6.6	5.8	6.2	3.0	4.7	5.3	2.1	2.1	1.3	1.0	0.9	0.2	0.3	0.9	0.9	1.1	0.4	0.6	1.6	0.7	2.22	6.60
17-May	0.0	1.6	3.4	3.4	4.5	14.1	7.3	1.5	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9	7.5	4.6	6.0	2.37	14.15
18-May	2.9	2.4	3.0	2.3	4.8	8.4	19.5	13.5	1.2	0.2	1.0	0.2	3.7	0.1	0.1	0.2	0.0	2.2	2.7	1.7	1.3	2.5	2.5	2.1	3.28	19.51
19-May	2.9	2.7	1.6	1.4	1.2	0.8	0.8	0.9	0.9	0.9	1.1	1.7	1.0	1.0	0.2	0.1	0.1	0.2	0.1	0.5	0.5	0.4	0.3	0.8	0.92	2.88
20-May	1.3	1.4	1.4	0.9	0.9	0.4	0.9	1.2	1.5	0.6	0.6	0.4	0.4	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.4	1.6	2.1	2.2	0.89	2.19
21-May	2.7	1.0	0.4	1.0	0.8	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.6	0.5	0.5	0.6	1.3	2.0	1.2	1.6	1.6	0.7	1.0	1.6	0.92	2.66
22-May	2.4	1.6	1.7	1.9	1.8	1.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.7	1.7	1.6	1.5	1.7	1.7	1.2	0.8	1.3	2.1	1.36	2.41
23-May	2.6	2.5	3.2	2.8	3.1	4.7	2.8	2.2	1.5	2.1	1.2	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.6	5.3	2.6	2.1	1.93	5.31
24-May	1.6	3.6	1.7	2.3	4.9	2.7	4.1	3.6	3.6	1.9	1.6	1.6	1.1	1.0	0.9	1.8	0.9	1.7	2.3	3.1	3.4	4.8	4.9	4.1	2.64	4.95
25-May	3.8	4.9	3.1	3.9	7.9	11.0	9.1	5.0	3.2	C	C	C	C	1.0	0.7	0.7	0.8	1.3	0.3	0.8	1.4	7.0	4.7	3.9	3.72	10.96
26-May	4.3	4.6	3.6	2.9	4.9	12.4	13.2	11.9	3.9	4.0	1.8	2.1	0.8	0.8	0.8	0.8	1.2	1.4	1.2	1.0	1.0	1.6	2.8	2.6	3.56	13.23
27-May	1.9	2.3	2.2	2.9	2.1	3.9	3.9	4.1	3.0	2.7	2.1	1.7	0.9	0.8	0.8	1.4	1.7	1.1	1.7	1.9	1.5	1.0	1.3	1.6	2.02	4.07
28-May	2.0	1.7	3.3	1.2	1.8	1.1	1.0	1.3	1.4	0.7	0.7	0.1	0.0	0.0	0.0	0.1	0.0	0.5	1.9	0.0	0.0	1.3	2.2	2.1	1.02	3.26
29-May	1.6	0.9	1.3	0.8	0.7	0.7	0.9	0.9	0.9	0.7	0.5	0.1	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.3	0.9	0.8	0.7	1.6	0.62	1.62
30-May	1.9	1.3	2.1	2.0	1.9	2.7	2.4	1.7	1.3	0.9	0.9	0.7	1.2	0.8	0.1	0.0	0.0	0.0	0.0	0.2	0.0	6.3	4.9	5.1	1.60	6.27
31-May	5.4	4.1	2.4	2.1	5.5	11.1	7.5	6.8	1.5	1.0	0.8	0.1	0.1	0.2	0.7	0.4	0.8	1.3	1.7	0.9	1.6	5.8	2.6	1.3	2.74	11.09
	3.62	3.87	3.83	3.90	5.21	8.89	7.81	5.18	2.69	1.69	1.04	0.82	0.81	0.65	0.70	0.63	0.64	1.14	1.13	1.25	2.13	4.44	3.70	3.57	Diurnal Average	
	12.78	10.10	11.27	9.96	11.50	35.08	34.47	15.85	10.56	5.73	2.43	2.13	3.73	1.59	2.31	1.78	1.75	6.95	3.19	6.29	10.88	13.89	9.98	11.40	Diurnal Maximum	

C - Calibration PF - Power Failure

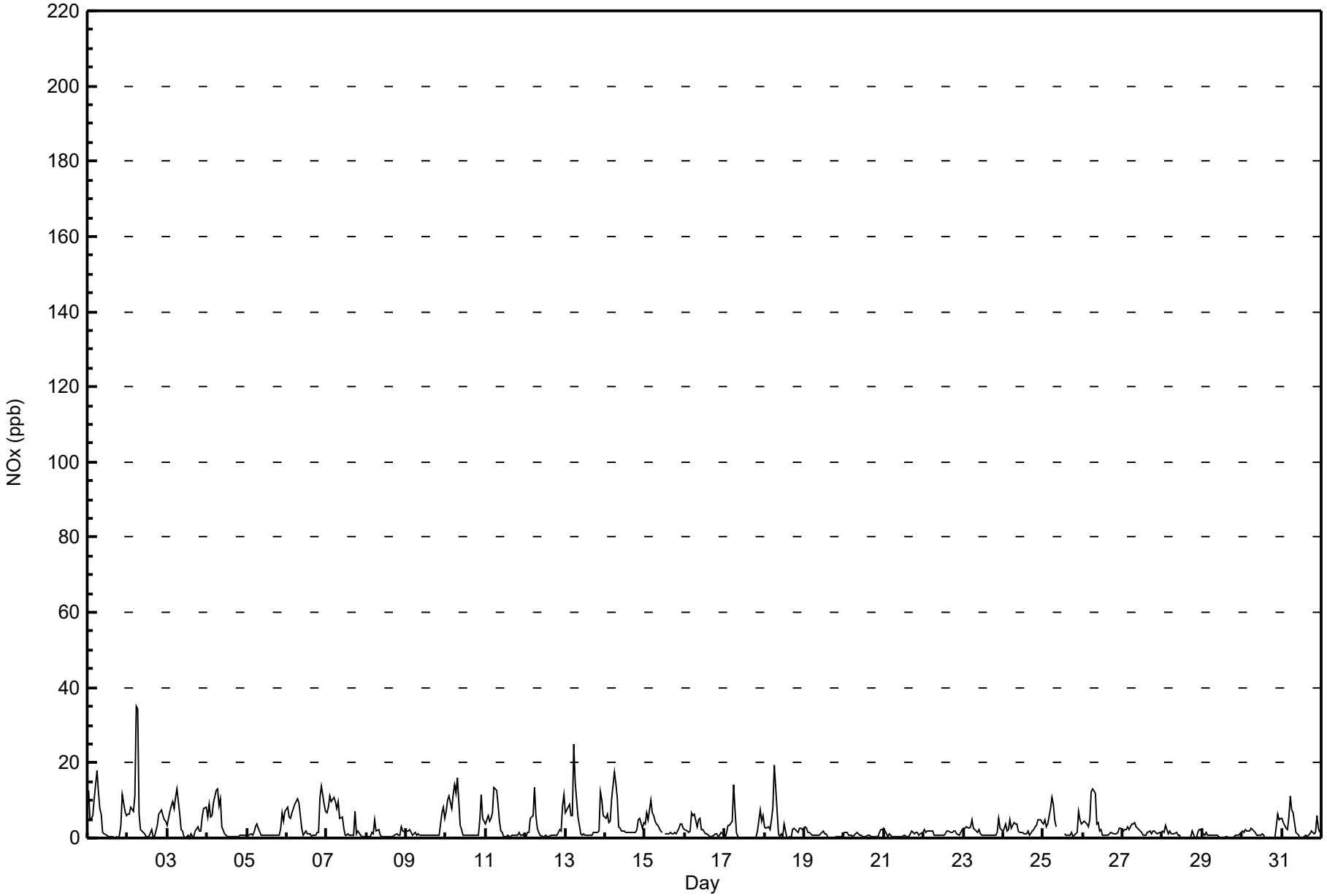
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ppb 24-hr --- ppb

West Central Airshed Society

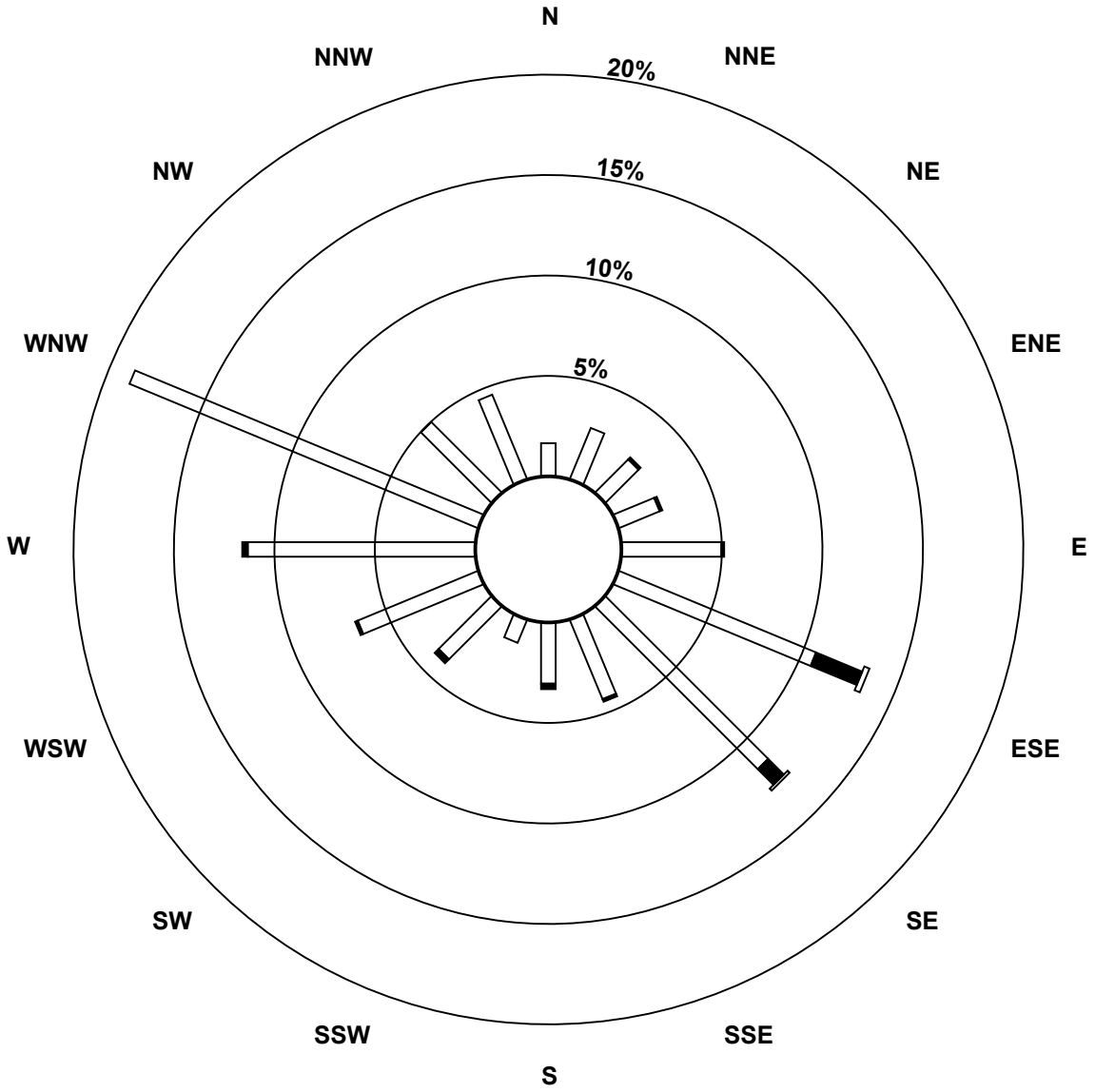
Hourly Averages

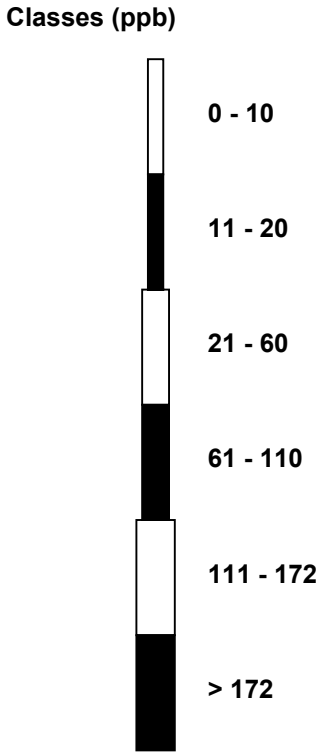
NOx (NO_x) - ppb

Fox Creek - May 2016



NOx (NO_x) - ppb
Fox Creek - May 2016





WCAS - Fox Creek
Summary of Hourly Averages

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$
May 2016

Maximum Value: 37.76 $\mu g/m^3$ on May 6 22:00

Maximum Daily Average: 13.94 $\mu g/m^3$ on May 15

Minimum Value: 0.0 $\mu g/m^3$ on May 4 20:00

Minimum Daily Average: 0.06 $\mu g/m^3$ on May 19

Maximum Diurnal Average: 6.84 $\mu g/m^3$ at hour 22

Minimum Diurnal Average: 2.72 $\mu g/m^3$ at hour 12

Monthly Average: 4.168 $\mu g/m^3$

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 1.2 Median = 2.8 Q_3 = 5.5 P_{90} = 9.8 P_{99} = 19.2

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	2
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	3.5	1.6	1.7	1.2	1.9	2.3	2.2	2.4	2.7	1.4	2.1	2.3	1.9	1.8	1.9	1.7	2.2	8.3	6.5	8.7	10.6	12.0	7.4	4.5	3.86	11.98
2-May	4.1	3.5	3.7	3.2	3.5	12.7	15.3	8.0	7.7	7.7	4.0	2.8	2.8	3.2	4.7	4.5	7.2	4.2	6.9	26.5	13.7	8.9	4.8	6.7	7.10	26.51
3-May	5.4	3.6	3.2	4.0	3.3	3.9	5.2	5.9	5.6	5.9	1.4	2.1	2.6	1.3	2.3	2.3	5.8	4.9	2.8	4.5	4.4	6.5	4.7	3.9	3.98	6.49
4-May	5.4	4.1	3.6	4.6	6.1	7.5	8.6	9.8	6.4	7.2	3.5	2.0	2.1	3.1	3.3	1.0	0.1	0.3	0.8	0.0	3.1	0.0	0.9	1.5	3.54	9.78
5-May	2.1	0.0	0.7	1.2	1.6	2.0	1.1	1.6	0.0	0.0	0.4	0.2	4.2	5.2	8.9	2.4	4.7	3.5	2.4	2.4	7.2	15.4	3.4	5.4	3.16	15.38
6-May	4.8	3.3	3.6	3.1	4.2	7.1	15.6	4.1	4.6	1.7	1.7	3.1	1.8	1.7	0.4	0.0	1.8	3.2	5.3	10.6	13.8	37.8	23.3	4.4	6.71	37.76
7-May	2.5	1.4	1.8	3.0	3.1	3.9	3.8	4.1	3.5	3.7	1.4	1.2	1.3	0.5	0.8	1.0	0.2	6.6	2.1	3.1	4.4	3.6	28.0	3.9	3.71	27.96
8-May	8.0	1.8	1.1	0.0	0.0	0.0	0.2	1.4	0.8	1.8	2.8	4.5	5.8	7.1	3.1	0.3	1.4	1.0	1.3	1.5	3.3	1.6	1.0	1.4	2.13	7.98
9-May	0.9	2.3	1.6	1.8	2.7	3.4	2.9	2.9	0.5	0.0	0.0	1.0	0.7	0.6	1.2	1.5	3.2	3.2	2.6	2.3	2.5	2.5	2.5	1.9	1.87	3.44
10-May	2.3	3.1	2.1	3.2	2.2	3.6	3.2	2.6	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.5	1.3	0.8	1.7	3.6	6.6	3.8	3.5	2.9	2.02	6.62
11-May	1.2	1.0	1.2	1.0	1.5	4.3	5.3	4.1	3.7	2.4	2.8	1.0	2.0	8.3	6.6	8.1	10.6	19.4	18.1	16.7	7.9	4.8	5.2	4.0	5.89	19.41
12-May	2.8	1.9	2.9	2.2	1.5	5.2	8.5	17.3	17.0	5.3	0.8	2.2	2.3	3.9	3.6	2.9	4.4	6.8	7.8	9.2	14.1	10.7	11.8	10.5	6.48	17.25
13-May	9.2	7.2	6.0	5.1	4.8	9.0	9.5	7.8	5.2	5.1	4.2	4.0	4.0	2.6	3.3	2.1	3.0	3.8	4.5	4.0	5.7	9.7	6.3	3.0	5.38	9.66
14-May	2.6	3.4	2.6	3.4	4.3	9.4	8.5	13.9	12.3	7.9	6.3	7.1	7.7	7.2	9.0	7.3	9.4	9.3	9.6	11.0	14.1	13.9	9.4	7.5	8.21	14.09
15-May	8.2	8.0	7.8	14.6	8.5	12.8	14.6	12.5	14.7	15.0	13.5	PF	12.6	14.4	14.8	15.9	13.6	20.2	16.2	9.8	16.2	25.9	18.1	13.1	13.94	25.88
16-May	12.7	9.7	9.8	10.8	13.2	17.2	15.9	13.5	12.8	12.1	13.5	14.4	11.2	11.4	11.6	9.4	10.3	14.9	19.7	15.1	16.0	5.5	0.8	3.3	11.87	19.68
17-May	7.1	4.1	1.6	0.2	1.7	7.8	7.0	3.6	0.6	1.1	1.3	1.2	2.7	3.1	3.2	2.2	3.1	3.6	4.1	8.6	10.7	11.6	5.2	3.5	4.13	11.56
18-May	2.0	1.9	2.7	2.8	6.9	5.7	9.3	13.2	4.1	2.9	6.5	2.9	3.0	0.0	1.0	2.5	1.2	3.3	2.2	0.0	0.4	0.0	0.0	1.1	3.14	13.24
19-May	0.0	1.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	1.08
20-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.1	1.0	0.2	0.5	0.5	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.18	0.98
21-May	0.3	0.0	0.0	0.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.3	1.4	1.4	2.8	2.4	3.7	2.6	2.3	1.6	0.9	2.2	1.01	3.72
22-May	1.4	2.0	4.2	2.5	2.5	3.8	3.0	2.1	5.7	4.4	1.3	0.0	0.0	0.0	0.8	0.0	0.1	0.8	1.0	1.7	2.0	2.9	5.0	5.4	2.19	5.66
23-May	4.5	3.5	3.1	2.0	3.8	6.9	6.1	6.0	3.7	5.2	1.8	1.7	2.6	1.2	0.9	1.7	4.1	0.0	2.4	6.1	7.6	2.1	1.3	0.9	3.31	7.62
24-May	1.1	2.6	1.3	1.4	2.1	4.6	4.7	4.8	3.6	0.6	2.2	3.2	3.4	3.1	3.9	4.0	5.5	7.6	7.7	9.2	10.3	8.5	9.5	8.7	4.74	10.32
25-May	5.7	5.3	5.5	3.9	3.1	5.2	8.7	14.1	14.2	13.5	11.0	9.1	7.6	C	C	0.3	0.6	1.8	2.9	3.2	4.4	6.3	3.6	2.3	6.01	14.24
26-May	2.7	2.5	2.1	2.3	3.1	4.3	5.5	7.4	6.4	5.2	6.2	5.6	5.5	6.8	5.3	3.2	3.8	2.7	2.7	3.3	3.8	4.4	2.8	3.1	4.19	7.43
27-May	5.1	5.5	6.2	6.1	7.1	7.9	8.2	6.9	5.9	4.9	5.5	6.0	5.2	5.8	6.1	6.6	5.4	1.7	1.9	1.7	2.0	2.7	2.7	2.2	4.97	8.16
28-May	2.3	1.8	2.1	1.9	1.7	0.3	0.2	0.5	0.6	0.0	0.0	0.6	0.1	0.5	1.2	2.6	1.3	3.3	2.6	2.4	1.7	0.4	0.1	0.6	1.20	3.34
29-May	2.8	1.6	1.6	0.5	2.4	2.2	1.8	1.1	1.0	1.2	1.6	1.1	1.4	0.9	0.9	0.6	0.5	0.9	1.0	1.4	1.6	1.6	1.2	1.6	1.35	2.84
30-May	0.6	1.3	1.6	1.0	2.8	2.4	2.3	2.0	1.6	0.7	1.1	1.4	1.8	1.0	0.2	1.6	0.4	0.4	0.9	1.1	1.3	2.1	1.5	0.6	1.33	2.79
31-May	0.6	0.5	0.3	0.0	1.2	3.4	4.0	2.8	0.0	0.3	0.0	0.7	0.5	0.9	0.6	0.8	3.1	4.6	5.2	7.1	5.6	5.3	2.0	1.3	2.11	7.05
	3.61	2.90	2.77	2.85	3.26	5.14	5.84	5.71	4.71	3.81	3.12	2.72	3.13	3.23	3.38	2.87	3.59	4.66	4.73	5.74	6.36	6.84	5.38	3.60	Diurnal Average	
	12.67	9.72	9.81	14.58	13.21	17.18	15.88	17.25	17.03	14.95	13.49	14.44	12.57	14.41	14.77	15.93	13.57	20.15	19.68	26.51	16.16	37.76	27.96	13.13	Diurnal Maximum	

C - Calibration PF - Power Failure

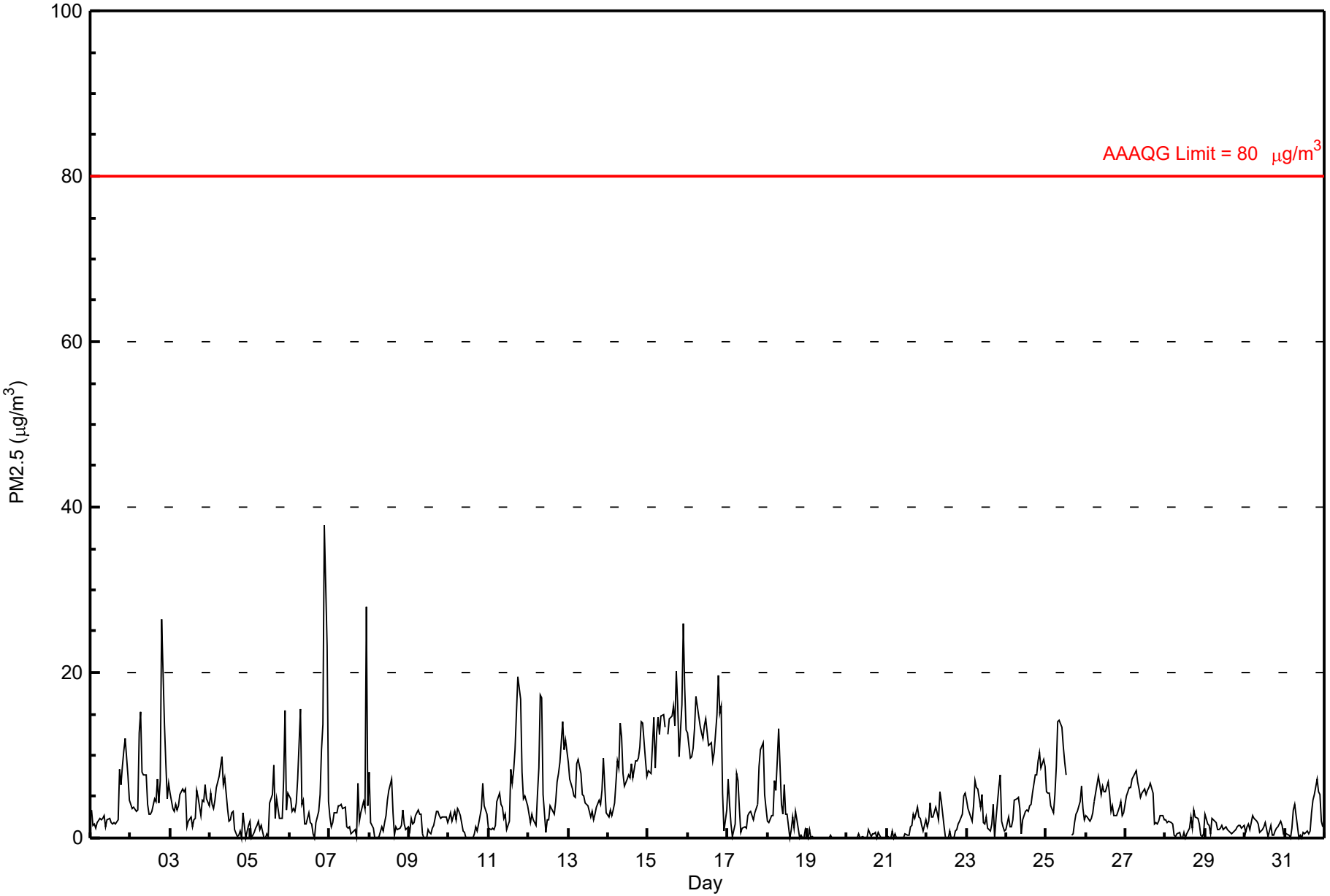
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 ul/m^3 24-hr 30 ul/m^3

West Central Airshed Society

Hourly Averages

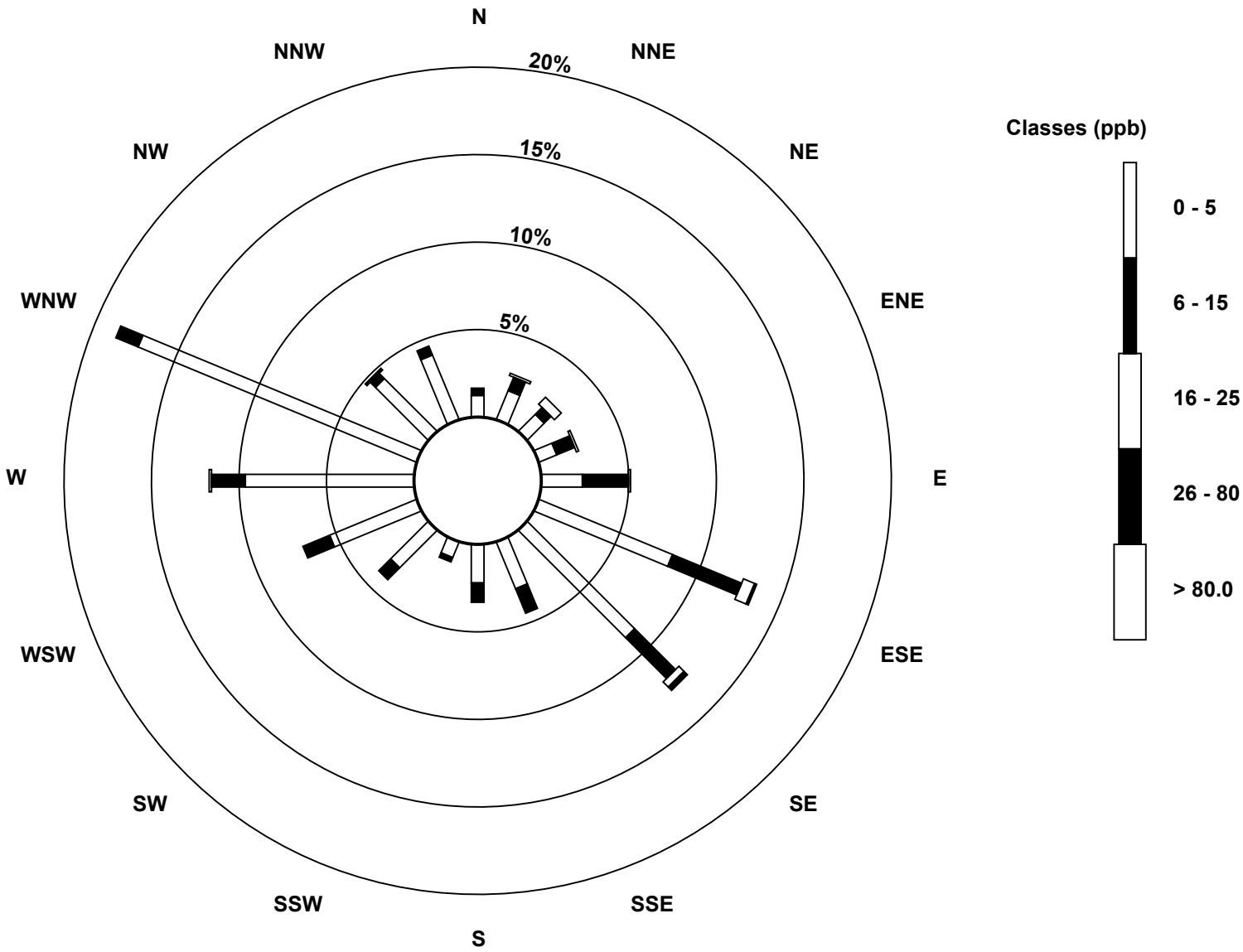
PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Fox Creek - May 2016



PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Fox Creek - May 2016



Maximum Value: 28.89 C on May 2 17:00

Maximum Daily Average: 20.47 C on May 3

Minimum Value: -2.3 C on May 13 05:00

Minimum Daily Average: 1.26 C on May 20

Maximum Diurnal Average: 15.28 C at hour 16

Minimum Diurnal Average: 3.86 C at hour 5

Monthly Average: 10.305 C

Percentiles: P_1 = -1.8 P_{10} = 1.5 Q_1 = 4.4 Median = 9.5 Q_3 = 15.0 P_{90} = 20.5 P_{99} = 28.1

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-May	4.4	2.1	1.7	1.6	2.5	4.9	7.8	11.4	15.0	17.0	18.8	20.3	21.4	22.2	23.0	23.4	23.1	22.6	22.2	20.3	15.5	12.5	10.8	9.9	13.95	23.45
2-May	8.9	8.1	7.2	5.7	4.8	5.6	8.6	15.7	19.0	21.7	23.8	25.3	26.2	27.2	27.7	28.2	28.9	28.5	27.9	24.4	21.6	20.4	18.0	14.8	18.68	28.89
3-May	13.4	13.2	14.2	12.8	12.7	12.7	13.0	17.4	21.3	23.2	24.9	25.8	26.8	27.3	28.0	28.3	28.6	28.0	28.0	25.9	22.6	16.8	13.4	13.0	20.47	28.59
4-May	12.9	9.7	8.8	8.4	8.3	9.0	10.9	12.6	15.8	16.0	17.7	17.9	18.3	18.8	17.8	17.6	17.3	17.3	16.3	15.3	14.1	13.5	12.6	11.8	14.10	18.77
5-May	10.9	10.3	9.8	9.5	8.4	8.1	8.4	9.0	9.9	10.8	11.7	12.5	13.6	14.5	15.4	16.2	16.4	16.6	16.2	15.1	10.1	5.9	4.3	2.8	11.10	16.59
6-May	2.3	2.5	3.2	2.0	0.2	1.1	5.6	9.8	13.0	15.3	16.5	18.1	19.1	20.5	21.0	21.9	22.2	21.8	21.1	19.1	14.1	10.0	8.0	8.1	12.36	22.22
7-May	8.8	9.1	10.0	10.5	10.5	10.9	12.3	14.5	16.4	19.5	23.0	25.6	26.2	26.8	28.1	28.1	27.4	27.2	27.1	23.9	21.2	18.6	16.6	15.7	19.08	28.11
8-May	11.7	9.8	9.2	8.1	6.0	5.4	6.2	7.1	9.0	10.0	10.7	10.9	10.6	8.9	6.2	6.1	5.6	6.0	6.1	3.9	3.5	4.3	3.9	4.1	7.22	11.72
9-May	3.9	4.0	3.9	3.8	3.5	3.2	2.9	3.4	4.3	5.2	6.4	7.7	8.1	8.4	8.8	9.4	9.5	9.5	10.0	9.4	6.5	2.7	1.0	-0.5	5.64	10.02
10-May	-1.3	-1.0	-1.5	-1.4	-2.2	-0.8	2.5	6.6	8.9	10.4	11.6	12.1	13.0	13.9	14.1	14.5	14.3	15.0	14.4	13.6	8.4	5.1	4.6	4.3	7.46	14.96
11-May	2.3	0.4	-0.7	-1.7	-2.1	-0.9	3.6	6.4	10.2	11.3	12.7	13.7	13.9	14.0	14.0	13.7	13.3	12.5	11.8	11.3	10.5	9.2	7.7	6.7	8.07	14.02
12-May	5.5	5.0	3.4	0.7	-0.3	-0.2	3.2	5.4	7.2	8.2	9.3	10.0	11.0	11.9	12.4	12.9	12.5	12.9	12.4	11.5	9.6	7.1	3.3	0.6	7.30	12.91
13-May	-1.1	-1.7	-2.0	-1.8	-2.3	-0.8	2.7	7.1	10.3	11.2	11.8	12.5	13.6	14.2	15.2	15.5	15.8	16.1	15.8	15.0	11.1	8.2	4.2	2.8	8.06	16.10
14-May	1.5	0.3	-1.2	-1.8	-2.0	-0.8	2.8	8.8	12.1	14.1	15.0	15.9	16.9	17.4	18.2	18.7	18.8	18.6	18.1	17.1	14.8	11.5	9.2	6.6	10.44	18.75
15-May	4.1	3.9	2.7	0.7	1.4	2.3	6.9	11.4	13.8	15.8	17.0	PF	19.2	20.0	20.6	21.0	21.2	21.1	20.6	19.4	17.1	15.2	14.1	12.4	13.13	21.15
16-May	9.9	8.0	7.6	5.0	4.2	6.2	9.3	12.2	15.1	17.7	19.4	21.8	23.2	24.4	24.7	24.4	23.2	22.1	21.9	19.9	15.4	14.0	14.5	15.3	15.80	24.66
17-May	14.5	11.7	8.5	7.9	6.4	7.2	12.1	14.3	15.6	16.3	17.0	18.2	19.3	20.3	21.0	20.9	21.5	21.4	21.1	19.8	16.3	13.7	12.3	10.3	15.32	21.46
18-May	9.4	8.2	8.0	8.5	8.5	8.8	9.5	10.9	11.9	11.4	11.1	11.5	11.8	12.4	12.6	12.5	13.0	12.9	12.5	10.0	9.6	9.3	9.0	8.6	10.50	13.03
19-May	8.4	8.3	8.1	7.7	6.6	5.4	4.7	4.0	3.3	2.7	1.7	0.8	0.6	0.6	0.6	0.5	0.2	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.3	2.65	8.39
20-May	-0.3	-0.3	-0.4	-0.5	-0.6	-0.6	-0.4	-0.1	-0.1	0.1	0.6	0.9	1.4	2.6	3.2	3.9	3.7	3.7	3.8	3.1	2.6	1.6	1.0	1.0	1.26	3.92
21-May	1.1	0.9	0.8	0.7	0.5	0.4	0.4	0.7	0.9	1.0	1.5	2.0	2.4	2.5	3.0	3.1	3.2	3.2	3.2	2.9	2.6	2.5	2.4	2.4	1.84	3.23
22-May	2.4	2.3	1.9	2.0	1.9	1.9	1.8	1.9	2.2	2.3	2.5	2.8	3.1	3.2	3.3	3.6	3.9	4.0	4.1	4.3	4.4	4.5	4.5	4.7	3.07	4.68
23-May	4.7	4.3	3.6	2.3	1.5	1.9	4.0	5.3	6.2	7.0	8.6	10.2	11.4	12.8	14.1	15.0	15.7	15.8	15.9	15.5	10.6	6.7	5.6	4.8	8.47	15.89
24-May	4.0	4.4	4.2	2.6	2.7	4.4	7.9	11.3	13.2	15.3	16.9	18.6	19.9	20.8	21.8	22.3	22.5	22.3	21.2	19.5	17.2	16.0	15.0	13.8	14.06	22.54
25-May	12.8	12.2	11.9	11.0	10.2	10.3	14.1	17.1	17.6	17.3	17.5	18.7	20.2	21.0	21.5	15.9	15.9	17.1	18.0	17.7	14.5	11.2	9.3	8.0	15.04	21.50
26-May	7.4	6.8	5.6	5.8	6.3	7.6	9.9	13.0	15.3	16.6	16.7	18.0	18.3	18.7	13.3	12.3	10.2	9.2	8.9	8.7	8.8	8.7	8.0	6.9	10.87	18.74
27-May	7.0	7.0	6.8	6.7	6.7	6.8	7.3	7.6	7.7	7.8	8.5	8.8	8.9	9.0	8.6	8.6	8.5	7.8	7.4	7.2	7.0	6.9	6.8	6.6	7.58	9.00
28-May	6.6	6.5	6.5	6.4	6.2	6.0	6.1	6.3	7.0	8.1	9.2	10.0	11.4	12.7	13.4	13.9	14.2	13.3	9.6	8.8	7.6	6.3	4.4	3.3	8.49	14.16
29-May	4.3	5.7	5.9	5.1	5.0	5.2	5.0	4.8	5.1	5.5	6.3	6.5	7.3	9.2	9.6	9.8	10.0	10.1	9.2	8.3	7.6	6.6	6.4	6.1	6.85	10.10
30-May	5.3	4.2	3.7	2.4	3.2	5.0	5.8	7.4	9.3	10.8	11.1	11.8	11.7	12.7	13.3	13.6	13.7	14.3	14.2	13.8	11.4	7.4	5.1	4.1	8.97	14.31
31-May	3.1	2.5	1.7	1.1	0.8	2.8	7.2	10.5	13.1	14.1	15.0	16.1	16.8	16.8	17.4	18.0	17.8	17.4	17.6	17.2	15.5	14.1	13.1	11.9	11.74	18.04
	6.09	5.42	4.94	4.24	3.86	4.48	6.51	8.83	10.64	11.73	12.74	13.50	14.38	15.03	15.23	15.28	15.23	15.11	14.72	13.61	11.35	9.38	8.02	7.12	Diurnal Average	
	14.46	13.24	14.18	12.76	12.72	12.67	14.09	17.40	21.25	23.24	24.91	25.80	26.79	27.27	28.11	28.26	28.89	28.48	28.03	25.91	22.63	20.42	18.04	15.69	Diurnal Maximum	

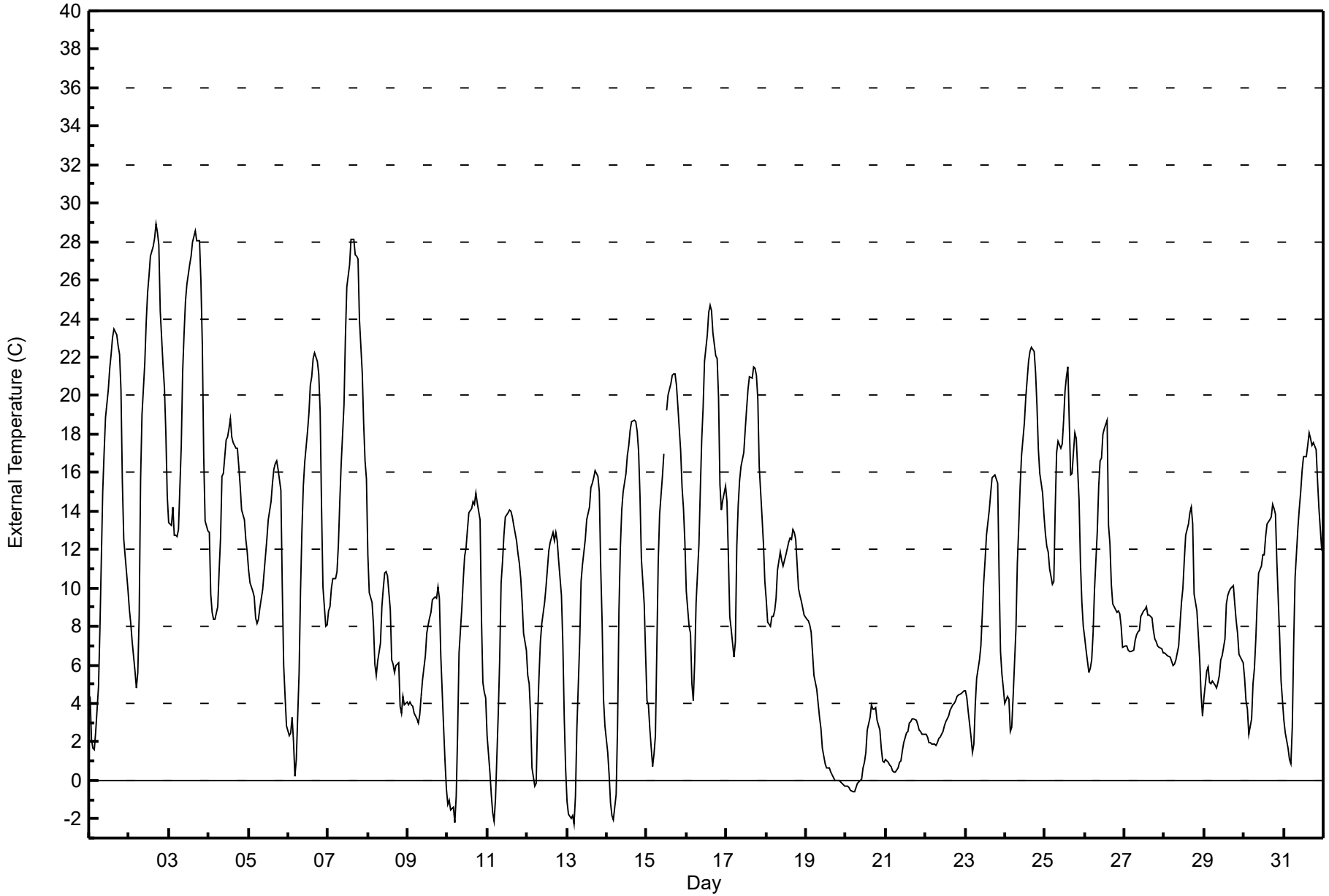
PF - Power Failure

West Central Airshed Society

Hourly Averages

External Temperature (ET) - C

Fox Creek - May 2016



WCAS - Fox Creek
Summary of Hourly Averages

Wind Speed (WS) - kph
May 2016

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	2.9	4.2	4.6	8.0	6.3	5.6	5.3	5.1	3.8	7.7	9.9	9.0	10.9	7.6	5.8	4.4	7.4	7.8	8.0	1.8	1.2	2.8	4.5	4.0	1.36	10.86
Dir	ESE	ESE	SE	SE	ESE	ESE	ESE	S	SSW	WSW	W	W	WSW	NW	W	W	WNW	NNW	NNW	NNW	SSE	SE	ESE	ESE	WSW	WSW
2 Spd	5.3	4.1	5.3	3.1	3.6	4.6	3.3	4.4	11.6	12.4	13.7	15.4	12.6	13.8	12.3	9.0	8.4	9.4	6.0	4.2	7.1	6.6	6.0	5.5	7.58	15.36
Dir	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	ESE	ESE	SE	SE	SE	ESE	ESE	ESE	SE	SSE	SSE	SE	SE	SE	SE	SE	SE	SE
3 Spd	6.7	4.0	3.6	6.5	3.6	3.9	5.3	4.2	4.5	6.2	6.5	2.9	1.8	4.7	9.3	9.3	9.4	8.8	7.2	9.7	8.5	2.2	2.8	3.2	3.40	9.69
Dir	SE	SSE	SE	ESE	SE	ESE	ESE	S	W	NW	WNW	WNW	E	WSW	S	S	S	S	SSW	SW	SW	S	SE	SSE	S	SW
4 Spd	0.4	3.3	5.6	4.7	5.3	5.4	5.5	1.4	7.6	11.3	12.1	13.3	11.8	10.6	12.3	12.3	12.0	10.1	6.5	6.8	4.6	7.5	7.6	9.6	4.84	13.31
Dir	E	ESE	ESE	ESE	ESE	ESE	ESE	SE	WSW	WNW	NW	NNW	NW	NNW	NW	NW	NW	NW	NW	NW	WNW	WNW	WNW	WNW	NW	NNW
5 Spd	11.6	8.9	8.5	10.3	3.0	6.0	8.4	10.6	12.2	13.2	12.9	11.9	10.3	11.2	9.7	10.6	10.6	9.1	9.6	6.9	0.9	3.3	4.4	4.3	7.46	13.17
Dir	WNW	W	WNW	WNW	SW	WSW	WSW	W	W	WNW	W	W	WNW	WNW	W	W	WNW	WNW	WNW	WNW	SSW	SE	SE	ESE	W	WNW
6 Spd	5.0	1.6	2.0	1.8	3.9	6.6	5.7	6.9	5.9	2.6	5.8	4.0	6.2	7.7	2.7	3.0	3.3	6.3	4.2	2.4	0.8	1.8	1.9	6.8	1.90	7.67
Dir	ESE	ESE	ENE	SSE	SE	SE	ESE	SSE	SSE	S	WSW	S	SSW	SW	WSW	SW	NNE	NNE	N	ENE	SW	SE	SE	ESE	SSE	SW
7 Spd	6.6	6.8	6.5	6.6	7.2	8.1	5.9	8.3	9.2	8.9	9.1	12.6	11.3	7.7	8.3	14.3	9.8	8.3	5.5	4.3	15.2	17.5	13.0	13.7	3.79	17.51
Dir	ESE	ESE	ESE	ESE	ESE	ESE	SE	S	S	S	S	S	SSE	SSW	WSW	SW	SW	S	SSE	SW	WNW	WNW	NW	WNW	SSW	WNW
8 Spd	10.5	5.3	5.3	7.5	3.5	5.4	7.6	7.6	15.8	21.2	24.4	21.2	24.2	24.0	26.7	23.6	21.5	21.7	19.7	13.3	6.9	10.2	8.2	9.9	13.88	26.73
Dir	NW	NW	WNW	W	W	WSW	SW	WSW	WSW	WSW	WSW	W	W	W	WSW	WSW	WSW	WSW	WSW	WNW	W	W	WSW	WSW	W	WSW
9 Spd	7.3	8.7	9.0	10.0	9.9	10.6	9.5	10.5	12.9	15.2	16.6	16.3	15.8	14.5	13.4	12.8	12.1	11.8	10.5	6.5	1.9	1.5	1.9	3.2	9.33	16.59
Dir	WSW	W	W	W	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	WNW	WNW	WNW	W	SSE	SE	SE	WNW	WNW
10 Spd	3.7	4.9	3.6	5.8	6.2	6.8	5.4	3.1	4.2	4.4	2.7	2.6	5.9	5.8	5.6	7.4	7.2	6.1	6.4	3.1	1.1	1.4	2.7	1.4	0.73	7.44
Dir	SE	SE	ESE	ESE	SE	ESE	ESE	S	W	WNW	NW	NNW	NNW	NNW	WNW	N	NNW	NNW	NW	NNW	SW	SE	SE	SE	N	N
11 Spd	1.3	1.0	0.7	0.9	1.8	0.9	0.8	3.8	1.0	7.0	4.6	7.1	6.1	13.6	12.6	12.8	13.0	14.2	14.9	8.2	9.6	9.1	5.3	6.8	5.75	14.92
Dir	SSE	SE	SSE	SSE	SE	SSE	W	NNW	NNE	N	N	NNE	NNE	NE	ENE	ENE	NE	NE	NE	NE	NNE	NNE	NE	NE	NE	NE
12 Spd	3.8	5.9	1.5	0.7	0.8	0.4	4.7	4.5	4.5	8.7	9.2	7.1	5.4	8.6	5.6	6.2	8.9	7.6	9.3	10.0	6.5	4.7	0.6	0.6	4.58	10.02
Dir	ENE	E	ENE	SW	SW	SW	ENE	ENE	NNE	NNE	NNE	N	N	NNE	NNE	N	NNE	NNE	N	NNE	NNE	NNE	SW	S	NNE	NNE
13 Spd	1.9	3.6	5.1	6.7	4.7	4.5	3.0	4.7	8.1	6.7	6.0	7.3	7.8	6.7	5.6	5.9	4.2	6.6	4.5	4.1	3.4	1.7	1.8	4.3	3.85	8.05
Dir	SE	SE	ESE	SE	SE	SE	SE	ESE	E	ENE	NE	NE	NE	NE	NE	ENE	E	ESE	ESE	SSE	N	NE	SE	SE	E	E
14 Spd	5.3	3.3	2.1	3.0	3.8	3.9	3.9	1.5	7.2	13.7	13.5	11.7	11.3	11.6	10.0	9.6	12.2	11.0	10.8	10.7	7.7	4.3	3.2	2.4	7.05	13.71
Dir	SE	SE	SE	SE	SE	ESE	ESE	ENE	E	E	E	E	ESE	ENE	ENE	E	E	ESE	E	E	ESE	SE	SSE	SE	E	E
15 Spd	2.6	4.7	1.3	3.8	3.8	4.2	3.5	6.3	11.9	16.9	17.3	PF	17.5	16.5	17.4	16.7	17.3	15.4	15.3	14.4	9.7	8.1	9.4	6.0	10.22	17.45
Dir	SE	SE	ESE	ESE	SE	SSE	SSE	ESE	E	ESE	ESE	PF	ESE	E	E	ESE	ESE	ESE	ESE	E	E	ESE	ESE	SE	ESE	ESE
16 Spd	3.5	5.7	4.5	3.5	5.2	6.1	7.0	9.9	7.1	3.6	4.1	2.3	4.4	3.6	2.5	5.3	3.4	10.6	4.1	8.4	17.0	7.6	7.8	8.4	1.84	17.03
Dir	SSE	SSE	SE	SSE	SSE	SE	SE	SE	S	SW	WNW	W	NW	SW	W	SW	N	NE	NE	WNW	W	W	WSW	SW	SW	W
17 Spd	3.2	1.3	1.7	3.2	3.3	2.5	6.4	8.8	14.1	14.2	11.4	13.3	12.1	11.4	12.0	9.7	9.8	8.9	6.8	3.7	0.8	2.1	3.0	3.0	4.98	14.18
Dir	NW	SE	SE	SE	ESE	ESE	WSW	W	W	W	WNW	W	W	WSW	W	W	W	WNW	NNW	NW	WSW	SE	SE	SE	W	W
18 Spd	4.2	3.7	3.6	2.6	1.4	1.1	3.4	2.7	7.9	7.7	2.9	2.5	3.3	5.2	1.6	2.6	1.9	3.7	2.3	6.7	3.2	3.6	2.6	0.6	0.10	7.94
Dir	SE	ESE	SE	SE	SE	SSE	ESE	W	NW	NNW	NNE	WNW	W	NW	NNE	ENE	E	SSW	WSW	WSW	SSE	SE	SE	SW	SW	NW
19 Spd	2.0	1.0	3.6	7.7	10.6	13.6	12.4	12.5	13.1	13.2	12.2	12.4	12.8	13.8	13.2	13.5	12.7	AF	AF	AF	AF	AF	AF	AF	--	13.75
Dir	S	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	AF	AF	AF	AF	AF	AF	AF	--	WNW
20 Spd	AF	AF	AF	AF	AF	AF	AF	AF	18.3	2.6	8.6	9.4	8.9	8.0	7.4	7.2	6.7	5.1	6.9	5.0	4.0	3.2	3.3	3.8	--	18.30
Dir	AF	AF	AF	AF	AF	AF	AF	AF	E	WNW	W	WNW	W	W	W	WNW	NW	NW	WNW	WNW	W	WNW	WNW	WNW	--	E
21 Spd	2.8	4.0	3.4	3.6	4.8	4.4	4.5	5.5	8.2	7.8	8.2	7.4	8.3	6.7	7.6	5.8	5.1	4.6	4.5	4.5	4.3	4.2	4.2	4.6	5.25	8.27
Dir	WNW	WNW	WNW	WNW	WNW	NNW	WNW	WNW	WNW	WNW	NW	NW	WNW	WNW	WNW	W	W	W	W	W	WNW	WNW	W	WNW	WNW	WNW
22 Spd	4.2	5.2	6.5	6.8	8.1	8.5	9.0	9.2	11.9	11.9	11.3	12.2	12.8	12.9	11.3	12.4	11.9	10.8	11.4	10.1	10.2	8.8	8.5	8.4	9.70	12.91
Dir	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	W	WNW	WNW

WCAS - Fox Creek
Summary of Hourly Averages

Wind Speed (WS) - kph
May 2016

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	8.4	7.4	5.8	2.4	0.5	0.5	6.7	9.0	7.9	6.3	8.8	10.4	10.4	7.6	7.0	5.4	5.5	8.7	5.1	3.6	1.0	2.1	6.0	3.7	3.49	10.40
Dir	WNW	W	W	WSW	SSW	WSW	WNW	WNW	NW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	NE	NE	ENE	S	SE	SE	SE	NNW	NNW
24 Spd	2.9	5.0	3.2	5.0	6.3	7.4	6.6	7.5	11.7	12.0	11.1	7.9	5.8	7.3	4.1	7.0	8.4	9.7	12.5	11.3	11.6	6.3	2.5	1.9	6.71	12.49
Dir	SSE	SE	SSE	SE	ESE	SE	SE	ESE	E	ESE	ESE	SE	E	E	E	E	NE	E	ESE	ESE	ESE	ESE	SE	SW	ESE	ESE
25 Spd	1.7	3.9	1.9	4.0	5.0	6.8	2.7	0.5	3.2	8.6	7.8	5.9	9.7	3.5	4.4	15.8	7.5	4.2	5.6	3.0	1.5	0.7	1.6	0.4	2.30	15.80
Dir	WSW	ESE	W	SE	SE	SE	S	W	W	WSW	W	WSW	WSW	WNW	NW	WNW	NW	WNW	NNW	NNW	WNW	SSE	SE	SSE	W	WNW
26 Spd	0.9	0.4	1.5	3.6	3.7	5.5	3.2	2.5	7.0	10.8	12.1	16.5	19.0	14.3	17.2	14.3	7.3	8.2	5.1	3.7	1.4	1.4	0.9	2.8	1.71	19.03
Dir	ESE	S	SE	SE	ESE	SE	ESE	E	E	ESE	E	ESE	ESE	E	W	WNW	WNW	WNW	WNW	W	NW	E	SW	W	ESE	ESE
27 Spd	3.6	2.9	2.9	2.2	1.3	2.2	2.1	6.8	7.7	7.5	7.7	6.7	7.5	6.2	7.2	6.8	9.4	10.6	7.8	6.9	7.4	8.2	7.0	6.6	5.75	10.60
Dir	W	W	W	W	SSW	WSW	WSW	WSW	WSW	WSW	W	WNW	WNW	WNW	WNW	W	WSW	WSW	W	W	W	WSW	WSW	SW	W	WSW
28 Spd	5.9	4.8	5.2	7.7	9.1	10.7	10.2	9.0	8.8	9.0	12.3	9.1	9.4	5.3	1.0	3.5	5.2	5.7	5.4	4.9	2.6	0.6	1.2	1.0	4.50	12.27
Dir	SW	SW	SSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	WNW	WNW	W	ESE	N	NNE	ENE	W	NW	WNW	WSW	SW	SSE	WSW	WSW
29 Spd	5.2	3.3	3.6	1.5	2.9	4.9	6.7	5.5	6.6	6.6	5.3	7.4	8.3	8.2	7.9	9.0	10.4	10.8	9.4	7.6	5.3	3.5	3.5	3.0	5.35	10.77
Dir	W	NW	ENE	W	WNW	WNW	W	W	W	W	WNW	W	WNW	WNW	NNW	NNW	NNW	NW	NW	NW	NW	WNW	WNW	WSW	WNW	NW
30 Spd	2.4	2.5	1.9	1.4	0.7	3.8	5.0	5.3	7.2	7.6	6.8	7.8	8.7	8.4	11.1	9.8	9.6	10.6	8.1	7.1	3.2	0.7	2.4	3.6	4.33	11.10
Dir	W	WSW	W	SE	S	W	WNW	NW	W	WNW	NW	WNW	W	WNW	NNW	NW	NNW	NNW	NNW	NNW	WNW	S	SE	SE	NW	NNW
31 Spd	4.6	4.2	5.5	6.1	5.5	6.5	4.5	2.3	7.9	7.0	5.2	7.0	6.6	3.3	5.3	3.6	7.1	7.4	5.6	6.3	4.6	4.4	4.0	4.0	5.10	7.90
Dir	SE	ESE	ESE	SE	ESE	SE	SE	E	ESE	ESE	ESE	E	ESE	E	SE	SE	E	ESE	E	E	E	ESE	SSE	SSE	ESE	ESE
Spd	1.02	1.18	0.90	1.46	1.52	1.55	1.45	1.96	1.75	2.79	3.40	3.42	2.98	3.16	3.62	3.73	3.34	1.96	2.23	1.92	1.60	0.66	1.01	1.39	Diurnal Average	
Dir	SSW	SSE	S	S	SSE	SSE	SSW	WSW	W	W	WNW	WNW	WNW	NW	WNW	WNW	NW	NNW	NNW	NW	WNW	W	SSW	SSW		
Spd	11.64	8.89	8.97	10.27	10.60	13.63	12.37	12.54	18.30	21.18	24.35	21.21	24.19	24.01	26.73	23.61	21.46	21.71	19.70	14.43	17.03	17.51	12.95	13.69	Diurnal Maximum	
Dir	283.50	277.57	267.33	289.45	295.15	299.05	298.75	295.58	86.40	253.84	250.93	262.63	261.66	265.87	249.70	247.14	251.14	253.50	257.97	97.83	277.50	302.55	310.83	295.89		

Maximum Speed Value: 26.7 kph on May 8 15:00
Maximum Daily Speed Average: 13.88 kph on May 8
Maximum Diurnal Speed Average: 3.73 kph at hour 16

Minimum Speed Value: 0.4 kph on May 12 06:00
Minimum Daily Speed Average: 0.10 kph on May 18
Minimum Diurnal Speed Average: 0.66 kph at hour 22

Monthly Average Velocity: 1.419 kph 277.09 deg
All monthly, daily, and diurnal averages have been calculated using vector methods

Speed Percentiles: P_1 = 0.6 P_{10} = 2.0 Q_1 = 3.7 Median = 6.3 Q_3 = 9.2 P_{90} = 12.5 P_{99} = 21.3

Hours in Service:	744
Hours of Data:	728
Hours of Missing Data:	16
Percent Operational Time:	97.9

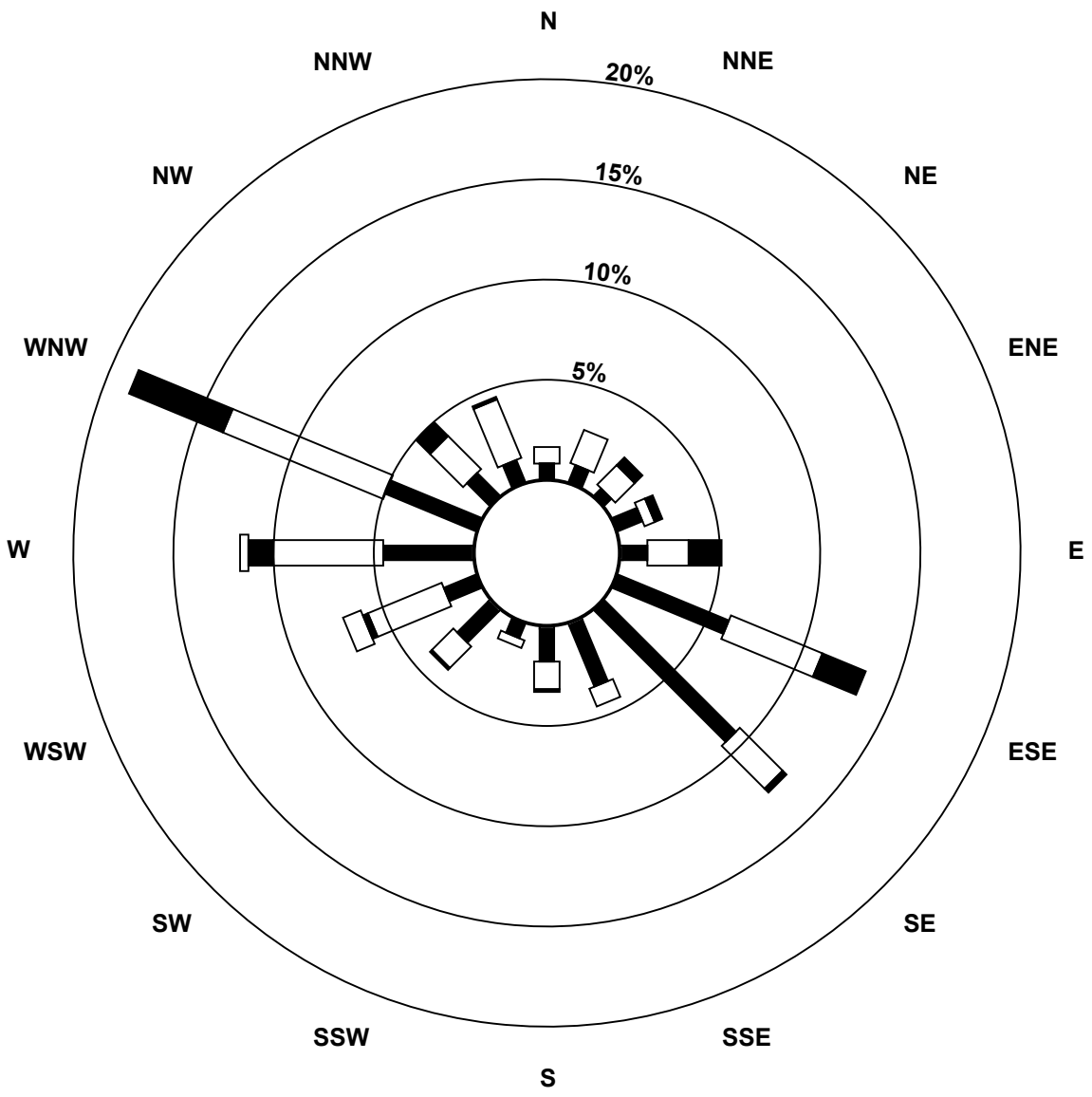
AF - Analyzer Failure PF - Power Failure

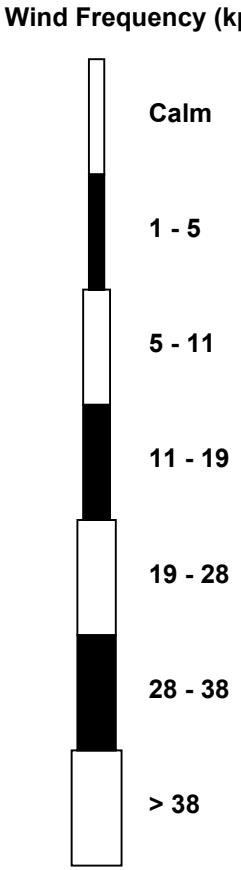
Frequency Distribution

Direction	Speed Range (kph) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	9	26	1	0	0	0	36
NorthEast	14	18	6	0	0	0	38
East	18	33	28	1	0	0	80
SouthEast	113	55	6	0	0	0	174
South	20	16	2	0	0	0	38
SouthWest	26	27	1	1	0	0	55
West	48	91	28	9	0	0	176
NorthWest	28	68	35	0	0	0	131
Total	276	334	107	11	0	0	728

WCAS - Fox Creek
Wind Speed Rose

Wind Speed (WS) - kph
May 2016





WEST CENTRAL AIRSHED SOCIETY

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM MONTHLY REPORT CALIBRATIONS

FOX CREEK
MAY 2016

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	May 25, 2014	Previous Calibration	April 14, 2016
Station Number	Paml2	Station Location	Fox Creek

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	11:00	End Time (MST)	18:00
Barometric Pressure	27.08 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Sabio 2010	Serial Number	42C 60475 327
NO Cal Gas Conc	25.4 ppm	Cal Gas Verif. Date	Dec 2,2015
NOx Cal Gas Conc	25.4 ppm	Cal Gas Serial #	SX17611

DACS Information

DACS make	ESC	DACS serial No.	

Parameter		NO	NO2	NOx
Before	Data Slope	1.000375	1.000329	1
	Data Offset	0.109328	-0.008378	
After	Data Slope	0.999998	1.002686	0.999998
	Data Offset	-0.088723	-0.174795	-0.088723
Channel #				
Voltage Range				

Analyzer Information

Analyzer make/model	42C	Analyzer serial #	60475327

Test Point	before		after	
Concentration range	1000	ppb	1000	ppb
NO background	1.2	mV	1.3	mV
NOx background	3	mV	1.6	mV
NO coefficient	1.190		1.133	
NO2 coefficient	0.978		0.978	
NOx coefficient	1.001		1.004	
Internal Temp		Deg C		Deg C
Chamber Temp		Deg C		Deg C
Cooler Temp				
Perm Temp		Deg C		Deg C
Pressure		inches Hg		inches Hg
Sample Flow		ccm		ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date: May 25, 2014 Station Location: Fox Creek

Aogust 30,2010

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Calculated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	Indicated NOx conc (ppb)	NO Correction factor	NOx Correction factor
zero	**5000**	**0.00**	0.0	0.0	0.0	**0.00**	**0.00**	**0.00**	N/A	N/A
P1	**5384**	**83.75**	389.0	0.0	389.0	**389.00**	**0.00**	**389.00**	1.000	1.000
P2	**5393**	**54.41**	253.7	0.0	253.7	**254.00**	**0.00**	**254.00**	0.999	0.999
P3	**5390**	**25.02**	117.4	0.0	117.4	**117.50**	**0.00**	**117.50**	0.999	0.999
AFZ	**5000**	**0.00**	0.0	0.0	0.0	**0.00**	**-1.50**	**-1.50**	#DIV/0!	0.000
AFS	**5368**	**78.49**	366.1	0.0	366.1	**385.00**	**-1.00**	**384.00**	0.951	0.953
							Average Correction Factor		0.999	0.999

As Found Concentrations	NO= 385.3 ppb	NO_X= 385.8 ppb
As Found Percent Change	NO= 5.2%	NO_X= 5.4%

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NOx ref (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Calculated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	Indicated NOx conc (ppb)	NO2 Correction factor	Converter Efficiency
0	389.0	389.0	0.0	389.0	**389.00**	**0.00**	**389.00**	N/A	N/A
1.0 v	394.0	81.0	312.9	393.9	**81.00**	**312.00**	**394.00**	1.0029	99.7%
0.7 v	442.0	191.9	199.0	390.9	**192.00**	**199.00**	**391.00**	1.0000	100.0%
0.4	442.0	302.9	88.0	390.9	**303.00**	**88.00**	**391.00**	1.0000	100.0%
						Average Correction Factor		1.001	0.999

AIC Data

	Previous calibration				Current calibration			
Parameter	NO	NO2	NOx		NO	NO2	NOx	
Auto zero	**0.00**	**-0.70**	**-0.60**	ppb	**-0.10**	**0.00**	**-0.10**	ppb
Auto span	**426.00**	**-1.00**	**425.00**	ppb	**437.00**	**-2.00**	**435.00**	ppb

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **NO**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

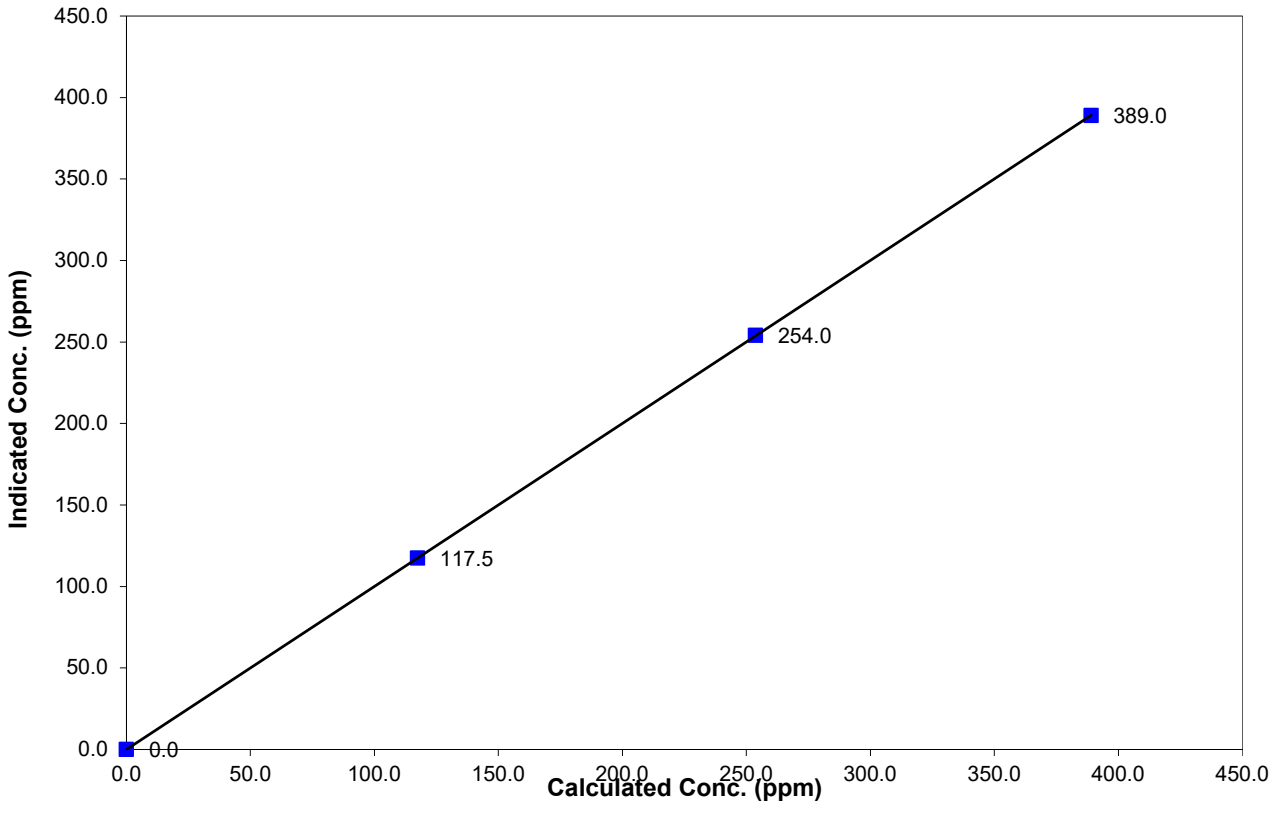
Station Information

Calibration Date	May 25, 2014	Previous Calibration	April 14, 2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	15:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
389.0	389.0	1.0001	Correlation Coefficient	0.999999
253.7	254.0	0.9989		
117.4	117.5	0.9990	Slope	0.999998
			Intercept	-0.088723

NO Calibration Curve



Calibration Summary

Parameter **NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

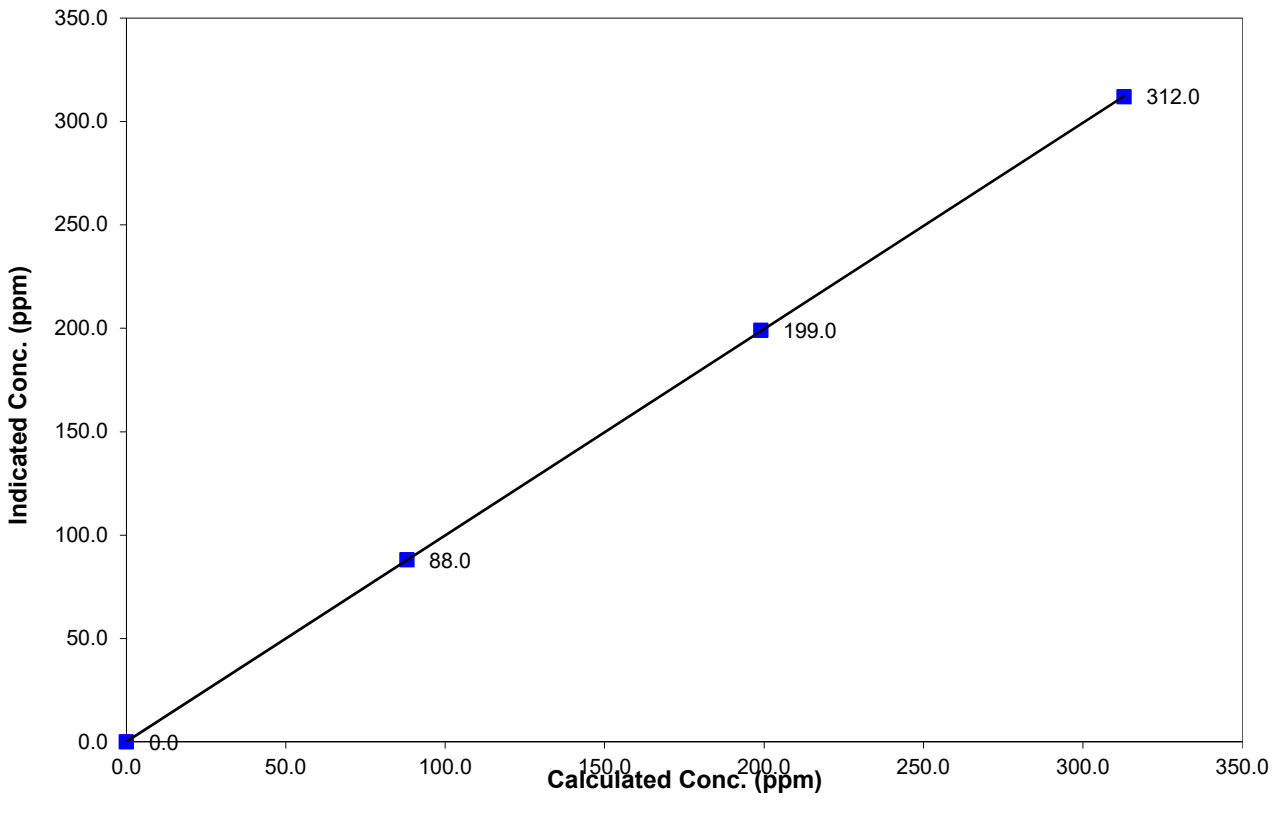
Station Information

Calibration Date	May 25, 2014	Previous Calibration	April 14, 2016
Station Number		Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	15:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
312.9	312.0	1.0029	Correlation Coefficient	0.999996
199.0	199.0	1.0000		
88.0	88.0	1.0000	Slope	1.002686
			Intercept	-0.174795

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

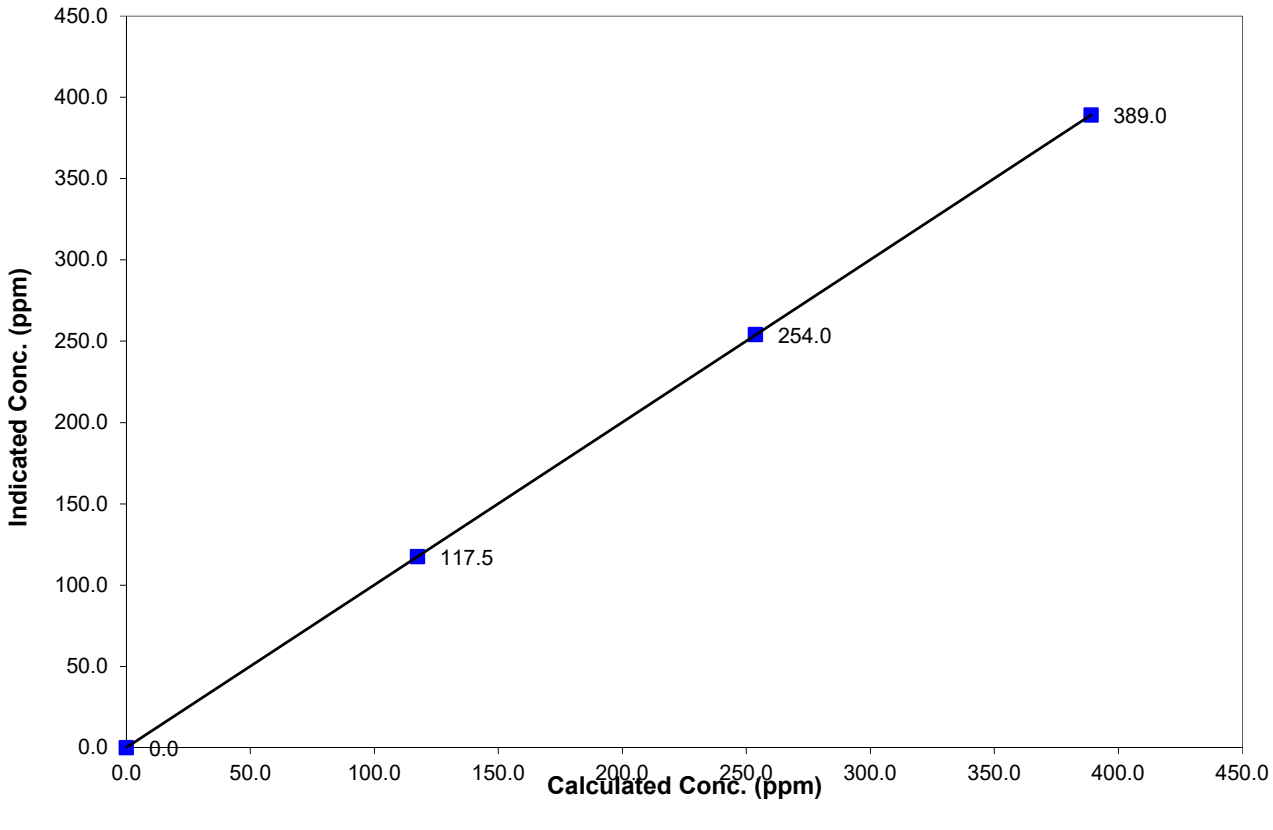
Station Information

Calibration Date	May 25, 2014	Previous Calibration	April 14, 2016
Station Number	Paml 2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	15:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
389.0	389.0	1.0001	Correlation Coefficient	0.999999
253.7	254.0	0.9989		
117.4	117.5	0.9990	Slope	0.999998
			Intercept	-0.088723

NOx Calibration Curve



Calibration Report

Parameter **SO2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	May 25, 2014	Previous Calibration	April 14, 2016
Station Number	Paml2	Station Location	Fox Creek
Reason: Routine	Calibration	Removal	Fox Creek
Start Time (MST)	11:00	End Time (MST)	18:00
Barometric Pressure	27.20 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Sabio 2010	Serial Number	SX17611
Cal Gas Concentration	25400 ppb SO2	Cal Gas Verified	Dec 2/15
DACS make		DACS serial No.	
DACS voltage range		DACS channel #	
	Before		After
Calculated slope	0.990853	Calculated slope	0.999078
Calculated intercept	0.916518	Calculated intercept	0.330040
Analyzer make	Teco 431	Analyzer serial #	0700419950

	before		after	
Concentration range	500	ppb	500	ppb
Background	14.1	ppb	14	ppb
Coefficient	0.807		0.883	
Intensity A		Hz		Hz
Intensity B		Hz		Hz
Pressure		mmHg		mmHg
Sample Flow A		Lpm		Lpm
Sample Flow B		Lpm		Lpm

Calibration Data

Dilution air flow rate (cc/min)		Source Gas Flow	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	5000	0.0	0.0	0.00	N/A
P1	5384	83.7	389.0	389.00	1.0001
P2	5393	54.4	253.7	254.00	0.9989
P3	5390	25.0	117.4	116.50	1.0076
AFZ	5000	0.0	0.0	-0.20	0.0000
AFS	5.368	78.5	366.1	397.00	0.9222
				Average Correction Factor	1.0022

Calculated value of As Found Response: 394.5 ppm Percent Change of As Found: 7.8%

	before calibration		after calibration	
Auto zero	0.20	ppb	0.00	ppb
Auto span	299.00	ppb	277.00	ppb

Notes:

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **SO2**

Air Monitoring Network **Fox Creek**

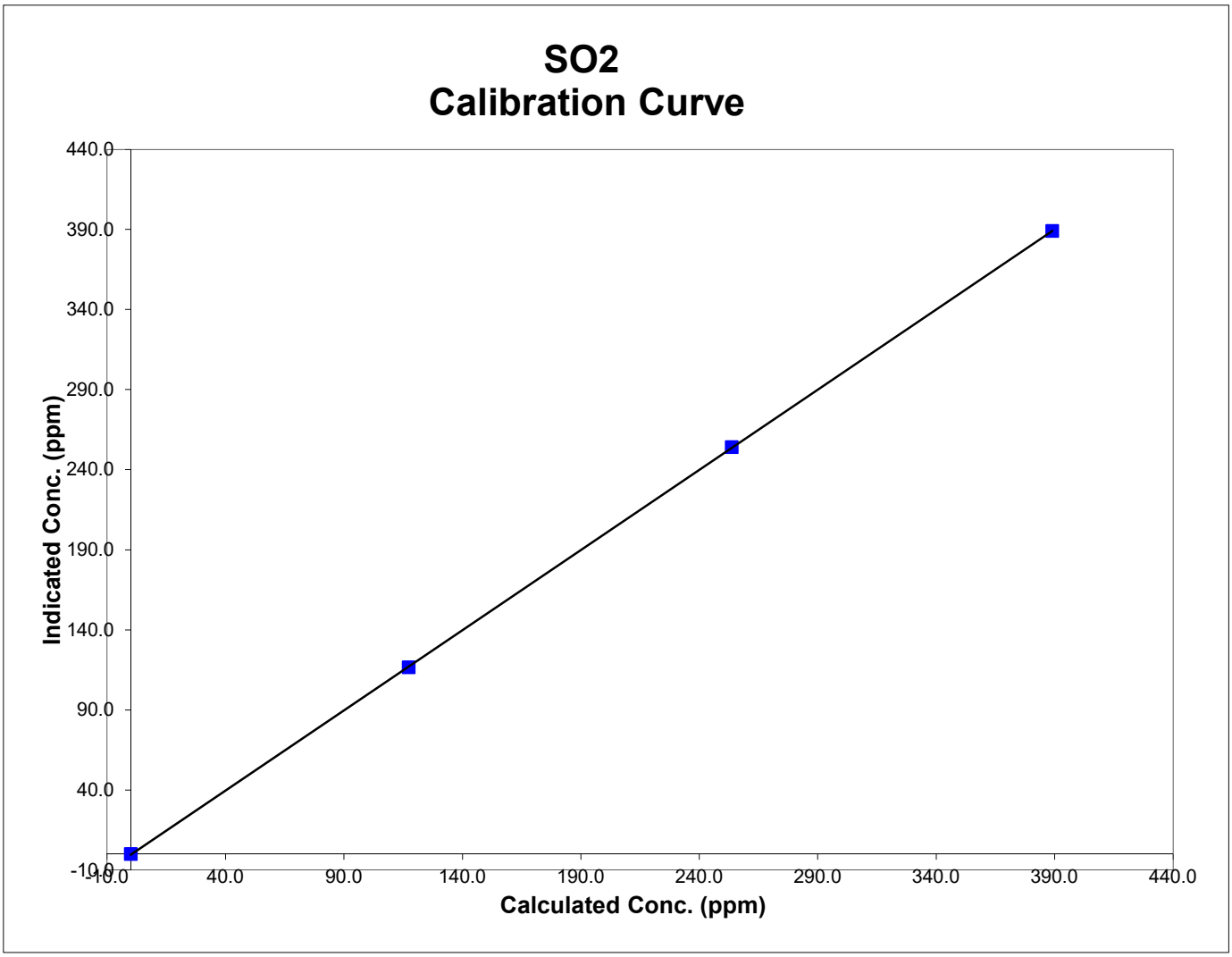
West Central Airshed Society

Station Information

Calibration Date	May 25, 2014	Previous Calibration	April 14, 2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	14:00
Analyzer make/model	Teco 431	Analyzer serial #	0700419950

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
389.0	389.0	1.0001		
253.7	254.0	0.9989	Correlation Coefficient	0.999992
117.4	116.5	1.0076		
0.0	0.0	N/A	Slope	0.999078
			Intercept	0.330040



Calibration Report

Parameter **H2S**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	March 29,2016	Previous Calibration	March 29, 2016
Station Number	Paml2	Station Location	Fox Creek
Reason: Routine	Calibration	Removal	Fox Creek
Start Time (MST)	7:00	End Time (MST)	9:50
Barometric Pressure	27.40 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Sabio 2010	Serial Number	5200311
Cal Gas Concentration	4.54 ppm SV15550	Cal Gas Verified	April 1, 2016
DACS make		DACS serial No.	
DACS voltage range		DACS channel #	1
	Before		After
Calculated slope	0.992231	Calculated slope	0.998221
Calculated intercept	0.200280	Calculated intercept	0.265022
Analyzer make	TecoTeco 45C	Analyzer serial #	0630718527

	before		after	
Concentration range	100	ppb	100	ppb
Background	17.9	ppb	15.9	ppb
Coefficient	1.165		1.029	
Intensity A	*	Hz		Hz
Intensity B	*	Hz		Hz
Pressure	*	mmHg		mmHg
Sample Flow A	*	Lpm		Lpm
Sample Flow B	*	Lpm		Lpm

Calibration Data

Dilution air flow rate (cc/min)		Source Gas Flow	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	5000	0.0	0.0	0.00	N/A
P1	5054	88.7	79.6	79.70	0.9987
P2	5012	49.6	44.9	44.40	1.0113
P3	4992	24.8	22.5	22.10	1.0181
AFZ	5000	0.0	0.0	-0.60	0.0000
AFS	4965	83.8	75.4	84.10	0.8960
				Average Correction Factor	1.0094

Calculated value of As Found Response: 84.2 ppm Percent Change of As Found: 11.8%

	before calibration		after calibration	
Auto zero	0.20	ppb	-0.20	ppb
Auto span	63.70	ppb	56.60	ppb

Notes: Told last year by AEMERA to use stated because they had no personnel to audit the cylinder. When WCAS was able to get the cylinder in for audit, the cylinder concentration changed from 5.19 ppm to 4.54.

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **H2S**

Air Monitoring Network **Fox Creek**

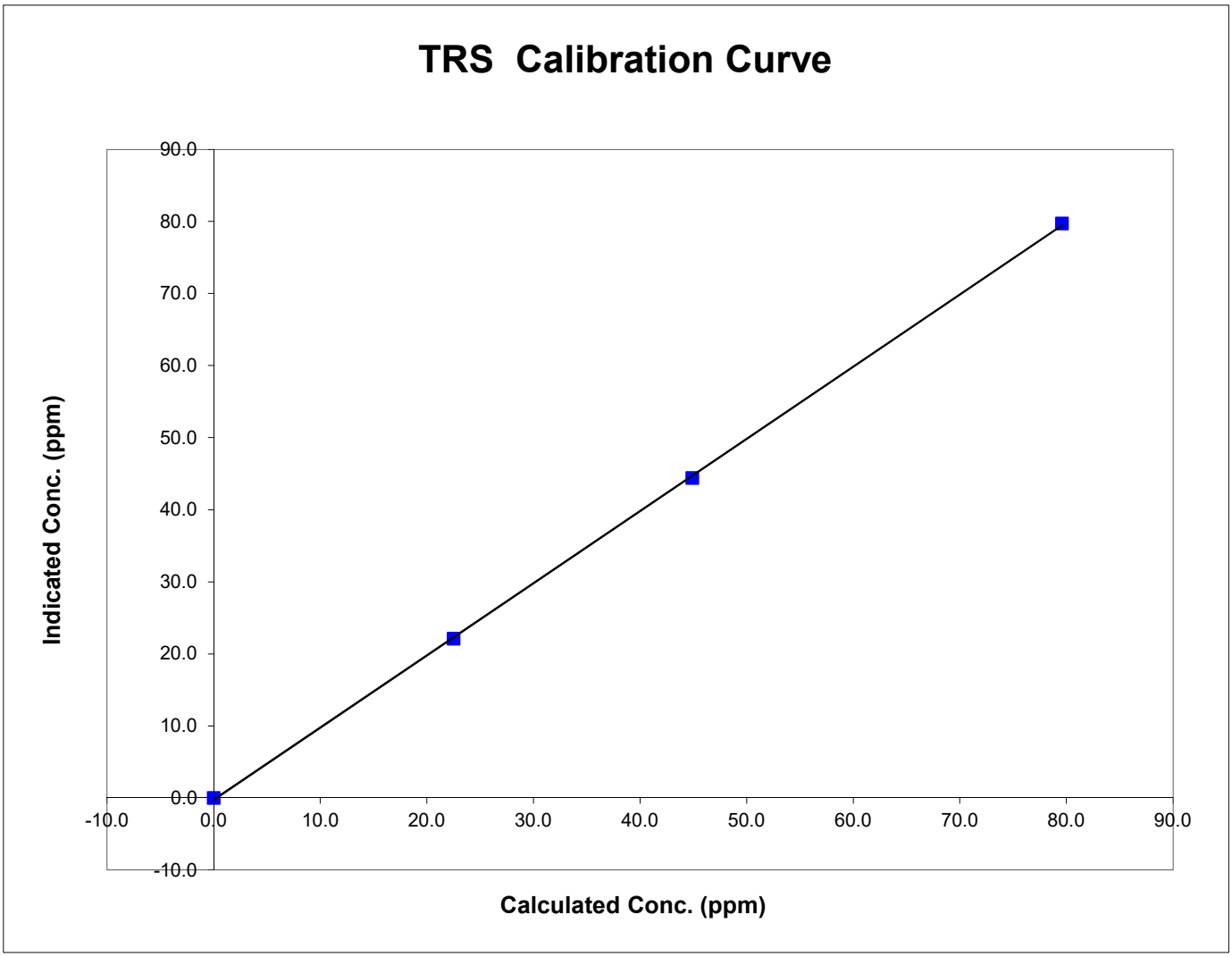
West Central Airshed Society

Station Information

Calibration Date	March 29,2016	Previous Calibration	March 29, 2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	7:00	End Time (MST)	9:50
Analyzer make/model	TecoTeco 45C	Analyzer serial #	0630718527

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
79.6	79.7	0.9987		
44.9	44.4	1.0113	Correlation Coefficient	0.999928
22.5	22.1	1.0181		
0.0	0.0	N/A	Slope	0.998221
			Intercept	0.265022



Calibration Report

Parameter **O3**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	May 25, 2016		Previous Calibration	April 14, 2016	
Station Number	Paml 2		Station Location	Fox Creek	
Reason:	Routine	Calibration	Removal		
Start Time (MST)	11:00	14:00	End Time (MST)	17:00	
Barometric Pressure	27.08	inches Hg	Station Temperature	22.0	Deg C
Calibrator	49i PS		Serial Number	142	
Cal Gas Concentration			Cal Gas Expiry Date		
DACS make			DACS serial No.		
DACS voltage range			DACS channel #	1	
	Before			After	
Calculated slope	1.001325		Calculated slope	1.000028	
Calculated intercept	-0.963867		Calculated intercept	0.020095	
Analyzer make	TECO 49i		Analyzer serial #	0630718533	

	before		after	
Concentration range	500	ppb	500	ppb
Background	0	ppb	0	ppb
Coefficient	1.006		1.006	
Intensity A		Hz		Hz
Intensity B		Hz		Hz
Pressure		mmHg		mmHg
Sample Flow A		Lpm		Lpm
Sample Flow B		Lpm		Lpm

Calibration Data

Dilution air flow rate (cc/min)		Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	3000	0.0	0.0	0.10	N/A
P1	3000	400.0	400.0	400.00	1.0000
P2	3000	200.0	200.0	200.00	1.0000
P3	3000	100.0	100.0	99.80	1.0020
AFZ	3000	0.0	0.0	0.40	0.0000
AF	3000	370.0	399.0	383.00	1.0418
				Average Correction Factor	1.0007

Calculated value of As Found Response: 382.1 ppm Percent Change of As Found: -4.2%

	before calibration		after calibration	
Auto zero	0.00	ppb	0.00	ppb
Auto span	369.00	ppb	381.00	ppb

Notes:

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **O3**

Air Monitoring Network **Fox Creek**

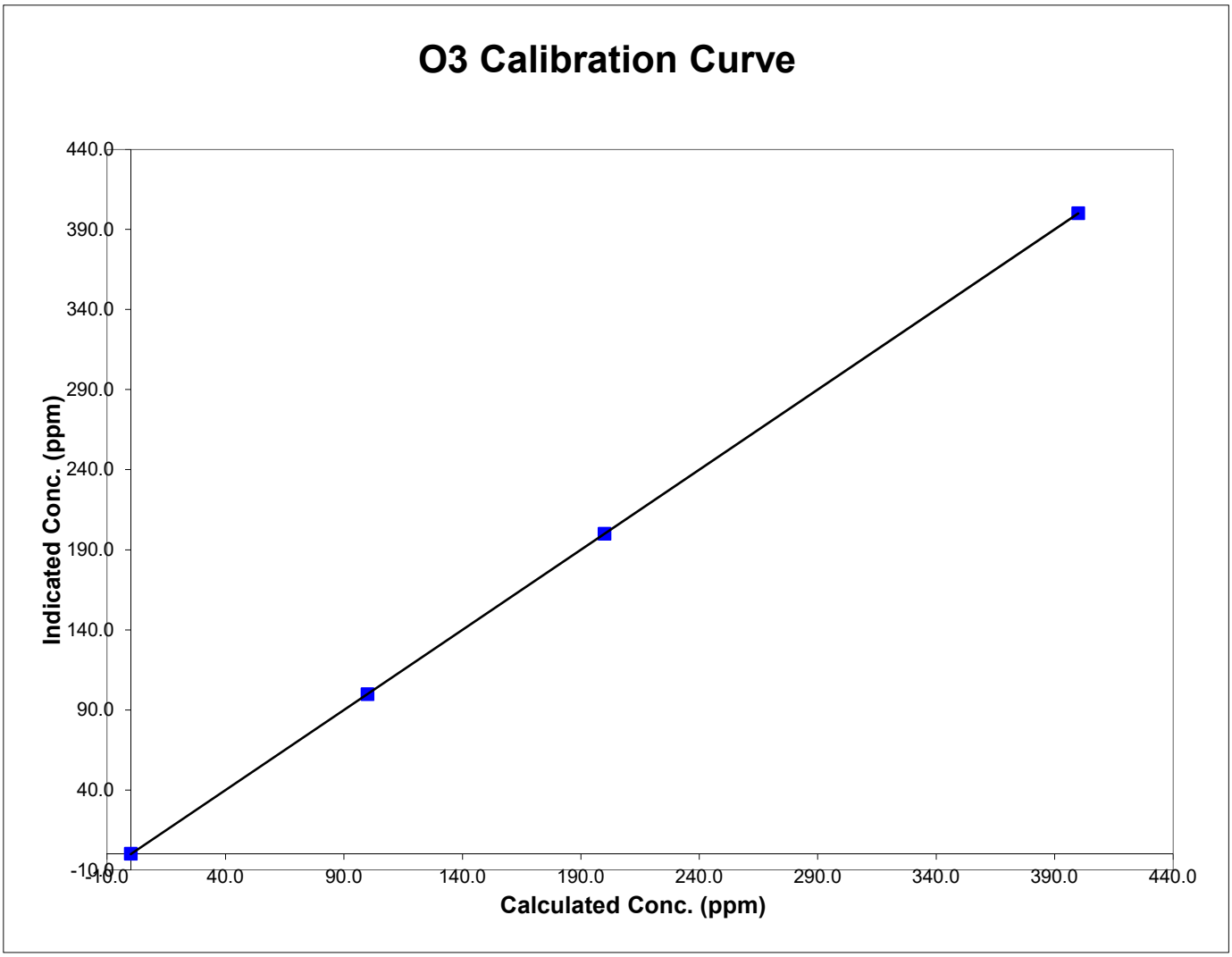
West Central Airshed Society

Station Information

Calibration Date	May 25, 2016	Previous Calibration	April 14, 2016
Station Number	PamI2	Station Location	Fox Creek
Start Time (MST)	7:00	End Time (MST)	9:50
Analyzer make/model	TECO 49i	Analyzer serial #	630718533

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
400.0	400.0	1.0000		
200.0	200.0	1.0000	Correlation Coefficient	0.999999
100.0	99.8	1.0020		
0.0	0.1	N/A	Slope	1.000028
			Intercept	0.020095



WEST CENTRAL AIRSHED SOCIETY

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM MONTHLY REPORT

END OF REPORT
MAY 2016