



March 4, 2013

Enforcement and Monitoring Division
Alberta Environment
11th floor, Oxbridge Place
9820-106 Street
Edmonton, Alberta
T5K 2J6

Attn: Shahin Manji

Re: Parkland Airshed Management Zone - Annual Summary Report - 2012

Enclosed is the Parkland Airshed Management Zone's (PAMZ) Annual Summary Report for 2012. This report summarizes the data collected by the PAMZ Continuous and Passive Air Quality Monitoring (AQM) Networks during 2012 in the formats required in the Air Monitoring Directive (AMD), specifically Section III C 2a, 2b, 2c, 2d, and 2e.

This summary report is submitted by PAMZ on behalf of the following Member Companies' Facilities to help satisfy their annual reporting requirements as outlined in the AMD:

Company	Facility	Approval Number
Apache Canada Ltd.	South Caroline	1071-01-00
Apache Canada Ltd.	North Caroline	10158-02-02
Bonavista Petroleum Limited	Carstairs-Crossfield	351-02-00
Conoco Phillips Canada Ltd.	Medicine River	381-01-00
Harmattan Gas Processing L.P.	Harmattan	10154-02-01
Husky Oil Operations Limited	Ram River	57-01-00
Imperial Oil Resources Ltd.	Wilson Creek	10264-01-00
Keyera Energy Limited	Gilby	1333-02-00
Keyera Energy Limited	Homeglen-Rimbey	865-01-00
Keyera Energy Limited	Nevis	261-01-00
Keyera Energy Limited	Strachan	1351-01-00
ExxonMobil Oil Canada Ltd.	Lone Pine	11341-02-00
NAL Resources	Sylvan Lake	249-01-00
Penn West Energy	West Gilby	11437-01-00
Pennwest Exploration	Wimborne	359-01-00
Suncor	East Gilby	1717-02-00
Shell Canada Limited	Burnt Timber	295-01-00
Shell Canada Limited	Shantz	11379-01-00
Shell Canada Limited	Caroline	11323-01-00



This summary report pertains specifically to the PAMZ AQM Program. Member companies will also be submitting, under separate cover, Annual Summary Information to AENV as per AMD Section III C 2f, 2g, 3(all), 4(all) and 5(all) where applicable.

Should you have any questions concerning this report please contact the undersigned at your convenience (403) 862-7046.

Sincerely,

A handwritten signature in black ink that reads "Kevin Warren". The signature is written in a cursive style with a long horizontal stroke at the end.

Kevin Warren
Executive Director, PAMZ

CC Mohammad Shoaib, AENV
Aaron Rognvaldson, Chairman - PAMZ TWG



PAMZ | Parkland Airshed
Management Zone

**Parkland Airshed Management
Zone
Ambient Air Quality Monitoring Network**

**2012 Annual Ambient Air
Monitoring Report**

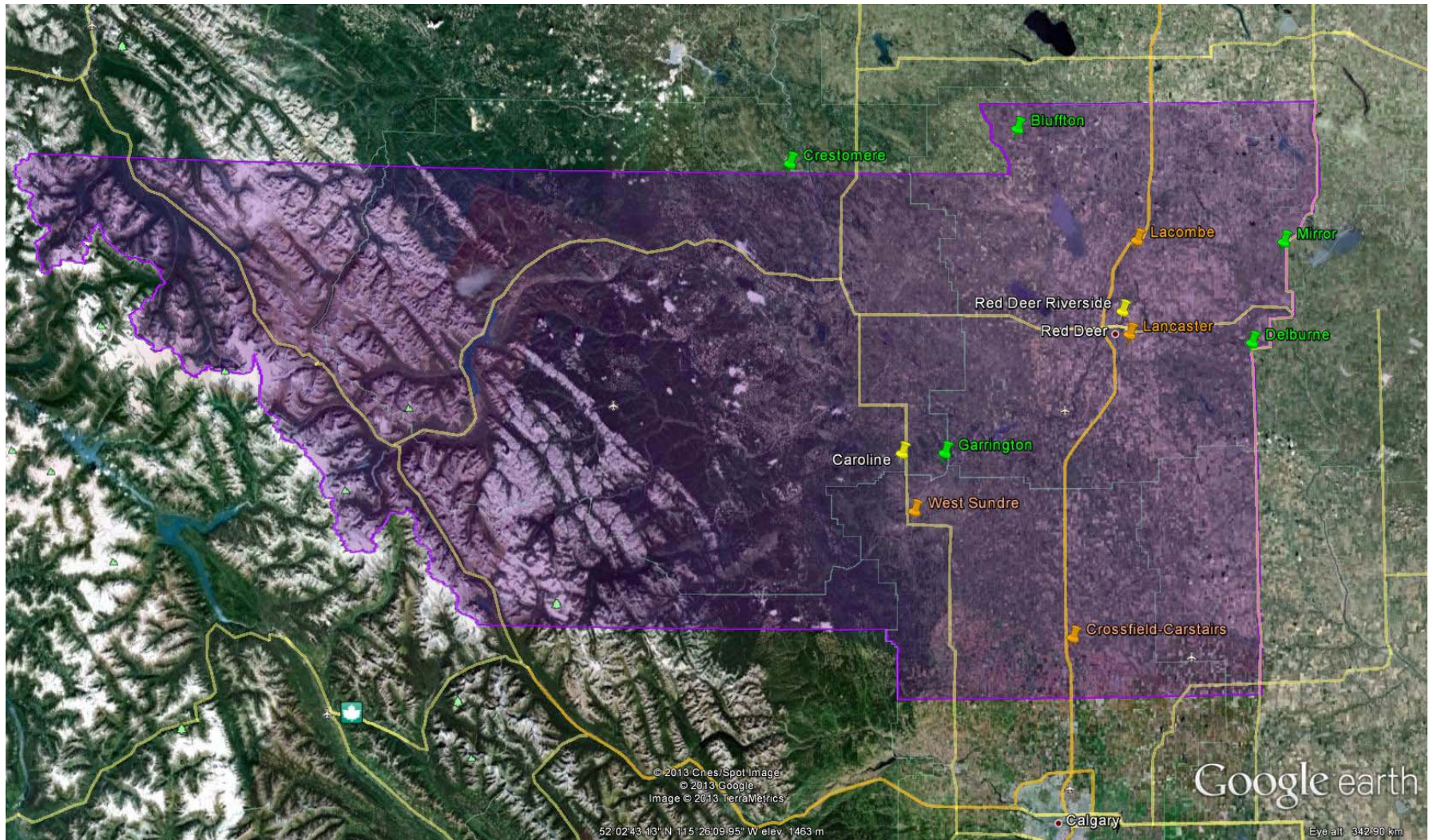
Prepared by
Whiteley Enterprises Inc.

**Parkland AirShed Management Zone
Ambient Air Quality Monitoring Network
2012 Annual Ambient Air Monitoring Report**

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PAMZ 2012 Site Locations

1. SO₂ Frequency & Exceedence Summary Tables

1.1 Parkland Airshed Management Zone – Bluffton SO₂ Sulphur Dioxide (ppb)

Martha Station -Bluffton			SO ₂ (ppb)								2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January																
February	470	0.8	4.3	Feb 29	15.8	Feb 29 19:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
March	123	0.9	1.9	Mar 01	7.1	Mar 01 11:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
April																
May																
June																
July																
August																
September	327	0.6	1.2	Sep 16	6.4	Sep 16 20:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
October																
November																
December																
Annual	920	0.8	4.3	Feb 29	15.8	Feb 29 19:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00

1.2 Parkland Airshed Management Zone – Caroline SO₂ Sulphur Dioxide (ppb)

Caroline Station		SO ₂ (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January	710	0.6	1.6	Jan 13	7.4	Jan 13 16:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
February	655	0.6	2.4	Feb 29	7.6	Feb 29 23:00	99.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
March	710	0.7	1.6	Mar 01	5.6	Mar 01 05:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
April	687	0.6	1.3	Apr 20	6.1	Apr 20 10:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
May	701	0.7	2.3	May 16	23.3	May 15 18:00	99.6	0	0	0	99.86	0.14	0.00	0.00	0.00	0.00
June	685	0.5	1.0	Jun 13	3.4	Jun 13 17:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
July	707	0.5	0.9	Jul 06	4.1	Jul 06 22:00	99.7	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
August	696	0.6	1.1	Aug 31	5.4	Aug 31 10:00	98.3	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
September	684	0.7	2.2	Sep 11	9.8	Sep 11 21:00	99.7	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
October	704	0.7	1.8	Oct 21	18.0	Oct 21 22:00	99.3	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
November	685	0.8	1.5	Nov 22	7.5	Nov 22 07:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
December	709	0.9	1.6	Dec 22	5.7	Dec 13 13:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
Annual	8333	0.7	2.4	Feb 29	23.3	May 15 18:00	99.6	0	0	0	99.99	0.01	0.00	0.00	0.00	0.00

1.3 Parkland Airshed Management Zone – Crestomere SO₂ Sulphur Dioxide (ppb)

Martha Station - Crestomere				SO ₂ (ppb)							2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January																
February																
March																
April																
May	467	0.6	1.4	May 18	4.0	May 14 08:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
June	76	0.5	0.8	Jun 02	2.2	Jun 02 12:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
July																
August																
September																
October																
November	56	1.5	3.1	Nov 30	10.4	Nov 30 13:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
December	707	0.8	3.5	Dec 08	28.5	Dec 08 00:00	100.0	0	0	0	99.86	0.14	0.00	0.00	0.00	0.00
Annual	1306	0.7	3.5	Dec 08	28.5	Dec 08 00:00	100.0	0	0	0	99.92	0.08	0.00	0.00	0.00	0.00

1.4 Parkland Airshed Management Zone – Crossfield-Carstairs SO₂ Sulphur Dioxide (ppb)

McCoy Station - Crossfield-Carstairs											SO ₂ (ppb)						2012
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO			Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340	
January																	
February	608	0.6	1.4	Feb 07	10.0	Feb 07 22:00	96.4	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
March	705	0.4	1.5	Mar 01	5.3	Mar 13 01:00	99.6	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
April	684	0.3	2.0	Apr 29	8.5	Apr 19 10:00	99.9	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
May	702	0.2	0.8	May 28	8.1	May 28 05:00	99.3	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
June	98	0.7	1.1	Jun 04	9.7	Jun 04 11:00	99.1	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
July																	
August																	
September																	
October																	
November																	
December																	
Annual	2797	0.4	2.0	Apr 29	10.0	Feb 07 22:00	98.8	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	

1.5 Parkland Airshed Management Zone – Delburne SO₂ Sulphur Dioxide (ppb)

Martha Station - Delburne			SO ₂ (ppb)								2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January																
February																
March	539	1.6	9.1	Mar 09	49.0	Mar 09 17:00	99.5	0	0	0	97.96	2.04	0	0	0	0
April	29	0.6	0.6	Apr 01	2.0	Apr 02 06:00	100.0	0	0	0	100	0	0	0	0	0
May																
June																
July																
August																
September	79	1.4	2.8	Sep 30	12.4	Sep 30 15:00	100.0	0	0	0	100	0	0	0	0	0
October	701	0.9	6.5	Oct 01	43.6	Oct 01 15:00	99.2	0	0	0	99.43	0.57	0	0	0	0
November	548	0.8	3.1	Nov 14	30.2	Nov 14 05:00	92.3	0	0	0	99.82	0.18	0	0	0	0
December																
Annual	1896	1.1	9.1	Mar 09	49.0	Mar 09 17:00	97.9	0	0	0	99.15	0.85	0	0	0	0

1.6 Parkland Airshed Management Zone – Garrington SO₂ Sulphur Dioxide (ppb)

Martha Station - Garrington			SO ₂ (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340	
January																	
February																	
March																	
April	608	0.4	0.7	Apr 23	2.7	Apr 08 00:00	99.5	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
May	145	0.3	0.4	May 04	2.0	May 04 10:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
June																	
July																	
August																	
September																	
October																	
November																	
December																	
Annual	753	0.4	0.7	Apr 23	2.7	Apr 08 00:00	99.8	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	

1.7 Parkland Airshed Management Zone – Lacombe SO₂ Sulphur Dioxide (ppb)

McCoy Station - Lacombe		SO ₂ (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January																
February																
March																
April																
May																
June	520	0.2	0.7	Jun 29	3.7	Jun 26 17:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
July	708	0.2	0.5	Jul 28	2.7	Jul 24 10:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
August	707	0.3	0.8	Aug 23	2.7	Aug 09 10:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
September	686	0.4	1.1	Sep 22	5.4	Sep 22 11:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
October	699	0.5	2.8	Oct 30	13.1	Oct 30 23:00	99.2	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
November	607	0.7	2.2	Nov 02	5.9	Nov 22 11:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
December																
Annual	3927	0.4	2.8	Oct 30	13.1	Oct 30 23:00	99.6	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00

1.8 Parkland Airshed Management Zone – Lancaster SO₂ Sulphur Dioxide (ppb)

McCoy Station - Lancaster		SO ₂ (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January																
February																
March																
April																
May																
June																
July																
August																
September																
October																
November	33	1.9	2.5	Nov 30	9.0	Nov 30 15:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
December	708	0.8	2.7	Dec 08	10.4	Dec 02 13:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
Annual	741	0.8	2.7	Dec 08	10.4	Dec 02 13:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00

1.9 Parkland Airshed Management Zone – Mirror SO₂ Sulphur Dioxide (ppb)

Martha Station - Mirror		SO ₂ (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January	583	0.7	1.9	Jan 21	6.0	Jan 15 16:00	95.6	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
February	148	1.1	2.3	Feb 04	8.3	Feb 04 17:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
March																
April																
May																
June	539	0.6	1.0	Jun 21	6.8	Jun 28 09:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
July	683	0.5	0.9	Jul 27	3.3	Jul 10 10:00	97.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
August	713	0.7	2.4	Aug 20	11.3	Aug 23 10:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
September	78	0.5	0.9	Sep 01	2.9	Sep 01 09:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
October																
November																
December																
Annual	2744	0.7	2.4	Aug 20	11.3	Aug 23 10:00	98.2	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00

1.10 Parkland Airshed Management Zone – Red Deer Riverside SO₂ Sulphur Dioxide (ppb)

Red Deer Riverside Station											SO ₂ (ppb)						2012
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340	
January	710	0.4	0.6	Jan 22	1.5	Jan 02 13:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
February	661	0.3	0.6	Feb 28	3.6	Feb 06 13:00	99.7	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
March	641	0.4	1.1	Mar 01	3.7	Mar 01 13:00	90.6	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
April	686	0.2	0.5	Apr 23	2.2	Apr 11 18:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
May	707	0.3	0.6	May 16	1.9	May 16 10:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
June	686	0.2	0.5	Jun 29	1.6	Jun 29 12:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
July	707	0.4	1.2	Jul 13	2.6	Jul 13 20:00	99.7	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
August	709	0.4	0.6	Aug 28	1.7	Aug 09 05:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
September	686	0.3	0.5	Sep 22	1.7	Sep 15 20:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
October	708	0.2	0.4	Oct 05	0.8	Oct 04 08:00	99.9	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
November	683	0.2	0.4	Nov 30	1.1	Nov 30 16:00	99.9	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
December	708	0.3	0.6	Dec 28	2.0	Dec 02 13:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
Annual	8292	0.3	1.2	Jul 13	3.7	Mar 01 13:00	99.1	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	

1.11 Parkland Airshed Management Zone – West Sundre SO₂ Sulphur Dioxide (ppb)

McCoy Station - West Sundre		SO ₂ (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO			Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	30-Day	0 - 20	20 - 60	60 - 110	110 - 170	170 - 340	>340
January	694	0.3	1.1	Jan 14	9.4	Jan 04 23:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
February																
March																
April																
May																
June																
July																
August																
September																
October																
November																
December																
Annual	694	0.3	1.1	Jan 14	9.4	Jan 04 23:00	100.0	0	0	0	100.00	0.00	0.00	0.00	0.00	0.00

2. TRS & H₂S Frequency & Exceedence Summary Tables

2.1 Parkland Airshed Management Zone – Bluffton TRS Total Reduced Sulphide (ppb)

Martha Station - Bluffton			TRS (ppb)							2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10
January															
February	446	0.3	0.7	Feb 29	1.5	Feb 29 15:00	100.0	0	0	99.10	0.90	0.00	0.00	0.00	0.00
March	126	0.3	0.5	Mar 01	3.4	Mar 01 12:00	100.0	0	0	99.21	0.00	0.79	0.00	0.00	0.00
April															
May															
June															
July															
August															
September	267	0.3	0.5	Sep 08	1.2	Sep 17 19:00	88.5	0	0	99.63	0.37	0.00	0.00	0.00	0.00
October															
November															
December															
Annual	839	0.3	0.7	Feb 29	3.4	Mar 01 12:00	96.2	0	0	99.28	0.60	0.12	0.00	0.00	0.00

2.2 Parkland Airshed Management Zone – Caroline TRS Total Reduced Sulphide (ppb)

Caroline Station		TRS (ppb)										2012			
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10
January	704	0.4	0.9	Jan 21	1.5	Jan 13 10:00	99.5	0	0	96.59	3.41	0.00	0.00	0.00	0.00
February	631	0.4	0.6	Feb 19	1.2	Feb 17 15:00	95.8	0	0	99.84	0.16	0.00	0.00	0.00	0.00
March	708	0.4	0.7	Mar 13	1.2	Mar 03 14:00	100.0	0	0	99.01	0.99	0.00	0.00	0.00	0.00
April	241	0.5	0.7	Apr 03	1.0	Apr 10 10:00	35.7	0	0	99.17	0.83	0.00	0.00	0.00	0.00
May	505	0.8	1.4	May 13	5.0	May 13 22:00	72.9	0	0	76.83	22.38	0.59	0.20	0.00	0.00
June	673	0.7	1.0	Jun 17	1.6	Jun 23 17:00	99.4	0	0	85.14	14.86	0.00	0.00	0.00	0.00
July	682	0.7	1.5	Jul 14	2.2	Jul 14 01:00	96.9	0	0	92.38	7.62	0.00	0.00	0.00	0.00
August	699	0.6	0.7	Aug 09	3.0	Aug 09 01:00	98.8	0	0	98.71	1.14	0.14	0.00	0.00	0.00
September	686	0.6	0.8	Sep 11	2.6	Sep 11 10:00	100.0	0	0	96.79	3.06	0.15	0.00	0.00	0.00
October	704	0.6	0.8	Oct 12	2.2	Oct 12 16:00	99.3	0	0	97.87	2.13	0.00	0.00	0.00	0.00
November	685	0.3	0.5	Nov 03	1.3	Nov 05 04:00	100.0	0	0	99.27	0.73	0.00	0.00	0.00	0.00
December	708	0.3	0.6	Dec 27	1.3	Dec 10 00:00	100.0	0	0	99.44	0.56	0.00	0.00	0.00	0.00
Annual	7626	0.5	1.5	Jul 14	5.0	May 13 22:00	91.6	0	0	95.25	4.67	0.07	0.01	0.00	0.00

2.3 Parkland Airshed Management Zone – Crestomere TRS Total Reduced Sulphide (ppb)

Martha Station - Crestomere			TRS (ppb)							2012						
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Number of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10	
January																
February																
March																
April																
May	467	0.4	1.0	May 15	2.2	May 15 13:00	100.0	0	0	96.79	3.21	0.00	0.00	0.00	0.00	
June	76	0.3	0.4	Jun 02	1.0	Jun 04 07:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
July																
August																
September																
October																
November																
December	712	0.5	1.1	Dec 07	4.2	Dec 08 00:00	99.9	0	0	94.24	5.62	0.14	0.00	0.00	0.00	
Annual	1282	0.4	1.1	Dec 07	4.2	Dec 08 00:00	100.0	0	0	95.21	4.71	0.08	0.00	0.00	0.00	

2.4 Parkland Airshed Management Zone – Crossfield-Carstairs TRS Total Reduced Sulphide (ppb)

McCoy Station - Crossfield-Carstairs											TRS (ppb)					2012
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10	
January																
February	585	0.3	0.5	Feb 27	1.5	Feb 07 22:00	96.2	0	0	98.97	1.03	0.00	0.00	0.00	0.00	
March	677	0.3	0.5	Mar 28	1.1	Mar 20 10:00	97.3	0	0	99.56	0.44	0.00	0.00	0.00	0.00	
April	674	0.4	1.6	Apr 21	5.6	Apr 12 15:00	99.4	0	0	89.61	8.75	1.48	0.15	0.00	0.00	
May	696	0.2	0.5	May 02	1.3	May 20 05:00	99.3	0	0	98.99	1.01	0.00	0.00	0.00	0.00	
June	119	0.2	0.5	Jun 02	0.8	Jun 02 22:00	99.2	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
July																
August																
September																
October																
November																
December																
Annual	2751	0.3	1.6	Apr 21	5.6	Apr 12 15:00	98.3	0	0	97.36	2.17	0.43	0.04	0.00	0.00	

2.5 Parkland Airshed Management Zone – Delburne TRS Total Reduced Sulphide (ppb)

Martha Station - Delburne			TRS (ppb)							2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10
January															
February															
March	534	0.3	0.9	Mar 09	2.7	Mar 09 17:00	99.3	0	0	95.88	3.93	0.19	0.00	0.00	0.00
April	32	0.4	0.3	Apr 01	0.8	Apr 02 11:00	92.7	0	0	100.00	0.00	0.00	0.00	0.00	0.00
May															
June															
July															
August															
September	81	0.4	0.5	Sep 30	1.6	Sep 30 08:00	100.0	0	0	98.77	1.23	0.00	0.00	0.00	0.00
October	697	0.4	1.1	Oct 01	4.3	Oct 01 15:00	98.7	0	0	96.99	2.58	0.43	0.00	0.00	0.00
November	605	0.4	1.3	Nov 26	9.6	Nov 26 18:00	100.0	0	0	94.88	4.46	0.33	0.00	0.33	0.00
December															
Annual	1949	0.4	1.3	Nov 26	9.6	Nov 26 18:00	98.1	0	0	96.13	3.46	0.31	0.00	0.10	0.00

2.6 Parkland Airshed Management Zone – Garrington TRS Total Reduced Sulphide (ppb)

Martha Station - Garrington			TRS (ppb)						2012							
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10	
January																
February																
March																
April	609	0.3	0.7	Apr 11	2.5	Apr 08 14:00	99.7	0	0	95.24	4.60	0.16	0.00	0.00	0.00	
May	147	0.3	0.7	May 04	2.2	May 04 16:00	98.7	0	0	92.52	7.48	0.00	0.00	0.00	0.00	
June																
July																
August																
September																
October																
November																
December																
Annual	756	0.3	0.7	May 04	2.5	Apr 08 14:00	99.2	0	0	94.71	5.16	0.13	0.00	0.00	0.00	

2.7 Parkland Airshed Management Zone – Lacombe TRS Total Reduced Sulphide (ppb)

McCoy Station - Lacombe			TRS (ppb)							2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10
January															
February															
March															
April															
May															
June	514	0.4	0.9	Jun 26	4.9	Jun 26 06:00	100.0	0	0	90.08	6.23	3.70	0.00	0.00	0.00
July	707	0.6	1.4	Jul 22	7.2	Jul 22 05:00	99.9	0	0	82.89	11.60	4.95	0.57	0.00	0.00
August	706	0.6	1.1	Aug 06	4.3	Aug 09 07:00	99.9	0	0	81.16	17.28	1.56	0.00	0.00	0.00
September	682	0.5	1.4	Sep 27	5.8	Sep 27 21:00	100.0	0	0	82.84	16.57	0.44	0.15	0.00	0.00
October	707	0.3	1.2	Oct 23	5.6	Oct 23 09:00	99.7	0	0	95.05	4.38	0.42	0.14	0.00	0.00
November	629	0.3	0.9	Nov 03	4.9	Nov 03 13:00	100.0	0	0	98.73	0.95	0.32	0.00	0.00	0.00
December															
Annual	3945	0.5	1.4	Sep 27	7.2	Jul 22 05:00	99.9	0	0	88.31	9.64	1.89	0.16	0.00	0.00

2.8 Parkland Airshed Management Zone – Lancaster TRS Total Reduced Sulphide (ppb)

McCoy Station - Lancaster		TRS (ppb)										2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10	
January																
February																
March																
April																
May																
June																
July																
August																
September																
October																
November	34	0.1	0.2	Nov 30	0.2	Nov 30 12:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00	
December	706	0.2	0.5	Dec 06	1.2	Dec 06 09:00	99.6	0	0	99.72	0.28	0.00	0.00	0.00	0.00	
Annual	740	0.2	0.5	Dec 06	1.2	Dec 06 09:00	99.8	0	0	99.73	0.27	0.00	0.00	0.00	0.00	

2.9 Parkland Airshed Management Zone – Mirror TRS Total Reduced Sulphide (ppb)

Martha Station - Mirror			TRS (ppb)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10
January	558	0.4	0.6	Jan 13	3.1	Jan 15 21:00	95.4	0	0	97.49	2.15	0.36	0.00	0.00	0.00
February	169	0.4	0.6	Feb 01	1.9	Feb 01 17:00	100.0	0	0	97.04	2.96	0.00	0.00	0.00	0.00
March															
April															
May															
June	513	1.7	7.2	Jun 26	43.3	Jun 26 04:00	99.8	4	18	67.64	16.37	7.80	3.12	1.17	3.90
July	674	2.5	6.0	Jul 01	35.8	Jul 10 06:00	96.4	5	35	49.70	23.74	12.76	5.19	2.67	5.93
August	713	1.7	6.1	Aug 17	41.1	Aug 13 06:00	100.0	4	22	56.94	25.25	10.10	2.38	1.54	3.79
September	99	0.6	1.2	Sep 04	6.9	Sep 04 22:00	100.0	0	0	90.91	5.05	2.02	2.02	0.00	0.00
October															
November															
December															
Annual	2726	1.6	7.2	Jun 26	43.3	Jun 26 04:00	98.6	13	75	69.19	16.36	7.41	2.57	1.28	3.19

2.10 Parkland Airshed Management Zone – Red Deer Riverside TRS Total Reduced Sulphide (ppb)

Red Deer Riverside Station								H ₂ S (ppb)			2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10	
January	710	0.3	0.7	Jan 14	3.8	Jan 14 04:00	100.0	0	0	97.46	2.11	0.42	0.00	0.00	0.00	
February	662	0.3	0.6	Feb 29	1.9	Feb 03 03:00	99.7	0	0	98.64	1.36	0.00	0.00	0.00	0.00	
March	658	0.2	0.4	Mar 10	1.4	Mar 10 05:00	93.4	0	0	98.94	1.06	0.00	0.00	0.00	0.00	
April	686	0.2	0.5	Apr 12	3.3	Apr 30 07:00	100.0	0	0	97.67	2.04	0.29	0.00	0.00	0.00	
May	707	0.2	0.7	May 16	2.8	May 09 06:00	100.0	0	0	95.19	4.67	0.14	0.00	0.00	0.00	
June	686	0.4	1.6	Jun 26	8.0	Jun 26 07:00	100.0	0	0	90.52	6.71	1.90	0.73	0.15	0.00	
July	689	0.5	1.0	Jul 29	6.0	Jul 02 06:00	99.3	0	0	87.23	10.30	2.03	0.44	0.00	0.00	
August	702	0.5	1.0	Aug 23	5.3	Aug 09 07:00	99.2	0	0	86.89	10.68	2.28	0.14	0.00	0.00	
September	687	0.5	0.9	Sep 14	4.9	Sep 22 23:00	100.0	0	0	88.06	11.06	0.87	0.00	0.00	0.00	
October	706	0.3	1.1	Oct 04	8.9	Oct 19 23:00	99.6	0	0	94.19	4.82	0.71	0.14	0.14	0.00	
November	686	0.3	0.6	Nov 16	2.1	Nov 19 19:00	99.9	0	0	98.10	1.90	0.00	0.00	0.00	0.00	
December	701	0.4	1.2	Dec 17	4.2	Dec 17 11:00	99.1	0	0	92.44	7.13	0.43	0.00	0.00	0.00	
Annual	8280	0.3	1.6	Jun 26	8.9	Oct 19 23:00	99.2	0	0	93.73	5.36	0.77	0.12	0.02	0.00	

2.11 Parkland Airshed Management Zone – West Sundre H₂S Hydrogen Sulphide (ppb)

McCoy Station - West Sundre			TRS (ppb)						2012						
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 1	1 - 2.5	2.5 - 5	5 - 7.5	7.5 - 10	>10
January	696	0.4	0.7	Jan 19	2.0	Jan 14 19:00	99.9	0	0	97.27	2.73	0.00	0.00	0.00	0.00
February															
March															
April															
May															
June															
July															
August															
September															
October															
November															
December															
Annual	696	0.4	0.7	Jan 19	2.0	Jan 14 19:00	8.5	0	0	97.27	2.73	0.00	0.00	0.00	0.00

3. NO₂ Frequency & Exceedence Summary Tables

3.1 Parkland Airshed Management Zone – Bluffton NO₂ Nitrogen Dioxide (ppb)

Martha Station - Bluffton											NO ₂ (ppb)					2012
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210		
January																
February	468	5.5	16.0	Feb 29	32.4	Feb 29 19:00	100.0	0	0	99.36	0.64	0.00	0.00	0.00		
March	123	3.7	7.2	Mar 02	15.6	Mar 01 06:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00		
April																
May																
June																
July																
August																
September	322	3.2	4.7	Sep 14	14.0	Sep 19 19:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00		
October																
November																
December																
Annual	913	4.4	16.0	Feb 29	32.4	Feb 29 19:00	100.0	0	0	99.67	0.33	0.00	0.00	0.00		

3.2 Parkland Airshed Management Zone – Caroline NO₂ Nitrogen Dioxide (ppb)

Caroline Station		NO ₂ (ppb)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range				
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210
January	684	2.6	7.1	Jan 20	19.3	Jan 20 20:00	97.6	0	0	100.00	0.00	0.00	0.00	0.00
February	657	3.7	8.0	Feb 29	22.3	Feb 29 22:00	99.6	0	0	100.00	0.00	0.00	0.00	0.00
March	706	2.5	4.5	Mar 01	12.3	Mar 01 01:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
April	637	2.0	3.9	Apr 12	12.6	Apr 09 21:00	94.2	0	0	100.00	0.00	0.00	0.00	0.00
May	701	1.4	3.5	May 15	12.0	May 15 03:00	99.9	0	0	100.00	0.00	0.00	0.00	0.00
June	675	1.1	2.2	Jun 05	7.2	Jun 28 23:00	99.7	0	0	100.00	0.00	0.00	0.00	0.00
July	703	0.8	2.3	Jul 29	10.9	Jul 31 06:00	99.7	0	0	100.00	0.00	0.00	0.00	0.00
August	695	0.8	2.9	Aug 27	6.9	Aug 27 01:00	98.5	0	0	100.00	0.00	0.00	0.00	0.00
September	683	1.3	2.4	Sep 08	7.0	Sep 25 05:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
October	702	2.2	5.5	Oct 31	16.0	Oct 20 00:00	99.3	0	0	100.00	0.00	0.00	0.00	0.00
November	680	3.8	6.3	Nov 21	20.0	Nov 23 08:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
December	707	5.4	11.4	Dec 26	26.2	Dec 20 19:00	100.0	0	0	99.58	0.42	0.00	0.00	0.00
Annual	8230	2.3	11.4	Dec 26	26.2	Dec 20 19:00	99.0	0	0	99.96	0.04	0.00	0.00	0.00

3.3 Parkland Airshed Management Zone – Crestomere NO₂ Nitrogen Dioxide (ppb)

Martha Station - Crestomere											NO ₂ (ppb)					2012
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210		
January																
February																
March																
April																
May	374	3.4	4.6	May 20	12.4	May 25 05:00	81.9	0	0	100.00	0.00	0.00	0.00	0.00		
June	76	4.2	5.3	Jun 02	16.0	Jun 02 02:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00		
July																
August																
September																
October																
November	43	2.2	1.4	Nov 29	10.7	Nov 30 09:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00		
December	713	9.8	21.3	Dec 07	36.3	Dec 19 18:00	100.0	0	0	99.02	0.98	0.00	0.00	0.00		
Annual	1206	7.2	21.3	Dec 07	36.3	Dec 19 18:00	95.5	0	0	99.39	0.61	0.00	0.00	0.00		

3.4 Parkland Airshed Management Zone – Crossfield-Carstairs NO₂ Nitrogen Dioxide (ppb)

McCoy Station - Crossfield-Carstairs											NO ₂ (ppb)					2012
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range						
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210		
January																
February	606	6.9	14.1	Feb 27	36.0	Feb 27 23:00	96.4	0	0	96.86	3.14	0.00	0.00	0.00		
March	698	4.8	11.0	Mar 01	36.8	Mar 06 23:00	99.1	0	0	99.14	0.86	0.00	0.00	0.00		
April	682	3.3	7.9	Apr 12	27.0	Apr 11 22:00	100.0	0	0	99.71	0.29	0.00	0.00	0.00		
May	686	2.6	3.8	May 08	21.0	May 06 22:00	99.3	0	0	100.00	0.00	0.00	0.00	0.00		
June	98	2.8	3.7	Jun 04	9.2	Jun 04 23:00	99.1	0	0	100.00	0.00	0.00	0.00	0.00		
July																
August																
September																
October																
November																
December																
Annual	2770	4.3	14.1	Feb 27	36.8	Mar 06 23:00	98.8	0	0	98.86	1.14	0.00	0.00	0.00		

3.5 Parkland Airshed Management Zone – Delburne NO₂ Nitrogen Dioxide (ppb)

Martha Station - Delburne		NO ₂ (ppb)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range				
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210
January														
February														
March	537	3.3	6.8	Mar 26	16.0	Mar 10 08:00	99.5	0	0	100.00	0.00	0.00	0.00	0.00
April	29	2.5	2.1	Apr 01	5.8	Apr 02 04:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
May														
June														
July														
August														
September	79	1.9	2.7	Sep 28	7.7	Sep 30 02:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
October	697	2.7	7.6	Oct 19	19.0	Oct 19 23:00	99.4	0	0	100.00	0.00	0.00	0.00	0.00
November	605	5.8	17.4	Nov 16	28.0	Nov 16 05:00	100.0	0	0	99.67	0.33	0.00	0.00	0.00
December														
Annual	1947	3.8	17.4	Nov 16	27.9	Nov 16 05:00	99.8	0	0	99.90	0.10	0.00	0.00	0.00

3.6 Parkland Airshed Management Zone – Garrington NO₂ Nitrogen Dioxide (ppb)

Martha Station - Garrington							NO ₂ (ppb)				2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210	
January															
February															
March															
April	608	2.4	5.2	Apr 11	19.9	Apr 08 22:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	
May	145	1.7	3.0	May 03	10.6	May 04 02:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	
June															
July															
August															
September															
October															
November															
December															
Annual	753	2.3	5.2	Apr 11	19.9	Apr 08 22:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	

3.7 Parkland Airshed Management Zone – Lacombe NO₂ Nitrogen Dioxide (ppb)

McCoy Station - Lacombe		NO ₂ (ppb)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range				
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210
January														
February														
March														
April														
May														
June	518	4.9	8.1	Jun 26	19.7	Jun 11 22:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
July	696	4.8	7.5	Jul 30	18.5	Jul 27 07:00	98.8	0	0	100.00	0.00	0.00	0.00	0.00
August	706	6.2	11.2	Aug 27	26.4	Aug 17 21:00	100.0	0	0	99.86	0.14	0.00	0.00	0.00
September	682	9.2	16.7	Sep 24	34.0	Sep 24 19:00	100.0	0	0	96.04	3.96	0.00	0.00	0.00
October	704	8.1	15.0	Oct 19	33.0	Oct 06 20:00	99.9	0	0	98.86	1.14	0.00	0.00	0.00
November	607	17.1	35.7	Nov 15	49.7	Nov 15 18:00	100.0	0	0	71.33	28.67	0.00	0.00	0.00
December														
Annual	3913	8.3	35.7	Nov 15	49.7	Nov 15 18:00	99.9	0	0	94.69	5.31	0.00	0.00	0.00

3.8 Parkland Airshed Management Zone – Lancaster NO₂ Nitrogen Dioxide (ppb)

McCoy Station - Lancaster							NO ₂ (ppb)			2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range				
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210
January														
February														
March														
April														
May														
June														
July														
August														
September														
October														
November	28	9.7	11.0	Nov 30	17.8	Nov 30 17:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
December	705	18.6	30.4	Dec 06	47.7	Dec 31 18:00	100.0	0	0	71.63	28.37	0.00	0.00	0.00
Annual	733	18.3	30.4	Dec 06	47.7	Dec 31 18:00	100.0	0	0	72.68	27.32	0.00	0.00	0.00

3.9 Parkland Airshed Management Zone – Mirror NO₂ Nitrogen Dioxide (ppb)

Martha Station - Mirror		NO ₂ (ppb)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range				
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210
January	579	9.5	15.7	Jan 13	63.6	Jan 15 21:00	95.6	0	0	98.10	1.55	0.35	0.00	0.00
February	148	10.9	16.4	Feb 01	47.3	Feb 01 17:00	100.0	0	0	97.97	2.03	0.00	0.00	0.00
March														
April														
May														
June	537	4.9	6.7	Jun 29	19.4	Jun 29 13:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
July	684	5.7	9.8	Jul 12	32.6	Jul 25 11:00	97.6	0	0	98.83	1.17	0.00	0.00	0.00
August	713	6.1	9.9	Aug 17	26.7	Aug 29 12:00	100.0	0	0	99.44	0.56	0.00	0.00	0.00
September	78	5.1	5.8	Sep 01	19.2	Sep 04 09:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00
October														
November														
December														
Annual	2739	6.7	16.4	Feb 01	63.6	Jan 15 21:00	98.9	0	0	99.05	0.88	0.07	0.00	0.00

3.10 Parkland Airshed Management Zone – Red Deer Riverside NO₂ Nitrogen Dioxide (ppb)

Red Deer Riverside Station								NO ₂ (ppb)			2012				
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210	
January	703	19.9	33.1	Jan 31	47.9	Jan 25 09:00	100.0	0	0	60.74	39.26	0.00	0.00	0.00	
February	655	17.2	31.4	Feb 29	45.7	Feb 29 11:00	99.7	0	0	72.06	27.94	0.00	0.00	0.00	
March	661	11.2	22.2	Mar 02	45.4	Mar 08 22:00	93.6	0	0	88.50	11.50	0.00	0.00	0.00	
April	684	5.3	9.4	Apr 04	30.2	Apr 09 08:00	100.0	0	0	99.71	0.29	0.00	0.00	0.00	
May	703	4.8	8.6	May 08	21.0	May 07 05:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	
June	678	4.6	8.6	Jun 26	18.8	Jun 05 15:00	99.9	0	0	100.00	0.00	0.00	0.00	0.00	
July	702	3.9	6.3	Jul 12	18.0	Jul 03 16:00	99.7	0	0	100.00	0.00	0.00	0.00	0.00	
August	707	4.8	7.0	Aug 20	15.3	Aug 10 07:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	
September	685	6.8	12.4	Sep 24	25.0	Sep 18 11:00	100.0	0	0	100.00	0.00	0.00	0.00	0.00	
October	707	7.6	14.3	Oct 19	25.0	Oct 17 23:00	99.9	0	0	99.86	0.14	0.00	0.00	0.00	
November	669	15.5	29.9	Nov 15	43.1	Nov 15 11:00	100.0	0	0	79.07	20.93	0.00	0.00	0.00	
December	685	21.1	36.4	Dec 28	49.1	Dec 28 20:00	97.5	0	0	62.92	37.08	0.00	0.00	0.00	
Annual	8239	10.1	36.4	Dec 28	49.1	Dec 28 20:00	99.2	0	0	88.62	11.38	0.00	0.00	0.00	

3.11 Parkland Airshed Management Zone – West Sundre NO₂ Nitrogen Dioxide (ppb)

McCoy Station - West Sundre		NO ₂ (ppb)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range				
								24-Hr	1-Hr	0 - 25	25 - 50	50 - 110	110 - 210	>210
January	693	7.5	13.7	Jan 12	31.5	Jan 13 19:00	100.0	0	0	97.84	2.16	0.00	0.00	0.00
February														
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														
Annual	693	7.5	13.7	Jan 12	31.5	Jan 13 19:00	100.0	0	0	97.84	2.16	0.00	0.00	0.00

4. PM_{2.5} Frequency & Exceedence Summary Tables

4.1 Parkland Airshed Management Zone – Bluffton PM_{2.5} Particulate Matter 2.5 (µg/m³)

Martha Station - Bluffton		PM _{2.5} (µg/m ³)										2012			
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range							
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30
January															
February	466	3.0	9.3	Feb 28	36.6	Feb 16 11:00	100.0	0	0	59.66	19.74	15.02	3.43	1.72	0.43
March	144	1.8	3.2	Mar 01	12.0	Mar 02 11:00	100.0	0	0	68.75	23.61	4.86	2.78	0.00	0.00
April															
May															
June															
July															
August															
September	314	4.8	9.9	Sep 17	69.5	Sep 17 19:00	100.0	0	0	44.27	28.03	18.47	4.78	2.55	1.91
October															
November															
December															
Annual	924	3.4	9.9	Sep 17	69.5	Sep 17 19:00	100.0	0	0	55.84	23.16	14.61	3.79	1.73	0.87

4.2 Parkland Airshed Management Zone – Caroline PM_{2.5} Particulate Matter 2.5 (µg/m³)

Caroline Station		PM _{2.5} (µg/m ³)										2012			
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO	AAAQG	Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30
January	743	1.7	5.5	Jan 21	19.5	Jan 09 10:00	100.0	0	0	67.03	27.05	5.11	0.67	0.13	0.00
February	692	2.4	9.1	Feb 10	22.0	Feb 27 18:00	100.0	0	0	62.57	23.99	9.83	2.89	0.72	0.00
March	741	2.5	6.6	Mar 07	31.0	Mar 06 00:00	100.0	0	0	58.97	27.67	10.12	2.56	0.54	0.13
April	210	2.7	4.5	Apr 01	9.8	Apr 01 06:00	29.6	0	0	43.33	46.19	10.48	0.00	0.00	0.00
May	506	5.7	11.4	May 15	22.8	May 19 23:00	69.2	0	0	15.42	42.89	33.20	7.31	1.19	0.00
June	702	3.0	10.8	Jun 05	19.5	Jun 08 03:00	98.2	0	0	51.00	30.20	15.24	3.13	0.43	0.00
July	742	7.5	17.9	Jul 12	26.3	Jul 16 14:00	100.0	0	0	17.92	26.55	30.86	18.06	6.60	0.00
August	718	8.3	15.4	Aug 28	28.7	Aug 27 13:00	97.3	0	0	11.56	25.21	35.52	19.92	7.80	0.00
September	710	7.6	18.9	Sep 23	63.0	Sep 19 21:00	99.4	0	0	18.17	30.14	28.87	14.93	7.61	0.28
October	712	5.3	14.4	Oct 31	23.2	Oct 10 00:00	96.0	0	0	28.09	33.43	26.54	10.25	1.69	0.00
November	717	5.1	17.8	Nov 02	47.0	Nov 19 23:00	100.0	0	0	44.49	25.38	13.95	9.48	6.00	0.70
December	724	5.1	21.2	Dec 01	34.4	Dec 01 12:00	97.7	0	0	50.28	17.82	13.54	10.08	7.87	0.41
Annual	7917	4.9	21.2	Dec 01	63.0	Sep 19 21:00	90.7	0	0	39.78	28.46	19.50	8.72	3.40	0.13

4.3 Parkland Airshed Management Zone – Crestomere PM_{2.5} Particulate Matter 2.5 (µg/m³)

Martha Station - Crestomere											PM _{2.5} (µg/m ³)					2012	
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range									
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30		
January																	
February																	
March																	
April																	
May	488	4.6	8.6	May 15	34.8	May 11 17:00	100.0	0	0	33.81	34.22	25	5.12	1.64	0.2		
June	102	4.6	7.8	Jun 04	40.9	Jun 04 09:00	100.0	0	0	34.31	37.25	21.57	4.9	0.98	0.98		
July																	
August																	
September																	
October																	
November	54	6.1	11.3	Nov 30	19.5	Nov 30 23:00	100.0	0	0	40.74	14.81	20.37	20.37	3.7	0		
December	743	5.3	18.6	Dec 01	64.1	Dec 01 16:00	99.9	0	0	40.38	25.71	16.96	12.65	3.77	0.54		
Annual	1387	5.0	18.6	Dec 01	64.1	Dec 01 16:00	100.0	0	0	37.89	30.08	20.23	8.65	2.71	0.45		

4.4 Parkland Airshed Management Zone – Crossfield-Carstairs PM_{2.5} Particulate Matter 2.5 (µg/m³)

McCoy Station - Crossfield-Carstairs											PM _{2.5} (µg/m ³)					2012	
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range							
								24-Hr	1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30		
January																	
February	517	3.6	8.6	Feb 10	33.2	Feb 06 20:00	81.5	0	0	43.52	34.82	15.86	4.45	1.16	0.19		
March	683	3.6	14.2	Mar 27	28.0	Mar 11 18:00	91.9	0	0	46.71	31.77	14.20	5.86	1.46	0.00		
April	716	5.0	11.9	Apr 25	18.4	Apr 25 19:00	100.0	0	0	22.63	41.90	28.49	6.84	0.14	0.00		
May	742	4.7	12.6	May 15	45.1	May 15 17:00	100.0	0	0	25.34	45.42	24.39	2.56	2.16	0.13		
June	125	6.5	11.4	Jun 05	22.6	Jun 05 21:00	96.9	0	0	14.40	37.60	35.20	9.60	3.20	0.00		
July																	
August																	
September																	
October																	
November																	
December																	
Annual	2783	4.4	14.2	Mar 27	45.1	May 15 17:00	94.1	0	0	34.89	37.15	21.19	5.23	1.45	0.09		

4.5 Parkland Airshed Management Zone – Delburne PM_{2.5} Particulate Matter 2.5 (µg/m³)

Martha Station - Delburne								PM _{2.5} (µg/m ³)								2012	
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range									
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30		
January																	
February																	
March	537	4.0	10.0	Mar 26	20.7	Mar 09 20:00	99.3	0	0	44.13	28.68	18.62	6.89	1.68	0		
April	55	2.6	3.0	Apr 02	6.9	Apr 02 12:00	100.0	0	0	45.45	49.09	5.45	0	0	0		
May																	
June																	
July																	
August																	
September	81	5.4	9.4	Sep 28	20.4	Sep 27 22:00	100.0	0	0	30.86	34.57	20.99	11.11	2.47	0		
October	683	2.8	10.4	Oct 29	55.5	Oct 07 14:00	93.3	0	0	57.69	25.18	12.45	3.22	1.32	0.15		
November	622	4.7	12.8	Nov 25	44.6	Nov 17 01:00	97.8	0	0	46.14	21.54	18.17	9.49	4.34	0.32		
December																	
Annual	1978	3.8	12.8	Nov 25	55.5	Oct 07 14:00	97.8	0	0	48.91	26.08	16.12	6.35	2.39	0.15		

4.6 Parkland Airshed Management Zone – Garrington PM_{2.5} Particulate Matter 2.5 (µg/m³)

Martha Station - Garrington								PM _{2.5} (µg/m ³)		2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range							
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30
January															
February															
March															
April	542	4.6	10.7	Apr 25	31.0	Apr 11 09:00	91.0	0	0	38.56	32.29	19.00	6.83	3.14	0.18
May	168	4.0	8.2	May 07	27.8	May 04 10:00	91.0	0	0	51.19	20.83	19.05	5.95	2.98	0.00
June															
July															
August															
September															
October															
November															
December															
Annual	710	4.4	10.7	Apr 25	31.0	Apr 11 09:00	91.0	0	0	41.55	29.58	19.01	6.62	3.10	0.14

4.7 Parkland Airshed Management Zone – Lacombe PM_{2.5} Particulate Matter 2.5 (µg/m³)

McCoy Station - Lacombe								PM _{2.5} (µg/m ³)								2012	
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range									
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30		
January																	
February																	
March																	
April																	
May																	
June	530	5.7	9.4	Jun 25	18.1	Jun 26 18:00	99.1	0	0	14.53	42.45	35.66	6.60	0.75	0.00		
July	728	9.1	35.6	Jul 13	81.4	Jul 13 22:00	98.4	1	1	13.74	29.67	29.95	15.38	8.24	3.02		
August	741	5.5	16.1	Aug 28	29.9	Aug 28 09:00	100.0	0	0	24.83	36.71	27.26	7.69	3.51	0.00		
September	707	6.3	17.6	Sep 23	33.5	Sep 23 02:00	98.5	0	0	31.97	26.31	21.78	12.45	7.36	0.14		
October	742	4.6	12.4	Oct 29	30.2	Oct 07 14:00	100.0	0	0	32.61	36.66	21.97	7.41	1.21	0.13		
November	653	9.7	17.5	Nov 25	34.0	Nov 19 21:00	99.1	0	0	11.03	18.84	31.55	25.73	12.40	0.46		
December																	
Annual	4101	6.8	35.6	Jul 13	81.4	Jul 13 22:00	99.2	1	1	22.14	31.55	27.33	12.68	5.62	0.67		

4.8 Parkland Airshed Management Zone – Lancaster PM_{2.5} Particulate Matter 2.5 (µg/m³)

McCoy Station - Lancaster								PM _{2.5} (µg/m ³)								2012	
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range									
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30		
January																	
February																	
March																	
April																	
May																	
June																	
July																	
August																	
September																	
October																	
November	31	10.9	12.5	Nov 30	17.9	Nov 30 13:00	100.0	0	0	3.23	9.68	32.26	45.16	9.68	0.00		
December	740	8.7	16.7	Dec 05	30.7	Dec 05 19:00	100.0	0	0	15.00	23.78	28.24	22.16	10.68	0.14		
Annual	771	8.8	16.7	Dec 05	30.7	Dec 05 19:00	100.0	0	0	14.55	23.25	28.31	23.12	10.65	0.13		

4.9 Parkland Airshed Management Zone – Mirror PM_{2.5} Particulate Matter 2.5 (µg/m³)

Martha Station - Mirror			PM _{2.5} (µg/m ³)										2012		
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	AAAQO		Percentage of Readings in Concentration Range					
								24-Hr	1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30
January	585	1.7	6.7	Jan 29	30.7	Jan 18 11:00	95.4	0	0	70.09	21.54	6.84	1.20	0.17	0.17
February	178	3.2	5.7	Feb 05	21.1	Feb 07 14:00	100.0	0	0	48.31	33.15	15.17	2.81	0.56	0.00
March															
April															
May															
June	518	5.9	10.0	Jun 10	30.3	Jun 19 22:00	96.3	0	0	23.36	31.27	32.43	9.85	2.90	0.19
July	722	12.9	60.4	Jul 13	168.6	Jul 14 00:00	97.5	2	17	12.60	21.75	29.22	19.25	10.66	6.51
August	744	5.6	13.4	Aug 28	29.7	Aug 28 12:00	91.7	0	0	30.24	31.59	23.39	10.22	4.57	0.00
September	35	2.5	5.9	Sep 04	11.3	Sep 01 09:00	91.7	0	0	60.00	25.71	8.57	5.71	0.00	0.00
October															
November															
December															
Annual	2782	6.5	60.4	Jul 13	168.6	Jul 14 00:00	97.3	2	17	34.29	26.89	22.39	10.06	4.60	1.76

4.10 Parkland Airshed Management Zone – Red Deer Riverside PM_{2.5} Particulate Matter 2.5 (µg/m³)

Red Deer Riverside Station			PM _{2.5} (µg/m ³)						2012						
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range							
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30
January	735	10.2	15.2	Jan 12	45.0	Jan 12 01:00	99.1	0	0	3.13	13.61	43.95	32.79	6.12	0.41
February	682	12.2	33.0	Feb 29	46.4	Feb 29 23:00	98.4	1	0	4.25	12.17	35.48	26.98	18.48	2.64
March	692	11.7	22.2	Mar 26	44.7	Mar 01 01:00	93.3	0	0	0.43	14.02	40.32	26.73	16.91	1.59
April	715	10.6	16.5	Apr 12	32.4	Apr 12 22:00	99.4	0	0	0.14	8.11	52.31	32.17	7.13	0.14
May	721	10.2	19.3	May 16	48.5	May 16 18:00	97.9	0	0	0.69	12.62	49.93	29.82	6.66	0.28
June	713	6.6	14.6	Jun 05	33.8	Jun 12 01:00	99.4	0	0	15.29	39.13	29.59	12.20	3.65	0.14
July	646	9.4	24.4	Jul 13	64.4	Jul 13 20:00	87.2	0	0	13.62	22.76	32.66	19.35	9.60	2.01
August	719	6.9	12.5	Aug 28	33.8	Aug 06 14:00	97.0	0	0	17.39	31.43	32.82	13.35	4.87	0.14
September	719	9.2	18.9	Sep 23	36.9	Sep 22 21:00	99.9	0	0	8.21	24.06	33.10	25.31	8.90	0.42
October	714	7.7	14.2	Oct 12	53.4	Oct 23 09:00	96.4	0	0	13.17	28.99	36.69	14.99	5.32	0.84
November	715	10.3	24.6	Nov 25	37.9	Nov 19 23:00	99.3	0	0	11.05	18.88	27.13	25.87	16.08	0.98
December	739	16.6	25.3	Dec 05	40.9	Dec 20 02:00	99.7	0	0	0.00	3.11	18.94	33.83	40.73	3.38
Annual	8510	10.2	33.0	Feb 29	64.4	Jul 13 20:00	97.2	1	0	7.27	19.11	35.98	24.52	12.04	1.08

4.11 Parkland Airshed Management Zone – West Sundre PM_{2.5} Particulate Matter 2.5 (µg/m³)

McCoy Station - West Sundre								PM _{2.5} (µg/m ³)		2012					
Month	# of Readings	Average	24-hr Maximum	Date	1-hr Maximum	Date	Operational Time (%)	Percentage of Readings in Concentration Range							
								AAAQO 24-Hr	AAAQG 1-Hr	0 - 2	2 - 6	6 - 11	11 - 17	17 - 30	> 30
January	690	6.2	11.2	Jan 22	50.8	Jan 22 17:00	93.8	0	0	17.97	40.87	28.55	7.97	3.48	1.16
February															
March															
April															
May															
June															
July															
August															
September															
October															
November															
December															
Annual	690	6.2	11.2	Jan 22	50.8	Jan 22 17:00	93.8	0	0	17.97	40.87	28.55	7.97	3.48	1.16

5. Wind Data Frequency Tables and Wind Roses

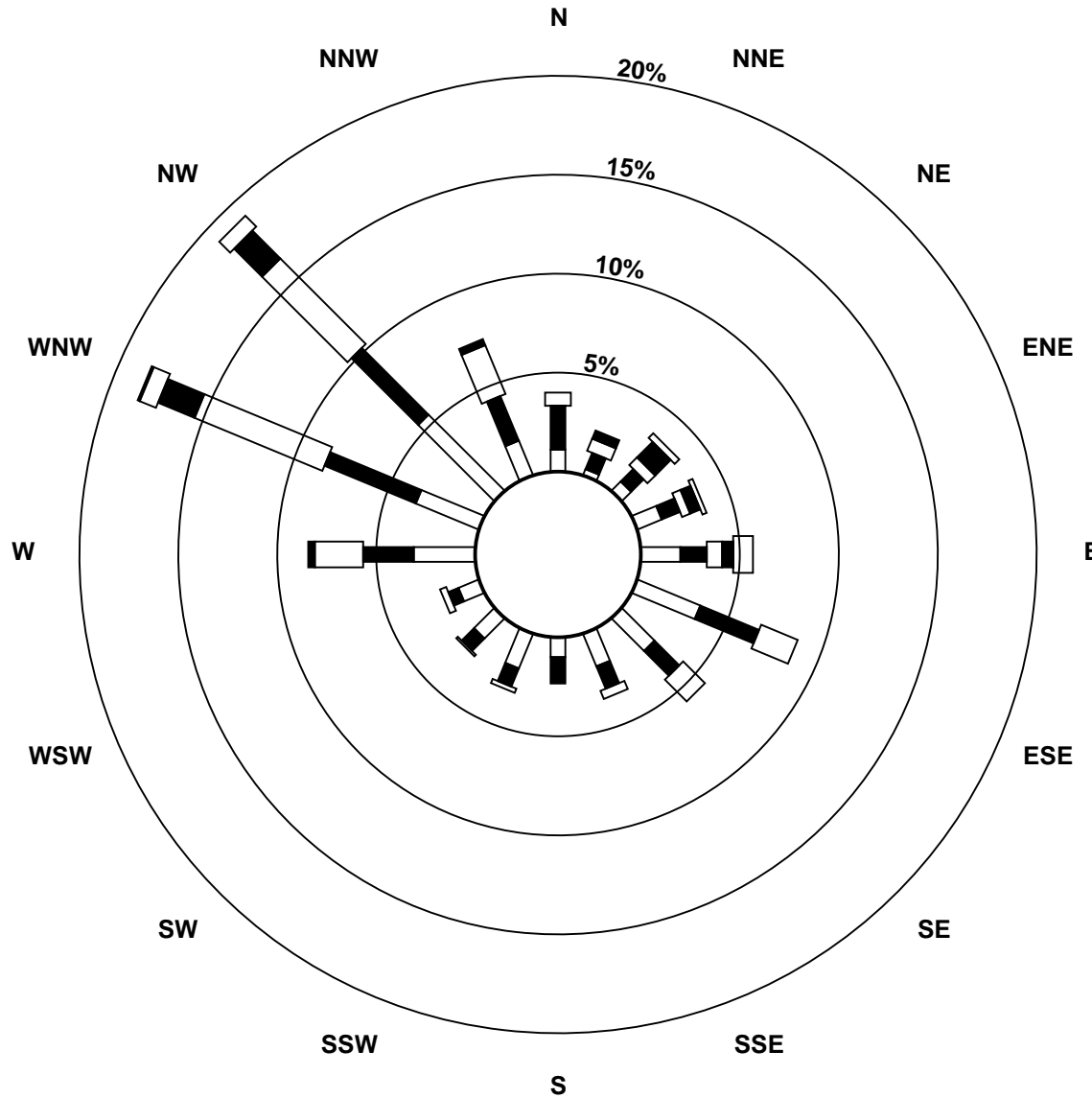
5.1 Parkland Airshed Management Zone – Bluffton Wind Speed and Wind Direction Frequency Table

Martha Station - Bluffton								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	36	1.11	2.22	0.67	0.00	0.00	0.00	4.00
NNE	21	0.33	0.89	0.67	0.44	0.00	0.00	2.33
NE	32	0.67	0.89	0.55	1.11	0.33	0.00	3.55
ENE	32	1.33	1.00	0.44	0.55	0.22	0.00	3.55
E	51	2.00	1.33	0.78	0.55	1.00	0.00	5.66
ESE	78	3.44	3.22	2.00	0.00	0.00	0.00	8.66
SE	51	2.33	1.78	1.55	0.00	0.00	0.00	5.66
SSE	31	1.78	1.22	0.44	0.00	0.00	0.00	3.44
S	21	1.00	1.33	0.00	0.00	0.00	0.00	2.33
SSW	28	1.89	1.00	0.22	0.00	0.00	0.00	3.11
SW	22	1.44	0.89	0.11	0.00	0.00	0.00	2.44
WSW	18	1.11	0.55	0.33	0.00	0.00	0.00	2.00
W	76	3.11	2.55	2.44	0.33	0.00	0.00	8.44
WNW	166	3.44	4.99	6.99	2.00	0.89	0.11	18.42
NW	172	5.44	4.77	6.10	2.00	0.78	0.00	19.09
NNW	66	1.89	2.44	2.66	0.33	0.00	0.00	7.33
Totals	901	32.30	31.08	25.97	7.33	3.22	0.11	100.00

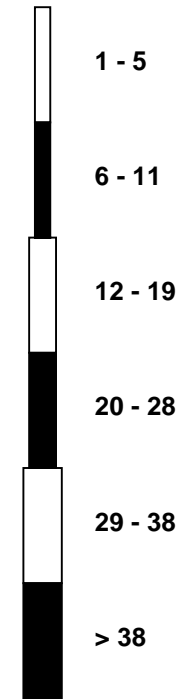
Wind Rose

Wind Speed (WS) (km/h)

Bluffton - 2012



Wind Speed Classes (km/h)



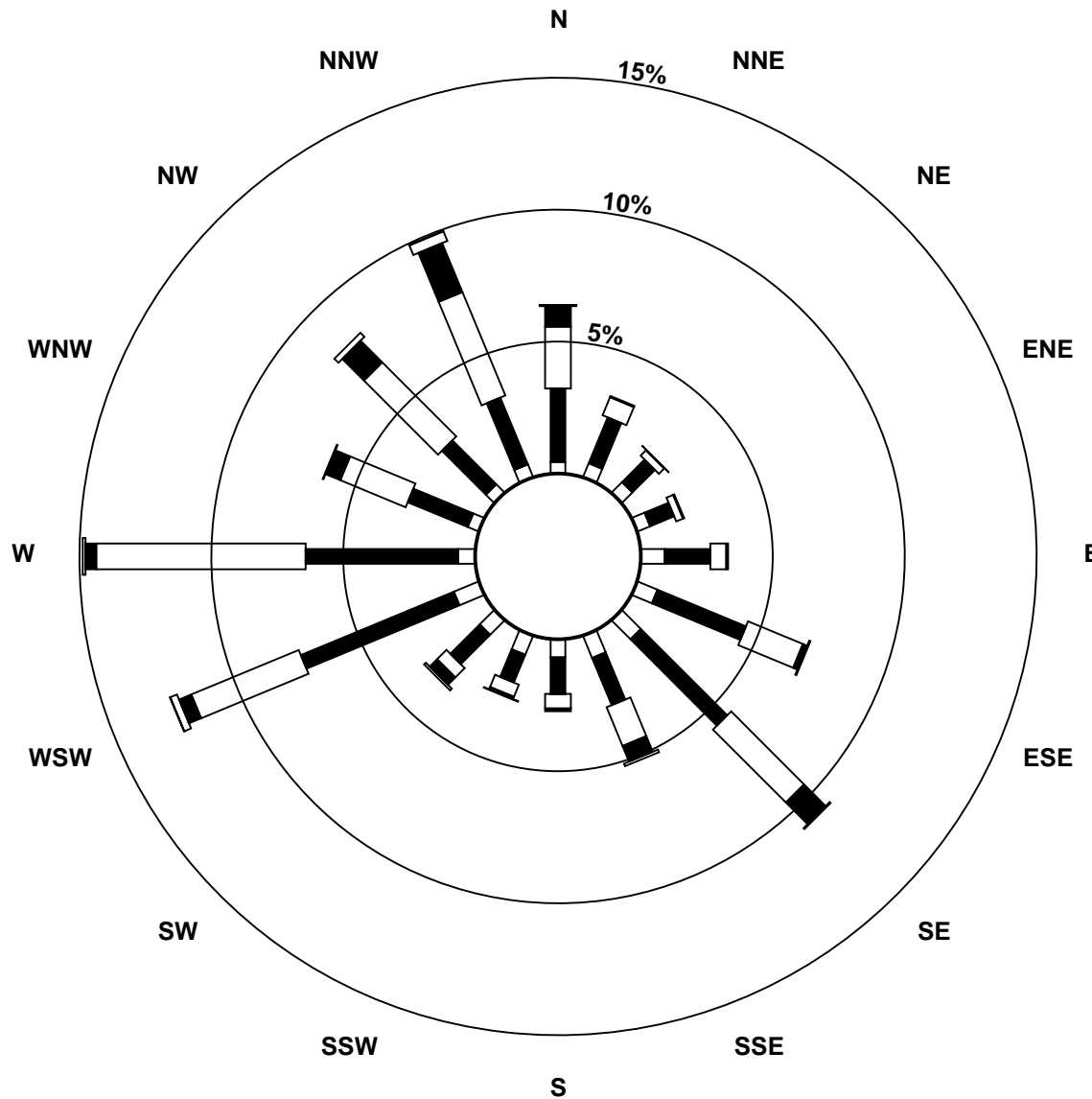
5.2 Parkland Airshed Management Zone – Caroline Wind Speed and Wind Direction Frequency Table

Caroline Station								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	551	0.44	2.78	2.34	0.78	0.05	0.00	6.39
NNE	279	0.57	1.88	0.74	0.05	0.00	0.00	3.24
NE	180	0.57	1.21	0.29	0.01	0.01	0.00	2.09
ENE	158	0.52	0.99	0.28	0.05	0.00	0.00	1.83
E	285	0.90	1.73	0.60	0.07	0.00	0.00	3.31
ESE	597	0.82	3.63	2.25	0.17	0.05	0.00	6.93
SE	928	1.02	4.63	3.91	1.16	0.05	0.00	10.77
SSE	446	0.90	1.94	1.59	0.64	0.10	0.00	5.17
S	235	0.68	1.38	0.56	0.10	0.00	0.00	2.73
SSW	218	0.78	1.14	0.50	0.09	0.02	0.00	2.53
SW	288	0.78	1.58	0.50	0.39	0.09	0.00	3.34
WSW	1077	1.02	6.28	4.41	0.50	0.28	0.01	12.49
W	1282	0.65	5.78	7.94	0.41	0.10	0.00	14.87
WNW	537	0.45	2.46	2.68	0.60	0.03	0.00	6.23
NW	703	0.45	2.35	3.97	1.16	0.22	0.00	8.16
NNW	856	0.52	2.74	4.25	2.01	0.39	0.02	9.93
Totals	8620	11.09	42.48	36.80	8.19	1.40	0.03	100.00

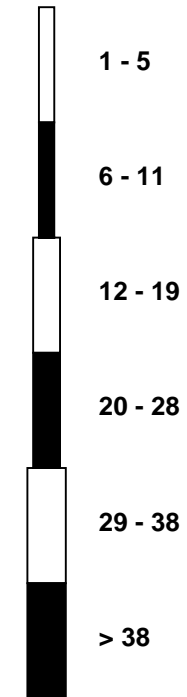
Wind Rose

Wind Speed (WS) (km/h)

Caroline - 2012



Wind Speed Classes (km/h)



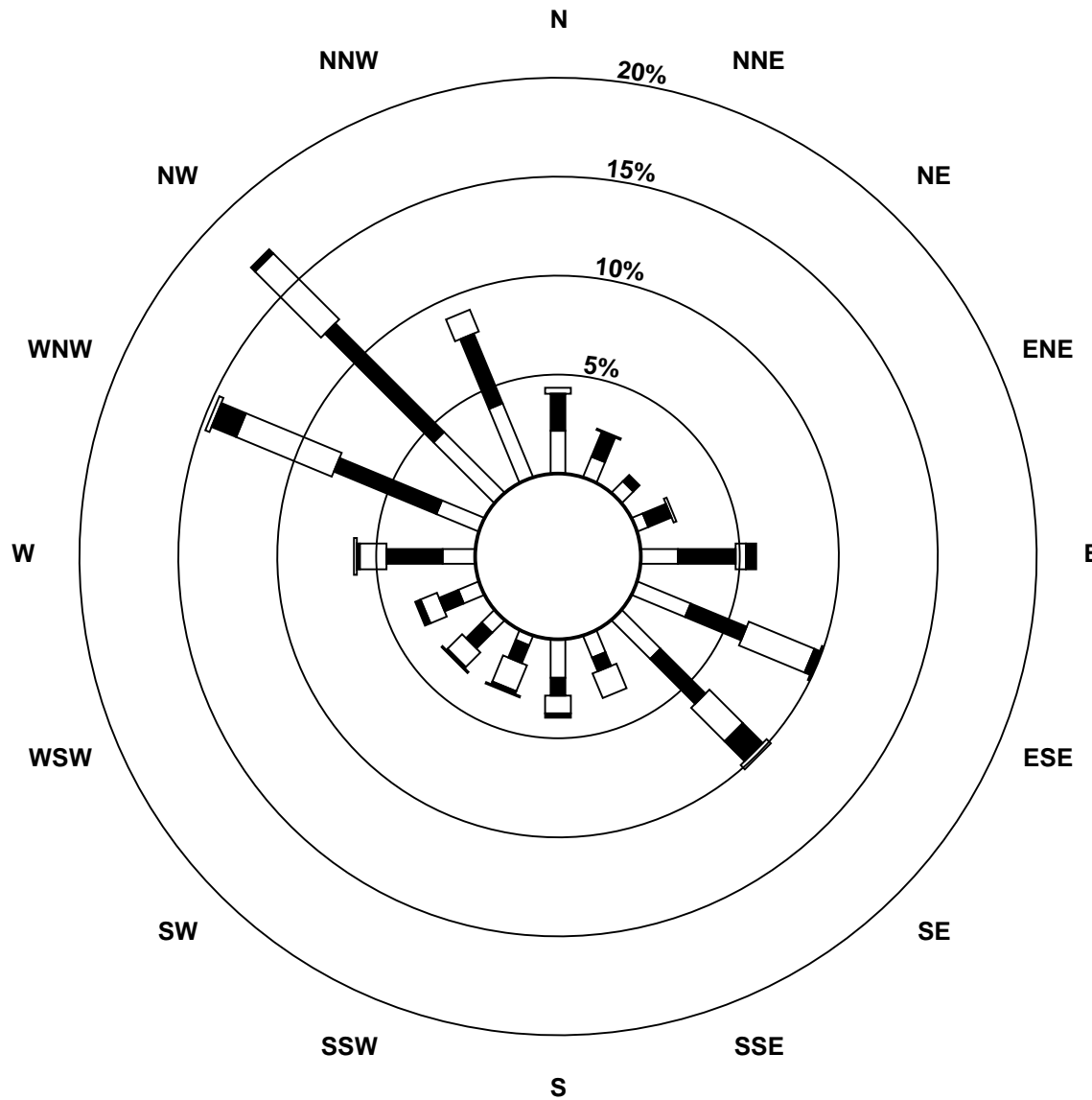
5.3 Parkland Airshed Management Zone – Crestomere Wind Speed and Wind Direction Frequency Table

Martha Station - Crestomere								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	58	2.17	1.87	0.30	0.00	0.00	0.00	4.33
NNE	34	1.12	1.35	0.07	0.00	0.00	0.00	2.54
NE	17	0.82	0.45	0.00	0.00	0.00	0.00	1.27
ENE	27	0.60	1.27	0.15	0.00	0.00	0.00	2.02
E	78	1.87	2.91	0.52	0.52	0.00	0.00	5.83
ESE	133	2.91	3.06	3.59	0.30	0.07	0.00	9.94
SE	135	2.77	3.21	2.39	1.42	0.30	0.00	10.09
SSE	44	1.20	0.75	1.35	0.00	0.00	0.00	3.29
S	53	1.94	0.90	0.90	0.22	0.00	0.00	3.96
SSW	42	0.52	0.97	1.42	0.15	0.07	0.00	3.14
SW	43	0.90	1.12	1.05	0.07	0.07	0.00	3.21
WSW	45	1.12	1.05	0.90	0.30	0.00	0.00	3.36
W	82	1.64	2.84	1.35	0.15	0.15	0.00	6.13
WNW	197	2.32	5.61	5.23	1.35	0.22	0.00	14.72
NW	229	4.33	7.77	4.71	0.30	0.00	0.00	17.12
NNW	121	4.04	3.81	1.20	0.00	0.00	0.00	9.04
Totals	1338	30.27	38.94	25.11	4.78	0.90	0.00	100.00

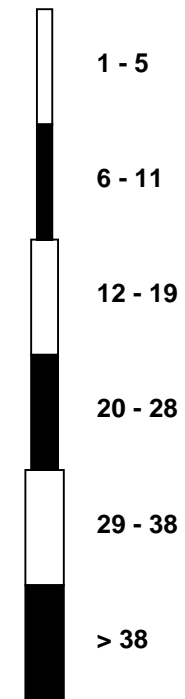
Wind Rose

Wind Speed (WS) (km/h)

Crestomere - 2012



Wind Speed Classes (km/h)

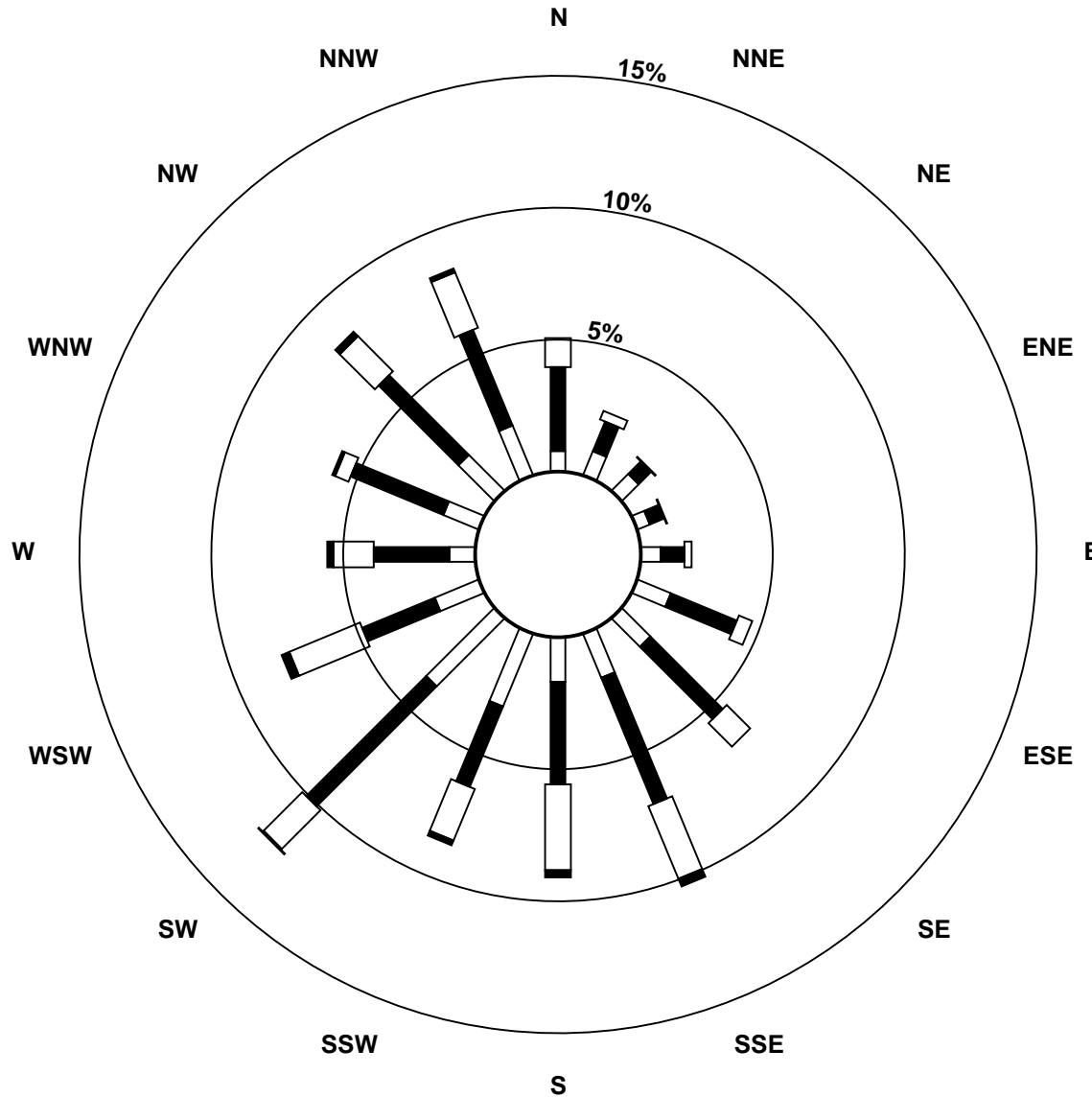


5.4 Parkland Airshed Management Zone – Crossfield-Carstairs Wind Speed and Wind Direction Frequency Table

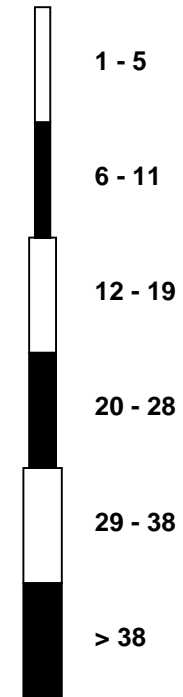
McCoy Station - Crossfield-Carstairs								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	129	0.78	3.18	1.10	0.00	0.00	0.00	5.06
NNE	65	0.98	1.22	0.35	0.00	0.00	0.00	2.55
NE	41	0.90	0.67	0.04	0.00	0.00	0.00	1.61
ENE	29	0.51	0.59	0.04	0.00	0.00	0.00	1.14
E	49	0.75	0.90	0.27	0.00	0.00	0.00	1.92
ESE	118	1.37	2.71	0.55	0.00	0.00	0.00	4.63
SE	170	1.53	3.88	1.25	0.00	0.00	0.00	6.67
SSE	262	1.80	5.18	2.98	0.31	0.00	0.00	10.27
S	232	1.69	3.88	3.25	0.27	0.00	0.00	9.10
SSW	219	2.98	3.29	2.12	0.20	0.00	0.00	8.59
SW	312	3.65	6.43	2.08	0.04	0.04	0.00	12.24
WSW	204	1.80	2.98	2.90	0.31	0.00	0.00	8.00
W	143	0.98	2.86	1.53	0.24	0.00	0.00	5.61
WNW	151	1.45	3.80	0.55	0.12	0.00	0.00	5.92
NW	212	1.92	4.27	1.88	0.24	0.00	0.00	8.31
NNW	214	2.04	3.92	2.27	0.16	0.00	0.00	8.39
Totals	2550	25.14	49.76	23.18	1.88	0.04	0.00	100.00

Wind Rose

Wind Speed (WS) (km/h)
Crossfield - Carstairs - 2012



Wind Speed Classes (km/h)



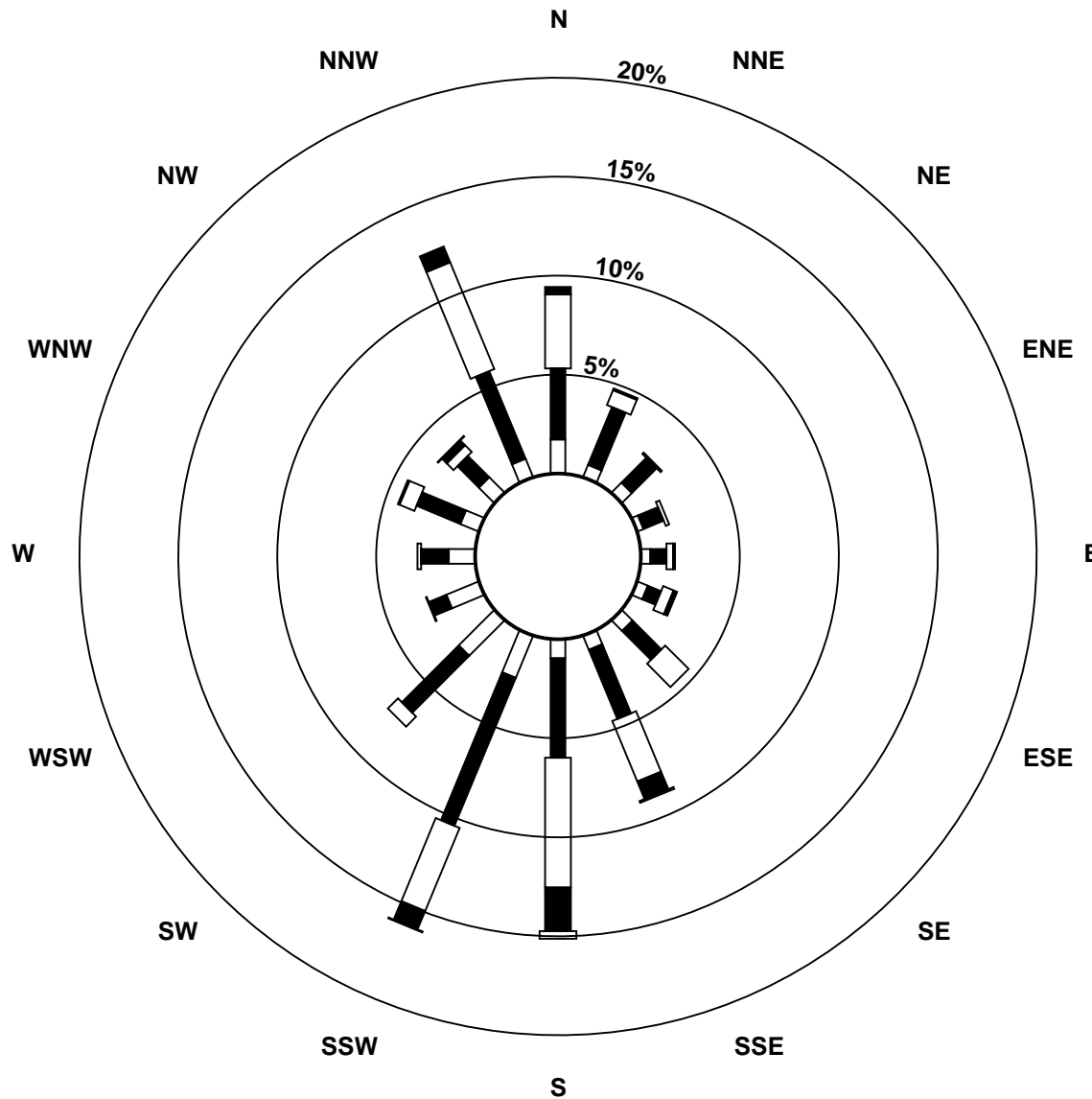
5.5 Parkland Airshed Management Zone – Delburne Wind Speed and Wind Direction Frequency Table

Martha Station - Delburne								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	197	1.72	3.59	3.73	0.38	0.00	0.00	9.43
NNE	99	0.67	3.16	0.81	0.10	0.00	0.00	4.74
NE	54	0.72	1.77	0.10	0.00	0.00	0.00	2.58
ENE	34	0.34	1.10	0.19	0.00	0.00	0.00	1.63
E	36	0.48	0.81	0.34	0.10	0.00	0.00	1.72
ESE	43	0.57	0.72	0.57	0.19	0.00	0.00	2.06
SE	94	0.77	2.06	1.68	0.00	0.00	0.00	4.50
SSE	186	0.77	3.78	3.30	0.96	0.10	0.00	8.90
S	316	0.96	5.03	6.56	2.20	0.38	0.00	15.13
SSW	334	2.30	8.09	4.55	1.01	0.05	0.00	15.99
SW	153	2.54	4.07	0.72	0.00	0.00	0.00	7.32
WSW	58	1.77	0.96	0.05	0.00	0.00	0.00	2.78
W	61	1.34	1.39	0.19	0.00	0.00	0.00	2.92
WNW	90	1.01	2.39	0.81	0.10	0.00	0.00	4.31
NW	73	1.10	1.53	0.48	0.34	0.05	0.00	3.49
NNW	261	1.01	4.79	5.84	0.86	0.00	0.00	12.49
Totals	2089	18.05	45.24	29.92	6.22	0.57	0.00	100.00

Wind Rose

Wind Speed (WS) (km/h)

Delburne - 2012



Wind Speed Classes (km/h)



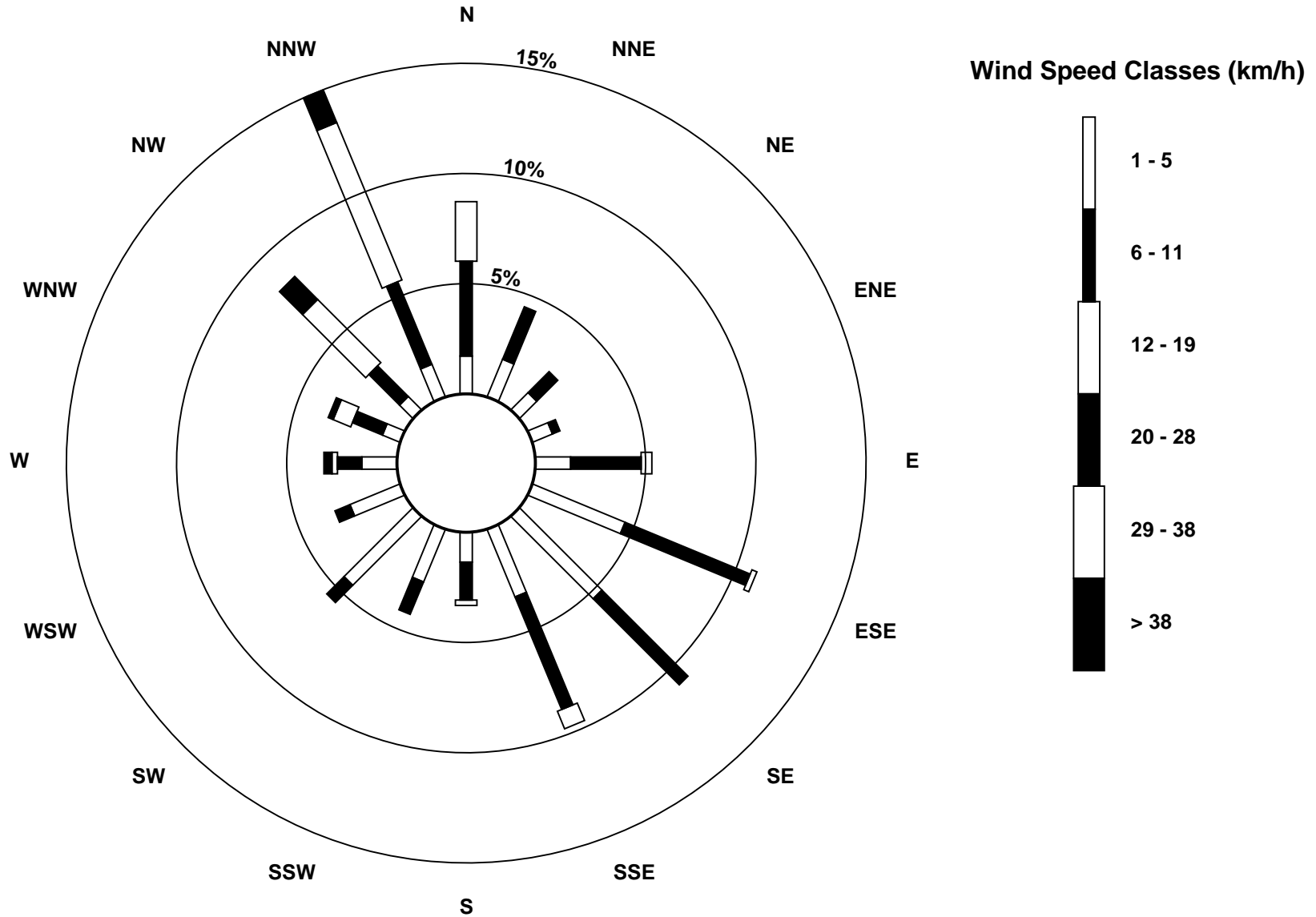
5.6 Parkland Airshed Management Zone – Garrington Wind Speed and Wind Direction Frequency Table

Martha Station - Garrington								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	71	1.72	4.30	2.70	0.00	0.00	0.00	8.72
NNE	36	1.84	2.58	0.00	0.00	0.00	0.00	4.42
NE	20	1.11	1.35	0.00	0.00	0.00	0.00	2.46
ENE	11	0.98	0.37	0.00	0.00	0.00	0.00	1.35
E	43	1.60	3.19	0.49	0.00	0.00	0.00	5.28
ESE	89	4.55	6.14	0.25	0.00	0.00	0.00	10.93
SE	88	5.28	5.53	0.00	0.00	0.00	0.00	10.81
SSE	79	3.32	5.53	0.86	0.00	0.00	0.00	9.71
S	27	1.35	1.72	0.25	0.00	0.00	0.00	3.32
SSW	34	2.58	1.60	0.00	0.00	0.00	0.00	4.18
SW	45	4.42	1.11	0.00	0.00	0.00	0.00	5.53
WSW	26	2.46	0.74	0.00	0.00	0.00	0.00	3.19
W	27	1.60	1.11	0.25	0.37	0.00	0.00	3.32
WNW	28	0.86	1.47	0.86	0.25	0.00	0.00	3.44
NW	68	0.86	1.97	4.05	1.47	0.00	0.00	8.35
NNW	122	1.60	4.05	7.74	1.60	0.00	0.00	14.99
Totals	814	36.12	42.75	17.44	3.69	0.00	0.00	100.00

Wind Rose

Wind Speed (WS) (km/h)

Garrington - 2012



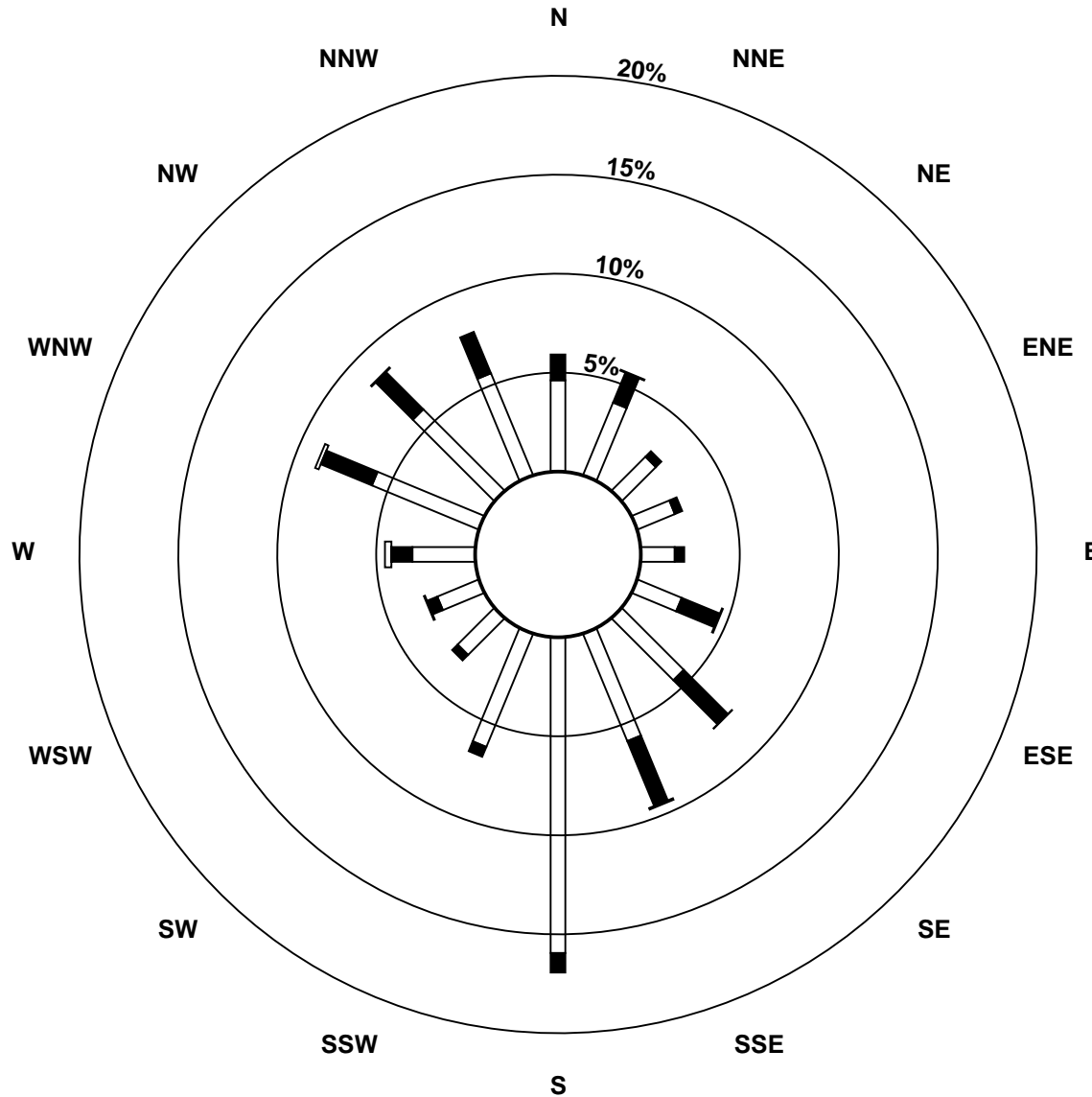
5.7 Parkland Airshed Management Zone – Lacombe Wind Speed and Wind Direction Frequency Table

Martha Station - Lacombe								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	222	4.61	1.31	0.00	0.00	0.00	0.00	5.92
NNE	212	3.97	1.63	0.05	0.00	0.00	0.00	5.65
NE	106	2.43	0.40	0.00	0.00	0.00	0.00	2.83
ENE	92	2.05	0.40	0.00	0.00	0.00	0.00	2.45
E	82	1.71	0.48	0.00	0.00	0.00	0.00	2.19
ESE	171	2.43	2.08	0.05	0.00	0.00	0.00	4.56
SE	285	4.43	3.15	0.03	0.00	0.00	0.00	7.60
SSE	356	5.87	3.55	0.08	0.00	0.00	0.00	9.49
S	635	15.95	0.99	0.00	0.00	0.00	0.00	16.93
SSW	252	6.19	0.53	0.00	0.00	0.00	0.00	6.72
SW	113	2.61	0.40	0.00	0.00	0.00	0.00	3.01
WSW	108	2.27	0.56	0.05	0.00	0.00	0.00	2.88
W	171	3.17	1.07	0.32	0.00	0.00	0.00	4.56
WNW	331	5.84	2.80	0.19	0.00	0.00	0.00	8.83
NW	320	5.81	2.67	0.05	0.00	0.00	0.00	8.53
NNW	294	5.57	2.27	0.00	0.00	0.00	0.00	7.84
Totals	3750	74.91	24.27	0.83	0.00	0.00	0.00	100.00

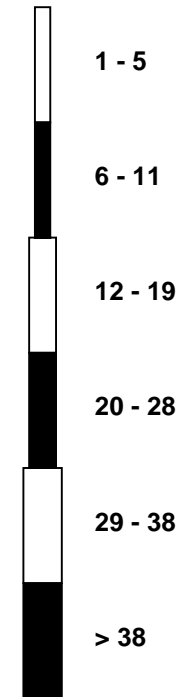
Wind Rose

Wind Speed (WS) (km/h)

Lacombe - 2012



Wind Speed Classes (km/h)



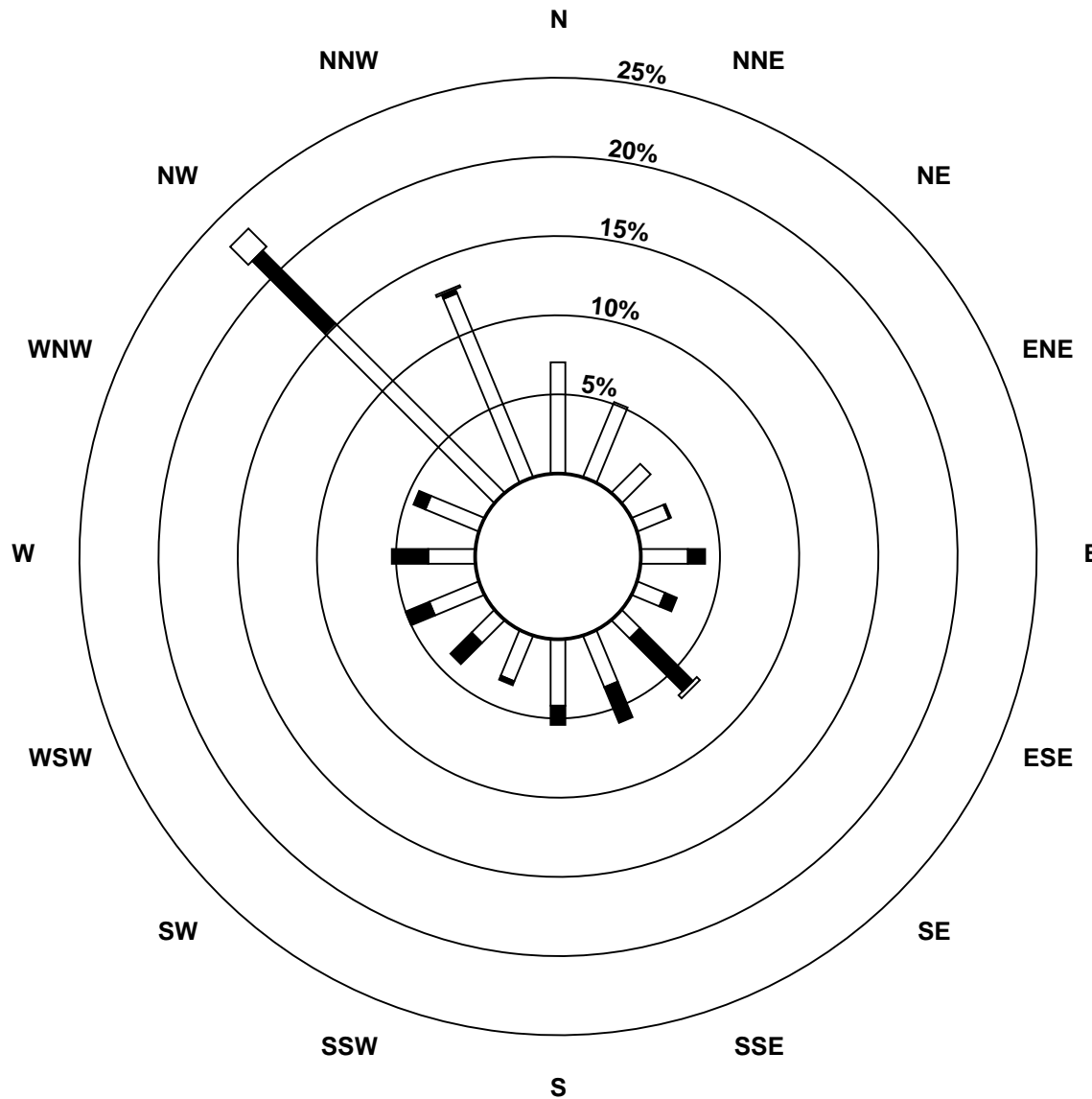
5.8 Parkland Airshed Management Zone – Lancaster Wind Speed and Wind Direction Frequency Table

McCoy Station - Lancaster								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	52	7.03	0.00	0.00	0.00	0.00	0.00	7.03
NNE	38	5.14	0.00	0.00	0.00	0.00	0.00	5.14
NE	19	2.57	0.00	0.00	0.00	0.00	0.00	2.57
ENE	17	2.16	0.14	0.00	0.00	0.00	0.00	2.30
E	30	2.97	1.08	0.00	0.00	0.00	0.00	4.05
ESE	20	1.89	0.81	0.00	0.00	0.00	0.00	2.70
SE	49	1.62	4.73	0.27	0.00	0.00	0.00	6.62
SSE	44	3.51	2.43	0.00	0.00	0.00	0.00	5.95
S	40	4.19	1.22	0.00	0.00	0.00	0.00	5.41
SSW	25	3.11	0.27	0.00	0.00	0.00	0.00	3.38
SW	29	2.03	1.89	0.00	0.00	0.00	0.00	3.92
WSW	37	3.38	1.62	0.00	0.00	0.00	0.00	5.00
W	39	2.97	2.30	0.00	0.00	0.00	0.00	5.27
WNW	33	3.65	0.81	0.00	0.00	0.00	0.00	4.46
NW	172	15.14	6.49	1.62	0.00	0.00	0.00	23.24
NNW	96	12.57	0.27	0.14	0.00	0.00	0.00	12.97
Totals	740	73.92	24.05	2.03	0.00	0.00	0.00	100.00

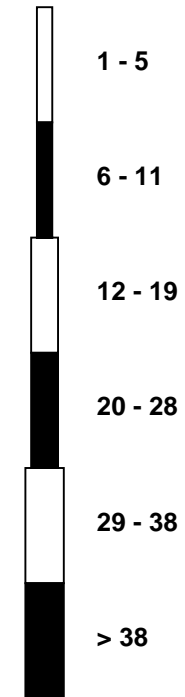
Wind Rose

Wind Speed (WS) (km/h)

Lancaster - 2012



Wind Speed Classes (km/h)



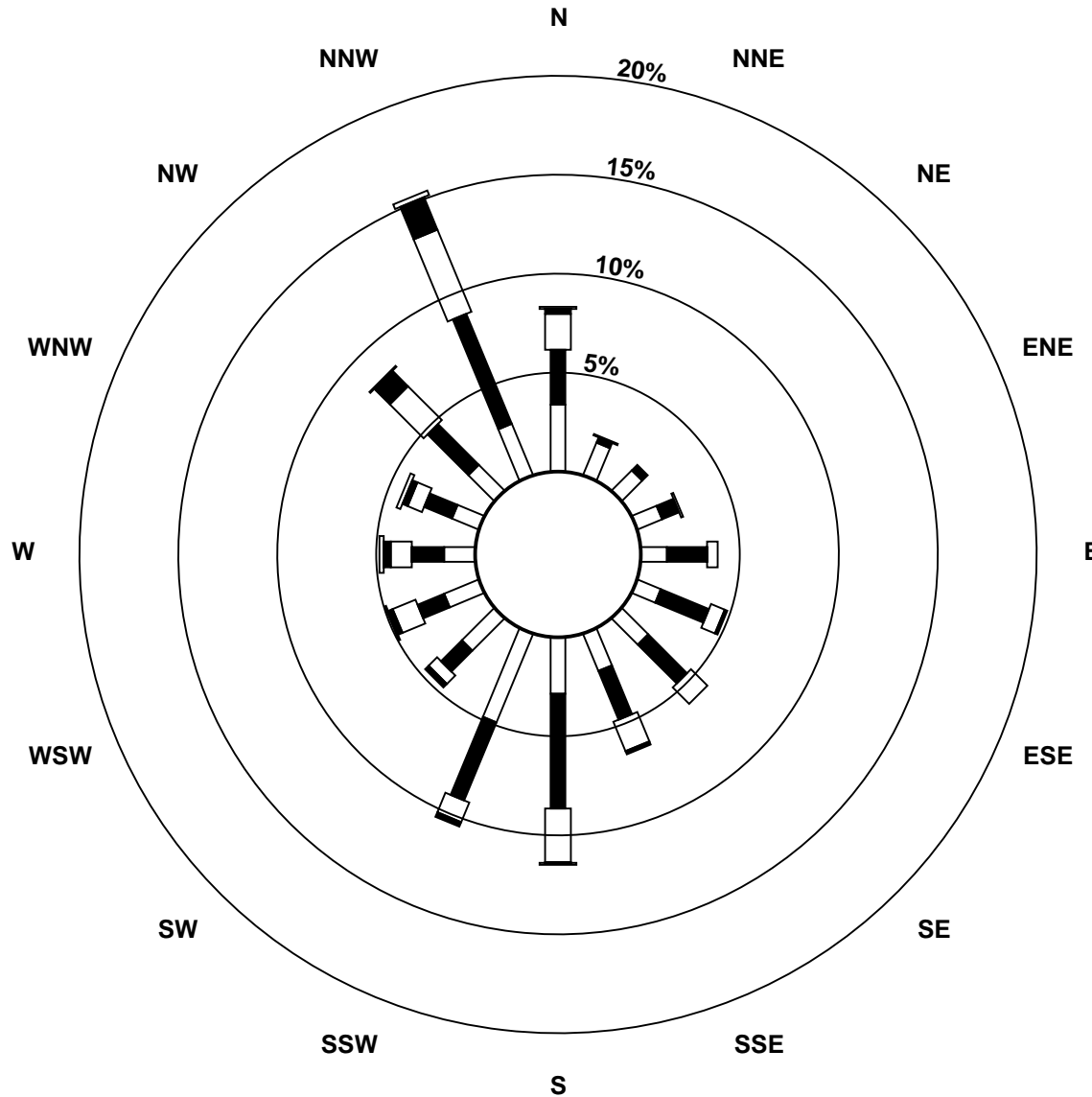
5.9 Parkland Airshed Management Zone – Mirror Wind Speed and Wind Direction Frequency Table

Martha Station - Mirror								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	234	3.38	2.78	1.81	0.25	0.11	0.00	8.33
NNE	60	1.78	0.28	0.07	0.00	0.00	0.00	2.14
NE	52	1.46	0.39	0.00	0.00	0.00	0.00	1.85
ENE	67	1.35	0.93	0.11	0.00	0.00	0.00	2.38
E	109	1.32	2.03	0.53	0.00	0.00	0.00	3.88
ESE	135	1.28	2.63	0.75	0.14	0.00	0.00	4.80
SE	164	1.89	2.78	1.17	0.00	0.00	0.00	5.84
SSE	182	2.03	2.67	1.60	0.18	0.00	0.00	6.48
S	323	2.85	5.80	2.70	0.04	0.11	0.00	11.49
SSW	293	4.84	4.27	1.07	0.25	0.00	0.00	10.43
SW	131	2.31	1.49	0.60	0.25	0.00	0.00	4.66
WSW	138	1.89	1.46	1.25	0.25	0.07	0.00	4.91
W	136	1.57	1.64	1.07	0.36	0.21	0.00	4.84
WNW	120	1.46	1.53	0.78	0.28	0.21	0.00	4.27
NW	235	1.85	2.92	2.42	1.10	0.07	0.00	8.36
NNW	431	2.81	6.01	4.48	1.78	0.25	0.00	15.34
Totals	2810	34.06	39.61	20.43	4.88	1.03	0.00	100.00

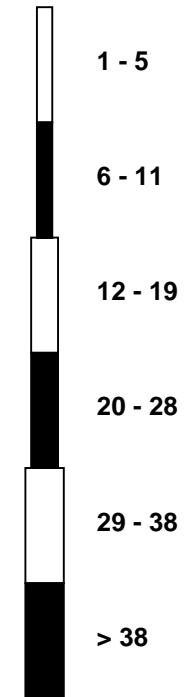
Wind Rose

Wind Speed (WS) (km/h)

Mirror - 2012



Wind Speed Classes (km/h)

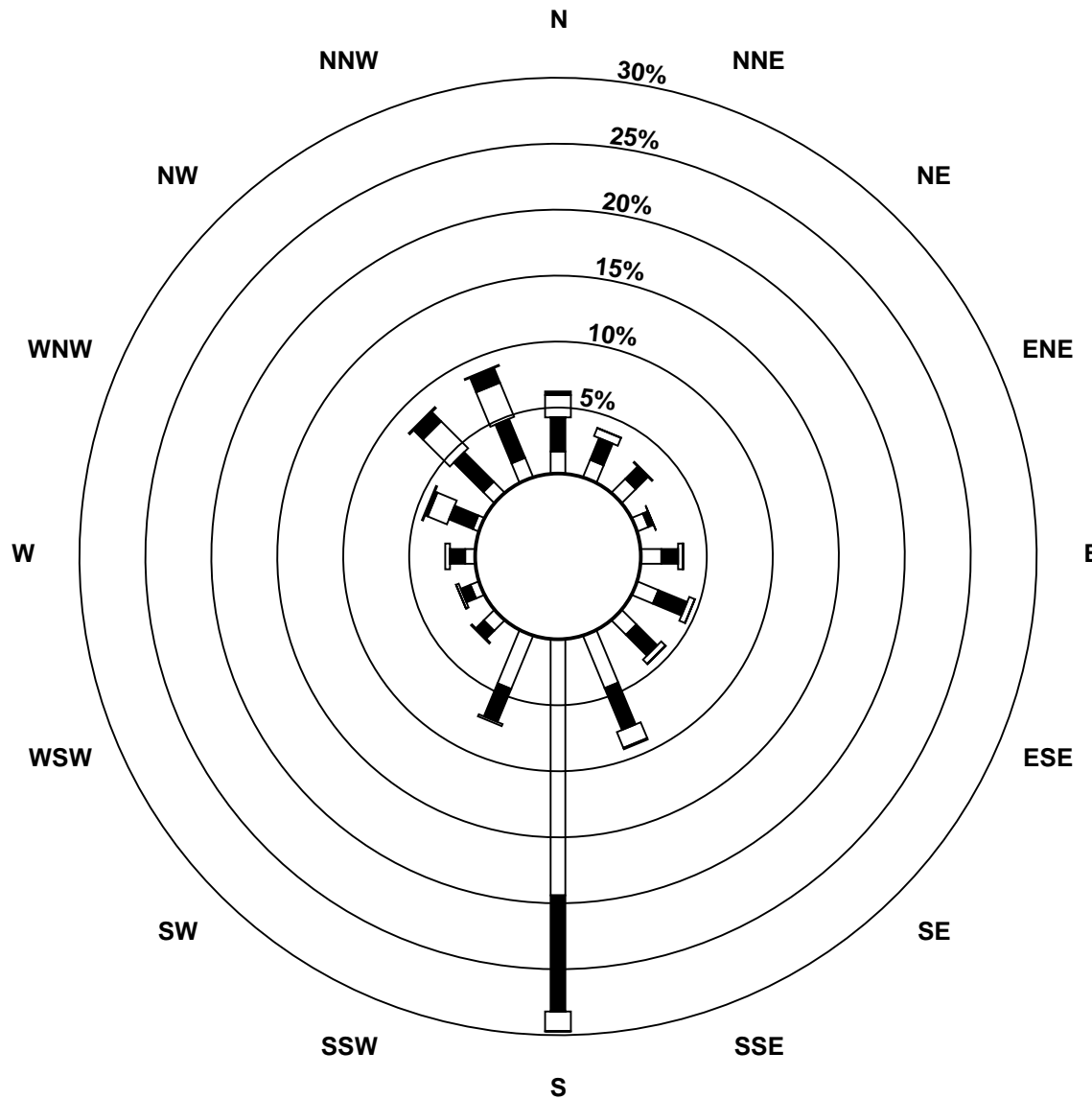


5.10 Parkland Airshed Management Zone – Red Deer Riverside Wind Speed and Wind Direction Frequency Table

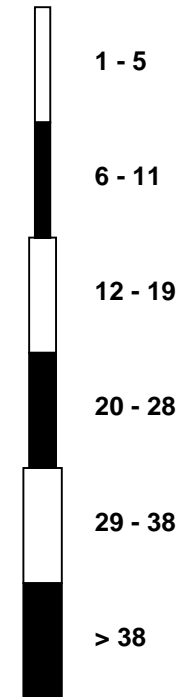
Red Deer Riverside Station								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	513	1.68	2.59	1.69	0.28	0.00	0.00	6.23
NNE	319	1.42	1.78	0.64	0.02	0.00	0.00	3.87
NE	237	1.49	1.30	0.08	0.00	0.00	0.00	2.88
ENE	110	0.91	0.41	0.01	0.00	0.00	0.00	1.34
E	266	1.55	1.26	0.35	0.06	0.00	0.00	3.23
ESE	375	1.72	2.36	0.46	0.01	0.00	0.00	4.55
SE	354	1.55	2.25	0.45	0.05	0.00	0.00	4.30
SSE	752	4.30	3.42	1.30	0.11	0.00	0.00	9.13
S	2448	19.40	8.80	1.51	0.01	0.00	0.00	29.72
SSW	596	4.36	2.71	0.17	0.00	0.00	0.00	7.24
SW	171	1.13	0.84	0.11	0.00	0.00	0.00	2.08
WSW	139	0.68	0.79	0.21	0.01	0.00	0.00	1.69
W	187	0.76	1.15	0.35	0.00	0.00	0.00	2.27
WNW	355	0.49	1.95	1.58	0.21	0.08	0.00	4.31
NW	686	1.18	3.17	2.89	0.98	0.11	0.00	8.33
NNW	729	1.59	3.18	2.82	1.19	0.07	0.00	8.85
Totals	8237	44.22	37.96	14.62	2.94	0.27	0.00	100.00

Wind Rose

Wind Speed (WS) (km/h)
Red Deer Riverside - 2012



Wind Speed Classes (km/h)



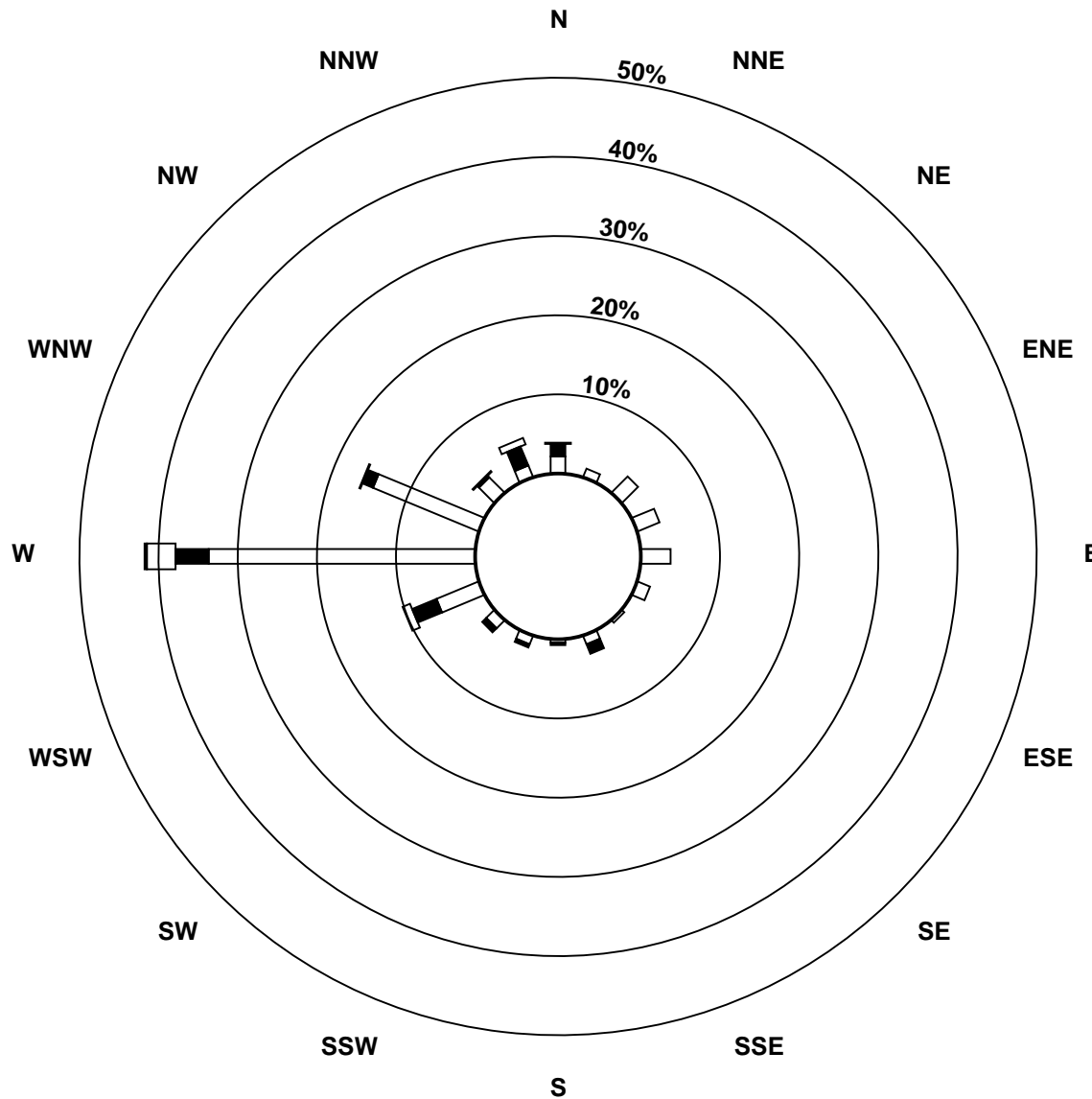
5.11 Parkland Airshed Management Zone – West Sundre Wind Speed and Wind Direction Frequency Table

McCoy Station - West Sundre								2012
Direction	# of Readings	% of wind speed (km/hr)						Totals
		1 - 5	6 - 11	12 - 19	20 - 28	29 - 38	> 38	
N	27	2.17	1.59	0.14	0.00	0.00	0.00	3.90
NNE	8	1.16	0.00	0.00	0.00	0.00	0.00	1.16
NE	20	2.89	0.00	0.00	0.00	0.00	0.00	2.89
ENE	21	3.03	0.00	0.00	0.00	0.00	0.00	3.03
E	26	3.76	0.00	0.00	0.00	0.00	0.00	3.76
ESE	12	1.73	0.00	0.00	0.00	0.00	0.00	1.73
SE	3	0.43	0.00	0.00	0.00	0.00	0.00	0.43
SSE	17	1.16	1.30	0.00	0.00	0.00	0.00	2.46
S	5	0.43	0.29	0.00	0.00	0.00	0.00	0.72
SSW	11	1.16	0.43	0.00	0.00	0.00	0.00	1.59
SW	15	1.45	0.72	0.00	0.00	0.00	0.00	2.17
WSW	70	5.78	3.32	1.01	0.00	0.00	0.00	10.12
W	289	33.67	4.19	3.61	0.29	0.00	0.00	41.76
WNW	111	14.45	1.45	0.14	0.00	0.00	0.00	16.04
NW	22	2.75	0.29	0.14	0.00	0.00	0.00	3.18
NNW	35	1.59	2.60	0.87	0.00	0.00	0.00	5.06
Totals	692	77.60	16.18	5.92	0.29	0.00	0.00	100.00

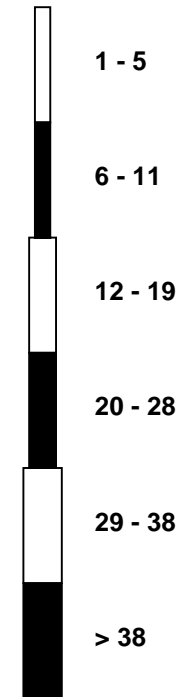
Wind Rose

Wind Speed (WS) (km/h)

West Sundre - 2012



Wind Speed Classes (km/h)

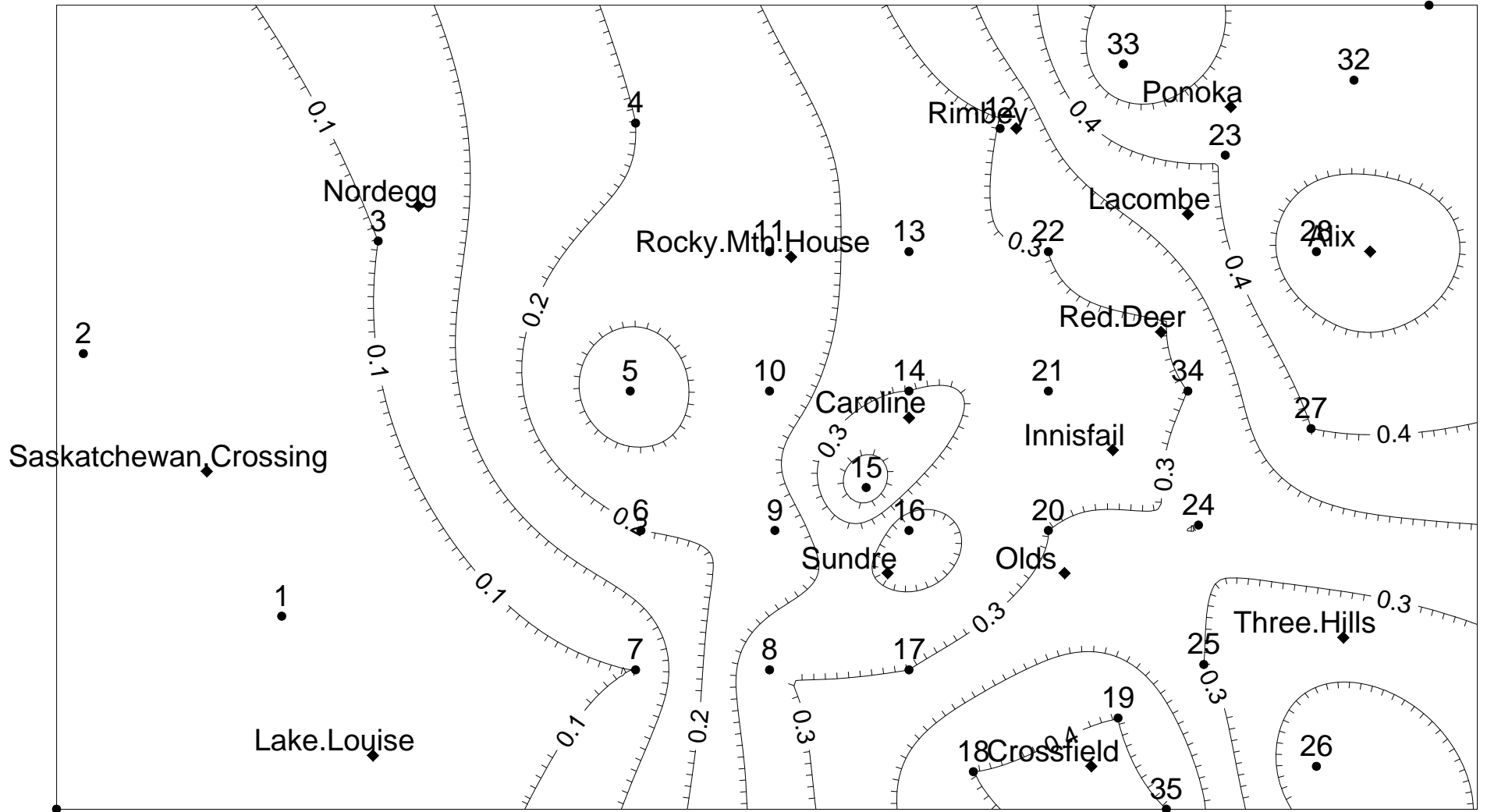


6. Passive Network Summary

PAMZ Annual Air Quality Monitoring Summary - 2012 SO₂ Passive Monitoring Network

Station	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	Station Average
1 Bow Summit	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
2 Parker Ridge	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0
3 Bighorn	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1
4 Sunchild	NA	NA	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.4	0.2
5 Baseline Mountain	0.2	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3
6 Limestone Mountain	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	NA	0.1	0.3	0.4	0.2
7 Panther River	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1
8 Fallen Timber	0.2	0.4	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.6	NA	0.3
9 Bearberry	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.2
10 Ricinus	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2
11 Twin Lakes	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2
12 Rimbey	0.3	0.5	0.5	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.5	0.3
13 Leslieville	0.5	0.4	0.4	0.2	0.2	0.1	0.2	0.2	0.2	NA	0.5	0.5	0.3
14 Raven River	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.5	0.3
15 Caroline	0.5	0.5	0.5	0.4	0.4	0.2	0.2	0.3	0.4	0.3	0.6	0.6	0.4
16 Sundre	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.3	0.2
17 South Elkton	0.5	0.5	0.3	0.4	0.2	0.1	0.2	0.3	0.3	0.2	0.5	0.4	0.3
18 Bottrel	0.5	0.6	0.4	0.4	0.2	0.2	0.2	0.4	0.3	0.2	0.7	0.5	0.4
19 Crossfield-Carstairs	0.4	0.7	0.3	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.5	0.4
20 Netook-Olds	0.4	0.5	0.4	0.2	0.2	0.1	0.3	0.2	0.1	0.3	0.5	0.5	0.3
21 Markerville	0.4	0.3	0.3	0.3	0.2	NA	0.3	0.2	0.2	0.1	0.5	0.4	0.3
22 Sylvan Lake	0.6	0.5	0.5	0.3	0.2	0.2	0.2	0.3	0.0	0.2	0.6	0.5	0.3
23 Morningside	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.5	0.4
24 Mayton	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.4	0.4	0.3
25 Sunnyslope	0.6	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.3
26 Grainger	0.1	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.4	0.4	0.2
27 Elnora	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.5	0.6	0.4
28 Alix	0.5	0.6	0.4	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.7	0.8	0.5
32 Samson	0.5	0.5	0.4	0.3	0.3	0.3	0.5	0.4	0.2	0.2	0.5	0.8	0.4
33 Ferrybank	0.9	0.6	0.7	0.3	0.4	0.2	0.3	0.4	0.4	0.3	0.9	0.8	0.5
34 Pakkwaw	0.3	0.5	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.6	0.6	0.3
35 Kersey	0.5	0.7	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.5	0.4	0.4
65 Red Deer	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.4	0.2	0.3	0.5	0.4	0.3
Monthly Average	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3
Monthly Maximum	0.9	0.7	0.7	0.4	0.4	0.3	0.5	0.5	0.4	0.4	0.9	0.8	
Monthly Minimum	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	

* All Values Expressed in PPB

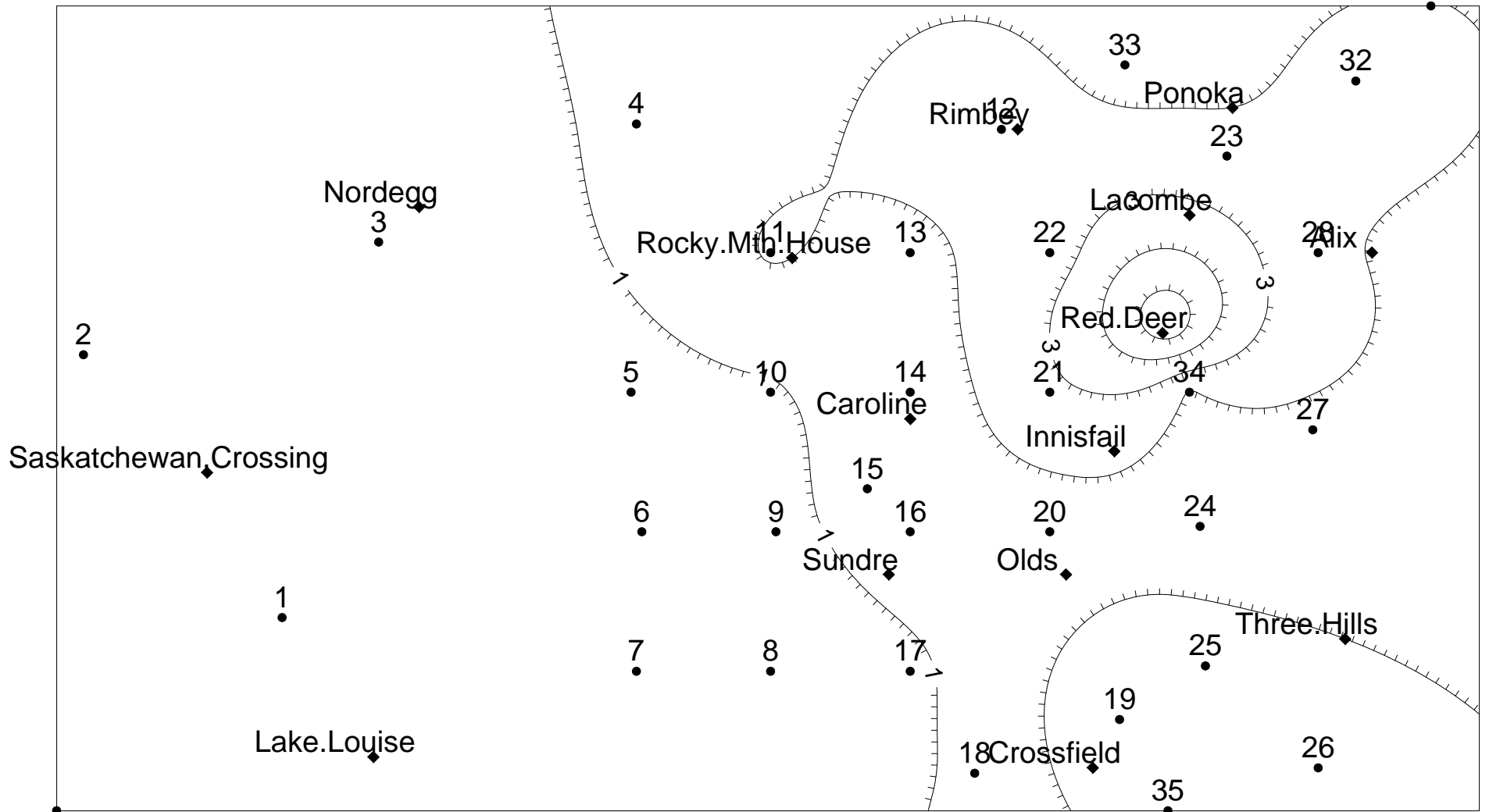


PAMZ Passive SO2 Monitoring Network - 2012 Station Averages (ppb)

PAMZ Annual Air Quality Monitoring Summary - 2012 NO₂ Passive Monitoring Network

Station	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	Station Average
1 Bow Summit	0.4	0.3	0.3	NA	0.0	0.4	0.1	0.2	0.0	0.2	0.2	0.7	0.3
2 Parker Ridge	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.1
3 Bighorn	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.2	1.1	1.1	0.3
4 Sunchild	NA	NA	1.2	0.1	0.2	2.4	0.3	0.4	0.3	1.0	2.8	3.3	1.2
5 Baseline Mountain	0.9	0.8	0.3	0.1	1.5	0.1	0.4	0.7	0.4	0.9	0.9	0.7	0.6
6 Limestone Mountain	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.4	NA	0.2	0.5	0.5	0.2
7 Panther River	0.4	0.3	0.0	0.0	0.1	0.2	0.0	0.2	0.0	0.2	0.6	0.6	0.2
8 Fallen Timber	0.6	0.6	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.5	0.8	1.4	0.4
9 Bearberry	0.8	0.9	0.2	0.1	0.3	0.7	0.3	0.4	0.3	0.8	1.9	2.3	0.8
10 Ricinus	0.9	1.2	0.7	0.3	0.3	0.4	0.3	0.4	0.3	0.9	1.9	2.6	0.9
11 Twin Lakes	3.4	2.8	1.3	0.9	0.7	1.9	0.5	0.9	1.5	2.0	4.1	5.4	2.1
12 Rimbey	2.8	2.9	1.7	1.1	1.0	3.9	0.6	1.3	1.3	1.7	5.5	6.2	2.5
13 Leslieville	2.4	2.3	1.1	0.8	1.1	1.6	0.6	1.0	NA	1.0	3.2	5.2	1.8
14 Raven River	1.4	1.7	1.3	0.8	0.7	0.9	0.6	0.7	0.6	1.3	2.6	3.9	1.4
15 Caroline	1.1	1.5	1.1	0.6	0.7	1.3	0.6	0.8	0.7	1.3	2.6	3.1	1.3
16 Sundre	1.7	2.2	1.3	0.6	0.8	1.0	0.4	0.9	0.6	1.2	3.2	3.9	1.5
17 South Elkton	0.7	1.0	0.8	0.4	0.3	0.9	0.3	0.6	0.6	1.0	1.9	1.6	0.8
18 Bottrel	1.3	1.0	0.9	0.7	0.5	3.4	0.4	0.9	0.5	1.1	1.8	2.0	1.2
19 Crossfield-Carstairs	3.0	3.2	3.5	1.2	1.0	2.4	1.0	1.1	1.4	2.0	7.3	7.6	2.9
20 Netook-Olds	1.8	2.3	1.0	0.7	0.9	1.8	0.7	1.0	1.0	1.4	3.0	3.9	1.6
21 Markerville	3.7	4.8	1.9	1.6	1.6	NA	1.2	1.5	0.9	3.1	4.4	6.0	2.8
22 Sylvan Lake	3.0	3.7	1.5	0.9	1.8	2.2	0.7	1.1	1.5	1.8	4.1	5.9	2.4
23 Morningside	2.7	2.9	1.4	0.8	1.1	2.3	1.0	1.2	1.4	2.3	3.9	4.8	2.2
24 Mayton	1.8	2.9	1.3	0.7	1.0	1.7	0.7	1.0	0.8	1.4	3.8	3.5	1.7
25 Sunnyslope	3.2	3.0	1.9	0.9	1.2	4.1	0.8	1.2	1.4	2.0	3.4	5.0	2.3
26 Grainger	2.9	3.4	1.9	1.3	1.6	2.0	1.0	1.2	1.4	1.8	3.3	4.6	2.2
27 Elnora	2.1	2.5	1.0	0.8	1.0	2.4	0.7	0.9	1.0	1.3	3.0	4.7	1.8
28 Alix	2.6	3.3	1.4	1.3	1.1	1.5	1.1	1.2	1.5	1.7	4.1	4.2	2.1
32 Samson	3.0	3.7	1.6	0.9	1.5	2.9	0.8	1.2	1.0	2.0	3.3	4.0	2.2
33 Ferrybank	2.5	2.1	0.8	0.5	1.1	1.9	0.9	1.1	0.9	1.3	2.3	3.7	1.6
34 Pakkwaw	1.9	2.8	1.0	0.8	1.1	1.9	0.7	1.1	1.4	2.7	3.3	4.6	1.9
35 Kersey	2.5	3.1	3.9	1.2	1.2	3.1	0.7	1.0	1.1	1.8	3.9	4.6	2.3
65 Red Deer	14.1	10.1	5.6	2.5	1.8	3.4	1.1	2.3	2.7	5.7	7.7	13.9	5.9
Monthly Average	2.2	2.3	1.3	0.7	0.8	1.7	0.6	0.9	0.9	1.5	2.9	3.8	1.6
Monthly Maximum	14.1	10.1	5.6	2.5	1.8	4.1	1.2	2.3	2.7	5.7	7.7	13.9	
Monthly Minimum	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	

* All Values Expressed in PPB

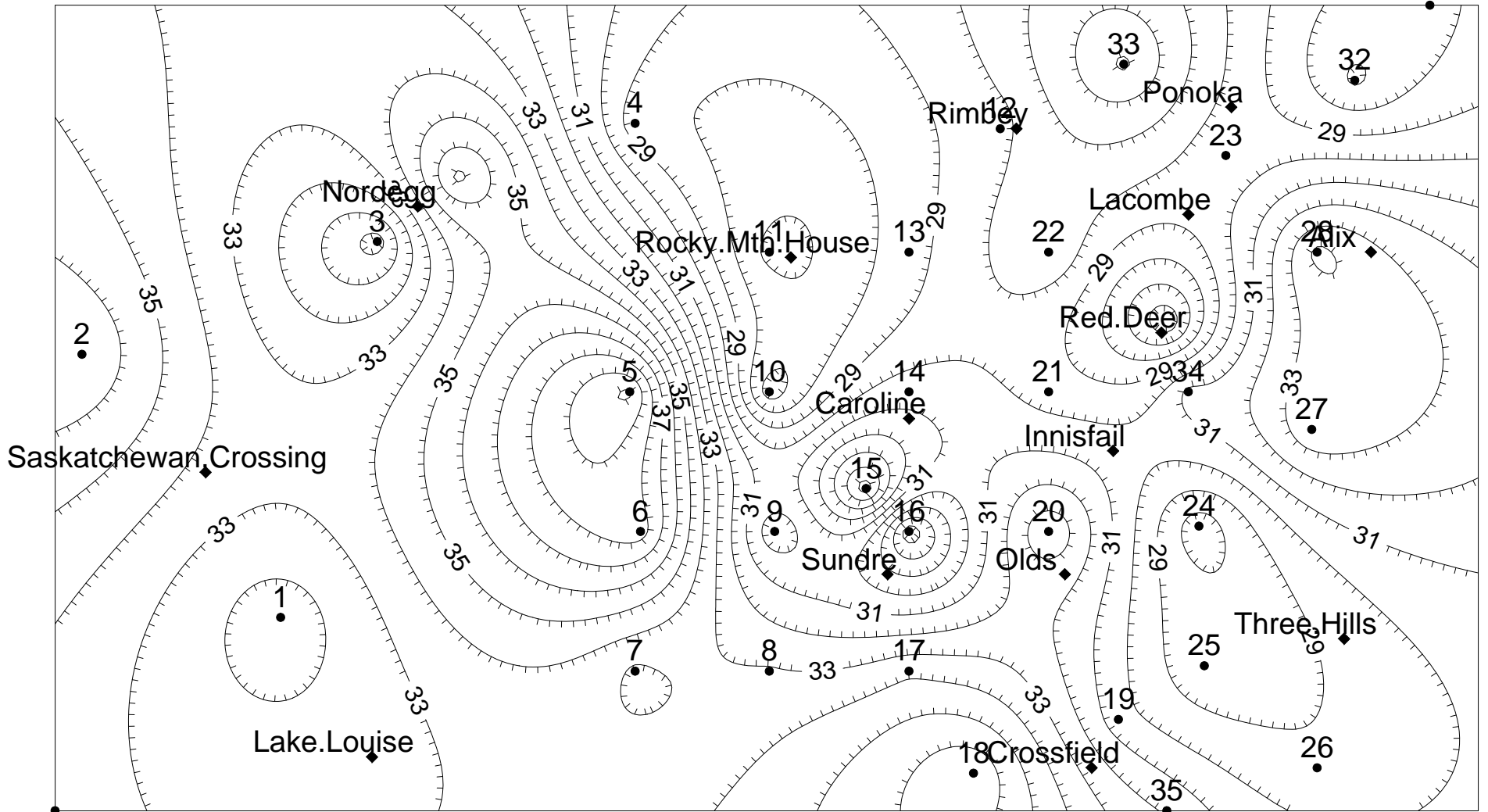


PAMZ Passive NO2 Monitoring Network - 2012 Station Averages (ppb)

PAMZ Annual Air Quality Monitoring Summary - 2012 O₃ Passive Monitoring Network

Station	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	Station Average
1 Bow Summit	37.3	39.6	41.1	34.5	39.5	34.4	24.7	31.0	17.2	25.2	22.8	28.3	31.3
2 Parker Ridge	46.7	51.1	50.0	37.3	37.4	40.8	25.8	28.7	19.9	35.3	36.0	35.2	37.0
3 Bighorn	39.9	45.5	36.3	42.3	31.0	25.1	21.2	24.0	15.7	22.1	26.0	24.9	29.5
4 Sunchild	NA	NA	39.0	34.1	38.1	26.2	29.0	30.1	22.1	23.0	24.2	18.2	28.4
5 Baseline Mountain	42.7	47.0	46.5	43.2	41.7	40.9	41.2	31.4	34.3	42.2	32.7	38.1	40.2
6 Limestone Mountain	42.7	48.9	40.0	47.9	40.8	31.3	35.5	38.5	NA	34.0	33.6	30.3	38.5
7 Panther River	37.5	44.8	46.1	47.7	35.1	27.1	27.0	26.3	21.2	25.4	28.6	27.1	32.8
8 Fallen Timber	37.7	43.0	39.8	37.8	38.3	28.1	25.8	33.0	17.4	26.5	30.1	40.1	33.1
9 Bearberry	33.1	39.3	38.6	38.5	34.0	25.3	19.9	31.0	19.1	23.9	26.5	21.4	29.2
10 Ricinus	31.2	36.1	33.2	36.5	32.9	26.7	21.5	22.3	15.7	19.8	23.0	18.2	26.4
11 Twin Lakes	26.9	34.7	35.3	35.2	34.4	25.4	26.8	24.4	16.5	24.3	20.7	15.4	26.7
12 Rimbey	36.2	39.7	42.7	35.4	36.4	26.8	26.7	26.6	19.8	25.4	21.6	18.9	29.7
13 Leslieville	30.0	39.5	41.8	32.1	35.9	26.4	23.8	24.2	20.3	18.6	30.3	20.3	28.6
14 Raven River	31.9	44.5	36.3	38.3	40.7	28.0	25.9	32.3	18.5	23.1	26.9	21.2	30.6
15 Caroline	38.8	47.1	42.4	39.4	43.6	33.8	34.8	40.7	27.4	27.7	28.3	24.8	35.7
16 Sundre	30.1	32.8	35.0	31.3	42.9	25.4	20.6	22.5	15.6	21.3	19.7	17.3	26.2
17 South Elkton	38.9	42.1	41.2	40.9	39.8	30.8	26.9	34.0	24.9	28.5	29.6	27.5	33.8
18 Bottrel	42.4	45.5	40.9	45.2	43.7	32.9	31.3	39.8	25.7	33.9	32.3	29.5	36.9
19 Crossfield-Carstairs	32.3	37.0	36.6	37.3	39.4	29.2	25.9	32.6	22.6	23.0	27.5	21.4	30.4
20 Netook-Olds	37.3	45.5	47.8	44.6	43.3	28.3	26.9	35.4	16.8	25.9	30.5	25.8	34.0
21 Markerville	29.3	40.3	45.4	37.4	35.5	NA	22.6	26.1	23.3	22.5	23.3	18.4	29.5
22 Sylvan Lake	37.4	40.8	45.1	34.2	39.3	28.4	28.1	31.8	15.9	25.9	25.3	20.0	31.0
23 Morningside	27.9	42.8	35.4	39.6	33.8	27.1	26.6	29.9	20.0	20.3	26.1	22.6	29.3
24 Mayton	24.7	28.9	38.3	34.2	34.3	28.5	24.5	27.7	16.4	21.5	27.8	20.9	27.3
25 Sunnyslope	29.7	32.3	38.7	33.4	38.5	26.8	22.4	27.7	19.2	25.7	24.0	19.8	28.2
26 Grainger	28.4	34.7	36.9	29.6	37.5	27.0	24.9	31.6	22.3	23.1	28.9	24.9	29.2
27 Elnora	35.8	41.1	43.5	35.1	45.3	32.5	26.8	33.5	24.5	25.7	35.1	26.3	33.8
28 Alix	32.2	39.3	42.3	40.0	41.4	29.6	32.1	36.8	27.1	24.9	36.6	28.9	34.3
32 Samson	28.9	34.2	39.6	36.8	35.8	24.7	21.2	22.6	15.2	18.8	23.2	20.5	26.8
33 Ferrybank	38.1	44.5	47.0	42.0	39.2	28.4	23.4	32.4	23.1	26.1	30.6	23.4	33.2
34 Pakkwaw	32.5	46.1	44.9	40.6	33.2	26.1	23.6	29.4	22.2	22.6	32.6	22.0	31.3
35 Kersey	33.2	33.5	43.1	36.2	37.2	35.1	25.5	37.2	27.5	24.2	24.8	24.7	31.9
44 Harlech	38.7	46.7	44.5	44.8	45.1	33.1	34.0	40.2	24.9	34.3	31.6	29.7	37.3
65 Red Deer	19.5	27.4	31.5	32.9	36.5	28.8	27.4	31.3	17.3	18.4	16.6	13.5	25.1
Monthly Average	34.2	40.5	40.8	38.1	38.3	29.4	26.6	30.8	20.9	25.4	27.6	24.1	31.4
Monthly Maximum	46.7	51.1	50.0	47.9	45.3	40.9	41.2	40.7	34.3	42.2	36.6	40.1	
Monthly Minimum	19.5	27.4	31.5	29.6	31.0	24.7	19.9	22.3	15.2	18.4	16.6	13.5	

* All Values Expressed in PPB



PAMZ Passive O3 Monitoring Network - 2012 Station Averages (ppb)