



PASZA

Peace AirShed Zone Association

Peace Air Shed Zone Association Ambient Air Monitoring Network 2005 Annual Report





March 14, 2006

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

RE: Peace Airshed Zone Association (PASZA) 2005 Annual Ambient Air Monitoring Report

On behalf of the Peace Airshed Zone Association (PASZA), we are pleased to present the 2005 Ambient Air Monitoring Network Annual Report.

The PASZA network consists of four continuous air monitoring stations (Henry Pirker, Evergreen Park, Smokey Heights and Beaverlodge) with the addition of forty-three passive monitoring stations (refer to Figure 1).

Additional information about PASZA, including its membership, objectives and details on the monitoring network are included on the web at <http://www.pasza.ca/>.

The continuous air monitoring stations measured the following parameters in 2005:

Parameter:	Station(s):
Sulphur Dioxide (SO₂)	Henry Pirker, Evergreen Park Smokey Heights, Beaverlodge
Nitrogen Dioxide (NO₂ , NO, NO _x)	Henry Pirker, Beaverlodge
Ozone (O₃)	Henry Pirker, Beaverlodge
Carbon Monoxide (CO)	Henry Pirker
Total Hydrocarbons (THC)	Henry Pirker
Total Reduced Sulphur (TRS)	Henry Pirker, Evergreen Smokey Heights
Particulate Matter (PM_{2.5})	Henry Pirker, Evergreen Park Smokey Heights, Beaverlodge
Wind Speed & Wind Direction (WS & WD)	Henry Pirker, Evergreen Park Smokey Heights, Beaverlodge
Relative Humidity (RH)	Henry Pirker, Beaverlodge
Solar Radiation (SR)	Henry Pirker

Temperature (Temp)	Henry Pirker, Evergreen Park Smokey Heights, Beaverlodge
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There were three (3) 1-hr averages of Total Reduced Sulphur (TRS) above the Hydrogen Sulphide Objective (AAAQO of 10 ppb) all of which were recorded at the Smokey Heights station:

- AENV Reference #164589 – October 8, 2005 for two hours (2:00 to 4:00) at Smokey Heights
- AENV Reference #166163 – December 6, 2005 for one hour (12:00 to 1:00) at Smokey Heights

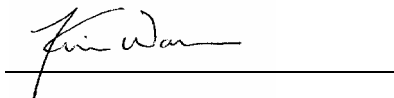
There were no 24-hr or annual averages of sulphur dioxide, nitrogen dioxide, ozone, carbon monoxide, total reduced sulphur or particulate matter (PM_{2.5}) above the Alberta Ambient Air Quality Objectives during 2005.

The passive monitoring network consists of 43 samplers distributed throughout the PASZA zone (B.C. border to Slave Lake extending from Peace County to South of Valleyview - Figure 1). The parameters measured at each site are sulphur dioxide (SO₂), nitrogen dioxide (NO₂) and ozone (O₃). There were no annual averages of the sulphur dioxide or nitrogen dioxide above the Alberta Ambient Air Quality Objectives.

We trust that the report satisfies your requirements and if you have any questions or concerns please call the undersigned at (403)-238-6640

Sincerely,

Peace Air Shed Zone Association



Kevin Warren,
Executive Director, PASZA

Encl.

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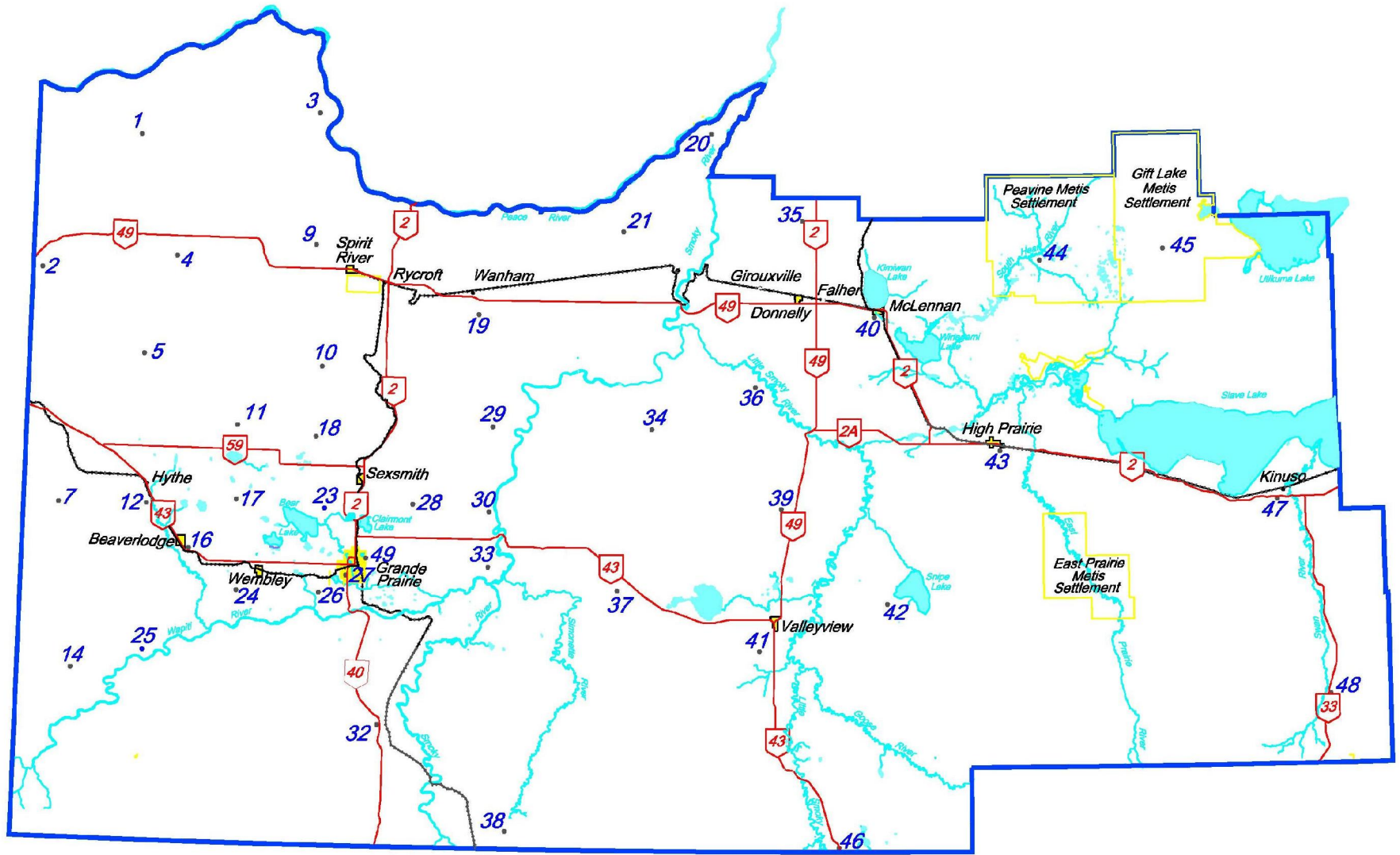


Figure 1. Peace Air Shed Zone Association - Air Monitoring Network

PASZA
HENRY PIRKER
CONTINUOUS AMBIENT AIR MONITORING STATION
2005
ANNUAL SUMMARY TABLES

Table 1. Henry Pirker - Key Parameters – Continuous Monitoring Data – 2005 Summary

Parameter	Annual Average	24-hr	Date	Maximum Values			Operational Time (%)	AAAQO Exceedences			
				8-hr	Date	1-hr		Date	24-hr	8-hr	1-hr
Sulphur Dioxide SO ₂ (ppb)	0.5	2.1	25-Aug	--	--	23.6	25-Aug	99.9%	0	--	0
Nitrogen Dioxide NO ₂ (ppb)	11.7	40.0	15-Jan	--	--	77.9	24-Feb	99.1%	0	--	0
Ozone O ₃ (ppb)	19.5	48.6	29-May	56.2	29-May	59.6	21-Apr	98.2%	--	--	0
Carbon Monoxide CO (ppm)	0.3	1.0	23-Jan	2.3	11-Feb	4.5	11-Feb	99.8%	--	0	0
Total Hydrocarbons THC (ppm)	2.2	3.4	19-Dec	--	--	7.6	16-Apr	98.1%	--	--	--
Total Reduced Sulphur TRS (ppb)	0.3	1.2	18-Apr	--	--	3.2	13-Jan	98.4%	0	--	0
Particulate Matter PM _{2.5} (µg/m ³)	4.6	25.6	15-Jan	--	--	52.0	15-Jan	99.4%	0	--	--

Table 2. Sulphur Dioxide (SO₂) – Henry Pirker 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	0.8	1.94	Jan 17	3.25	Jan 23 15:00	99.9%	0	0
February 2005	0.8	1.78	Feb 27	5.99	Feb 27 18:00	99.9%	0	0
March 2005	0.5	1.46	Mar 10	11.28	Mar 10 14:00	100.0%	0	0
April 2005	0.3	1.06	Apr 11	2.86	Apr 06 12:00	99.7%	0	0
May 2005	0.5	1.60	May 18	5.86	May 18 19:00	99.9%	0	0
June 2005	0.3	0.59	Jun 08	2.36	Jun 08 08:00	100.0%	0	0
July 2005	0.3	2.08	Jul 29	12.49	Jul 29 08:00	100.0%	0	0
August 2005	0.3	2.13	Aug 25	23.61	Aug 25 10:00	100.0%	0	0
September 2005	0.3	1.06	Sep 28	6.83	Sep 26 00:00	100.0%	0	0
October 2005	0.6	1.16	Oct 22	5.04	Oct 16 13:00	100.0%	0	0
November 2005	0.5	1.19	Nov 25	2.25	Nov 25 14:00	99.6%	0	0
December 2005	0.7	1.61	Dec 17	5.72	Dec 17 15:00	100.0%	0	0
AVERAGE	0.4					99.9%		
							0	0
MAXIMUM	0.8	2.13	Aug 25	23.61	Aug 25 10:00			

Table 3. Sulphur Dioxide (SO₂) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 20	20 to 60	60 to 110	110 to 170	170 to 340	> 340	
January 2005	707	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8
February 2005	635	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8
March 2005	708	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5
April 2005	684	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
May 2005	707	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5
June 2005	686	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
July 2005	692	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
August 2005	708	99.86%	0.14%	0.00%	0.00%	0.00%	0.00%	0.3
September 2005	686	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
October 2005	707	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6
November 2005	683	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5
December 2005	709	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7
Total Hours	8,312							
Average		99.99%	0.01%	0.00%	0.00%	0.00%	0.00%	0.4

Table 4. Nitrogen Dioxide (NO₂) – Henry Pirker 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	22.1	39.96	Jan 15	60.71	Jan 23 15:00	99.9%	0	0
February 2005	22.2	37.69	Feb 07	77.87	Feb 24 08:00	99.9%	0	0
March 2005	15.4	33.69	Mar 05	58.78	Mar 25 23:00	100.0%	0	0
April 2005	8.8	17.57	Apr 05	47.44	Apr 05 21:00	99.6%	0	0
May 2005	5.6	9.34	May 04	23.12	May 04 06:00	94.9%	0	0
June 2005	5.3	11.60	Jun 10	33.86	Jun 19 01:00	96.8%	0	0
July 2005	5.6	9.56	Jul 05	21.71	Jul 11 23:00	100.0%	0	0
August 2005	6.2	9.94	Aug 04	30.14	Aug 25 21:00	100.0%	0	0
September 2005	7.4	14.00	Sep 27	29.85	Sep 26 08:00	100.0%	0	0
October 2005	13.1	21.60	Oct 12	36.86	Oct 06 12:00	99.7%	0	0
November 2005	13.2	22.98	Nov 24	36.22	Nov 11 19:00	99.6%	0	0
December 2005	15.7	27.73	Dec 28	52.92	Dec 19 14:00	100.0%	0	0
AVERAGE	10.8					99.1%		
							0	0
MAXIMUM	22.2	39.96	Jan 15	77.87	Feb 24 08:00			

Table 5. Nitrogen Dioxide (NO₂) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 25	25 to 50	50 to 110	110 to 150	150 to 210	> 210	
January 2005	706	58.36%	40.37%	1.27%	0.00%	0.00%	0.00%	22.1
February 2005	634	62.62%	34.23%	3.15%	0.00%	0.00%	0.00%	22.2
March 2005	706	74.79%	24.93%	0.28%	0.00%	0.00%	0.00%	15.4
April 2005	682	94.28%	5.72%	0.00%	0.00%	0.00%	0.00%	8.8
May 2005	673	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.6
June 2005	657	99.24%	0.76%	0.00%	0.00%	0.00%	0.00%	5.3
July 2005	704	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.6
August 2005	702	99.72%	0.28%	0.00%	0.00%	0.00%	0.00%	6.2
September 2005	684	98.83%	1.17%	0.00%	0.00%	0.00%	0.00%	7.4
October 2005	695	91.94%	8.06%	0.00%	0.00%	0.00%	0.00%	13.1
November 2005	678	91.15%	8.85%	0.00%	0.00%	0.00%	0.00%	13.2
December 2005	706	88.39%	11.33%	0.28%	0.00%	0.00%	0.00%	15.7
Total Hours	8,227							
Average		88.28%	11.31%	0.42%	0.00%	0.00%	0.00%	10.8

Table 6. Ozone (O₃) – Henry Pirker 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	12.3	29.94	Jan 31	42.10	Jan 31 14:00	99.7%	-	0
February 2005	17.6	31.65	Feb 01	42.79	Feb 01 03:00	99.9%	-	0
March 2005	25.1	39.78	Mar 30	50.92	Mar 31 14:00	100.0%	-	0
April 2005	31.6	39.68	Apr 29	59.62	Apr 21 18:00	99.7%	-	0
May 2005	32.7	48.60	May 29	58.72	May 29 18:00	100.0%	-	0
June 2005	23.8	36.35	Jun 06	59.01	Jun 01 16:00	100.0%	-	0
July 2005	18.7	26.16	Jul 18	42.84	Jul 28 15:00	100.0%	-	0
August 2005	17.4	28.78	Aug 28	47.40	Aug 27 16:00	100.0%	-	0
September 2005	16.5	27.08	Sep 25	41.66	Sep 01 17:00	95.1%	-	0
October 2005	14.3	24.98	Oct 26	42.64	Oct 26 07:00	85.5%	-	0
November 2005	13.8	28.65	Nov 18	35.09	Nov 20 04:00	99.6%	-	0
December 2005	9.3	34.30	Dec 10	41.70	Dec 10 15:00	100.0%	-	0
AVERAGE	20.1					98.2%		
							0	0
MAXIMUM	32.7	48.60	May 29	59.62	Apr 21 18:00			

Table 7. Ozone (O₃) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 2	2 to 10	10 to 20	20 to 40	40 to 82	> 82	
January 2005	707	24.47%	25.60%	21.78%	27.72%	0.42%	0.00%	12.3
February 2005	637	13.50%	19.94%	21.19%	44.27%	1.10%	0.00%	17.6
March 2005	708	10.59%	11.16%	12.29%	55.79%	10.17%	0.00%	25.1
April 2005	684	2.49%	9.06%	9.80%	45.32%	33.33%	0.00%	31.6
May 2005	705	0.43%	5.11%	8.65%	55.60%	30.21%	0.00%	32.7
June 2005	683	0.59%	7.91%	33.82%	47.73%	9.96%	0.00%	23.8
July 2005	707	2.55%	19.38%	29.14%	48.23%	0.71%	0.00%	18.7
August 2005	708	8.90%	16.81%	35.03%	37.29%	1.98%	0.00%	17.4
September 2005	652	7.82%	21.17%	33.59%	37.12%	0.31%	0.00%	16.5
October 2005	605	22.48%	22.48%	21.16%	33.55%	0.33%	0.00%	14.3
November 2005	683	23.28%	19.91%	25.04%	31.77%	0.00%	0.00%	13.8
December 2005	707	35.93%	30.69%	14.57%	18.39%	0.42%	0.00%	9.3
Total Hours	8,186							
Average		12.75%	17.43%	22.17%	40.23%	7.41%	0.00%	20.1

Table 8. Carbon Monoxide (CO) – Henry Pirker 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	0.4	1.04	Jan 23	2.77	Jan 23 14:00	99.9%	-	0
February 2005	0.4	0.99	Feb 11	4.45	Feb 11 10:00	99.9%	-	0
March 2005	0.3	0.66	Mar 10	2.07	Mar 08 09:00	100.0%	-	0
April 2005	0.3	0.46	Apr 05	1.44	Apr 20 07:00	99.7%	-	0
May 2005	0.2	0.27	May 08	0.53	May 26 07:00	99.9%	-	0
June 2005	0.2	0.30	Jun 30	0.85	Jun 19 01:00	100.0%	-	0
July 2005	0.2	0.29	Jul 01	0.58	Jul 01 01:00	99.9%	-	0
August 2005	0.2	0.31	Aug 25	0.87	Aug 25 22:00	99.7%	-	0
September 2005	0.1	0.28	Sep 13	0.73	Sep 10 00:00	100.0%	-	0
October 2005	0.3	0.60	Oct 06	1.98	Oct 30 19:00	99.9%	-	0
November 2005	0.3	0.61	Nov 01	2.75	Nov 02 22:00	99.4%	-	0
December 2005	0.4	0.91	Dec 19	2.26	Dec 21 20:00	100.0%	-	0
AVERAGE	0.3					99.8%		
							0	0
MAXIMUM	0.4	1.04	Jan 23	4.45	Feb 11 10:00			

Table 9. Carbon Monoxide (CO) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 0.1	0.1 to 1	1 to 2.5	2.5 to 5	5 to 13	> 13	
January 2005	706	2.41%	92.92%	4.53%	0.14%	0.00%	0.00%	0.4
February 2005	637	1.57%	93.56%	4.40%	0.47%	0.00%	0.00%	0.4
March 2005	708	0.00%	96.89%	3.11%	0.00%	0.00%	0.00%	0.3
April 2005	683	0.00%	98.83%	1.17%	0.00%	0.00%	0.00%	0.3
May 2005	707	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.2
June 2005	681	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.2
July 2005	706	5.95%	94.05%	0.00%	0.00%	0.00%	0.00%	0.2
August 2005	706	6.66%	93.34%	0.00%	0.00%	0.00%	0.00%	0.2
September 2005	685	38.25%	61.75%	0.00%	0.00%	0.00%	0.00%	0.1
October 2005	704	18.61%	77.84%	3.55%	0.00%	0.00%	0.00%	0.3
November 2005	681	5.87%	90.90%	3.08%	0.15%	0.00%	0.00%	0.3
December 2005	708	1.27%	93.22%	5.51%	0.00%	0.00%	0.00%	0.4
Total Hours	8,312							
Average		6.72%	91.11%	2.11%	0.06%	0.00%	0.00%	0.3

Table 10. Total Hydrocarbons (THC) – Henry Pirker 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	2.5	3.44	Jan 15	4.15	Jan 05 10:00	99.9%	-	-
February 2005	2.4	3.13	Feb 07	3.93	Feb 24 09:00	99.9%	-	-
March 2005	2.2	2.77	Mar 01	3.36	Mar 27 04:00	100.0%	-	-
April 2005	2.1	2.80	Apr 16	7.64	Apr 16 13:00	99.6%	-	-
May 2005	2.0	2.14	May 08	2.86	May 05 03:00	99.9%	-	-
June 2005	2.0	2.16	Jun 19	2.94	Jun 19 06:00	100.0%	-	-
July 2005	2.0	2.16	Jul 12	2.87	Jul 30 01:00	100.0%	-	-
August 2005	2.0	2.21	Aug 25	3.03	Aug 25 08:00	80.5%	-	-
September 2005	2.0	2.13	Sep 27	2.65	Sep 12 23:00	100.0%	-	-
October 2005	2.1	2.67	Oct 06	3.51	Oct 06 01:00	99.6%	-	-
November 2005	2.2	2.96	Nov 02	5.67	Nov 01 21:00	99.6%	-	-
December 2005	2.4	3.44	Dec 19	4.37	Dec 19 08:00	100.0%	-	-
AVERAGE	2.1					98.1%		
							0	0
MAXIMUM	2.5	3.44	Dec 19	7.64	Apr 16 13:00			

Table 11. Total Hydrocarbons (THC) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 1.5	1.5 to 2	2 to 2.5	2.5 to 5	5 to 10	> 10	
January 2005	708	0.00%	5.08%	48.59%	46.33%	0.00%	0.00%	2.5
February 2005	635	0.00%	12.44%	60.00%	27.56%	0.00%	0.00%	2.4
March 2005	709	0.00%	21.58%	61.64%	16.78%	0.00%	0.00%	2.2
April 2005	680	0.00%	36.76%	57.65%	5.29%	0.29%	0.00%	2.1
May 2005	707	0.00%	60.68%	38.47%	0.85%	0.00%	0.00%	2.0
June 2005	685	0.00%	68.91%	29.64%	1.46%	0.00%	0.00%	2.0
July 2005	700	0.00%	73.71%	25.00%	1.29%	0.00%	0.00%	2.0
August 2005	567	0.00%	64.73%	31.92%	3.35%	0.00%	0.00%	2.0
September 2005	685	0.00%	69.49%	29.93%	0.58%	0.00%	0.00%	2.0
October 2005	701	0.00%	40.37%	50.21%	9.42%	0.00%	0.00%	2.1
November 2005	684	0.00%	23.54%	59.65%	16.67%	0.15%	0.00%	2.2
December 2005	709	0.00%	18.62%	43.86%	37.52%	0.00%	0.00%	2.4
Total Hours	8,170							
Average		0.00%	41.33%	44.71%	13.92%	0.04%	0.00%	2.1

Table 12. Total Reduced Sulphur (TRS) – Henry Pirker 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	0.6	1.16	Jan 03	3.22	Jan 13 23:00	99.9%	0	0
February 2005	0.4	0.95	Feb 07	2.72	Feb 24 09:00	99.7%	0	0
March 2005	0.3	0.68	Mar 25	1.30	Mar 08 09:00	100.0%	0	0
April 2005	0.3	1.17	Apr 18	1.79	Apr 18 09:00	84.0%	0	0
May 2005	0.2	0.60	May 04	1.31	May 04 02:00	99.6%	0	0
June 2005	0.2	0.35	Jun 21	1.19	Jun 21 04:00	100.0%	0	0
July 2005	0.2	0.67	Jul 29	3.02	Jul 29 02:00	100.0%	0	0
August 2005	0.2	0.43	Aug 01	1.97	Aug 01 01:00	100.0%	0	0
September 2005	0.2	0.40	Sep 13	1.42	Sep 11 07:00	100.0%	0	0
October 2005	0.2	0.53	Oct 31	2.64	Oct 31 22:00	99.9%	0	0
November 2005	0.2	0.58	Nov 25	1.16	Nov 02 22:00	99.6%	0	0
December 2005	0.3	0.66	Dec 19	1.82	Dec 03 19:00	100.0%	0	0
AVERAGE	0.2					98.4%		
							0	0
MAXIMUM	0.6	1.17	Apr 18	3.22	Jan 13 23:00			

Table 13. Total Reduced Sulphur (TRS) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 1	1 to 2.5	2.5 to 5	5 to 7.5	7.5 to 10	> 10	
January 2005	707	88.26%	11.46%	0.28%	0.00%	0.00%	0.00%	0.6
February 2005	634	93.85%	5.84%	0.32%	0.00%	0.00%	0.00%	0.4
March 2005	704	98.44%	1.56%	0.00%	0.00%	0.00%	0.00%	0.3
April 2005	575	95.65%	4.35%	0.00%	0.00%	0.00%	0.00%	0.3
May 2005	704	99.57%	0.43%	0.00%	0.00%	0.00%	0.00%	0.2
June 2005	686	99.85%	0.15%	0.00%	0.00%	0.00%	0.00%	0.2
July 2005	701	98.43%	1.43%	0.14%	0.00%	0.00%	0.00%	0.2
August 2005	708	99.72%	0.28%	0.00%	0.00%	0.00%	0.00%	0.2
September 2005	686	99.71%	0.29%	0.00%	0.00%	0.00%	0.00%	0.2
October 2005	707	99.58%	0.28%	0.14%	0.00%	0.00%	0.00%	0.2
November 2005	683	99.71%	0.29%	0.00%	0.00%	0.00%	0.00%	0.2
December 2005	709	98.17%	1.83%	0.00%	0.00%	0.00%	0.00%	0.3
Total Hours	8,204							
Average		97.58%	2.35%	0.07%	0.00%	0.00%	0.00%	0.2

Table 14. Particulate Matter (PM_{2.5}) – Henry Pirker 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	7.4	25.58	Jan 15	52.04	Jan 15 12:00	99.3%	0	-
February 2005	5.4	18.06	Feb 07	51.80	Feb 07 13:00	99.6%	0	-
March 2005	3.9	9.93	Mar 10	29.63	Mar 10 19:00	100.0%	0	-
April 2005	4.2	9.41	Apr 22	31.81	Apr 26 01:00	99.6%	0	-
May 2005	5.1	19.80	May 30	35.49	May 30 02:00	98.7%	0	-
June 2005	3.8	8.13	Jun 09	33.02	Jun 19 01:00	98.9%	0	-
July 2005	2.6	6.04	Jul 12	13.77	Jul 08 10:00	99.2%	0	-
August 2005	3.8	12.60	Aug 13	23.48	Aug 25 22:00	99.2%	0	-
September 2005	2.2	4.13	Sep 13	19.21	Sep 18 09:00	99.9%	0	-
October 2005	5.1	14.66	Oct 06	37.53	Oct 06 12:00	99.3%	0	-
November 2005	5.6	16.28	Nov 25	40.36	Nov 25 18:00	99.6%	0	-
December 2005	5.9	14.78	Dec 19	37.50	Dec 19 14:00	99.3%	0	-
AVERAGE	4.3					99.4%		
							0	0
MAXIMUM	7.4	25.58	Jan 15	52.04	Jan 15 12:00			

Table 15. Particulate Matter (PM_{2.5}) Frequency Distribution – Henry Pirker 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 2	2 to 6	6 to 11	11 to 17	17 to 30	> 30	
January 2005	739	22.73%	29.50%	26.66%	13.26%	5.68%	2.17%	7.4
February 2005	664	31.17%	37.05%	19.28%	6.93%	4.52%	1.05%	5.4
March 2005	742	37.33%	42.18%	15.50%	3.77%	1.21%	0.00%	3.9
April 2005	716	38.97%	40.22%	13.13%	4.75%	2.37%	0.56%	4.2
May 2005	728	29.26%	40.52%	19.64%	8.24%	1.51%	0.82%	5.1
June 2005	707	34.65%	44.27%	16.83%	3.39%	0.71%	0.14%	3.8
July 2005	733	47.61%	42.97%	8.59%	0.82%	0.00%	0.00%	2.6
August 2005	737	42.88%	34.87%	15.06%	5.02%	2.17%	0.00%	3.8
September 2005	716	57.68%	35.75%	6.15%	0.28%	0.14%	0.00%	2.2
October 2005	736	29.35%	42.53%	16.30%	7.34%	4.35%	0.14%	5.1
November 2005	716	35.34%	30.31%	18.58%	11.17%	3.91%	0.70%	5.6
December 2005	738	27.64%	32.52%	25.07%	9.62%	4.34%	0.81%	5.9
Total Hours	8,672							
Average		36.22%	37.73%	16.73%	6.22%	2.58%	0.53%	4.3

Table 16. Wind Speed and Wind Direction Frequency Distribution – Henry Pirker 2005 Summary

Direction	Number of Readings	% of wind speed range ($\mu\text{g}/\text{m}^3$)						Total %
		1 to 6	6 to 12	12 to 20	20 to 29	29 to 39	> 39	
N	286	1.4%	1.2%	0.7%	0.1%	0.0%	0.0%	3.3%
NNE	210	1.1%	1.1%	0.2%	0.0%	0.0%	0.0%	2.4%
NE	390	1.2%	2.7%	0.7%	0.0%	0.0%	0.0%	4.5%
ENE	454	1.8%	2.8%	0.6%	0.0%	0.0%	0.0%	5.3%
E	648	1.7%	4.1%	1.7%	0.0%	0.0%	0.0%	7.6%
ESE	499	2.1%	3.0%	0.7%	0.0%	0.0%	0.0%	5.8%
SE	294	2.1%	1.2%	0.1%	0.0%	0.0%	0.0%	3.4%
SSE	329	2.5%	1.2%	0.2%	0.0%	0.0%	0.0%	3.8%
S	251	1.5%	1.2%	0.2%	0.0%	0.0%	0.0%	2.9%
SSW	254	1.3%	1.4%	0.2%	0.0%	0.0%	0.0%	3.0%
SW	415	1.2%	2.5%	1.0%	0.2%	0.0%	0.0%	4.8%
WSW	1228	1.6%	4.8%	4.7%	2.3%	0.8%	0.0%	14.3%
W	1024	1.8%	3.4%	3.5%	2.6%	0.6%	0.0%	11.9%
WNW	858	3.6%	3.4%	2.1%	0.8%	0.1%	0.0%	10.0%
NW	894	5.5%	3.0%	1.6%	0.3%	0.0%	0.0%	10.4%
NNW	540	3.9%	1.9%	0.5%	0.0%	0.0%	0.0%	6.3%
Total Calms	8,574	34.3%	38.9%	18.8%	6.3%	1.6%	0.0%	100.0%

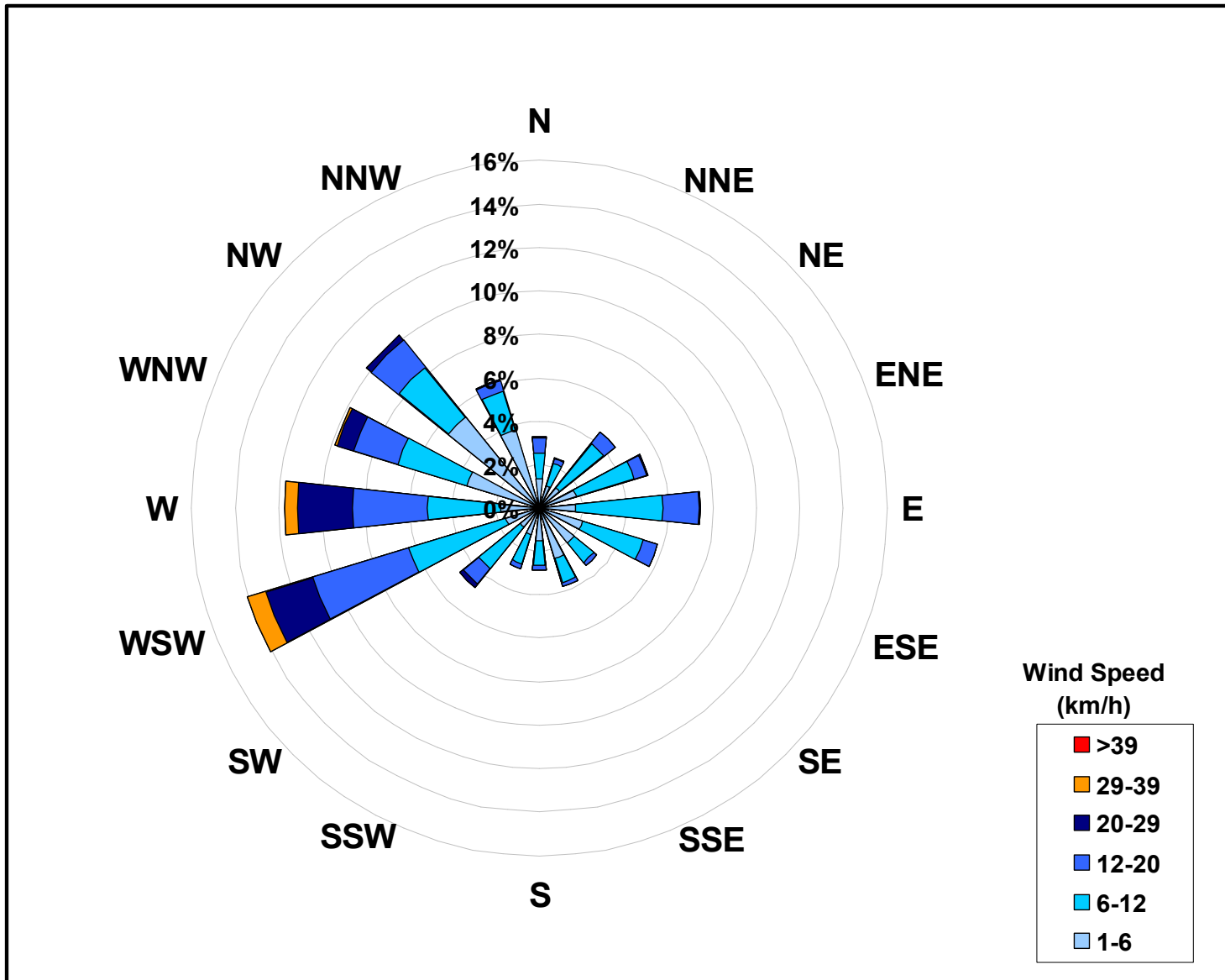


Figure 2. Henry Pirker Wind Rose

Table 17. Relative Humidity (%) – Henry Pirker 2005 Summary

Month	Monthly Average (° C)	Monthly Maximum (° C)	Monthly Minimum (° C)	Operational time (%)
January 2005	73.9	95.1	43.8	99.9%
February 2005	66.7	90.6	28.3	100.0%
March 2005	67.8	92.9	27.6	99.7%
April 2005	52.6	96.2	14.0	100.0%
May 2005	56.3	95.9	19.9	100.0%
June 2005	70.5	96.9	26.6	100.0%
July 2005	66.9	97.0	31.1	100.0%
August 2005	68.5	96.1	24.4	100.0%
September 2005	67.4	96.6	24.3	100.0%
October 2005	68.7	95.8	21.1	100.0%
November 2005	69.7	94.8	22.1	99.7%
December 2005	78.4	95.0	54.1	100.0%
AVERAGE	67.3			99.9%
MAXIMUM	78.4			

Table 18. Solar Radiation (W/m²) – Henry Pirker 2005 Summary

Month	Monthly Average (W/m ²)	Monthly Maximum (W/m ²)	Monthly Minimum (W/m ²)	Operational time (%)
January 2005	30.8	273.7	0.0	99.9%
February 2005	72.1	471.6	0.0	100.0%
March 2005	129.1	700.1	0.0	99.7%
April 2005	205.7	839.6	0.0	100.0%
May 2005	242.7	885.7	0.0	100.0%
June 2005	222.1	933.3	0.0	100.0%
July 2005	241.3	907.0	0.0	99.9%
August 2005	185.0	820.6	0.0	100.0%
September 2005	136.7	722.6	0.0	100.0%
October 2005	79.8	533.8	0.0	100.0%
November 2005	37.4	340.4	0.0	99.7%
December 2005	22.0	243.0	0.0	100.0%
AVERAGE	133.7			99.9%
MAXIMUM	242.7			

Table 19. Temperature (°C) – Henry Pirker 2005 Summary

Month	Monthly Average (° C)	Monthly Maximum (° C)	Monthly Minimum (° C)	Operational time (%)
January 2005	-15.4	8.4	-40.0	99.9%
February 2005	-5.9	10.5	-40.0	100.0%
March 2005	-0.4	12.3	-17.4	99.7%
April 2005	6.6	24.8	-7.8	100.0%
May 2005	12.3	29.5	-3.4	100.0%
June 2005	14.3	25.9	4.1	100.0%
July 2005	15.6	25.8	4.9	100.0%
August 2005	14.1	28.4	1.5	100.0%
September 2005	9.9	22.3	-1.3	100.0%
October 2005	4.9	22.3	-6.1	100.0%
November 2005	-0.5	16.8	-14.9	99.7%
December 2005	-6.8	10.9	-30.0	100.0%
AVERAGE	4.1			99.9%
MAXIMUM	15.6			

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Table 20. Evergreen Park - Key Parameters – Continuous Monitoring Data – 2005 Summary

Parameter	Annual Average	Maximum Values				Operational Time (%)	AAQO Exceedences	
		24-hr	Date	1-hr	Date		24-hr	1-hr
Sulphur Dioxide SO ₂ (ppb)	0.7	4.39	23-Aug	35.29	24-Aug	91.8%	0	0
Total Reduced Sulphur TRS (ppb)	0.6	1.27	18-Dec	6.85	19-Oct	92.3%	0	0
Particulate Matter PM _{2.5} (µg/m ³)	4.1	15.42	12-Aug	83.97	8-Mar	91.5%	0	0

Table 21. Sulphur Dioxide (SO₂) – Evergreen Park 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	2.7	3.04	Feb 24	9.78	Feb 24 14:00	15.8%	0	0
March 2005	0.7	1.89	Mar 02	8.19	Mar 04 14:00	99.6%	0	0
April 2005	0.6	2.59	Apr 20	11.39	Apr 21 09:00	100.0%	0	0
May 2005	0.8	2.13	May 23	11.93	May 27 08:00	100.0%	0	0
June 2005	0.4	1.47	Jun 01	8.18	Jun 20 16:00	99.6%	0	0
July 2005	1.0	3.16	Jul 12	11.47	Jul 13 19:00	96.0%	0	0
August 2005	0.9	4.39	Aug 23	35.29	Aug 24 07:00	99.7%	0	0
September 2005	0.8	2.99	Sep 28	10.87	Sep 29 14:00	99.2%	0	0
October 2005	0.6	2.28	Oct 08	9.07	Oct 14 12:00	100.0%	0	0
November 2005	0.7	3.40	Nov 07	6.05	Nov 08 14:00	100.0%	0	0
December 2005	0.6	1.18	Dec 06	4.24	Dec 07 10:00	100.0%	0	0
AVERAGE	0.9					91.8%		
							0	0
MAXIMUM	2.7	4.39	Aug 23	35.29	Aug 24 07:00			

Table 22. Sulphur Dioxide (SO₂) Frequency Distribution – Evergreen Park 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 20	20 to 60	60 to 110	110 to 170	170 to 340	> 340	
January 2005	-	-	-	-	-	-	-	-
February 2005	102	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7
March 2005	703	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7
April 2005	683	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6
May 2005	704	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8
June 2005	680	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
July 2005	677	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.0
August 2005	706	99.72%	0.28%	0.00%	0.00%	0.00%	0.00%	0.9
September 2005	679	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8
October 2005	708	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6
November 2005	684	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.7
December 2005	701	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.6
Total Hours	7,027							
Average		99.97%	0.03%	0.00%	0.00%	0.00%	0.00%	0.9

Table 23. Total Reduced Sulphur (TRS) – Evergreen Park 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	0.7	0.80	Feb 27	1.47	Feb 28 09:00	15.8%	0	0
March 2005	0.6	0.82	Mar 04	1.53	Mar 05 06:00	100.0%	0	0
April 2005	0.6	1.03	Apr 23	4.76	Apr 24 06:00	100.0%	0	0
May 2005	0.5	0.69	May 22	1.24	May 27 08:00	100.0%	0	0
June 2005	0.5	0.65	Jun 21	1.19	Jun 05 06:00	99.6%	0	0
July 2005	0.5	0.65	Jul 26	1.79	Jul 27 08:00	100.0%	0	0
August 2005	0.5	0.64	Aug 24	1.52	Aug 11 22:00	100.0%	0	0
September 2005	0.5	0.69	Sep 28	1.20	Sep 29 09:00	100.0%	0	0
October 2005	0.6	0.89	Oct 18	6.85	Oct 19 10:00	100.0%	0	0
November 2005	0.7	1.05	Nov 24	1.75	Nov 24 21:00	100.0%	0	0
December 2005	0.8	1.27	Dec 18	2.84	Dec 19 16:00	100.0%	0	0
AVERAGE	0.6					92.3%		
							0	0
MAXIMUM	0.8	1.27	Dec 18	6.85	Oct 19 10:00			

Table 24. Total Reduced Sulphur (TRS) Frequency Distribution – Evergreen Park 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 1	1 to 2.5	2.5 to 5	5 to 7.5	7.5 to 10	> 10	
January 2005	-	-	-	-	-	-	-	-
February 2005	102	96.08%	3.92%	0.00%	0.00%	0.00%	0.00%	0.7
March 2005	706	98.02%	1.98%	0.00%	0.00%	0.00%	0.00%	0.6
April 2005	685	93.28%	6.28%	0.44%	0.00%	0.00%	0.00%	0.6
May 2005	709	99.86%	0.14%	0.00%	0.00%	0.00%	0.00%	0.5
June 2005	683	99.71%	0.29%	0.00%	0.00%	0.00%	0.00%	0.5
July 2005	706	99.29%	0.71%	0.00%	0.00%	0.00%	0.00%	0.5
August 2005	708	99.58%	0.42%	0.00%	0.00%	0.00%	0.00%	0.5
September 2005	685	99.71%	0.29%	0.00%	0.00%	0.00%	0.00%	0.5
October 2005	708	96.33%	3.53%	0.00%	0.14%	0.00%	0.00%	0.6
November 2005	684	93.71%	6.29%	0.00%	0.00%	0.00%	0.00%	0.7
December 2005	708	85.31%	14.41%	0.28%	0.00%	0.00%	0.00%	0.8
Total Hours	7,084							
Average		96.44%	3.48%	0.07%	0.01%	0.00%	0.00%	0.6

Table 25. Particulate Matter (PM_{2.5}) – Evergreen Park 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	6.8	8.67	Feb 26	17.83	Feb 28 09:00	15.8%	0	-
March 2005	3.6	11.39	Mar 07	83.97	Mar 08 19:00	99.2%	0	-
April 2005	3.0	6.68	Apr 20	41.00	Apr 20 07:00	98.5%	0	-
May 2005	4.4	13.90	May 29	37.12	May 30 07:00	98.9%	0	-
June 2005	3.8	8.90	May 31	21.70	Jun 10 06:00	98.6%	0	-
July 2005	3.8	12.99	Jul 16	46.56	Jul 17 15:00	98.5%	0	-
August 2005	4.7	15.42	Aug 12	27.12	Aug 13 16:00	99.1%	0	-
September 2005	2.7	8.47	Sep 06	36.63	Sep 07 12:00	98.5%	0	-
October 2005	4.2	10.88	Oct 27	35.11	Oct 28 08:00	99.5%	0	-
November 2005	4.8	14.09	Nov 03	21.37	Nov 08 09:00	100.0%	0	-
December 2005	5.4	12.80	Dec 02	24.86	Dec 03 20:00	99.6%	0	-
AVERAGE	4.3					91.5%		
							0	0
MAXIMUM	6.8	15.42	Aug 12	83.97	Mar 08 19:00			

Table 26. Particulate Matter (PM_{2.5}) Frequency Distribution – Evergreen Park 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 2	2 to 6	6 to 11	11 to 17	17 to 30	> 30	
January 2005	-	-	-	-	-	-	-	-
February 2005	106	11.32%	36.79%	33.96%	16.98%	0.94%	0.00%	6.8
March 2005	738	47.15%	35.23%	12.74%	3.79%	0.81%	0.27%	3.6
April 2005	704	47.30%	40.91%	8.95%	2.13%	0.43%	0.28%	3.0
May 2005	733	27.83%	48.84%	17.33%	4.64%	1.23%	0.14%	4.4
June 2005	710	39.72%	38.59%	16.90%	4.08%	0.70%	0.00%	3.8
July 2005	731	43.23%	38.58%	12.72%	2.74%	1.92%	0.82%	3.8
August 2005	735	38.10%	30.75%	20.54%	7.76%	2.86%	0.00%	4.7
September 2005	707	57.00%	31.97%	6.93%	2.55%	1.41%	0.14%	2.7
October 2005	737	31.89%	46.68%	15.74%	4.21%	1.22%	0.27%	4.2
November 2005	718	40.11%	28.83%	18.11%	10.17%	2.79%	0.00%	4.8
December 2005	735	28.03%	35.51%	23.40%	10.34%	2.72%	0.00%	5.4
Total Hours	7,354							
Average		37.43%	37.52%	17.03%	6.31%	1.55%	0.18%	4.3

Table 27. Wind Speed and Wind Direction Frequency Distribution – Evergreen Park 2005 Summary

Direction	Number of Readings	% of wind speed range ($\mu\text{g}/\text{m}^3$)						Total %
		1 to 6	6 to 12	12 to 20	20 to 29	29 to 39	> 39	
N	176	1.3%	0.5%	0.4%	0.1%	0.0%	0.0%	2.4%
NNE	267	2.0%	0.8%	0.4%	0.4%	0.1%	0.0%	3.6%
NE	491	3.3%	1.6%	1.0%	0.8%	0.1%	0.0%	6.6%
ENE	585	4.7%	2.1%	0.6%	0.4%	0.0%	0.0%	7.9%
E	371	2.8%	1.0%	0.8%	0.3%	0.1%	0.0%	5.0%
ESE	252	1.5%	0.8%	0.8%	0.3%	0.1%	0.0%	3.4%
SE	230	1.7%	0.7%	0.5%	0.1%	0.1%	0.0%	3.1%
SSE	298	2.3%	0.8%	0.6%	0.2%	0.1%	0.0%	4.0%
S	421	3.3%	1.4%	0.7%	0.2%	0.1%	0.0%	5.7%
SSW	592	5.2%	1.7%	0.8%	0.3%	0.0%	0.0%	8.0%
SW	530	3.1%	2.2%	1.1%	0.5%	0.1%	0.1%	7.2%
WSW	1119	2.6%	3.5%	4.6%	2.4%	1.3%	0.7%	15.1%
W	1035	2.5%	4.2%	3.3%	1.8%	1.2%	1.0%	14.0%
WNW	406	1.7%	2.3%	1.0%	0.4%	0.1%	0.0%	5.5%
NW	352	1.7%	1.5%	0.9%	0.5%	0.2%	0.0%	4.8%
NNW	272	1.6%	1.2%	0.7%	0.2%	0.0%	0.0%	3.7%
Total	7,397	41.2%	26.2%	18.0%	9.1%	3.6%	1.9%	100.0%
Calms								0.0%

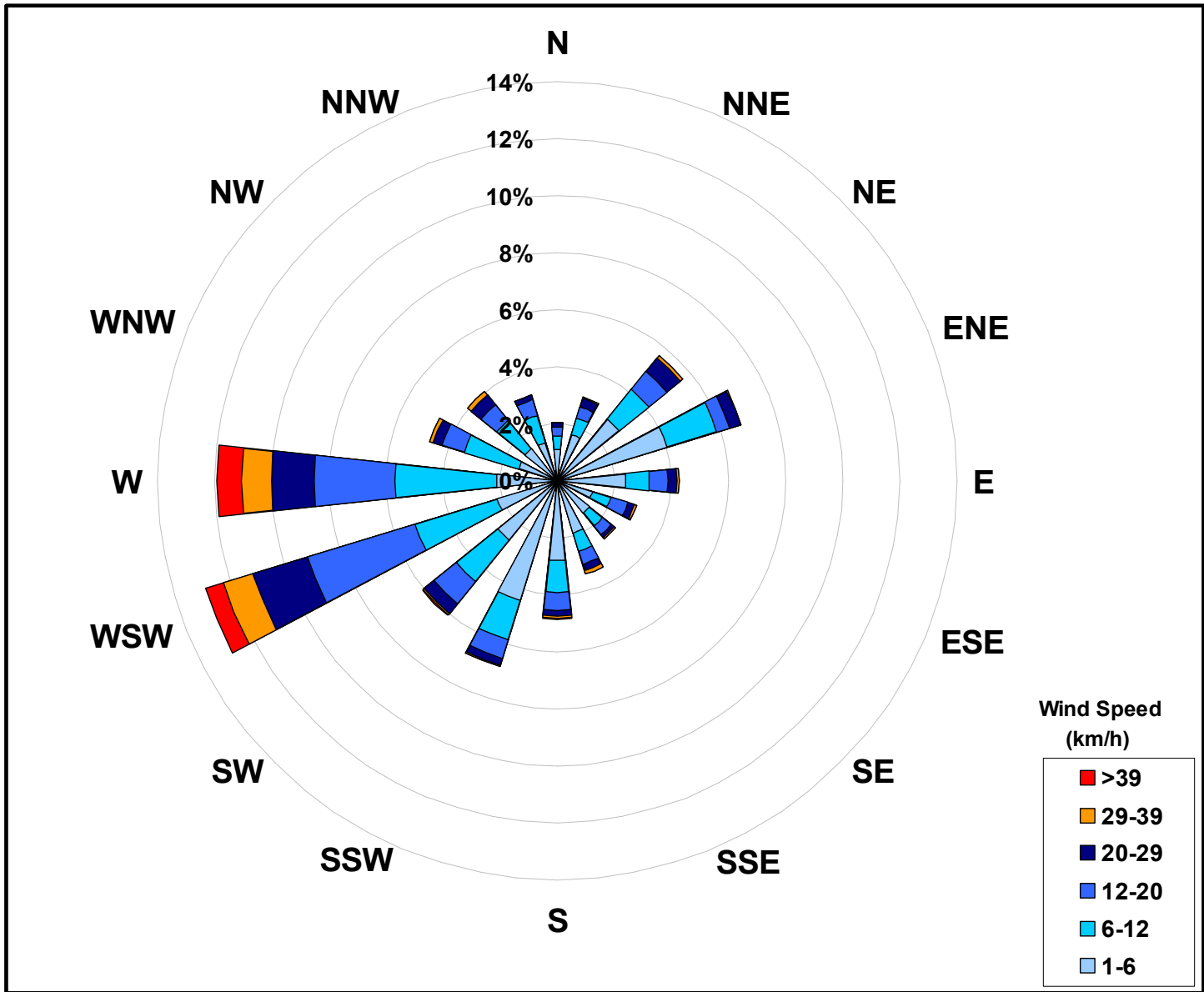


Figure 3. Evergreen Park Wind Rose

Table 28. Temperature (°C) – Evergreen Park 2005 Summary

Month	Monthly Average (° C)	Monthly Maximum (° C)	Monthly Minimum (° C)	Operational time (%)
January 2005	--	--	--	--
February 2005	-4.3	11.4	-18.6	46.7%
March 2005	-0.6	11.6	-20.4	99.7%
April 2005	5.9	25.1	-8.3	100.0%
May 2005	11.5	29.7	-5.8	100.0%
June 2005	13.5	25.9	1.4	99.6%
July 2005	14.9	25.9	3.8	100.0%
August 2005	13.3	27.1	0.9	100.0%
September 2005	9.3	22.0	-2.4	100.0%
October 2005	3.8	22.9	-9.7	100.0%
November 2005	-1.0	17.0	-16.9	100.0%
December 2005	-7.5	11.8	-31.1	100.0%
AVERAGE	4.9			95.1%
MAXIMUM	14.9			

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SMOKEY HEIGHTS

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Table 29. Smokey Heights - Key Parameters – Continuous Monitoring Data – 2005 Summary

Parameter	Annual Average	Maximum Values				Operational Time (%)	AAAQO Exceedences	
		24-hr	Date	1-hr	Date		24-hr	1-hr
Sulphur Dioxide SO ₂ (ppb)	0.4	2.13	23-May	12.50	20-Apr	95.8%	0	0
Total Reduced Sulphur TRS (ppb)	0.5	2.78	7-Oct	29.90	8-Oct	92.4%	0	3
Particulate Matter PM _{2.5} (µg/m ³)	3.3	13.90	29-May	71.81	21-Mar	87.1%	0	0

Table 30. Sulphur Dioxide (SO₂) – Smokey Heights 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	0.4	1.41	Mar 23	6.16	Mar 24 15:00	72.0%	0	0
April 2005	0.4	1.56	Apr 10	12.50	Apr 20 07:00	100.0%	0	0
May 2005	0.8	2.13	May 23	11.93	May 27 08:00	100.0%	0	0
June 2005	0.4	1.54	Jun 29	3.23	Jun 23 13:00	87.2%	0	0
July 2005	0.3	0.96	Jun 30	4.22	Jul 14 03:00	100.0%	0	0
August 2005	0.4	1.13	Aug 02	5.05	Aug 06 07:00	99.3%	0	0
September 2005	0.1	0.65	Sep 04	4.45	Sep 05 10:00	99.4%	0	0
October 2005	0.4	1.31	Oct 07	7.04	Oct 07 23:00	100.0%	0	0
November 2005	0.4	1.34	Nov 16	11.34	Nov 17 08:00	99.6%	0	0
December 2005	0.5	1.89	Dec 06	5.31	Dec 08 06:00	100.0%	0	0
AVERAGE	0.4					95.8%		
							0	0
MAXIMUM	0.8	2.13	May 23	12.50	Apr 20 07:00			

Table 31. Sulphur Dioxide (SO₂) Frequency Distribution – Smokey Heights 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 20	20 to 60	60 to 110	110 to 170	170 to 340	> 340	
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	508	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
April 2005	683	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
May 2005	704	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.8
June 2005	615	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
July 2005	702	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
August 2005	697	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
September 2005	680	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1
October 2005	708	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
November 2005	680	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
December 2005	707	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5
Total Hours	6,684							
Average		100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4

Table 32. Total Reduced Sulphur (TRS) – Smokey Heights 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	0.3	0.69	Mar 18	0.95	Mar 28 01:00	72.0%	0	0
April 2005	0.6	0.73	Apr 23	1.68	Apr 14 14:00	100.0%	0	0
May 2005	0.5	0.69	May 22	1.24	May 27 08:00	100.0%	0	0
June 2005	0.3	0.54	Jun 28	1.25	Jun 29 05:00	53.3%	0	0
July 2005	0.5	0.65	Jul 28	1.40	Jul 11 00:00	100.0%	0	0
August 2005	0.5	0.92	Aug 30	1.54	Aug 04 18:00	98.9%	0	0
September 2005	0.5	0.59	Sep 20	1.31	Sep 02 04:00	99.4%	0	0
October 2005	0.6	2.78	Oct 07	29.90	Oct 08 02:00	100.0%	0	2
November 2005	0.6	0.85	Nov 06	1.42	Nov 22 16:00	99.9%	0	0
December 2005	0.7	1.63	Dec 05	11.55	Dec 06 12:00	100.0%	0	1
AVERAGE	0.5					92.4%		
							0	3
MAXIMUM	0.7	2.78	Oct 07	29.90	Oct 08 02:00			

Table 33. Total Reduced Sulphur (TRS) Frequency Distribution – Smokey Heights 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 1	1 to 2.5	2.5 to 5	5 to 7.5	7.5 to 10	> 10	
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	508	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
April 2005	685	99.27%	0.73%	0.00%	0.00%	0.00%	0.00%	0.6
May 2005	709	99.86%	0.14%	0.00%	0.00%	0.00%	0.00%	0.5
June 2005	371	99.46%	0.54%	0.00%	0.00%	0.00%	0.00%	0.3
July 2005	702	99.72%	0.28%	0.00%	0.00%	0.00%	0.00%	0.5
August 2005	695	93.67%	6.33%	0.00%	0.00%	0.00%	0.00%	0.5
September 2005	680	99.41%	0.59%	0.00%	0.00%	0.00%	0.00%	0.5
October 2005	708	96.33%	2.97%	0.14%	0.28%	0.00%	0.28%	0.6
November 2005	682	98.24%	1.76%	0.00%	0.00%	0.00%	0.00%	0.6
December 2005	707	90.52%	9.19%	0.00%	0.00%	0.14%	0.14%	0.7
Total Hours	6,447							
Average		97.65%	2.25%	0.01%	0.03%	0.01%	0.04%	0.5

Table 34. Particulate Matter (PM_{2.5}) – Smokey Heights 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	2.9	7.90	Mar 24	71.81	Mar 21 22:00	71.2%	0	-
April 2005	1.7	5.20	Apr 24	55.18	Apr 28 03:00	99.3%	0	-
May 2005	4.4	13.90	May 29	37.12	May 30 07:00	98.9%	0	-
June 2005	2.3	5.37	Jun 20	32.39	Jun 21 19:00	26.9%	0	-
July 2005	5.6	13.71	Jul 21	50.39	Jul 27 19:00	84.7%	0	-
August 2005	3.3	12.04	Aug 12	51.70	Aug 19 19:00	95.4%	0	-
September 2005	1.1	4.33	Sep 05	59.46	Sep 06 05:00	95.8%	0	-
October 2005	2.7	9.41	Oct 26	58.45	Oct 27 17:00	100.0%	0	-
November 2005	4.2	12.39	Nov 06	41.70	Nov 01 00:00	98.8%	0	-
December 2005	4.1	9.79	Dec 30	40.71	Dec 15 08:00	99.7%	0	-
AVERAGE	2.9					87.1%		
							0	0
MAXIMUM	5.6	13.90	May 29	71.81	Mar 21 22:00			

Table 35. Particulate Matter (PM_{2.5}) Frequency Distribution – Smokey Heights 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 2	2 to 6	6 to 11	11 to 17	17 to 30	> 30	
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	530	61.13%	28.11%	5.85%	2.26%	1.70%	0.94%	2.9
April 2005	710	72.11%	22.54%	4.08%	0.85%	0.00%	0.42%	1.7
May 2005	733	27.83%	48.84%	17.33%	4.64%	1.23%	0.14%	4.4
June 2005	190	65.79%	24.74%	7.89%	0.53%	0.53%	0.53%	2.3
July 2005	627	30.94%	36.20%	16.75%	9.89%	5.90%	0.32%	5.6
August 2005	707	56.86%	27.86%	8.77%	3.11%	2.69%	0.71%	3.3
September 2005	687	82.10%	16.16%	1.46%	0.15%	0.00%	0.15%	1.1
October 2005	741	55.33%	35.22%	7.02%	0.94%	0.81%	0.67%	2.7
November 2005	709	48.24%	24.82%	17.49%	6.49%	2.54%	0.42%	4.2
December 2005	738	37.26%	37.67%	19.92%	3.66%	1.08%	0.41%	4.1
Total Hours	6,372							
Average		53.76%	30.22%	10.66%	3.25%	1.65%	0.47%	3.2

Table 36. Wind Speed and Wind Direction Frequency Distribution – Smokey Heights 2005 Summary

Direction	Number of Readings	% of wind speed range ($\mu\text{g}/\text{m}^3$)						Total %
		1 to 6	6 to 12	12 to 20	20 to 29	29 to 39	> 39	
N	371	1.9%	2.5%	0.9%	0.0%	0.0%	0.0%	5.3%
NNE	584	2.8%	4.2%	1.0%	0.4%	0.0%	0.0%	8.4%
NE	488	1.8%	3.3%	1.7%	0.2%	0.0%	0.0%	7.0%
ENE	223	1.1%	1.1%	0.8%	0.2%	0.0%	0.0%	3.2%
E	154	0.7%	0.7%	0.5%	0.2%	0.1%	0.0%	2.2%
ESE	183	0.8%	0.9%	0.7%	0.2%	0.1%	0.0%	2.6%
SE	206	0.7%	1.0%	0.9%	0.2%	0.1%	0.0%	3.0%
SSE	241	0.8%	1.5%	0.7%	0.3%	0.2%	0.0%	3.5%
S	344	1.1%	2.5%	1.0%	0.2%	0.1%	0.0%	5.0%
SSW	504	1.8%	3.9%	1.2%	0.4%	0.0%	0.0%	7.3%
SW	592	2.1%	4.4%	1.6%	0.4%	0.0%	0.0%	8.5%
WSW	1361	2.4%	5.0%	5.8%	4.3%	1.7%	0.5%	19.6%
W	978	1.9%	3.8%	4.0%	2.7%	1.4%	0.3%	14.1%
WNW	251	1.0%	1.4%	0.8%	0.3%	0.1%	0.0%	3.6%
NW	257	1.0%	0.9%	1.2%	0.5%	0.1%	0.0%	3.7%
NNW	205	0.9%	1.2%	0.8%	0.1%	0.0%	0.0%	3.0%
Total	6,942	22.8%	38.4%	23.5%	10.7%	3.7%	0.9%	100.0%
Calms								0.0%

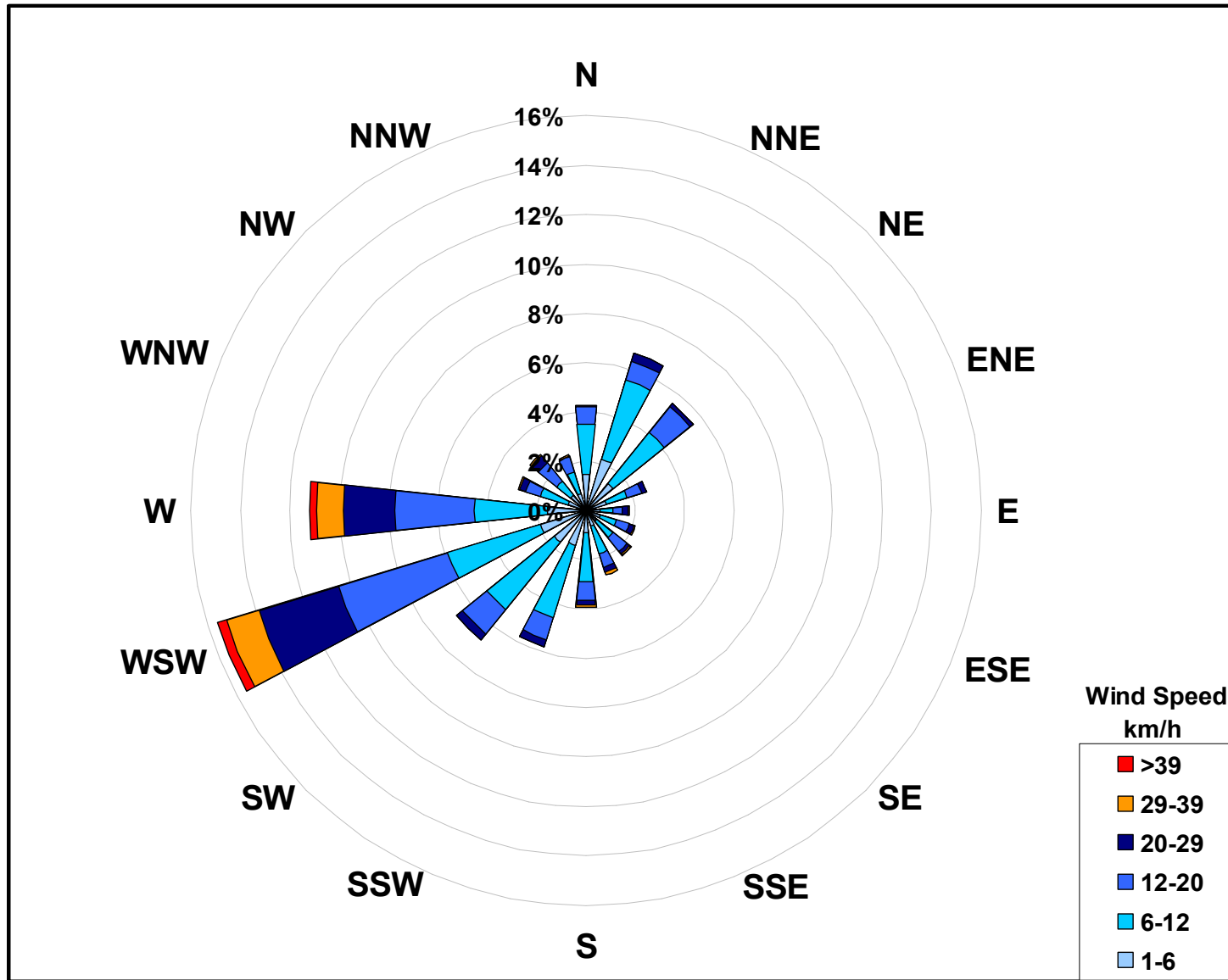


Figure 4. Smokey Heights Wind Rose

Table 37. Temperature (°C) – Smokey Heights 2005 Summary

Month	Monthly Average (° C)	Monthly Maximum (° C)	Monthly Minimum (° C)	Operational time (%)
January 2005	--	--	--	--
February 2005	--	--	--	--
March 2005	-3.2	9.5	-18.1	99.1%
April 2005	4.9	21.8	-6.3	100.0%
May 2005	11.5	29.7	-5.8	100.0%
June 2005	12.3	24.1	1.8	87.4%
July 2005	13.4	23.9	1.8	100.0%
August 2005	12.0	24.9	-1.8	99.7%
September 2005	7.7	20.0	-4.3	99.4%
October 2005	3.8	21.5	-6.3	99.9%
November 2005	-1.2	16.8	-15.9	99.9%
December 2005	-6.9	10.0	-31.8	100.0%
AVERAGE	4.5			98.5%
MAXIMUM	13.4			

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Table 38. Beaverlodge - Key Parameters – Continuous Monitoring Data – 2005 Summary

Parameter	Annual Average	24-hr	Date	Maximum Values			Operational Time (%)	AAAQO Exceedences			
				8-hr	Date	1-hr		Date	24-hr	8-hr	1-hr
Sulphur Dioxide SO ₂ (ppb)	0.4	2.8	3-Mar	--	--	28.0	3-Mar	98.4%	0	--	0
Nitrogen Dioxide NO ₂ (ppb)	4.5	21.2	16-Jan	--	--	36.0	15-Jan	98.9%	0	--	0
Ozone O ₃ (ppb)	27.5	47.5	29-May	57.1	29-May	61.0	21-Apr	99.7%	--	--	0
Particulate Matter PM _{2.5} (µg/m ³)	3.1	19.5	13-Aug	--	--	60.2	30-May	91.5%	0	--	--

Table 39. Sulphur Dioxide (SO₂) – Beaverlodge 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	0.9	2.20	Jan 11	9.00	Jan 11 02:00	99.7%	0	0
February 2005	0.5	1.83	Feb 04	8.00	Feb 24 17:00	99.3%	0	0
March 2005	0.6	2.81	Mar 03	28.00	Mar 03 15:00	100.0%	0	0
April 2005	0.3	0.92	Apr 21	5.60	Apr 26 05:00	99.2%	0	0
May 2005	0.5	1.51	May 29	3.40	May 14 04:00	99.1%	0	0
June 2005	0.2	0.57	Jun 06	2.00	Jun 02 15:00	100.0%	0	0
July 2005	0.1	0.63	Jul 22	3.20	Jul 08 20:00	100.0%	0	0
August 2005	0.2	0.83	Aug 15	6.64	Aug 24 19:00	90.6%	0	0
September 2005	0.2	2.39	Sep 28	8.66	Sep 28 01:00	100.0%	0	0
October 2005	0.4	1.43	Oct 28	4.81	Oct 16 11:00	100.0%	0	0
November 2005	0.3	0.89	Nov 29	5.75	Nov 06 17:00	100.0%	0	0
December 2005	0.2	1.37	Dec 02	2.23	Dec 06 15:00	94.5%	0	0
AVERAGE	0.3					98.4%		
							0	0
MAXIMUM	0.9	2.81	Mar 03	28.00	Mar 03 15:00			

Table 40. Sulphur Dioxide (SO₂) Frequency Distribution – Beaverlodge 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 20	20 to 60	60 to 110	110 to 170	170 to 340	> 340	
January 2005	742	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.9
February 2005	667	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5
March 2005	744	99.73%	0.27%	0.00%	0.00%	0.00%	0.00%	0.6
April 2005	714	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
May 2005	737	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.5
June 2005	716	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2
July 2005	733	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.1
August 2005	668	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2
September 2005	717	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2
October 2005	740	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.4
November 2005	717	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.3
December 2005	673	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.2
Total Hours	8,568							
Average		99.98%	0.02%	0.00%	0.00%	0.00%	0.00%	0.3

Table 41. Nitrogen Dioxide (NO₂) – Beaverlodge 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	8.9	21.17	Jan 16	36.00	Jan 15 00:00	99.6%	0	0
February 2005	6.0	11.25	Feb 18	23.00	Feb 18 08:00	95.4%	0	0
March 2005	4.6	9.33	Mar 04	34.00	Mar 17 07:00	96.0%	0	0
April 2005	2.6	4.75	Apr 07	14.00	Apr 06 08:00	99.3%	0	0
May 2005	2.5	3.92	May 14	12.00	May 17 08:00	99.2%	0	0
June 2005	2.5	4.18	Jun 09	12.19	Jun 15 09:00	100.0%	0	0
July 2005	2.3	3.65	Jul 21	9.50	Jul 13 06:00	100.0%	0	0
August 2005	2.7	5.85	Aug 20	10.93	Aug 03 21:00	98.9%	0	0
September 2005	3.1	6.89	Sep 03	18.01	Sep 28 07:00	99.7%	0	0
October 2005	5.4	13.11	Oct 28	21.00	Oct 28 18:00	98.9%	0	0
November 2005	4.9	13.58	Nov 24	24.00	Nov 25 17:00	100.0%	0	0
December 2005	8.5	16.13	Dec 04	23.00	Dec 02 23:00	100.0%	0	0
AVERAGE	4.1					98.9%		
							0	0
MAXIMUM	8.9	21.17	Jan 16	36.00	Jan 15 00:00			

Table 42. Nitrogen Dioxide (NO₂) Frequency Distribution – Beaverlodge 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 25	25 to 50	50 to 110	110 to 150	150 to 210	> 210	
January 2005	741	96.09%	3.91%	0.00%	0.00%	0.00%	0.00%	8.9
February 2005	641	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.0
March 2005	714	99.86%	0.14%	0.00%	0.00%	0.00%	0.00%	4.6
April 2005	715	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.6
May 2005	738	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.5
June 2005	715	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.5
July 2005	737	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.3
August 2005	732	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.7
September 2005	709	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.1
October 2005	723	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.4
November 2005	715	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.9
December 2005	714	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.5
Total Hours	8,594							
Average		99.66%	0.34%	0.00%	0.00%	0.00%	0.00%	4.1

Table 43. Ozone (O₃) – Beaverlodge 2005 Summary

Month	Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppb)	Date	1-hr (ppb)	Date		24-hr	1-hr
January 2005	22.7	38.91	Jan 31	45.00	Jan 31 13:00	99.7%	-	0
February 2005	34.2	45.50	Feb 23	49.00	Feb 23 16:00	99.4%	-	0
March 2005	37.5	45.04	Mar 30	53.00	Mar 25 16:00	100.0%	-	0
April 2005	40.4	46.88	Apr 30	61.00	Apr 21 18:00	99.4%	-	0
May 2005	36.6	47.46	May 29	57.00	May 29 13:00	99.6%	-	0
June 2005	29.5	40.17	Jun 06	56.66	Jun 09 17:00	100.0%	-	0
July 2005	24.4	33.76	Jul 22	50.78	Jul 22 13:00	100.0%	-	0
August 2005	22.0	31.81	Aug 28	47.03	Aug 27 18:00	98.0%	-	0
September 2005	22.0	32.73	Sep 25	44.04	Sep 26 04:00	100.0%	-	0
October 2005	20.7	31.80	Oct 26	40.95	Oct 26 07:00	100.0%	-	0
November 2005	23.1	38.83	Nov 21	41.00	Nov 21 14:00	100.0%	-	0
December 2005	17.2	41.96	Dec 10	44.47	Dec 10 16:00	100.0%	-	0
AVERAGE	28.0					99.7%		
							0	0
MAXIMUM	40.4	47.46	May 29	61.00	Apr 21 18:00			

Table 44. Ozone (O₃) Frequency Distribution – Beaverlodge 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppb)
		0 to 2	2 to 10	10 to 20	20 to 40	40 to 82	> 82	
January 2005	742	6.20%	9.57%	23.99%	57.95%	2.29%	0.00%	22.7
February 2005	668	0.00%	0.15%	3.89%	72.46%	23.50%	0.00%	34.2
March 2005	744	0.00%	0.40%	1.75%	65.32%	32.53%	0.00%	37.5
April 2005	716	0.00%	0.14%	2.23%	43.72%	53.91%	0.00%	40.4
May 2005	741	0.00%	0.27%	5.94%	57.09%	36.71%	0.00%	36.6
June 2005	717	0.00%	1.12%	20.22%	61.92%	16.74%	0.00%	29.5
July 2005	738	0.00%	3.25%	29.40%	62.74%	4.61%	0.00%	24.4
August 2005	726	0.28%	8.82%	31.68%	56.34%	2.89%	0.00%	22.0
September 2005	717	1.26%	11.85%	28.17%	58.30%	0.42%	0.00%	22.0
October 2005	740	2.43%	13.78%	26.89%	56.76%	0.14%	0.00%	20.7
November 2005	718	4.18%	13.23%	19.08%	62.12%	1.39%	0.00%	23.1
December 2005	713	9.26%	30.29%	22.02%	32.96%	5.47%	0.00%	17.2
Total Hours	8,680							
Average		1.97%	7.74%	17.94%	57.30%	15.05%	0.00%	28.0

Table 45. Particulate Matter (PM_{2.5}) – Beaverlodge 2005 Summary

Month	Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	AAAQO Exceedences	
		24-hr (ppm)	Date	1-hr (ppm)	Date		24-hr	1-hr
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	-	-	-	-	-	-	-	-
April 2005	3.3	6.23	Apr 21	16.30	Apr 19 21:00	35.7%	0	-
May 2005	4.3	18.63	May 30	60.20	May 30 15:00	99.3%	0	-
June 2005	3.0	8.15	Jun 01	17.60	Jun 01 23:00	99.6%	0	-
July 2005	2.2	6.87	Jul 22	18.92	Jul 22 22:00	97.2%	0	-
August 2005	3.8	19.48	Aug 13	41.70	Aug 13 22:00	94.4%	0	-
September 2005	1.5	3.28	Sep 07	19.99	Sep 29 19:00	98.1%	0	-
October 2005	2.6	7.41	Oct 05	11.95	Oct 22 18:00	99.7%	0	-
November 2005	3.1	13.31	Nov 04	25.60	Nov 21 15:00	99.9%	0	-
December 2005	3.7	9.75	Dec 04	50.20	Dec 07 04:00	100.0%	0	-
AVERAGE	2.5					91.5%		
							0	0
MAXIMUM	4.3	19.48	Aug 13	60.20	May 30 15:00			

Table 46. Particulate Matter (PM_{2.5}) Frequency Distribution – Beaverlodge 2005 Summary

Month	Number of Readings	% of Readings in Concentration Range (ppb)						Monthly Average (ppm)
		0 to 2	2 to 6	6 to 11	11 to 17	17 to 30	> 30	
January 2005	-	-	-	-	-	-	-	-
February 2005	-	-	-	-	-	-	-	-
March 2005	-	-	-	-	-	-	-	-
April 2005	257	37.74%	47.08%	13.62%	1.56%	0.00%	0.00%	3.3
May 2005	739	33.29%	43.71%	18.00%	4.19%	0.27%	0.54%	4.3
June 2005	715	42.24%	43.22%	13.71%	0.70%	0.14%	0.00%	3.0
July 2005	723	57.95%	34.72%	6.92%	0.28%	0.14%	0.00%	2.2
August 2005	699	50.07%	29.47%	12.30%	5.44%	1.57%	1.14%	3.8
September 2005	704	70.45%	27.41%	1.85%	0.14%	0.14%	0.00%	1.5
October 2005	739	46.55%	44.79%	8.53%	0.14%	0.00%	0.00%	2.6
November 2005	714	52.80%	29.69%	13.03%	3.92%	0.56%	0.00%	3.1
December 2005	735	40.54%	40.68%	15.24%	2.59%	0.54%	0.41%	3.7
Total Hours	6,025							
Average		47.96%	37.86%	11.46%	2.11%	0.37%	0.23%	3.1

Table 47. Wind Speed and Wind Direction Frequency Distribution – Beaverlodge 2005 Summary

Direction	Number of Readings	% of wind speed range ($\mu\text{g}/\text{m}^3$)						Total %
		1 to 6	6 to 12	12 to 20	20 to 29	29 to 39	> 39	
N	369	2.1%	1.8%	0.4%	0.0%	0.0%	0.0%	4.3%
NNE	376	2.2%	1.7%	0.4%	0.0%	0.0%	0.0%	4.4%
NE	496	2.8%	2.0%	0.9%	0.0%	0.0%	0.0%	5.7%
ENE	532	3.7%	1.5%	0.8%	0.1%	0.0%	0.0%	6.2%
E	673	4.7%	1.6%	1.2%	0.3%	0.0%	0.0%	7.8%
ESE	748	4.6%	2.5%	1.5%	0.1%	0.0%	0.0%	8.7%
SE	528	3.9%	1.9%	0.3%	0.0%	0.0%	0.0%	6.1%
SSE	309	2.7%	0.8%	0.1%	0.0%	0.0%	0.0%	3.6%
S	324	3.0%	0.7%	0.1%	0.0%	0.0%	0.0%	3.8%
SSW	277	2.6%	0.5%	0.1%	0.0%	0.0%	0.0%	3.2%
SW	363	2.7%	1.3%	0.2%	0.0%	0.0%	0.0%	4.2%
WSW	567	2.1%	2.7%	1.1%	0.5%	0.2%	0.0%	6.6%
W	1269	2.3%	3.3%	4.0%	3.7%	1.3%	0.1%	14.7%
WNW	732	1.7%	2.5%	2.3%	1.6%	0.4%	0.0%	8.5%
NW	509	2.1%	2.5%	1.2%	0.1%	0.0%	0.0%	5.9%
NNW	568	2.0%	3.3%	1.2%	0.1%	0.0%	0.0%	6.6%
Total Calms	8,640	45.3%	30.7%	15.6%	6.4%	1.8%	0.1%	100.0%

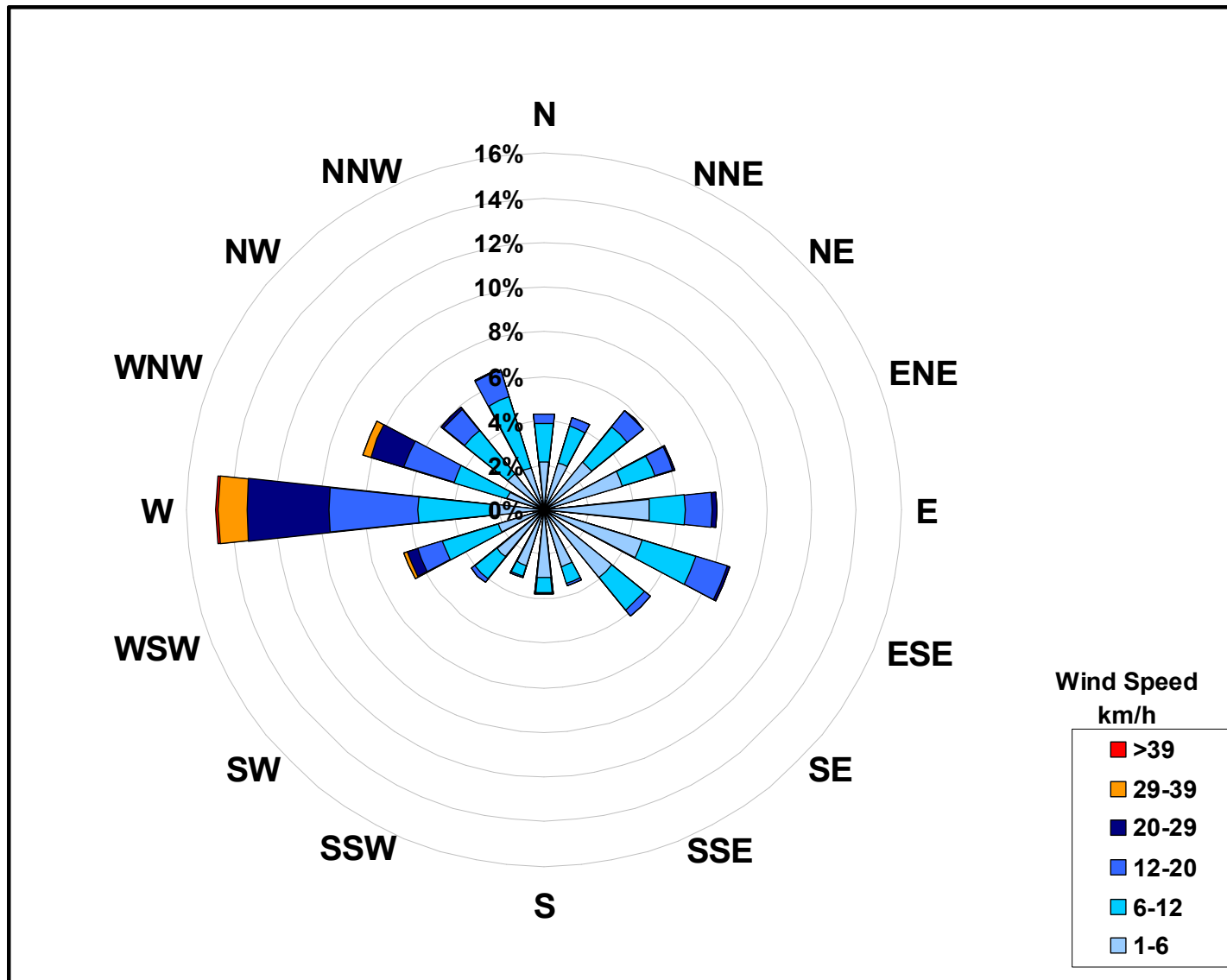


Figure 5. Beaverlodge Wind Rose

Table 48. Relative Humidity (%) – Beaverlodge 2005 Summary

Month	Monthly Average (° C)	Monthly Maximum (° C)	Monthly Minimum (° C)	Operational time (%)
January 2005	76.8	97.0	37.0	99.7%
February 2005	60.5	97.0	18.0	100.0%
March 2005	63.4	95.0	23.0	100.0%
April 2005	49.7	97.0	14.0	99.4%
May 2005	54.2	95.0	19.0	99.9%
June 2005	68.8	96.0	27.0	100.0%
July 2005	66.2	97.3	27.8	100.0%
August 2005	67.4	97.0	23.0	100.0%
September 2005	67.2	98.0	26.0	100.0%
October 2005	65.7	98.0	15.0	100.0%
November 2005	67.8	97.0	18.0	100.0%
December 2005	79.0	98.0	44.0	100.0%
AVERAGE	65.6			99.9%
MAXIMUM	79.0			

Table 49. Temperature (°C) – Beaverlodge 2005 Summary

Month	Monthly Average (° C)	Monthly Maximum (° C)	Monthly Minimum (° C)	Operational time (%)
January 2005	-14.0	6.1	-35.3	99.7%
February 2005	-4.1	9.4	-35.3	100.0%
March 2005	-0.5	11.2	-16.0	100.0%
April 2005	6.4	23.5	-4.9	99.4%
May 2005	12.0	28.3	-3.1	99.9%
June 2005	13.9	24.7	5.1	100.0%
July 2005	14.8	25.3	4.4	100.0%
August 2005	13.6	28.3	1.0	100.0%
September 2005	9.3	21.4	-1.6	100.0%
October 2005	5.1	21.8	-6.4	100.0%
November 2005	0.0	16.6	-14.1	100.0%
December 2005	-5.2	10.9	-24.2	100.0%
AVERAGE	4.3			99.9%
MAXIMUM	14.8			

PASZA

PASSIVE MONITORING

2005

ANNUAL SUMMARY TABLES

Table 50. SO₂ Passive - 2005 Summary

Station Number	Station Name	2005 Jan	2005 Feb	2005 Mar	2005 Apr	2005 May	2005 Jun	2005 Jul	2005 Aug	2005 Sep	2005 Oct	2005 Nov	2005 Dec	12-month Average	12-month Maximum
1	Silver Valley	1.0	1.4	0.5	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.5	0.5	1.4
2	Bay Tree	0.6	0.6	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.6
3	Forth Creek	0.8	0.6	0.4	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.2	0.4	0.3	0.8
4	Gordondale	0.9	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.4	0.4	0.9
5	Boone Creek	0.5	0.4	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.3	0.2	0.4	0.3	0.5
7	Steeprock Creek	0.4	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4
9	Spirit River	0.6	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.6
10	Woking	0.8	0.8	0.5	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.4	0.8
11	Webber Creek	0.8	0.5	0.4	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.2	0.4	0.3	0.8
12	Hythe	-	0.2	0.4	0.2	0.3	0.3	0.4	0.2	0.4	0.3	0.3	0.4	0.3	0.4
14	Sylvester	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2
16	Beaverlodge	0.7	0.4	0.5	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.3	0.7
17	Poplar	0.7	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.3	0.7
18	Saddle Hills	0.6	0.6	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.4	0.3	0.6
19	Wanham	0.6	0.6	0.4	0.4	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.5	0.4	0.6
20	Shaftesbury	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.4	0.2	0.4
21	Eaglesham	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.4
23	Bear Lake	0.7	0.5	0.3	0.2	0.3	0.2	0.1	-	0.1	0.4	0.1	0.3	0.3	0.7
24	Wembley	0.5	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.5
25	Pinto Creek	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.2	0.4
26	Flyingshot	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.3	0.2	0.4
27	Grande Prairie 1	0.5	0.4	0.4	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.4	0.3	0.5
28	Clairmont Lake	0.8	0.5	0.4	0.2	0.2	0.4	0.2	0.3	0.2	0.3	0.2	0.5	0.4	0.8
29	Smoky Heights	1.1	0.9	0.7	0.4	0.3	0.2	0.3	0.3	0.3	0.5	0.4	0.5	0.5	1.1
30	Fitzsimmons	0.4	0.3	0.3	0.2	0.2	0.4	0.2	0.2	0.1	0.2	0.1	0.3	0.2	0.4
32	Gold Creek	0.5	0.2	0.7	0.3	0.7	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.4	0.7
33	Wapiti	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.3	0.2	0.3
34	Puskwaskau	0.3	0.2	0.3	0.2	0.2	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.3
35	Jean Cote	0.7	0.4	0.3	0.3	0.3	0.3	1.0	0.5	0.6	0.3	0.2	0.3	0.4	1.0
36	Guy	-	-	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.3
37	Crooked Creek	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.5	0.3	0.5
38	Karr Creek	0.2	0.2	0.3	0.2	0.2	0.1	-	0.1	0.1	0.1	0.1	0.2	0.2	0.3
39	Clouston Creek	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.4	0.3	0.8
40	McLennan	0.6	0.5	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.6
41	Valleyview	0.7	0.4	0.5	0.4	0.4	0.3	0.2	0.1	0.2	0.5	0.2	0.6	0.4	0.7
42	Sunset House	0.9	0.5	0.5	0.3	0.3	0.2	0.1	0.2	0.2	0.5	0.4	0.6	0.4	0.9
43	High Prairie	0.4	0.3	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.4
44	Peavine	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.3
45	Gift Lake	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3
46	Little Smoky	0.5	0.3	0.3	0.4	0.3	0.2	0.1	0.2	0.1	0.4	0.2	0.4	0.3	0.5
47	Kinuso	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.0	0.2	0.2	0.3
48	Deer Mountain	0.4	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.1	0.4	0.2	0.4
49	Grande Prairie 2	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.5

Table 51. NO₂ Passive - 2005 Summary

Station Number	Station Name	2005 Jan	2005 Feb	2005 Mar	2005 Apr	2005 May	2005 Jun	2005 Jul	2005 Aug	2005 Sep	2005 Oct	2005 Nov	2005 Dec	12-month Average	12-month Maximum
1	Silver Valley	2.6	1.6	1.1	1.3	1.3	1.8	1.6	1.2	1.1	1.7	1.7	2.6	1.6	2.6
2	Bay Tree	1.5	0.6	0.7	0.6	0.5	0.8	0.6	0.6	0.6	0.8	1.1	1.7	0.8	1.7
3	Forth Creek	1.7	1.2	1.0	0.8	0.9	0.8	0.8	0.8	0.9	1.4	1.4	1.9	1.1	1.9
4	Gordondale	2.1	1.2	1.4	1.2	1.3	1.3	1.1	1.3	1.1	1.7	1.9	2.2	1.5	2.2
5	Boone Creek	1.7	1.1	0.9	0.6	0.6	0.6	0.7	0.7	1.2	1.8	2.0	3.3	1.3	3.3
7	Steeprock Creek	-	0.9	0.8	0.7	0.6	1.0	0.6	0.5	0.7	1.2	1.6	2.2	1.0	2.2
9	Spirit River	2.6	1.9	1.3	1.2	1.9	2.1	1.2	1.2	1.5	1.9	1.8	2.3	1.7	2.6
10	Woking	1.5	1.1	0.8	1.0	0.9	1.0	1.1	1.0	1.0	1.4	1.5	1.7	1.2	1.7
11	Webber Creek	2.3	2.1	1.5	0.9	1.2	2.3	1.3	1.2	1.0	2.0	2.1	3.1	1.7	3.1
12	Hythe	3.8	2.5	1.8	1.2	-	2.1	1.1	1.0	1.1	2.2	2.6	3.6	2.1	3.8
14	Sylvester	2.2	0.8	0.8	0.8	1.0	1.0	0.3	0.4	0.4	1.0	1.3	2.0	1.0	2.2
16	Beaverlodge	5.6	3.2	3.2	1.6	1.3	1.8	1.9	2.1	2.1	4.2	4.2	5.2	3.0	5.6
17	Poplar	3.2	2.3	1.8	1.3	1.7	2.1	1.0	0.8	0.8	2.1	2.2	3.2	1.9	3.2
18	Saddle Hills	2.1	1.7	1.0	1.1	1.2	0.9	0.9	0.8	1.3	1.5	1.9	1.7	1.3	2.1
19	Wanham	2.2	1.1	1.0	1.4	1.0	1.1	0.7	0.6	1.0	1.8	2.0	2.7	1.4	2.7
20	Shaftesbury	1.6	1.1	0.8	0.8	1.0	0.7	0.8	0.4	0.9	1.3	1.7	1.7	1.1	1.7
21	Eaglesham	1.6	1.0	0.5	0.7	1.2	1.4	0.9	0.5	0.8	1.2	1.6	1.7	1.1	1.7
23	Bear Lake	3.6	2.8	1.6	1.6	2.4	2.9	1.3	-	1.3	2.9	3.5	3.3	2.5	3.6
24	Wembley	4.9	3.1	2.3	1.3	1.9	1.9	1.4	1.2	1.0	2.4	4.3	5.0	2.6	5.0
25	Pinto Creek	3.1	1.8	1.1	0.9	0.8	1.0	0.6	0.9	0.6	1.5	1.6	2.5	1.4	3.1
26	Flyingshot	6.4	4.5	3.5	1.8	1.7	1.7	1.2	1.2	1.2	2.7	3.7	4.8	2.9	6.4
27	Grande Prairie 1	14.6	14.5	9.6	7.5	4.5	5.3	3.2	4.1	3.7	8.3	8.8	11.2	7.9	14.6
28	Clairmont Lake	3.9	2.5	1.6	1.2	1.2	1.7	1.3	1.4	1.6	2.2	3.0	3.6	2.1	3.9
29	Smoky Heights	2.3	1.3	1.5	1.1	1.2	1.8	1.2	1.0	1.4	1.9	2.9	4.1	1.8	4.1
30	Fitzsimmons	3.9	3.0	1.5	1.3	0.9	1.1	1.3	1.1	1.7	1.9	3.1	3.5	2.0	3.9
32	Gold Creek	4.1	3.3	2.4	1.4	0.9	0.8	0.9	0.9	1.1	-	2.9	2.6	1.9	4.1
33	Wapiti	4.5	2.9	1.6	1.0	1.0	1.2	1.2	1.0	1.1	1.8	2.8	3.2	1.9	4.5
34	Puskwaskau	1.2	2.0	0.6	0.4	0.5	0.6	0.1	0.4	0.5	0.8	1.3	1.0	0.8	2.0
35	Jean Cote	1.8	1.3	0.9	1.6	2.1	2.3	1.3	0.8	1.0	1.5	1.6	1.9	1.5	2.3
36	Guy	1.9	1.0	0.8	0.7	1.4	1.9	0.8	0.6	0.7	1.4	1.8	1.9	1.2	1.9
37	Crooked Creek	3.4	2.8	2.0	1.0	1.4	1.4	1.0	0.9	1.0	1.9	2.8	3.5	1.9	3.5
38	Karr Creek	1.2	0.7	0.6	0.7	0.6	0.7	-	0.4	0.4	0.6	1.1	1.3	0.8	1.3
39	Clouston Creek	2.4	1.6	1.2	0.8	0.8	1.1	0.8	-	0.8	1.6	1.9	2.2	1.4	2.4
40	McLennan	1.9	1.3	1.0	1.0	1.5	2.8	1.8	0.8	1.0	1.5	2.1	1.9	1.5	2.8
41	Valleyview	2.9	1.5	1.2	0.9	1.0	1.0	0.7	0.8	0.7	1.9	2.6	3.2	1.5	3.2
42	Sunset House	1.6	1.0	0.6	0.6	0.6	0.6	0.6	0.6	0.9	1.2	1.6	1.6	1.0	1.6
43	High Prairie	3.1	2.7	1.8	2.7	2.1	2.0	1.0	0.8	0.8	1.7	2.1	2.6	1.9	3.1
44	Peavine	1.1	0.7	0.5	0.5	0.4	0.5	0.4	0.4	0.5	1.0	1.1	1.1	0.7	1.1
45	Gift Lake	1.6	2.2	1.1	1.3	0.8	1.2	0.7	0.7	1.1	1.7	2.0	1.7	1.3	2.2
46	Little Smoky	5.6	6.0	5.2	2.6	0.7	1.6	1.2	1.3	1.7	3.8	5.3	5.3	3.4	6.0
47	Kinuso	2.6	1.3	1.0	0.8	0.7	1.0	0.4	0.6	0.4	1.3	1.2	1.4	1.1	2.6
48	Deer Mountain	1.1	0.6	0.4	0.7	0.6	0.7	0.6	0.4	0.5	1.7	1.3	0.9	0.8	1.7
49	Grande Prairie 2	14.0	17.2	11.6	8.8	4.6	4.6	4.5	5.5	6.2	10.6	11.0	11.9	9.2	17.2

Table 52. O₃ Passive - 2005 Summary

Station Number	Station Name	2005 Jan	2005 Feb	2005 Mar	2005 Apr	2005 May	2005 Jun	2005 Jul	2005 Aug	2005 Sep	2005 Oct	2005 Nov	2005 Dec	12-month Average	12-month Maximum
1	Silver Valley	34.8	50.0	49.7	37.3	34.3	25.7	22.9	19.0	22.0	14.4	24.6	23.2	29.8	50.0
2	Bay Tree	38.3	40.5	45.6	38.7	34.9	24.0	20.8	17.3	23.1	19.4	26.5	23.3	29.4	45.6
3	Forth Creek	34.4	54.4	48.2	52.1	44.0	30.6	23.5	24.8	25.7	23.0	28.8	25.2	34.6	54.4
4	Gordondale	35.6	42.8	49.3	39.7	42.8	25.3	23.4	22.0	23.8	23.4	29.5	29.5	32.3	49.3
5	Boone Creek	29.2	39.1	44.9	33.9	33.6	20.8	15.0	15.5	16.9	18.5	25.3	19.7	26.0	44.9
7	Steepprock Creek	33.3	42.1	47.8	41.2	41.3	25.9	22.1	19.7	24.6	22.8	29.2	24.5	31.2	47.8
9	Spirit River	35.6	41.0	47.2	37.4	36.2	23.6	21.2	23.6	22.9	20.6	26.5	24.1	30.0	47.2
10	Woking	34.3	48.5	50.6	38.5	35.9	22.8	21.9	19.3	22.3	20.4	27.8	25.2	30.6	50.6
11	Webber Creek	30.9	42.1	42.8	36.4	34.3	25.5	24.6	19.2	20.2	18.4	23.3	19.9	28.1	42.8
12	Hythe	27.8	40.1	45.1	35.0	36.6	24.8	24.6	16.0	21.5	16.5	24.8	19.1	27.7	45.1
14	Sylvester	27.2	43.7	44.3	32.1	32.9	20.1	18.1	14.7	20.1	13.3	23.8	16.5	25.6	44.3
16	Beaverlodge	31.8	41.8	42.5	43.0	45.5	31.6	26.1	25.1	24.6	20.2	26.7	21.8	31.7	45.5
17	Poplar	29.3	43.6	46.2	33.7	35.4	25.0	23.7	18.4	22.0	17.9	22.8	20.2	28.2	46.2
18	Saddle Hills	36.4	43.6	50.0	37.2	38.1	26.3	21.6	19.4	22.0	19.3	25.8	24.4	30.3	50.0
19	Wanham	33.9	42.6	50.0	42.8	39.8	26.8	26.6	24.9	25.1	24.4	29.8	25.3	32.7	50.0
20	Shaftesbury	34.1	43.4	43.5	32.3	33.5	22.0	18.7	18.6	20.1	18.1	22.0	19.6	27.2	43.5
21	Eaglesham	32.8	43.9	44.5	32.3	32.4	23.7	18.8	17.7	17.7	15.9	21.3	17.7	26.5	44.5
23	Bear Lake	33.2	46.1	46.5	40.1	32.7	27.1	22.7	-	21.0	17.9	22.8	19.9	30.0	46.5
24	Wembley	26.4	39.5	41.1	34.9	32.7	24.3	16.8	15.0	19.7	13.6	19.8	18.8	25.2	41.1
25	Pinto Creek	27.2	41.1	46.7	31.9	34.7	22.3	20.9	16.7	21.8	16.5	25.2	17.5	26.9	46.7
26	Flyingshot	23.0	35.7	41.4	34.2	34.6	22.9	19.9	15.7	20.8	18.4	22.2	16.3	25.4	41.4
27	Grande Prairie 1	18.4	29.9	38.6	34.2	37.0	26.2	23.9	18.6	20.5	13.1	19.2	16.2	24.6	38.6
28	Clairmont Lake	35.6	45.6	53.5	37.8	38.3	26.2	22.1	21.7	21.4	21.9	22.7	20.5	30.6	53.5
29	Smoky Heights	33.2	46.4	48.4	46.0	41.9	31.6	28.5	25.6	24.6	21.7	23.7	20.3	32.7	48.4
30	Fitzsimmons	27.9	44.2	46.3	36.5	36.4	26.8	21.6	18.5	22.8	17.3	22.5	19.7	28.4	46.3
32	Gold Creek	22.5	32.6	44.2	31.8	31.4	21.6	16.4	12.6	17.4	14.6	18.0	14.1	23.1	44.2
33	Wapiti	27.2	39.3	44.3	38.6	38.7	26.0	26.3	17.4	23.1	19.0	22.5	19.0	28.4	44.3
34	Puskwaskau	29.0	38.1	50.2	32.7	31.3	21.4	19.4	15.0	18.5	17.2	21.8	19.7	26.2	50.2
35	Jean Cote	34.4	45.1	51.3	34.9	33.8	26.8	19.8	17.2	19.9	20.2	22.7	23.4	29.1	51.3
36	Guy	36.8	41.4	42.3	39.0	36.8	24.9	21.4	18.4	23.8	20.1	23.8	22.6	29.3	42.3
37	Crooked Creek	31.6	37.6	41.0	37.1	36.4	27.4	22.2	17.8	20.5	19.7	22.9	23.1	28.1	41.0
38	Karr Creek	26.3	40.2	40.4	27.3	28.3	18.7	-	16.1	14.4	12.9	20.6	17.8	23.9	40.4
39	Clouston Creek	30.2	42.6	43.5	41.1	33.5	25.5	27.1	18.4	23.3	18.7	24.0	22.1	29.2	43.5
40	McLennan	34.7	43.4	47.3	37.3	32.8	25.8	21.1	23.9	23.3	19.9	23.8	25.4	29.9	47.3
41	Valleyview	26.6	43.1	45.5	46.7	36.2	27.3	26.8	21.5	23.5	23.7	22.7	24.7	30.7	46.7
42	Sunset House	39.7	43.6	48.7	42.6	36.9	30.7	24.9	23.7	25.3	28.2	31.2	33.3	34.1	48.7
43	High Prairie	33.2	39.3	48.3	38.2	36.1	23.9	23.2	18.4	20.6	20.0	22.2	20.0	28.6	48.3
44	Peavine	30.8	41.7	46.2	40.6	36.8	23.7	18.9	18.0	20.4	17.4	25.0	23.2	28.6	46.2
45	Gift Lake	33.5	37.3	48.3	35.6	31.7	21.2	18.7	18.3	17.9	16.1	21.6	18.5	26.6	48.3
46	Little Smoky	22.0	34.8	40.1	38.7	31.8	22.6	17.8	16.4	18.4	15.6	17.4	16.9	24.4	40.1
47	Kinuso	26.4	35.5	40.9	34.2	34.1	20.7	17.2	16.6	18.4	16.9	20.4	18.1	24.9	40.9
48	Deer Mountain	31.9	39.0	45.8	34.9	33.6	20.0	19.1	15.4	18.6	18.2	25.7	27.3	27.5	45.8
49	Grande Prairie 2	18.8	26.3	33.7	39.1	39.4	30.8	26.2	21.4	20.8	13.9	17.0	14.1	25.1	39.4

SO₂ Units are in parts per billion (ppb)

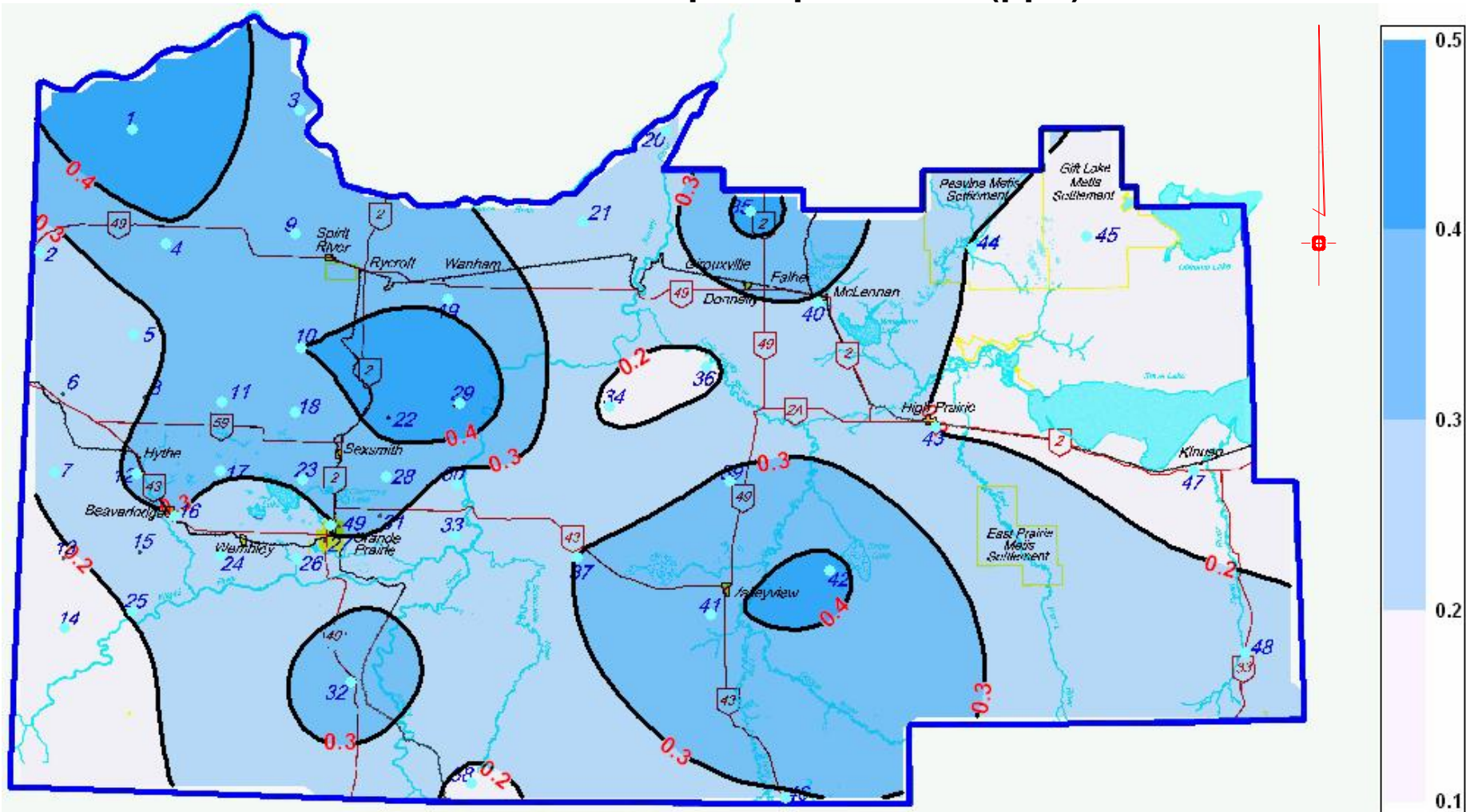


Figure 6. Annual SO₂ Passive Isopleths



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 Prepared by: **FOCUS**
 Date: **March 14, 2006**

Points denote sampling locations throughout zone

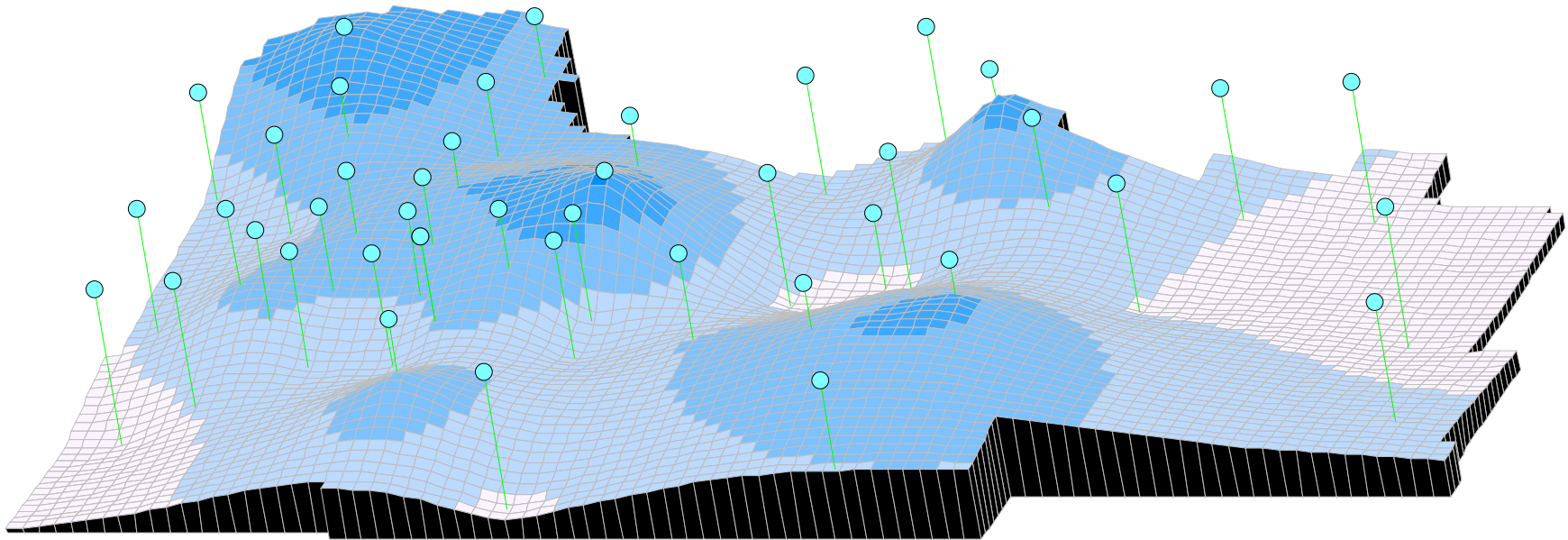


Figure 7. Annual SO₂ Passive Profile



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Prepared by: **FOCUS**

Date: **March 14, 2006**

O₃ Units are in parts per billion (ppb)

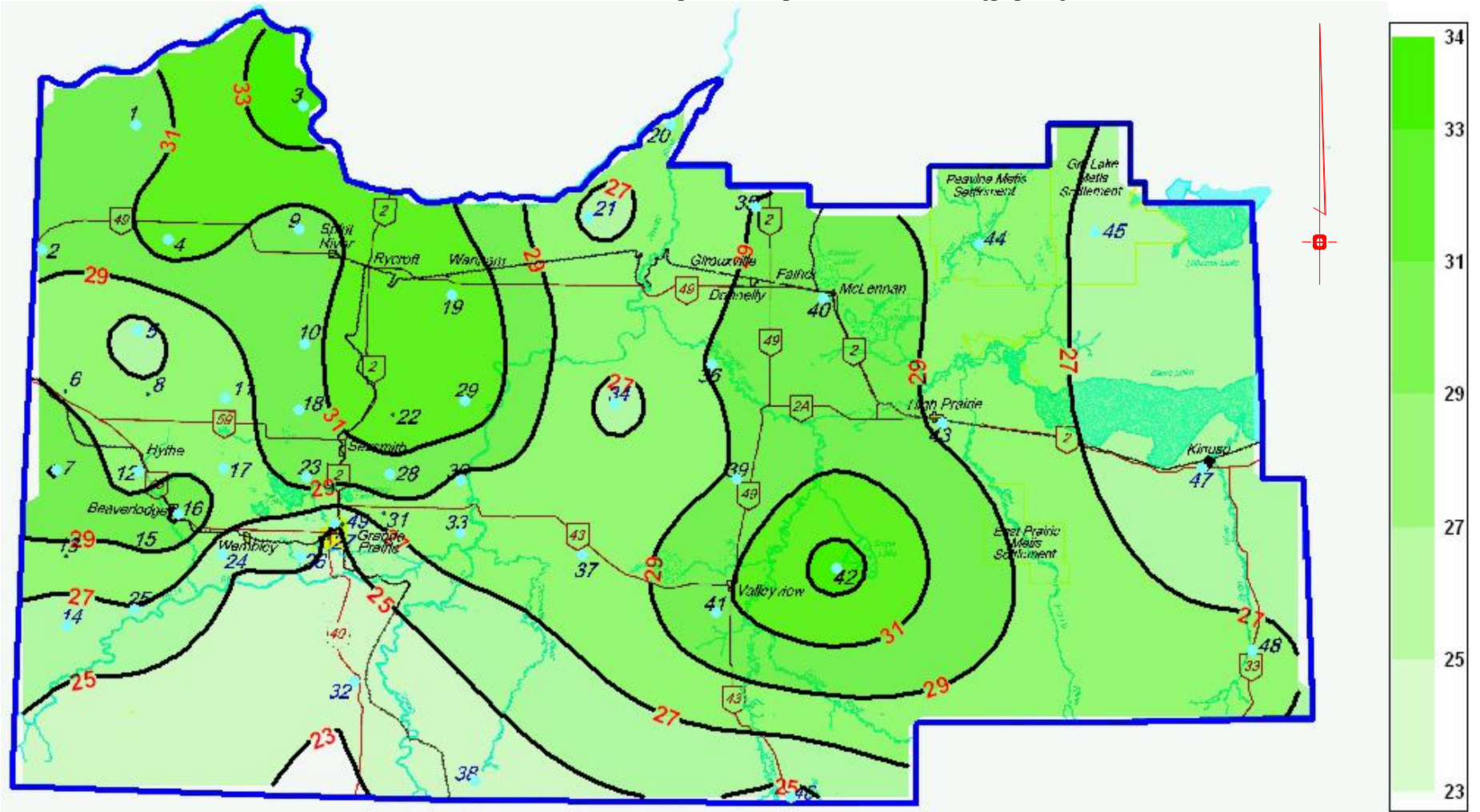


Figure 8. Annual O₃ Passive Isopleths



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 Prepared by:
FOCUS
 Date:
March 14, 2006

Points denote sampling locations throughout zone

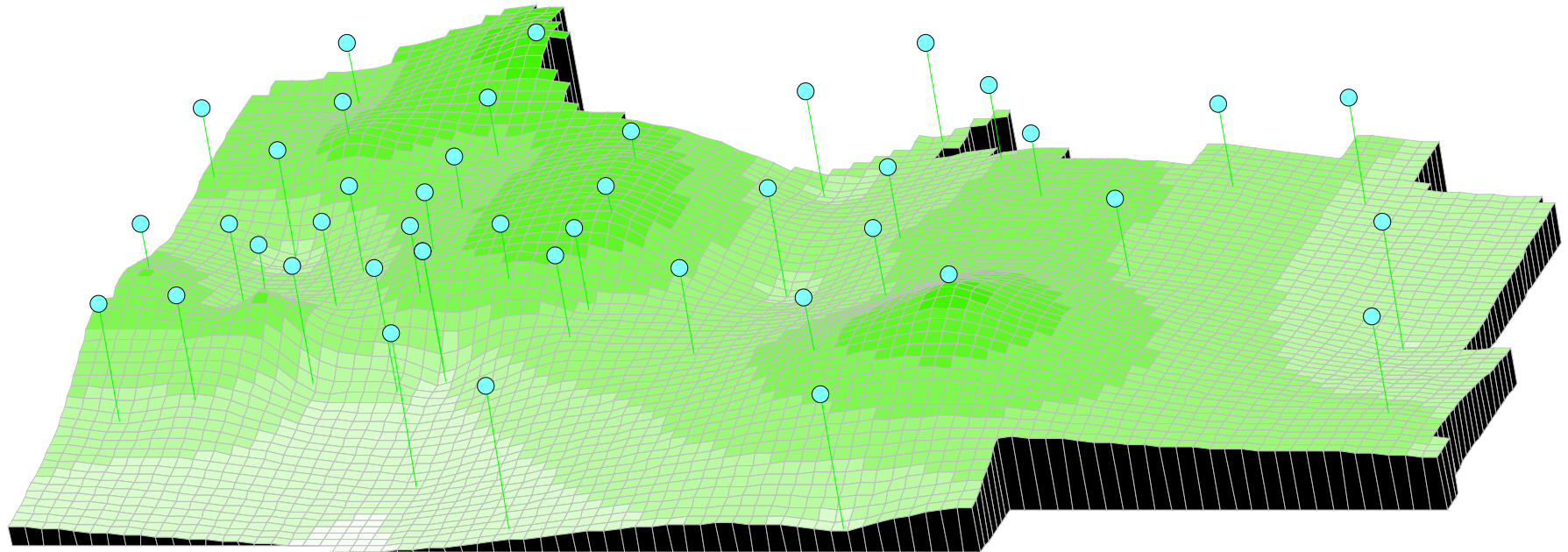


Figure 9. Annual O₃ Passive Profile



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Date: **March 14, 2006**

NO₂ Units are in parts per billion (ppb)

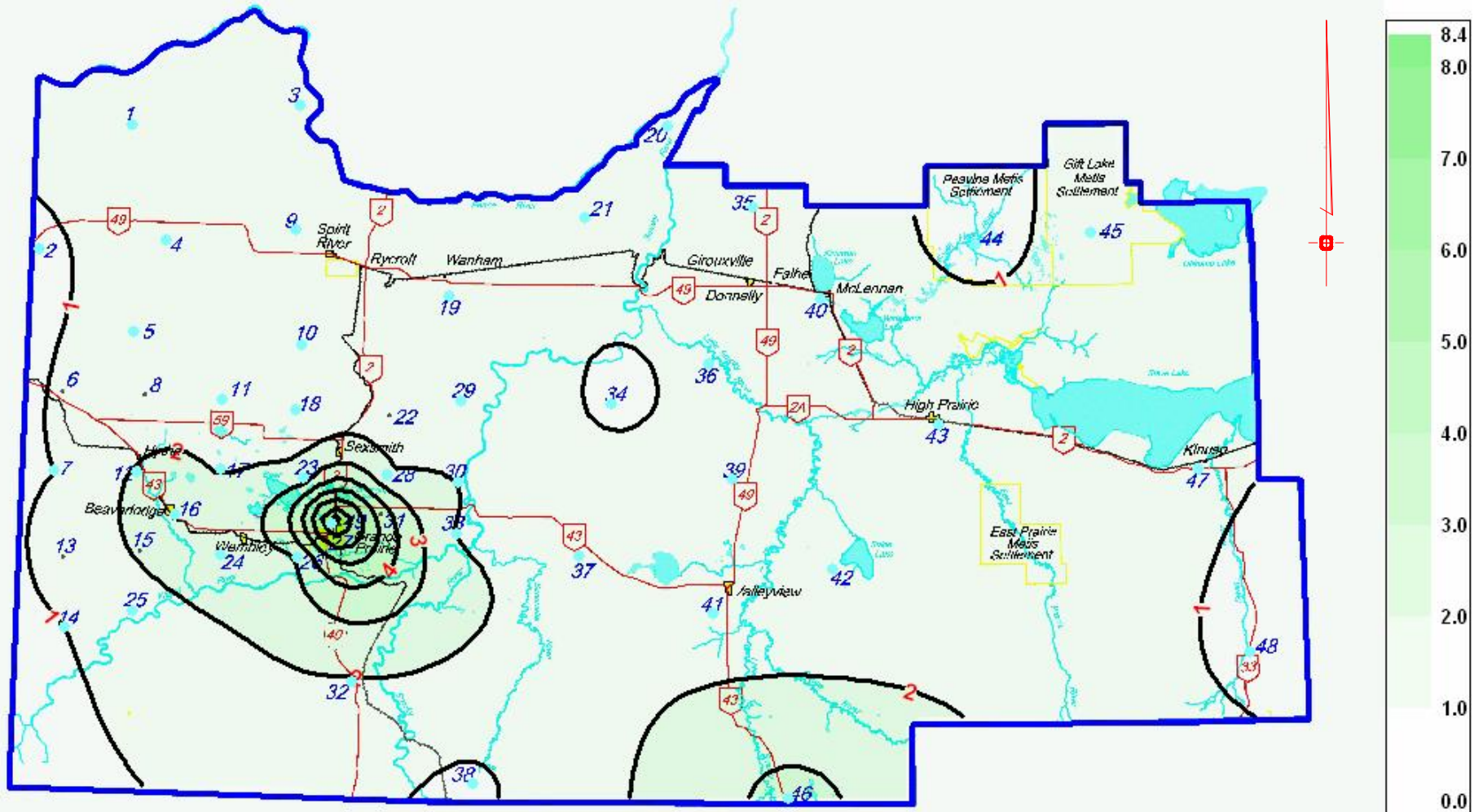


Figure 10. Annual NO₂ Passive Isopleths



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 Date: **March 14, 2006**

Points denote sampling locations throughout zone

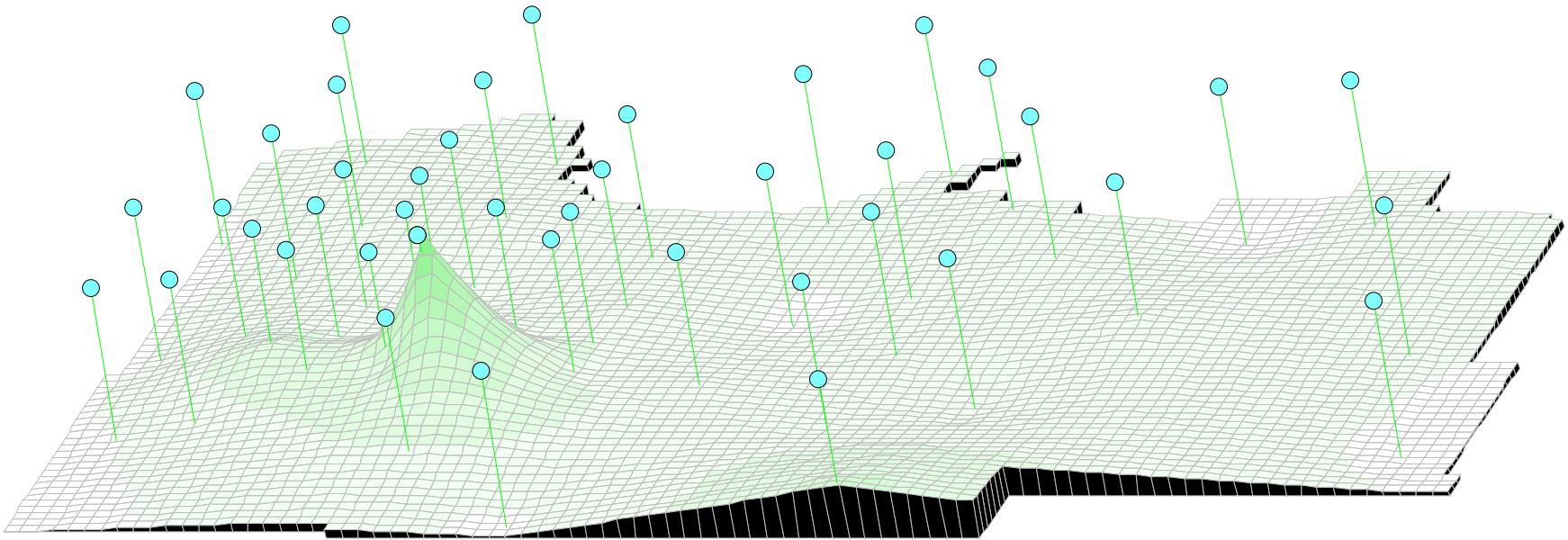


Figure 11. Annual NO₂ Passive Profile



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Date:
March 14, 2006