

# Air Quality Monitoring Results

## Supplementary Data

# 2014

New Brunswick  
Department of Environment  
and Local Government



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This report provides detailed, site-specific air quality information, and is provided as a companion document to the Department of Environment and Local Government's "Air Quality Monitoring Results 2014" report, which is available electronically via the DELG website:

**[www.gnb.ca/environment](http://www.gnb.ca/environment)**

**Feedback**

We are interested in your feedback on this report. All suggestions will be considered, and if possible, incorporated in future reports. You may contact the State of the Environment Branch, Department of Environment and Local Government (DELG) at (506) 457- 4844, by fax at (506) 453-2265 or by e-mail at [darrell.welles@gnb.ca](mailto:darrell.welles@gnb.ca) with any comments.

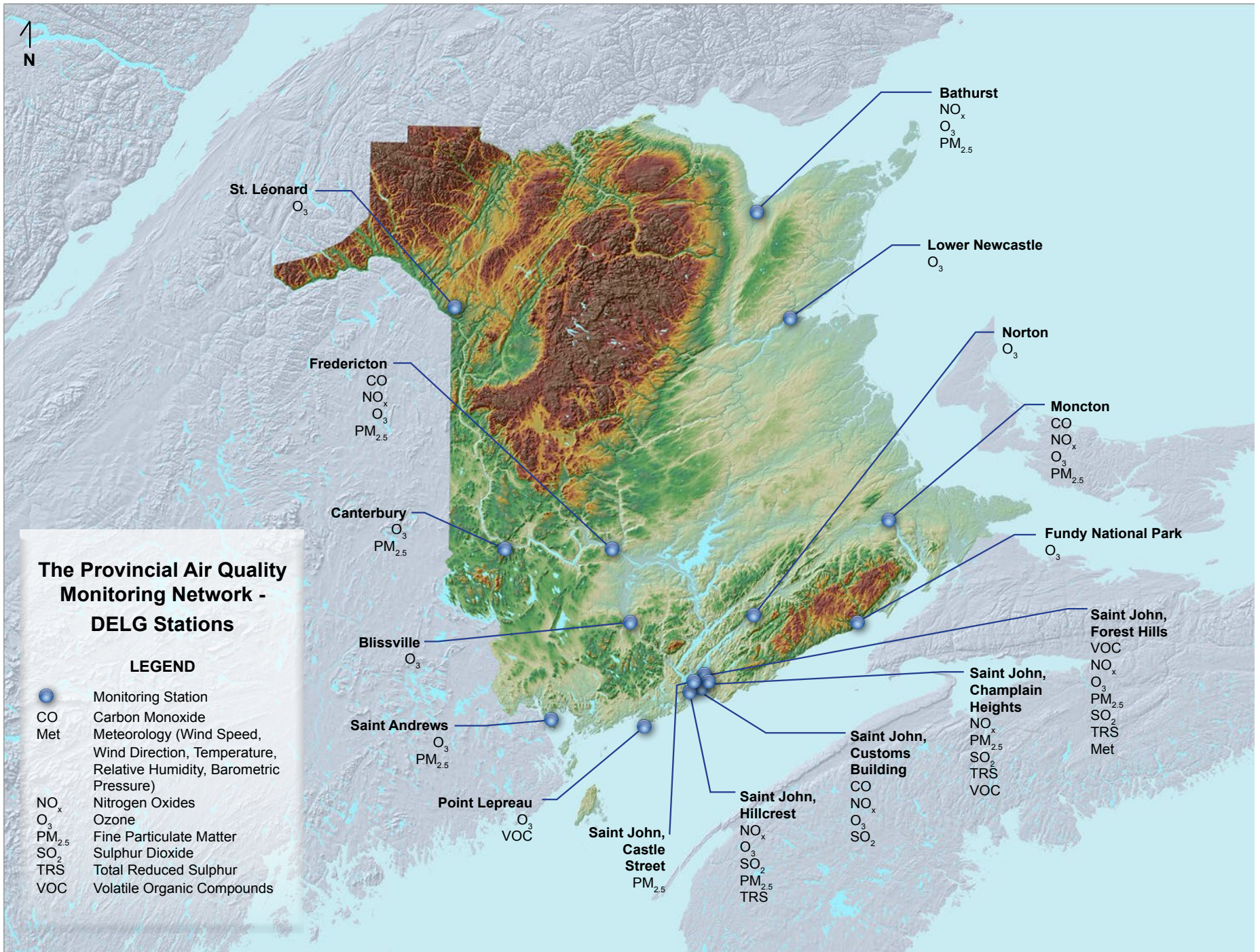
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## List of Acronyms and Abbreviations

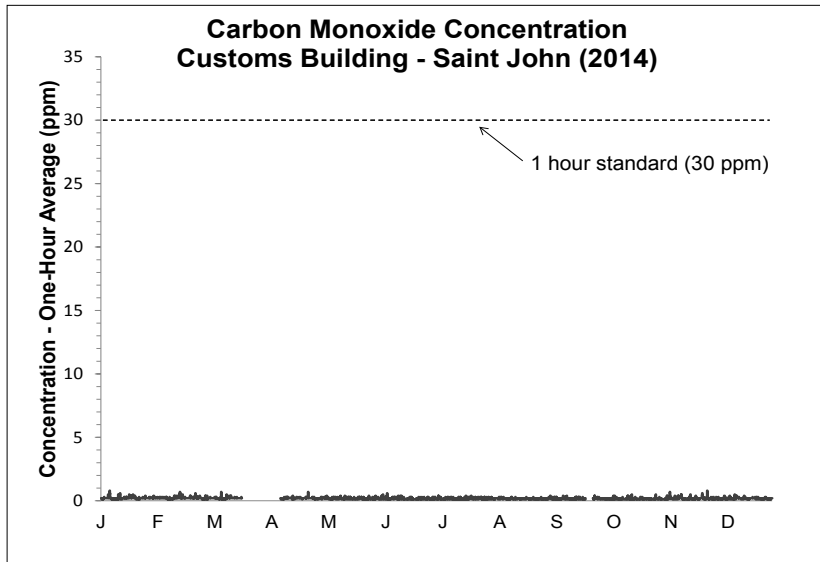
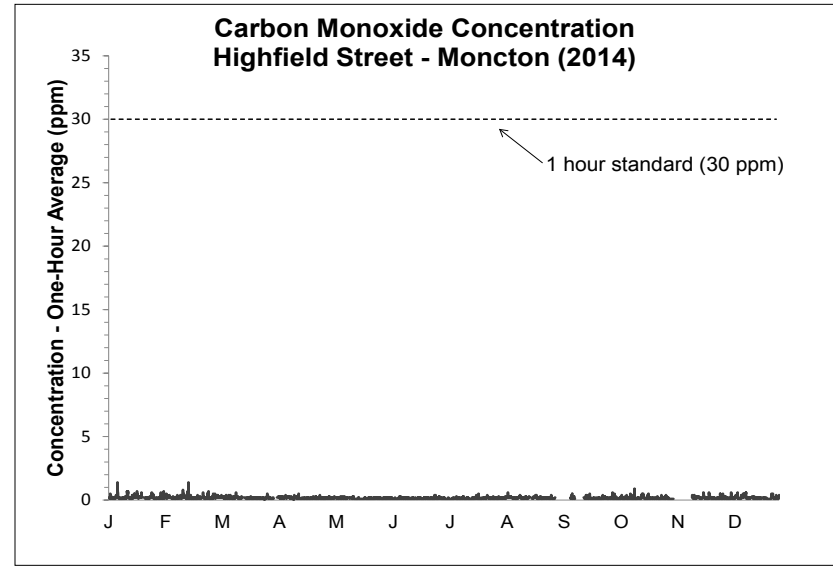
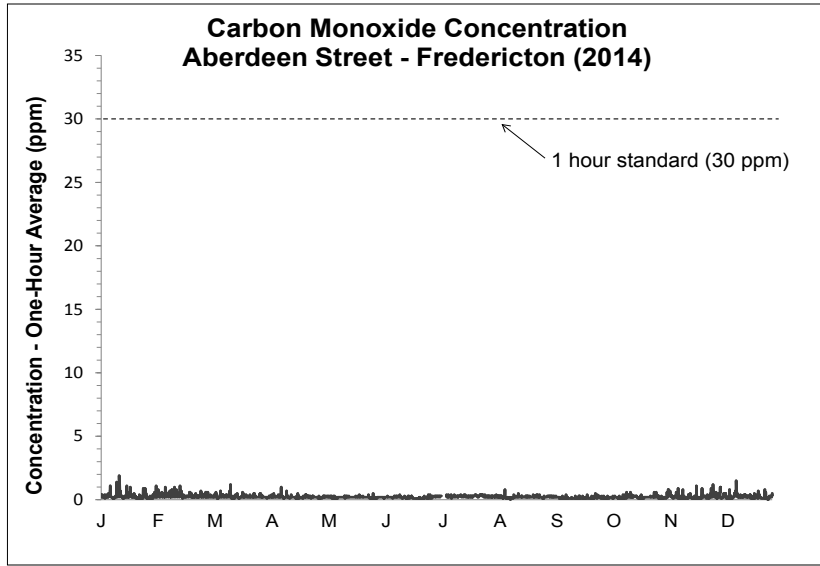
CO	Carbon Monoxide
PM <sub>2.5</sub>	Fine Particulate Matter (less than 2.5 microns)
H <sub>2</sub> S	Hydrogen Sulphide
µg/m <sup>3</sup>	Micrograms per cubic meter
ng/ m <sup>3</sup>	Nanograms per cubic meter
NO <sub>2</sub>	Nitrogen Dioxide
O <sub>3</sub>	Ozone
ppb	Parts per billion
ppm	Parts per million
SO <sub>2</sub>	Sulphur Dioxide
TRS	Total Reduced Sulphur
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound

**PART I:**  
**PROVINCIALY OPERATED AIR QUALITY MONITORING NETWORKS**



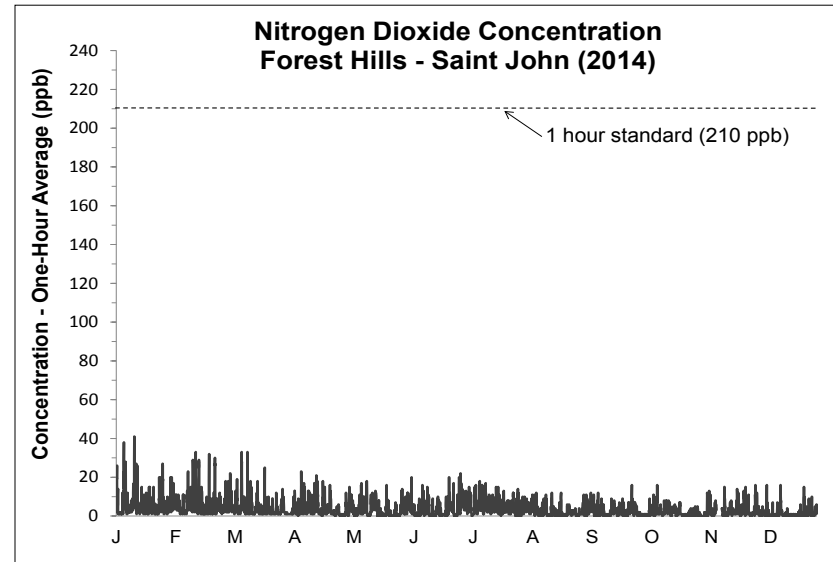
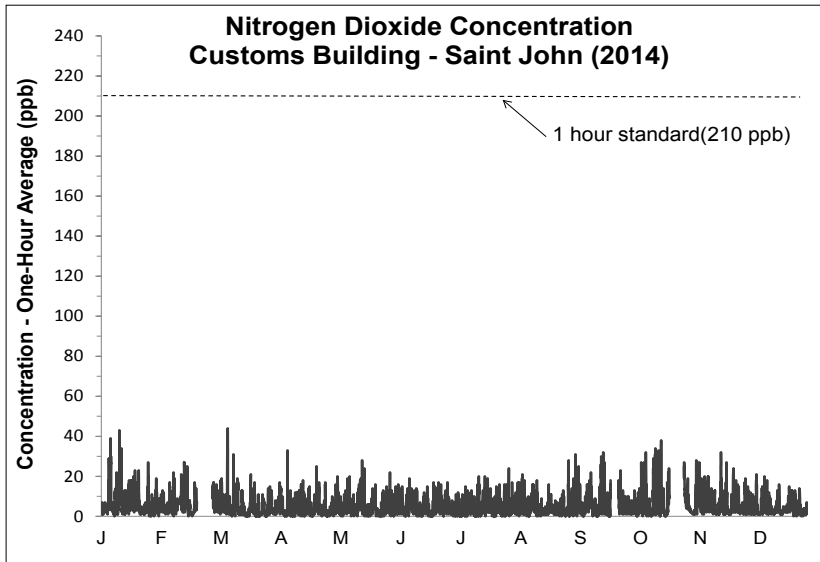
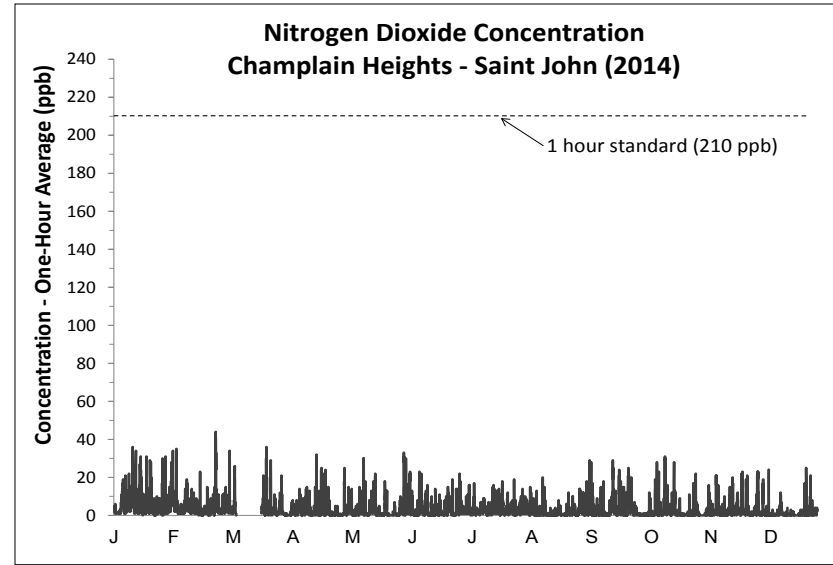
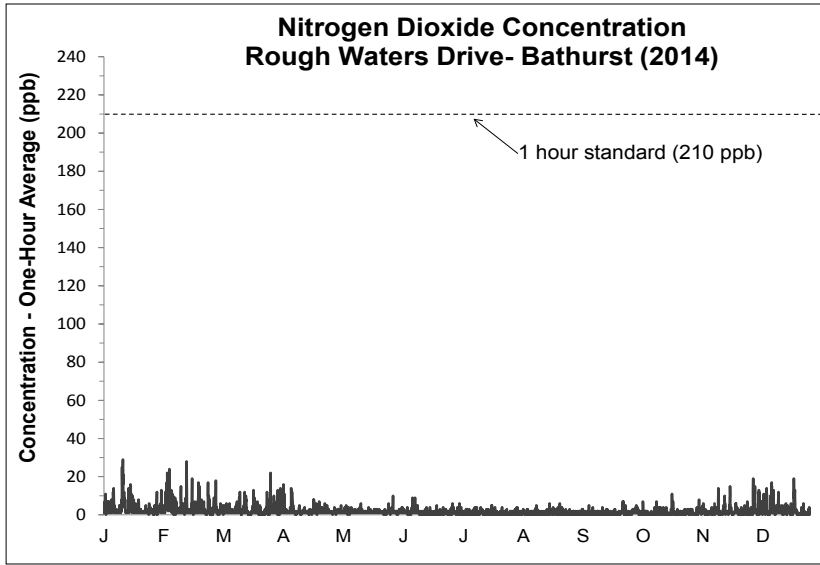
# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Carbon Monoxide



# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

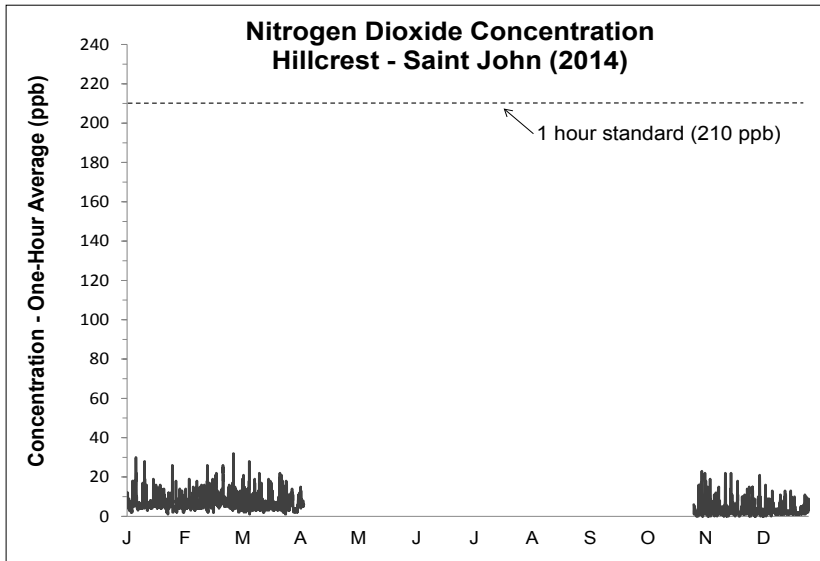
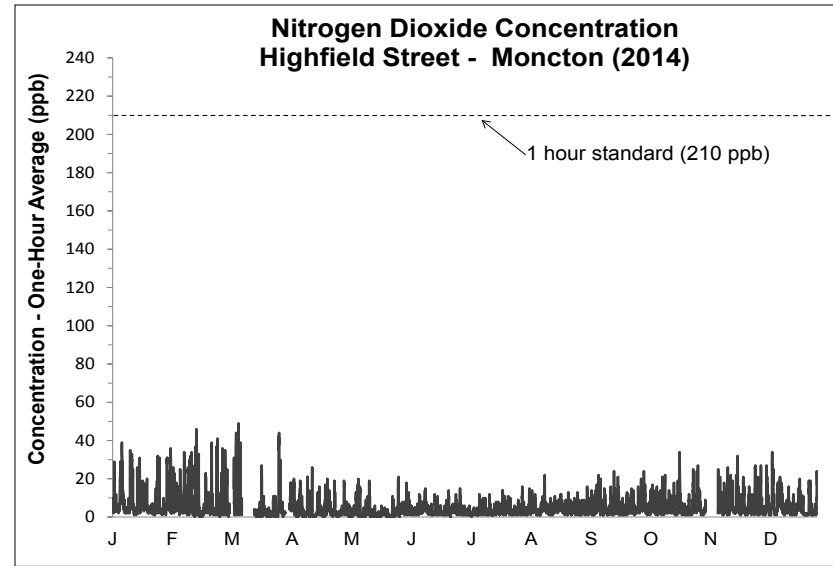
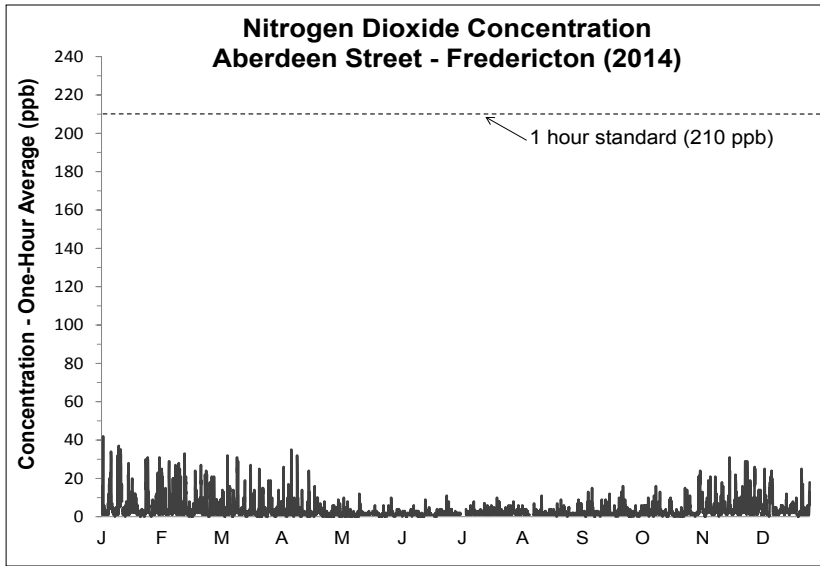
## Nitrogen Dioxide





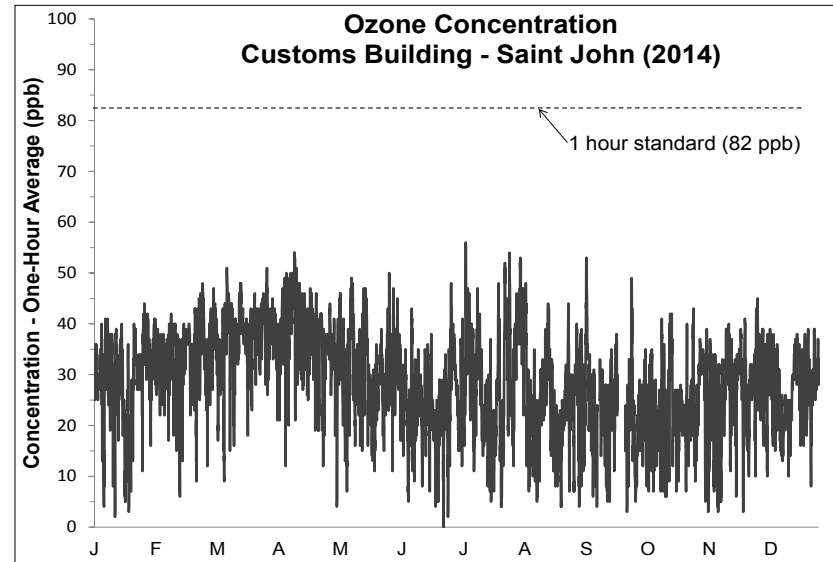
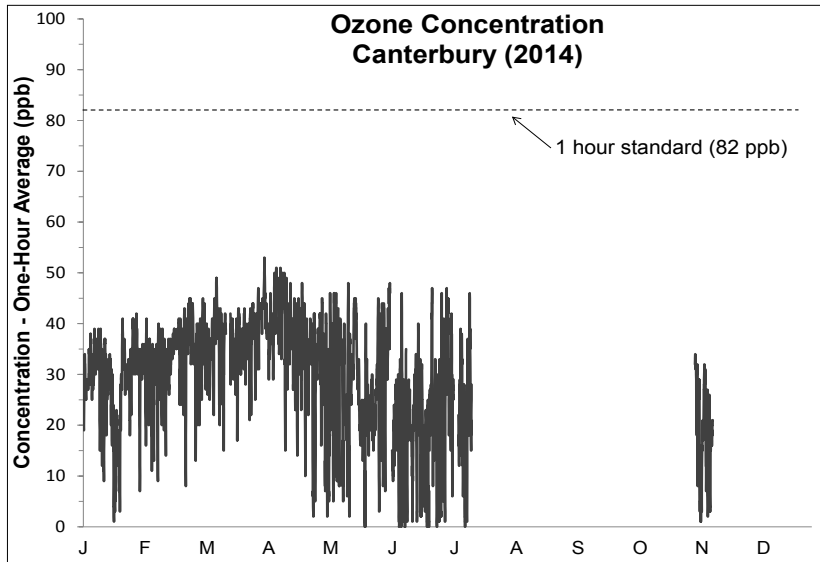
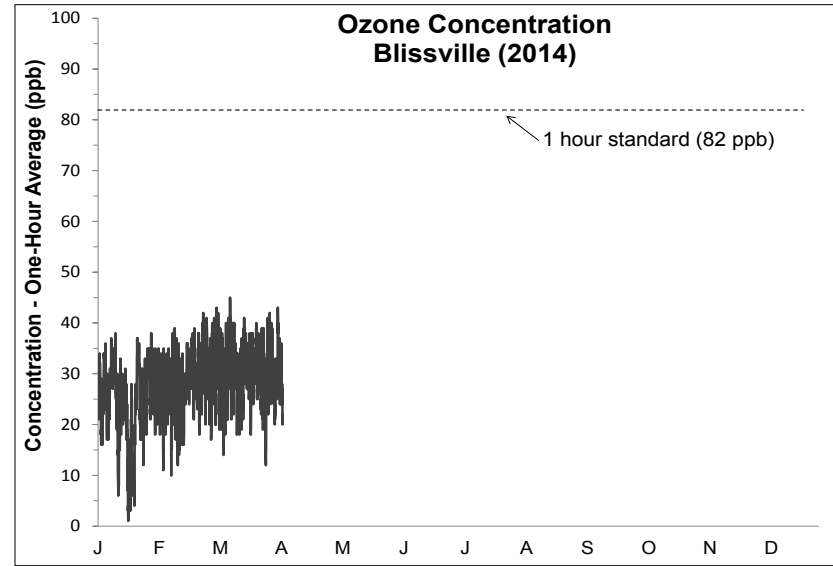
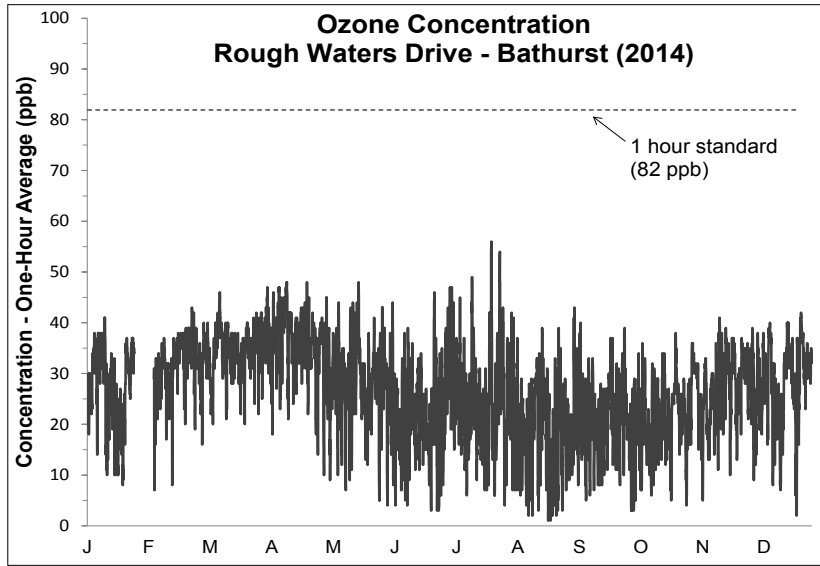
# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Nitrogen Dioxide



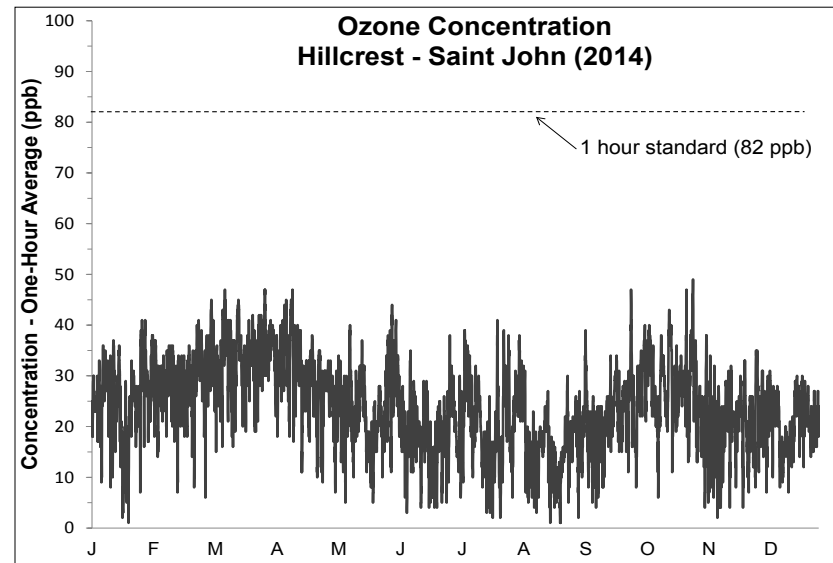
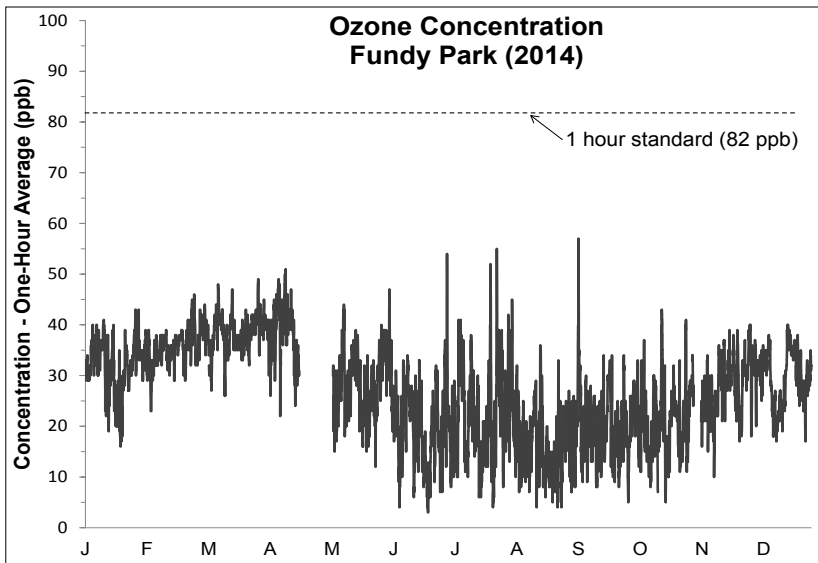
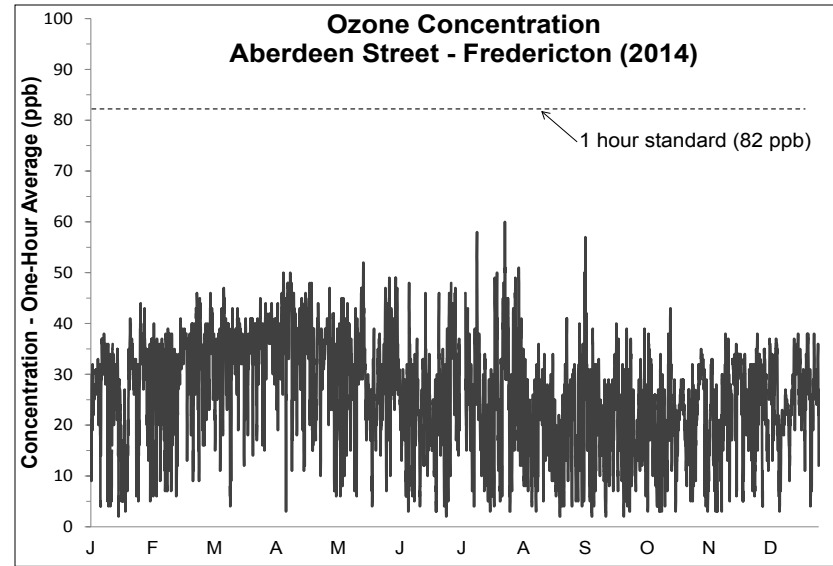
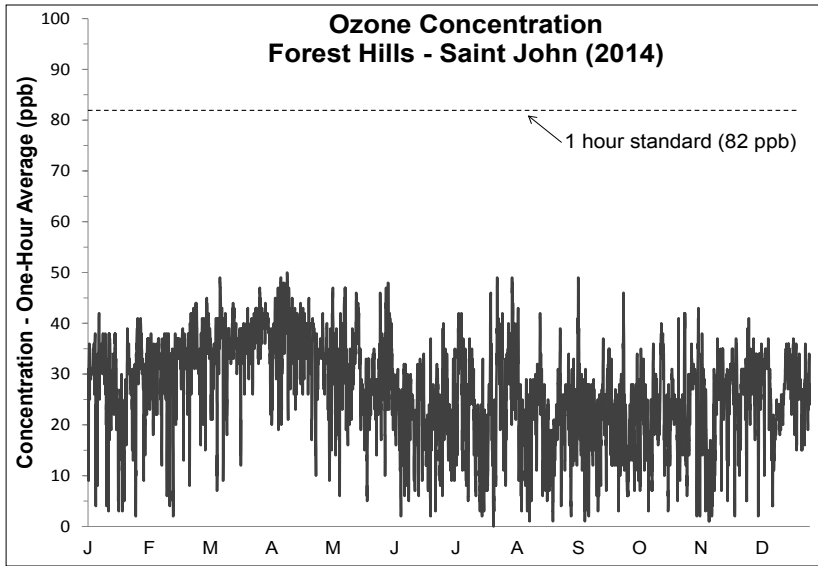
# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Ozone



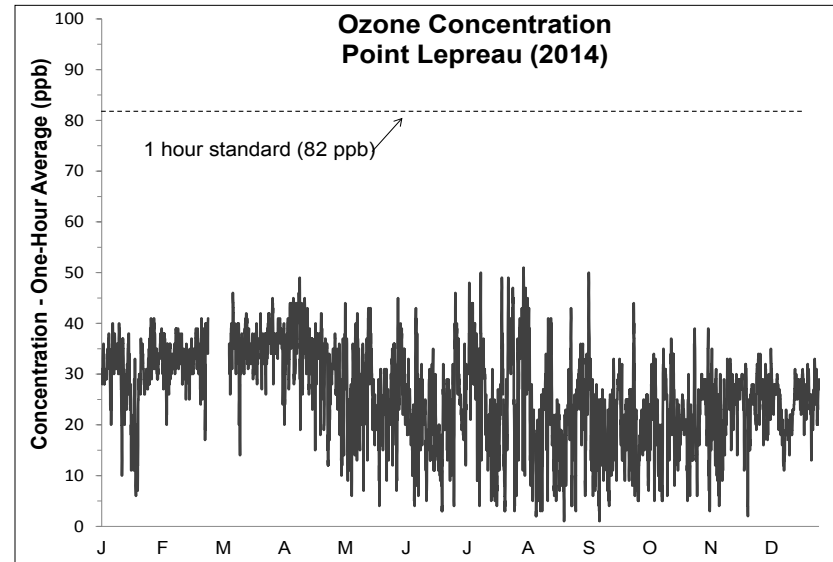
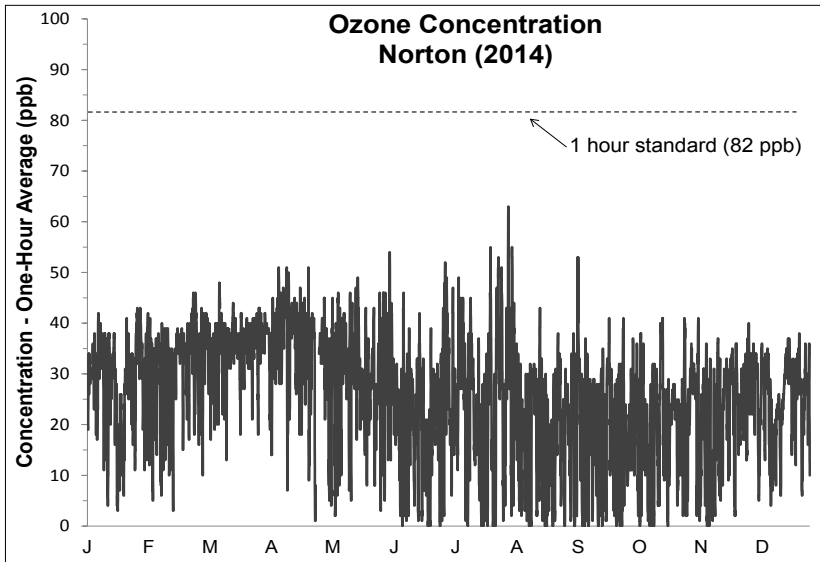
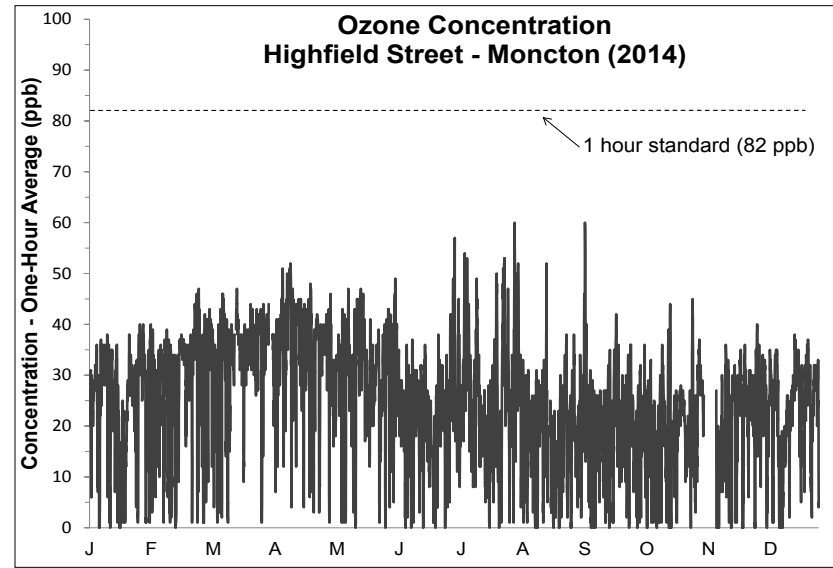
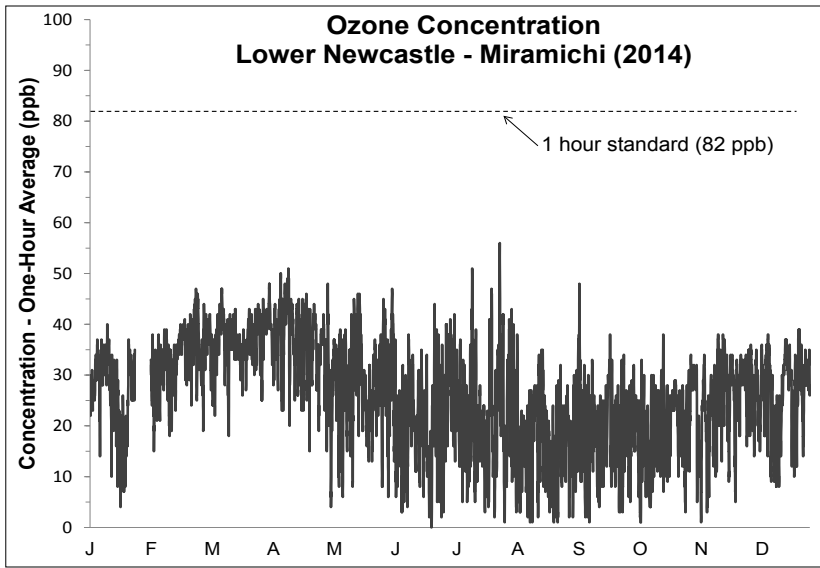
# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Ozone



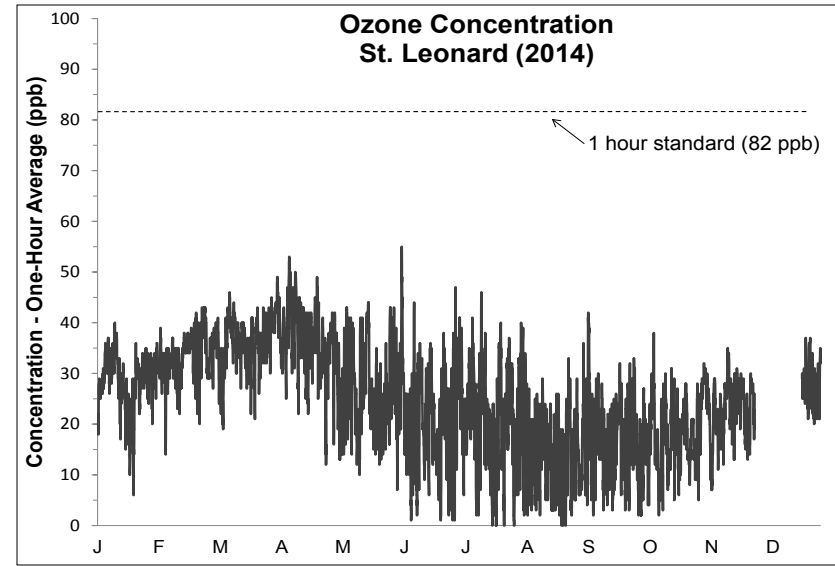
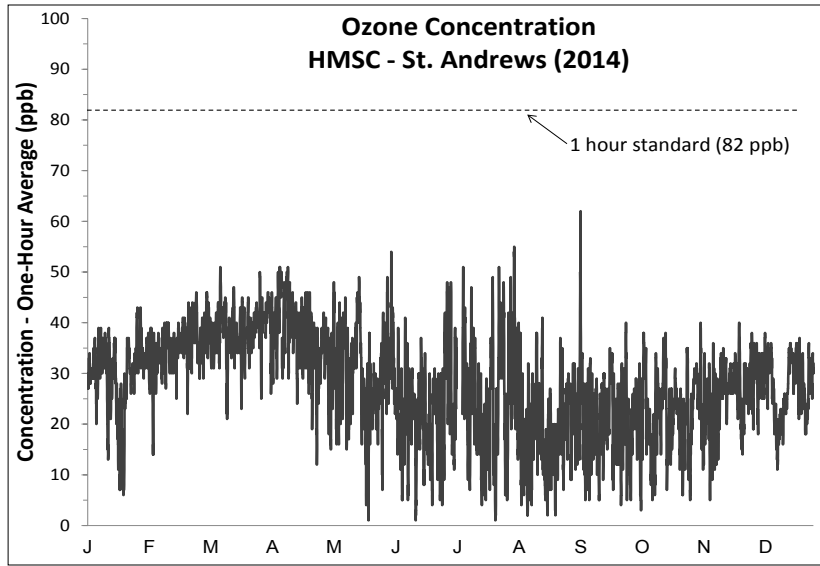
# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Ozone



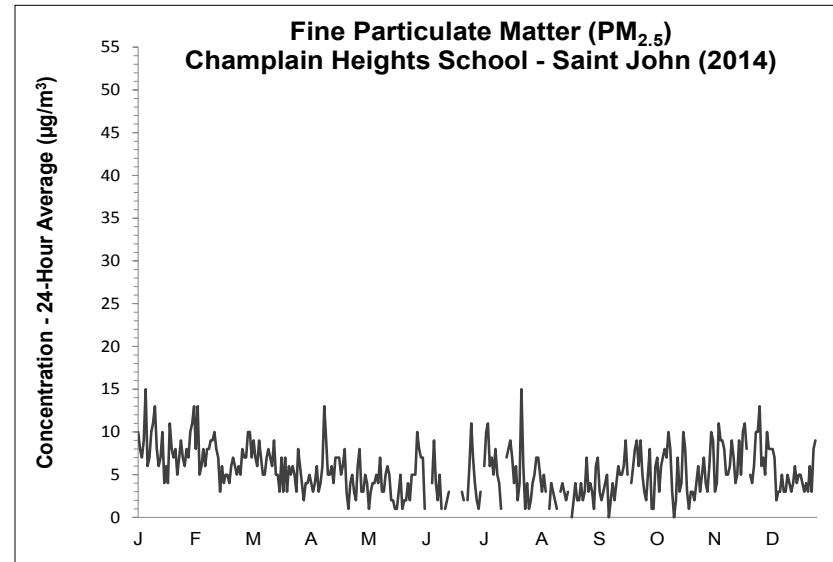
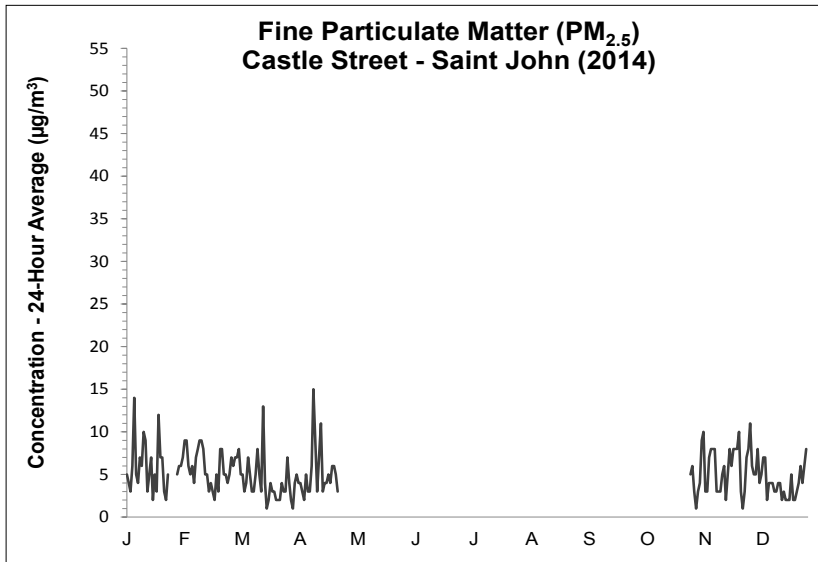
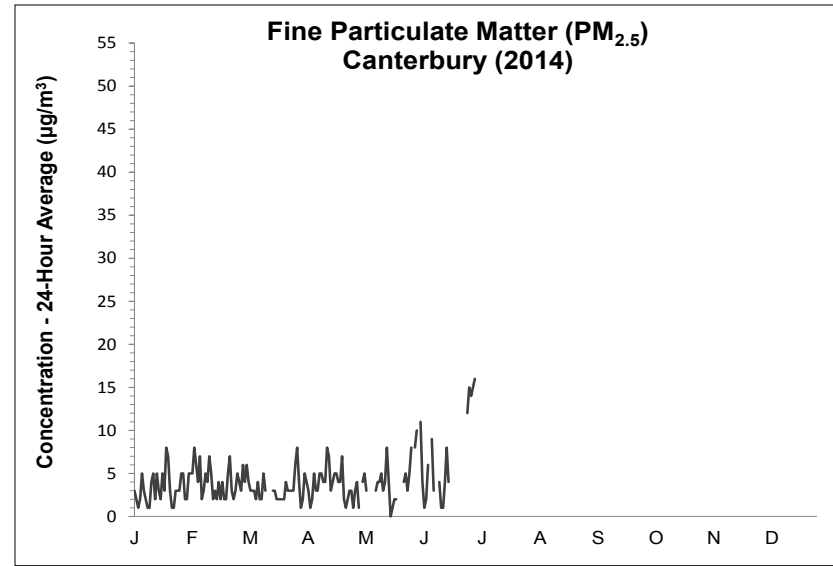
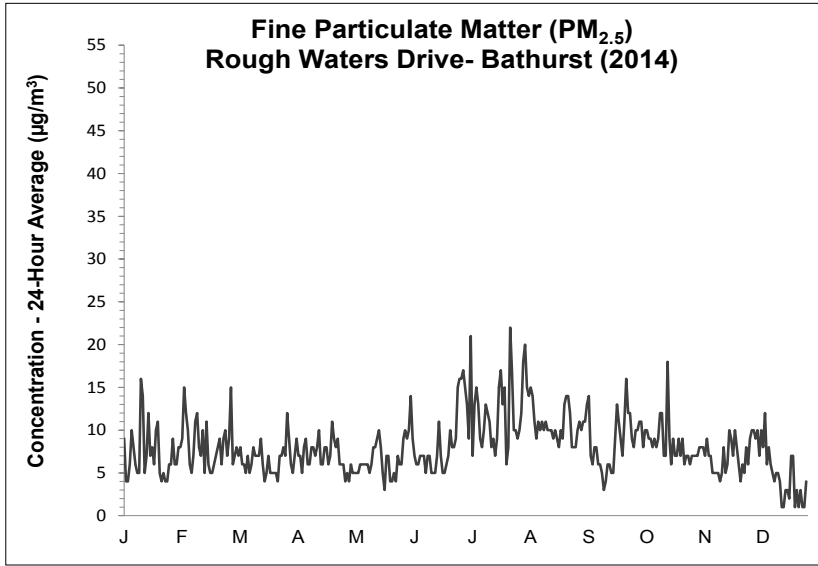
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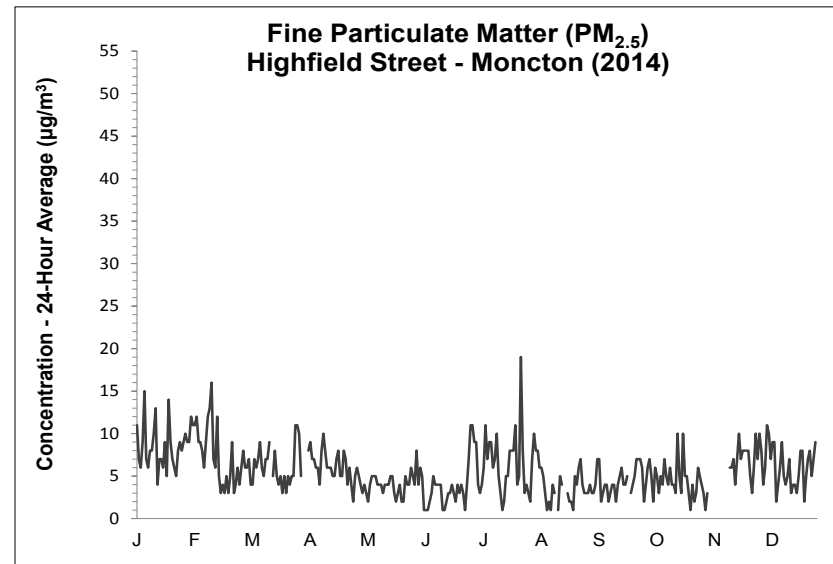
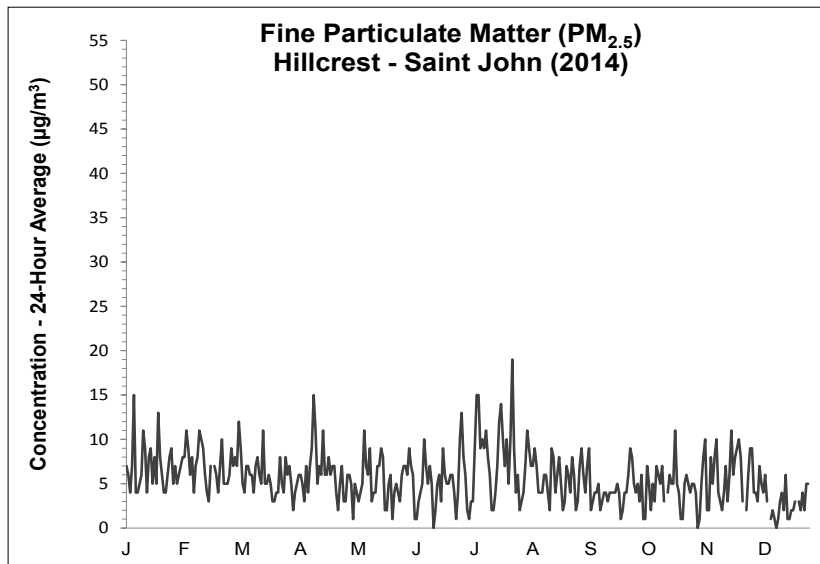
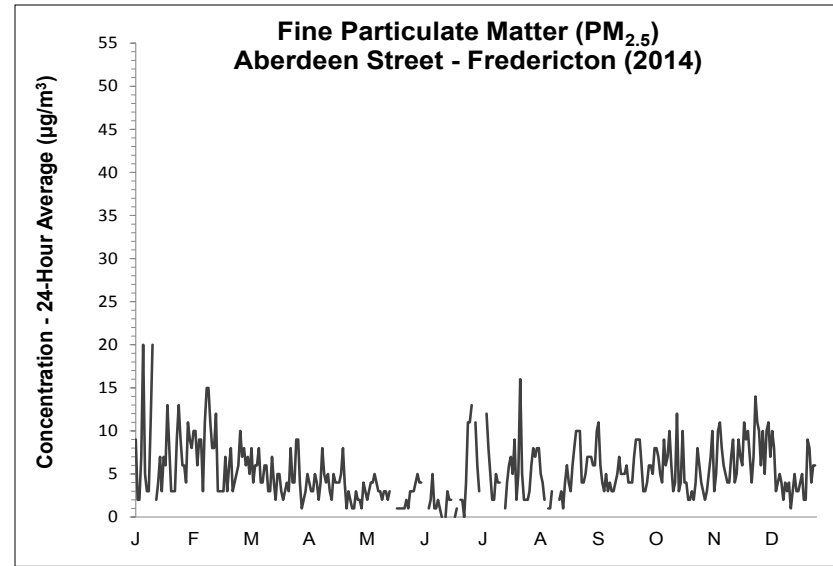
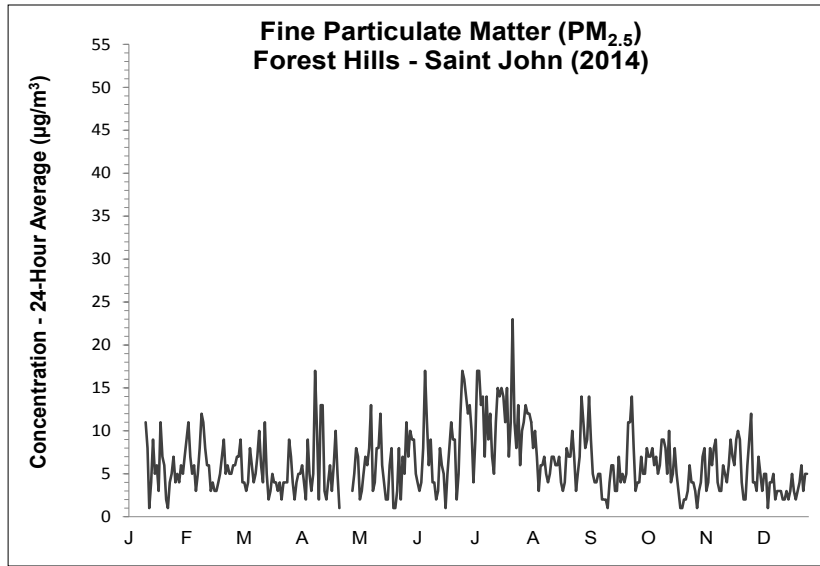
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## Fine Particulate Matter



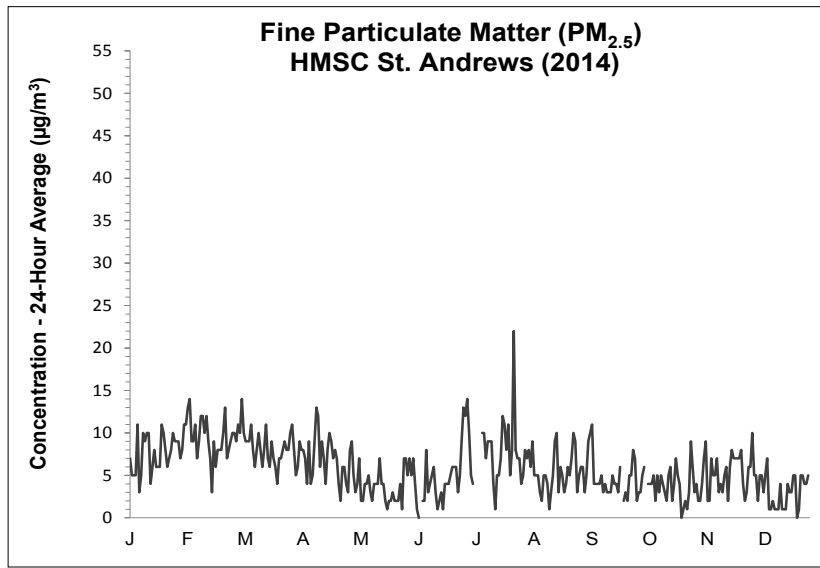
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## Fine Particulate Matter



# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

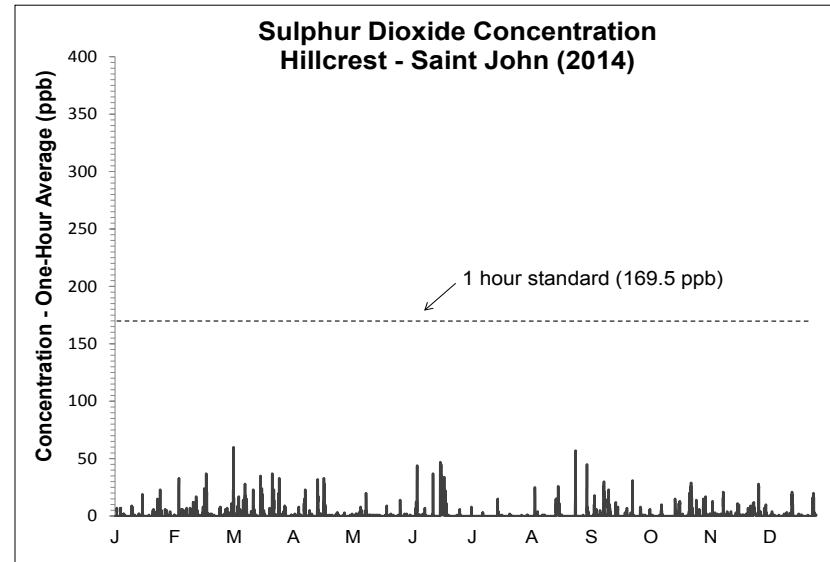
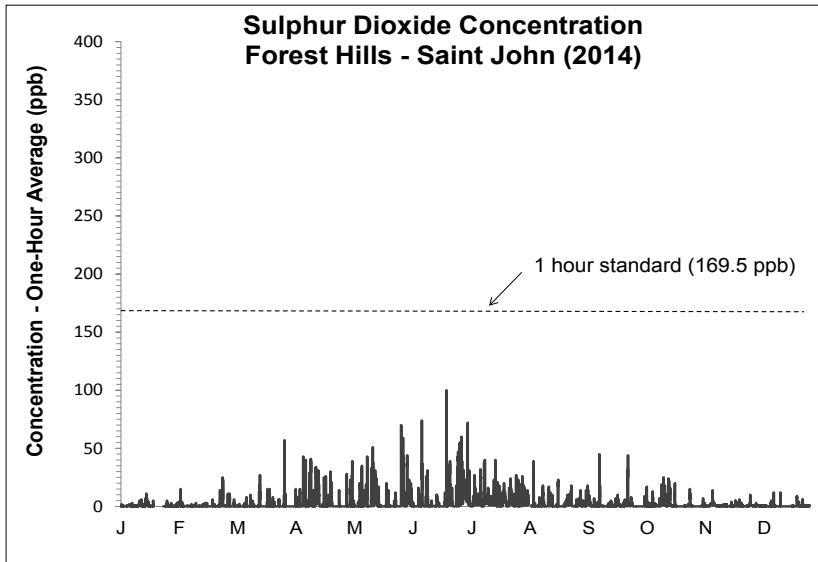
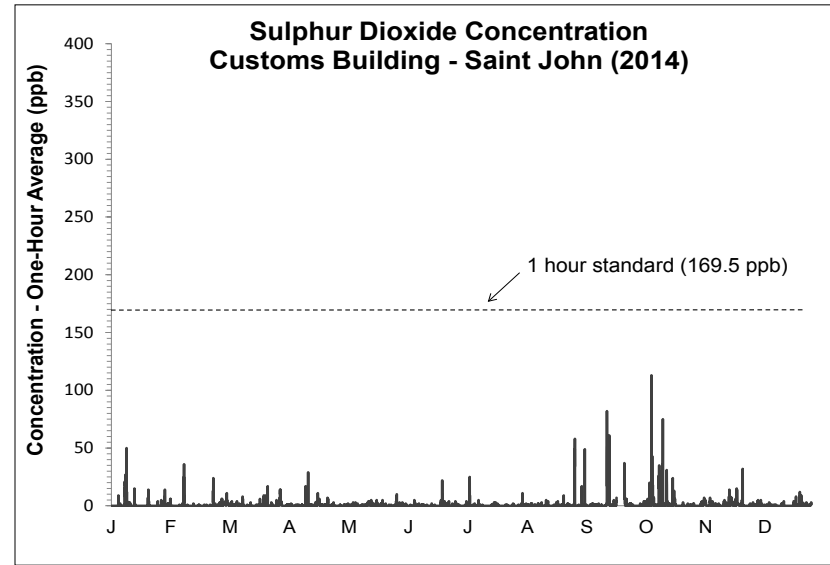
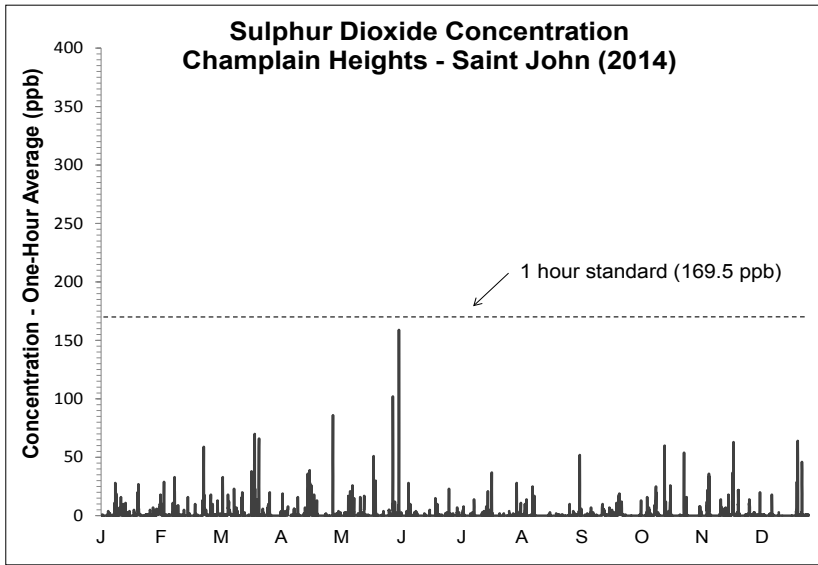
## Fine Particulate Matter





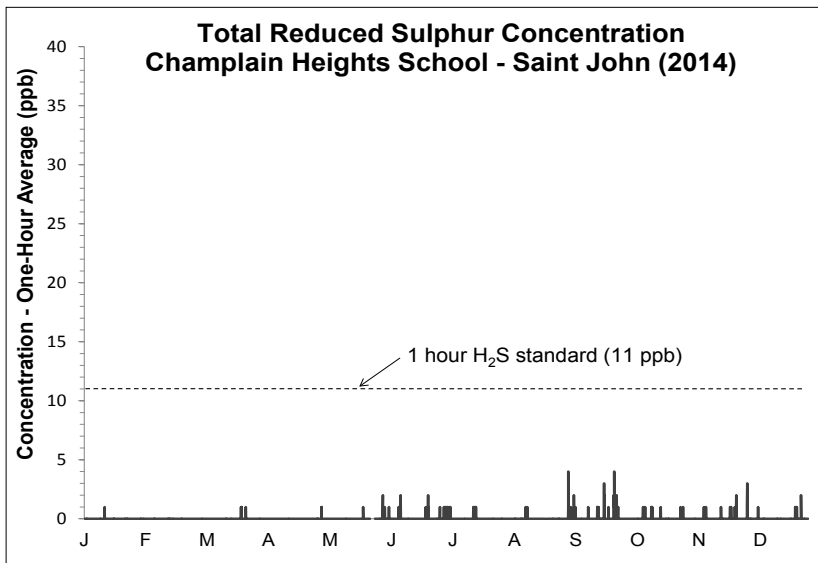
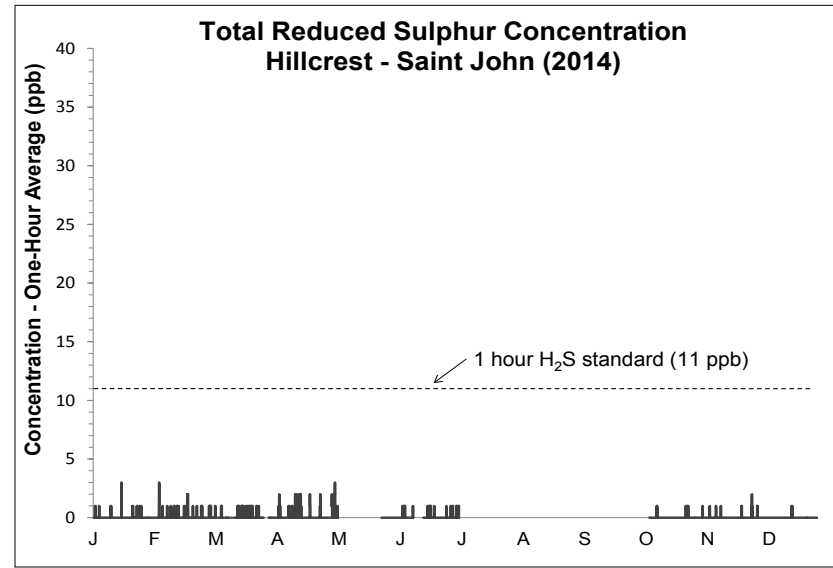
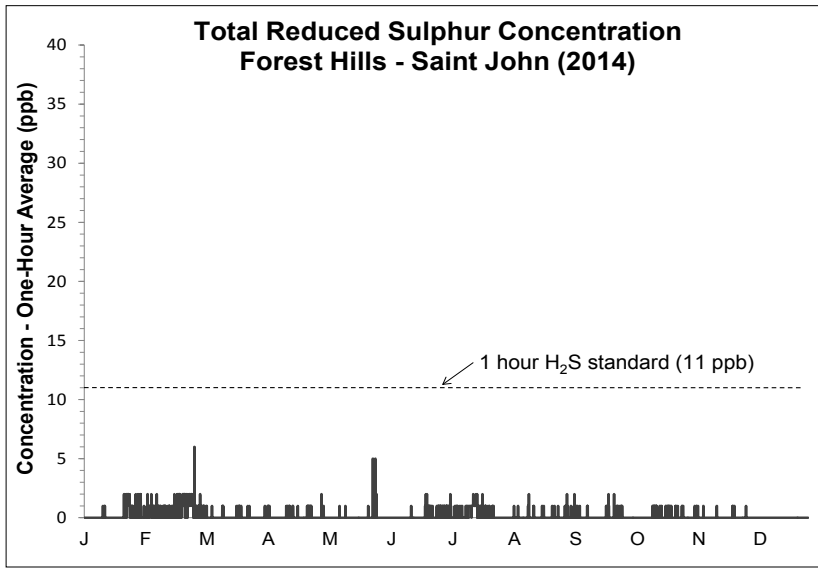
# PART I: PROVINCIALY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Sulphur Dioxide



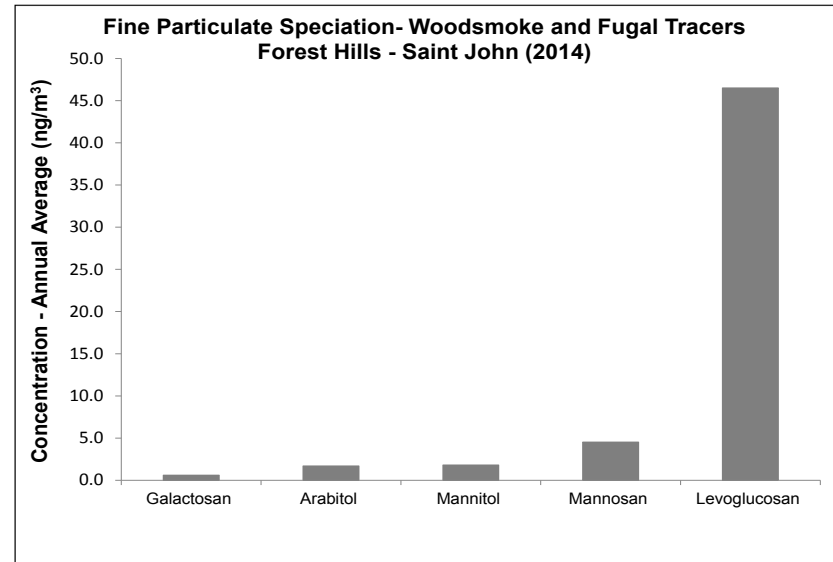
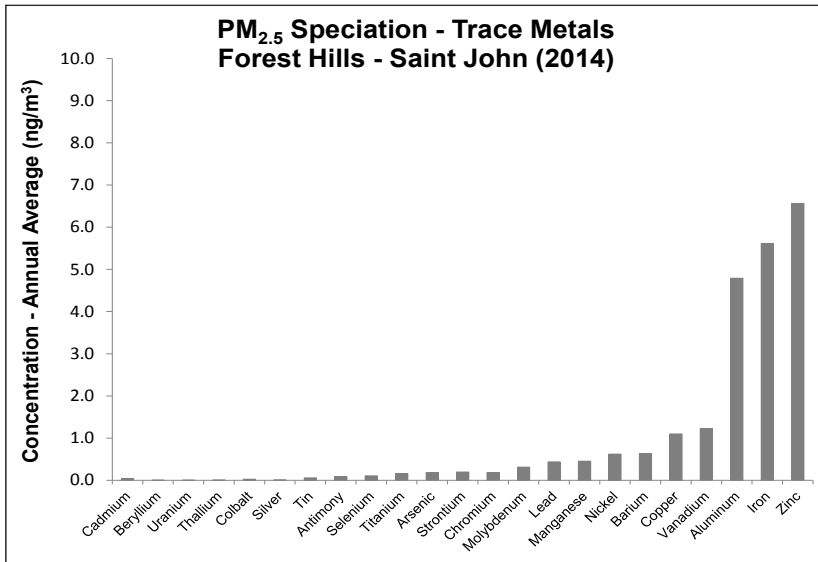
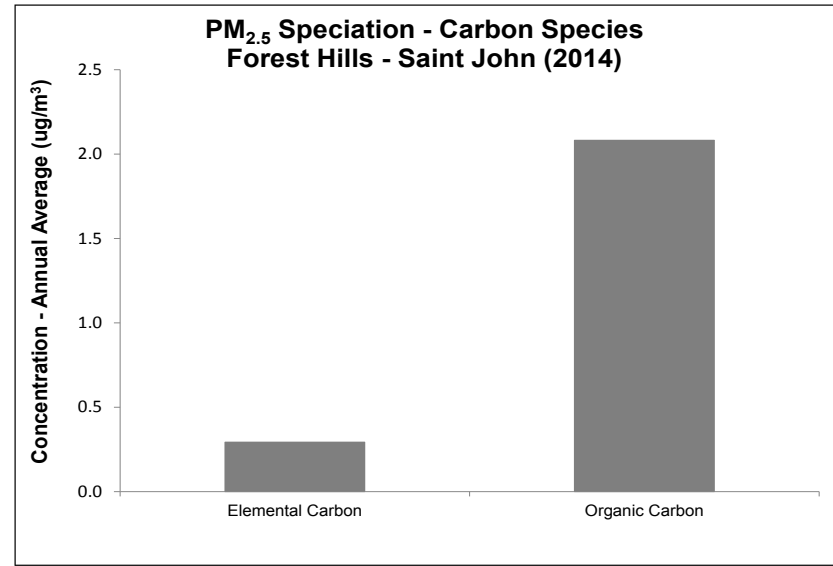
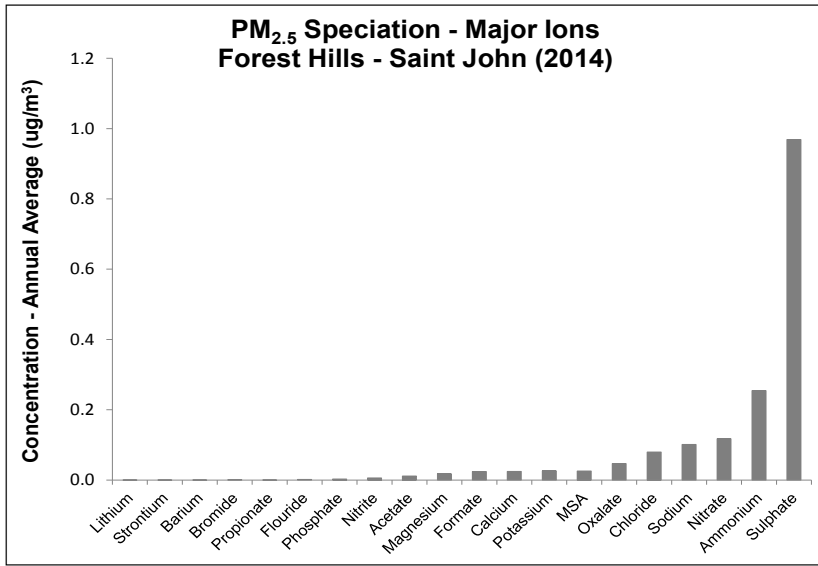
# PART I: PROVINCIALLY OPERATED NETWORKS - Continuous Air Quality Monitoring Results

## Total Reduced Sulphur



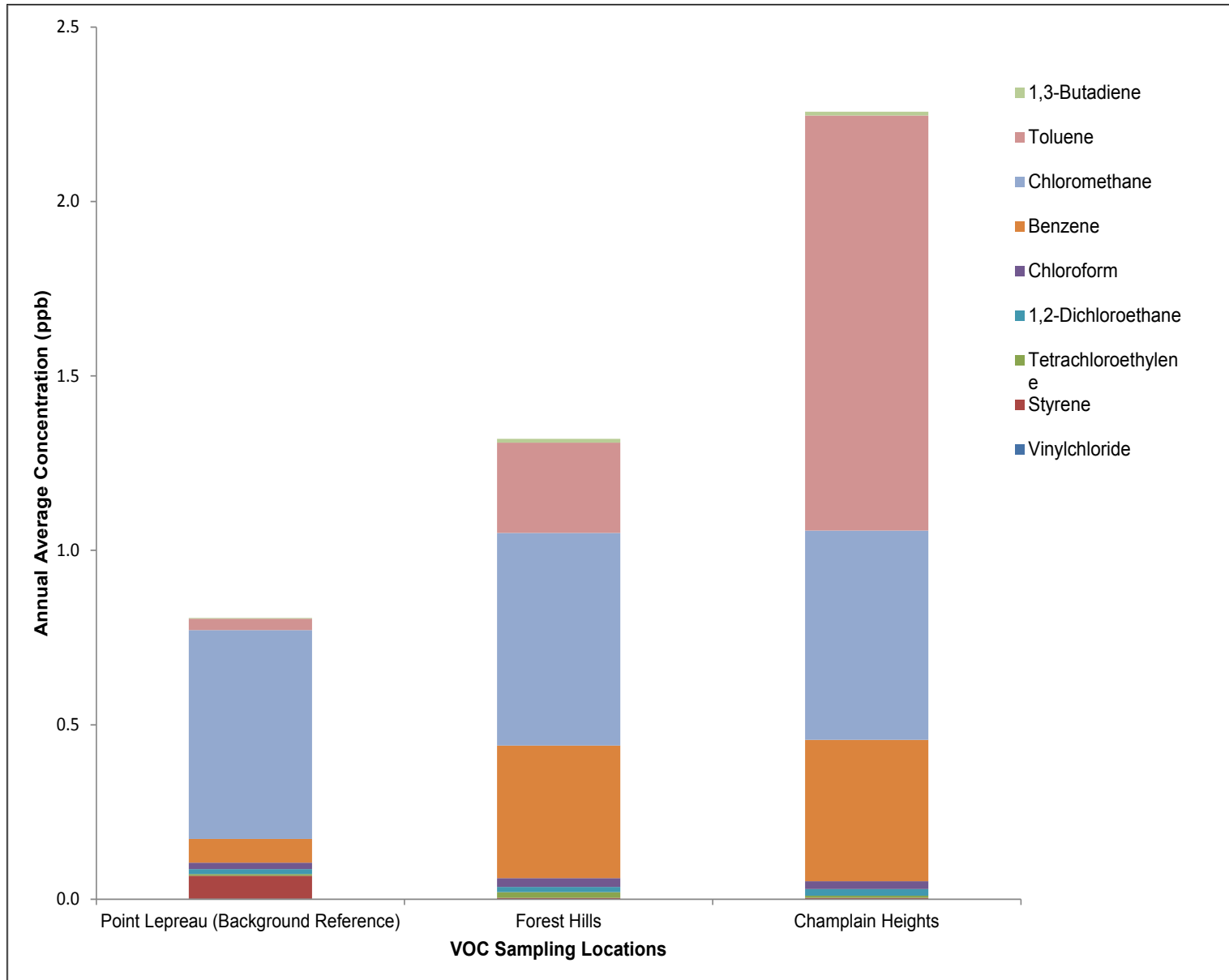
**PART I: PROVINCIALY OPERATED NETWORKS - Fine Particulate Speciation - Forest Hills, Saint John**

**2014 Annual Average Concentration Range Charts**



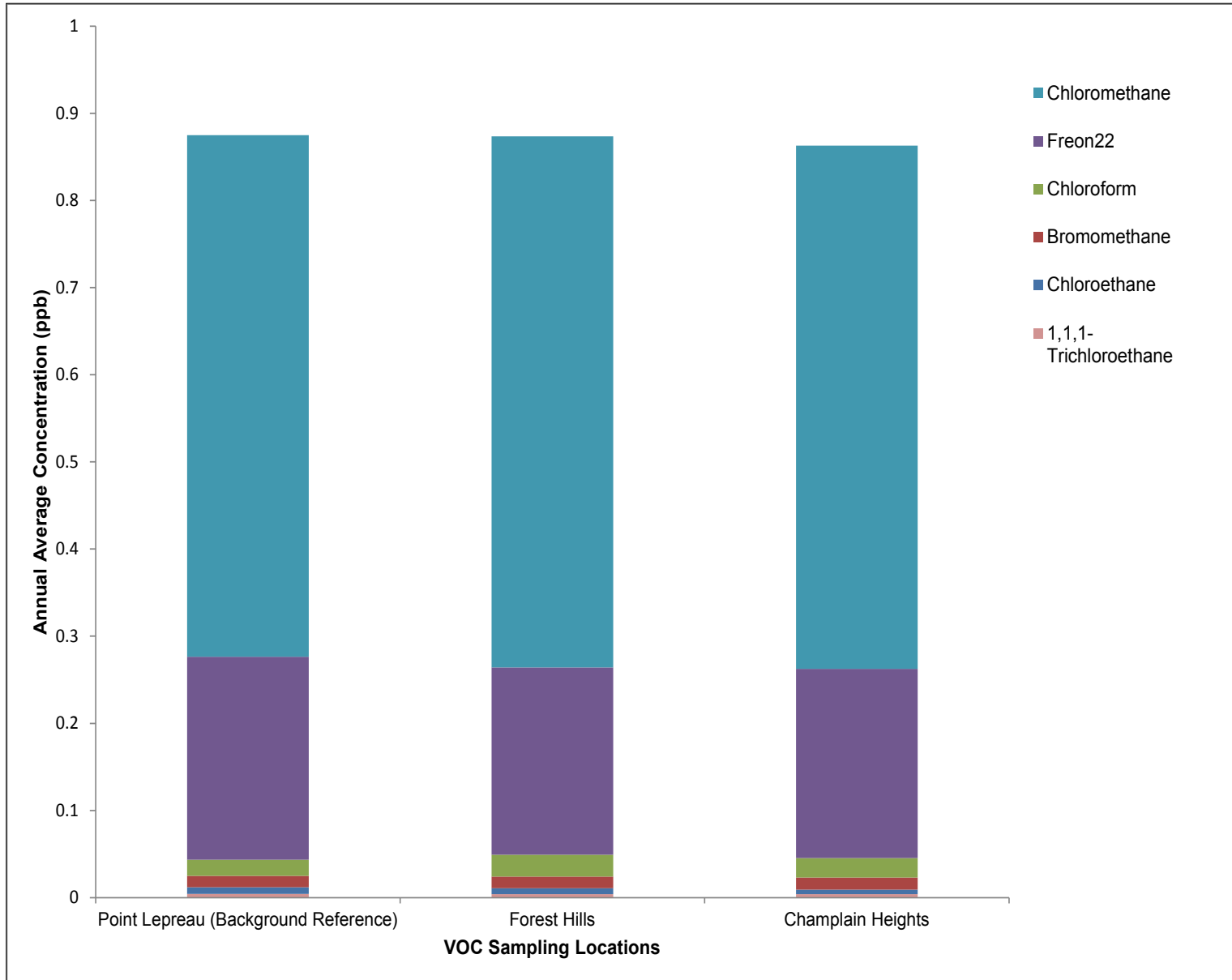
**PART I: PROVINCIALY OPERATED NETWORKS - Volatile Organic Compounds, Saint John Region**

**Air Toxics - 2014 Annual Average Concentration Range Chart**



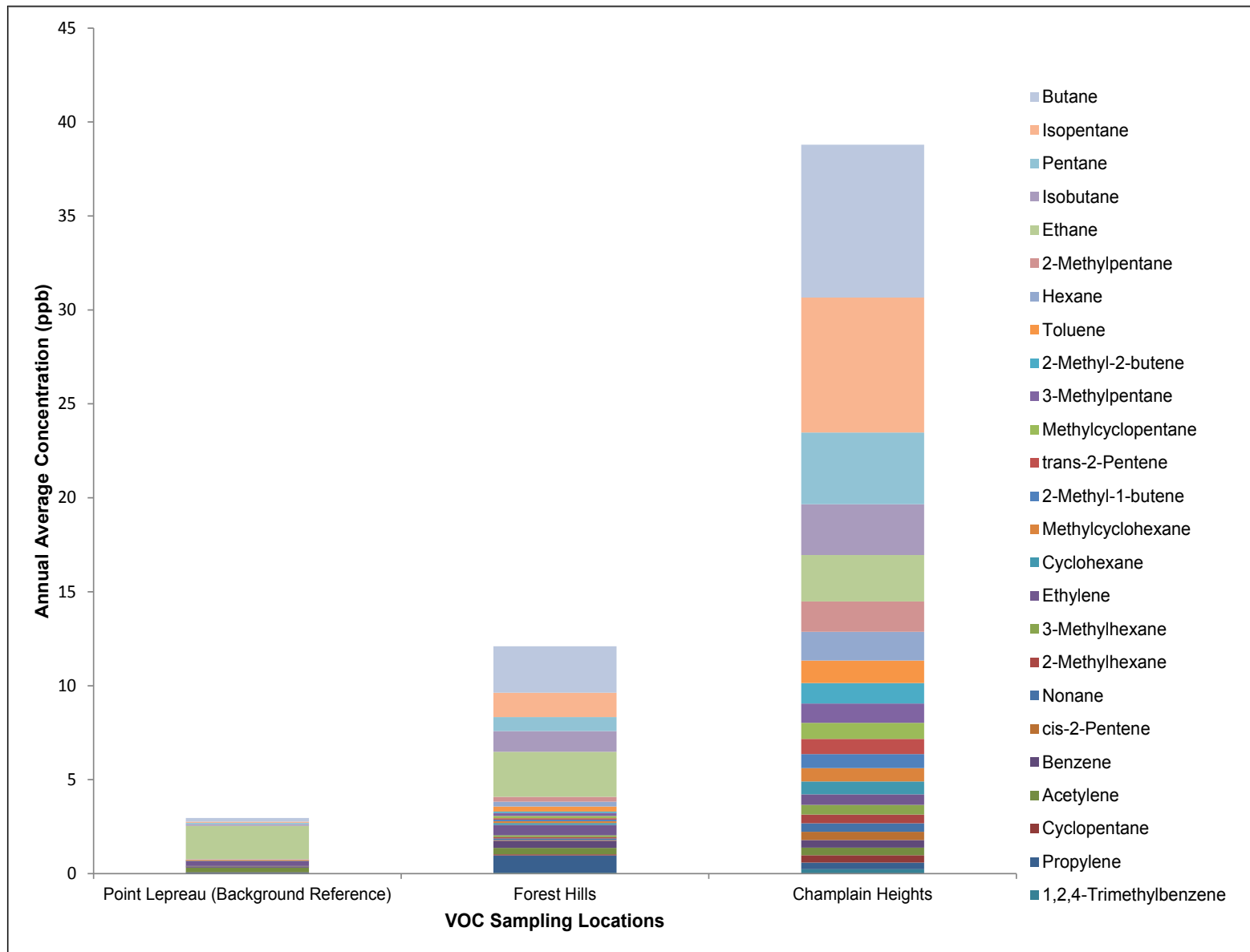
**PART I: PROVINCIALY OPERATED NETWORKS - Volatile Organic Compounds - Saint John Region**

**Ozone Depleting Substances 2014 Annual Average Concentration Range Chart**



**PART I: PROVINCIALY OPERATED NETWORKS - Volatile Organic Compounds - Saint John Region**

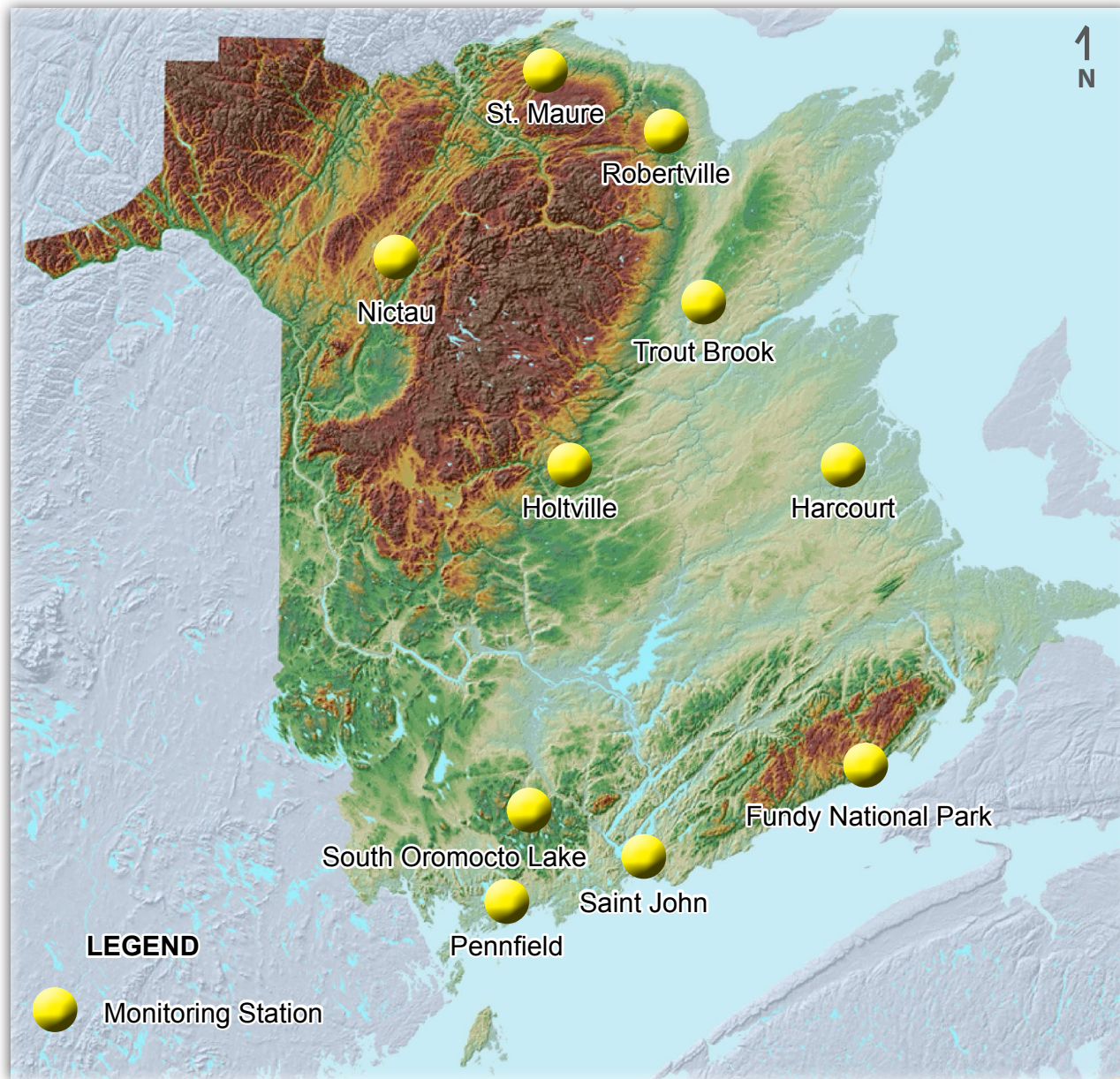
**Smog-Forming VOCs - 2014 Annual Average Concentration Range Chart**



**\*Note: Graph displays the 25 highest concentration smog-forming VOCs**

**PART II:**  
**ACID PRECIPITATION MONITORING NETWORK**

# 2014 Acid Precipitation Network Map





## PART II: ACID PRECIPITATION MONITORING NETWORK - Sulphate and Nitrate Deposition Trends

### Annual Sulphate and Nitrate Wet Deposition (eq/ha/yr) at New Brunswick Monitoring Sites, 2005-2014

Site	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
St. Maure	262.51	251.96	244.51	253.52	176.43	177.00	168.80	120.53	121.30	140.76
Robertville	323.47	308.98	239.47	239.60	200.84	184.26	173.56	118.33	124.20	168.35
Nictau	224.63	274.52	184.48*	198.12	154.56	121.21	150.02	96.50	108.13	119.96
Trout Brook	264.01	262.48	210.02	195.52	163.08	135.17	134.02	101.20	100.78	116.05
Holtville	296.02	294.78	215.82	269.87	210.01	122.63	184.33	98.19	127.23	126.63
Harcourt	249.76	255.02	204.46	256.90	199.91	159.91	139.40	91.68	99.92	120.67
Canterbury	328.16	--	--	237.95	172.54	136.32	195.51	125.42	--	Closed
Coles Island	231.23	224.21	217.17	199.47	177.45	131.60	143.83	88.01	Closed	Closed
South Oromocto Lake	--	301.26	267.54	278.39	230.26	163.31	164.09	128.81	154.73	150.02
Pennfield	448.75	431.99	329.09	409.11	349.97	290.78	--	228.24	265.32	223.61
Lakewood Heights	340.69**	383.18	302.87	357.59	310.16	194.27	--	169.58	193.66	164.38
Fundy	436.28	446.06	332.23	428.04	322.81	226.37	263.55	208.08	249.13	200.13

-- insufficient data

\*49 Weeks

\*\*48 Weeks

## PART II: ACID PRECIPITATION MONITORING NETWORK - Sulphate and Nitrate Deposition Trends

**Annual Sulphate Wet Deposition (kg/ha/yr) at New Brunswick Monitoring Sites, 2005-2014**

Site	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
St. Maure	11.51	10.89	10.62	11.02	7.67	7.80	7.19	5.17	5.06	5.92
Robertville	14.20	13.34	10.49	10.32	8.76	8.06	7.38	4.92	5.17	7.13
Nictau	9.53	11.72	7.91*	8.21	6.44	5.01	6.07	3.77	4.25	4.65
Trout Brook	11.33	11.28	9.17	8.26	6.91	5.69	5.49	4.09	4.01	4.71
Holtville	12.63	12.64	9.26	11.43	8.93	4.99	7.52	3.88	5.02	5.00
Harcourt	10.72	10.90	8.79	10.92	8.52	6.76	5.69	3.67	3.92	4.82
Canterbury	13.86	---	---	9.92	7.29	5.49	8.00	4.92	---	Closed
Coles Island	9.86	9.62	9.38	8.39	7.43	5.44	5.84	3.45	Closed	Closed
South Oromocto Lake	---	12.96	11.55	11.89	9.80	6.77	6.73	5.16	6.24	5.96
Pennfield	19.67	18.85	14.41	17.81	15.20	12.49	---	9.65	11.28	9.31
Lakewood Heights	14.79**	16.64	13.32	15.67	13.48	8.29	---	7.20	8.20	8.12
Fundy	19.00	19.51	14.53	18.79	13.91	9.65	11.20	8.86	10.64	8.21

-- insufficient data

\*49 Weeks

\*\*48 Weeks

## PART II: ACID PRECIPITATION MONITORING NETWORK - Sulphate and Nitrate Deposition Trends

### Annual Nitrate Wet Deposition (kg/ha/yr) at New Brunswick Monitoring Sites, 2005-2014

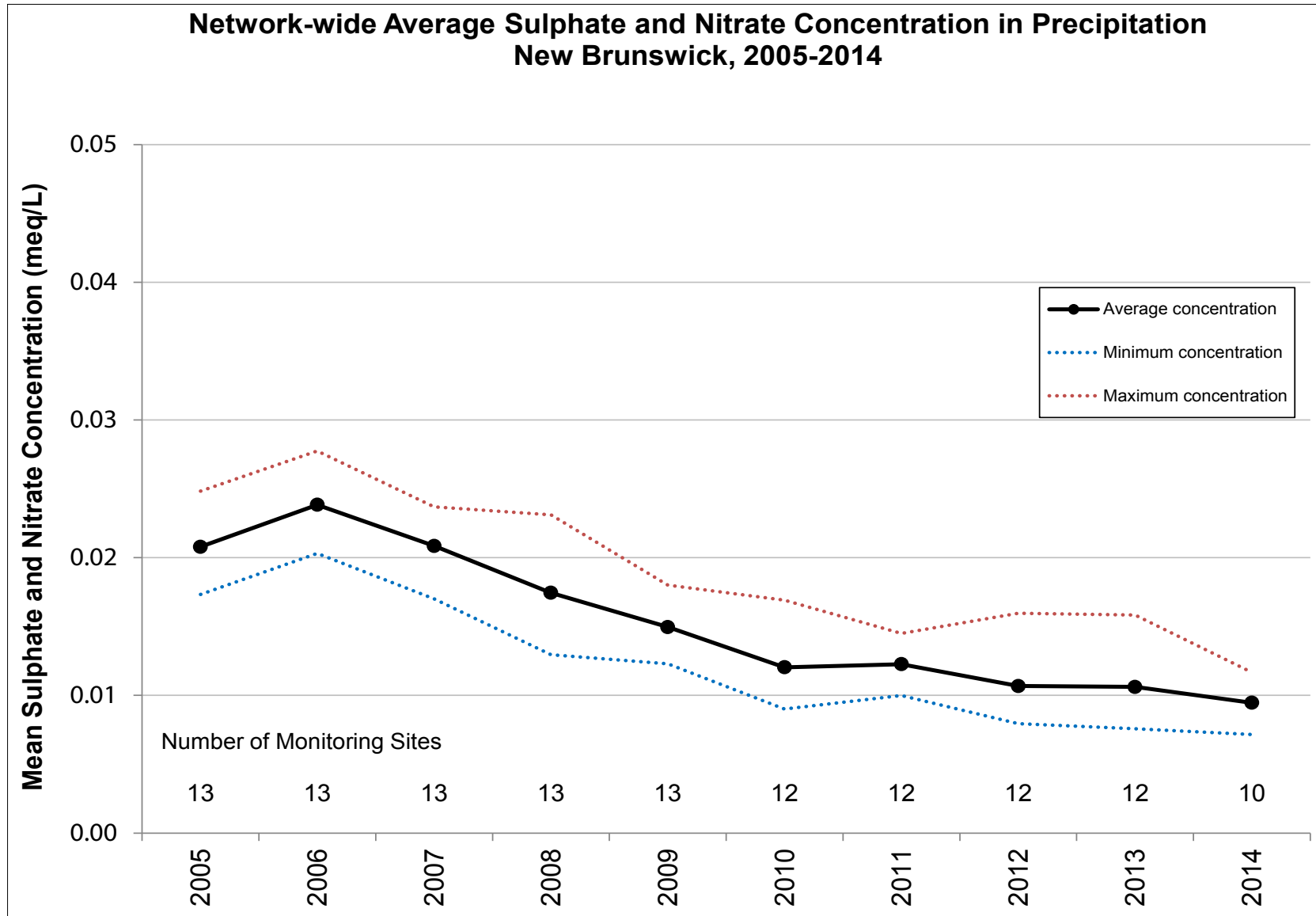
Site	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
St. Maure	1.42	1.56	1.45	1.50	1.03	0.90	1.18	0.80	0.99	1.09
Robertville	1.73	1.94	1.31	1.53	1.15	1.02	1.24	0.99	1.03	1.17
Nictau	1.63	1.90	1.23*	1.69	1.27	1.05	1.46	1.12	1.23	1.44
Trout Brook	1.75	1.71	1.18	1.47	1.19	1.04	1.23	1.00	1.07	1.11
Holtville	2.05	1.96	1.43	1.98	1.50	1.16	1.72	1.08	1.41	1.40
Harcourt	1.65	1.75	1.34	1.84	1.40	1.19	1.30	0.95	1.14	1.26
Canterbury	2.45	---	---	1.95	1.29	1.36	1.80	1.43	---	Closed
Coles Island	1.61	1.48	1.36	1.53	1.41	1.14	1.38	1.01	Closed	Closed
South Oromocto Lake	---	1.95	1.68	1.92	1.63	1.39	1.49	1.33	1.54	1.61
Pennfield	2.43	2.45	1.80	2.38	2.08	1.90	---	1.70	1.89	1.85
Lakewood Heights	2.03**	2.27	1.59	1.95	1.84	1.35	---	1.22	1.42	1.57
Fundy	2.53	2.48	1.84	2.29	2.06	1.58	1.89	1.46	1.71	1.81

-- insufficient data

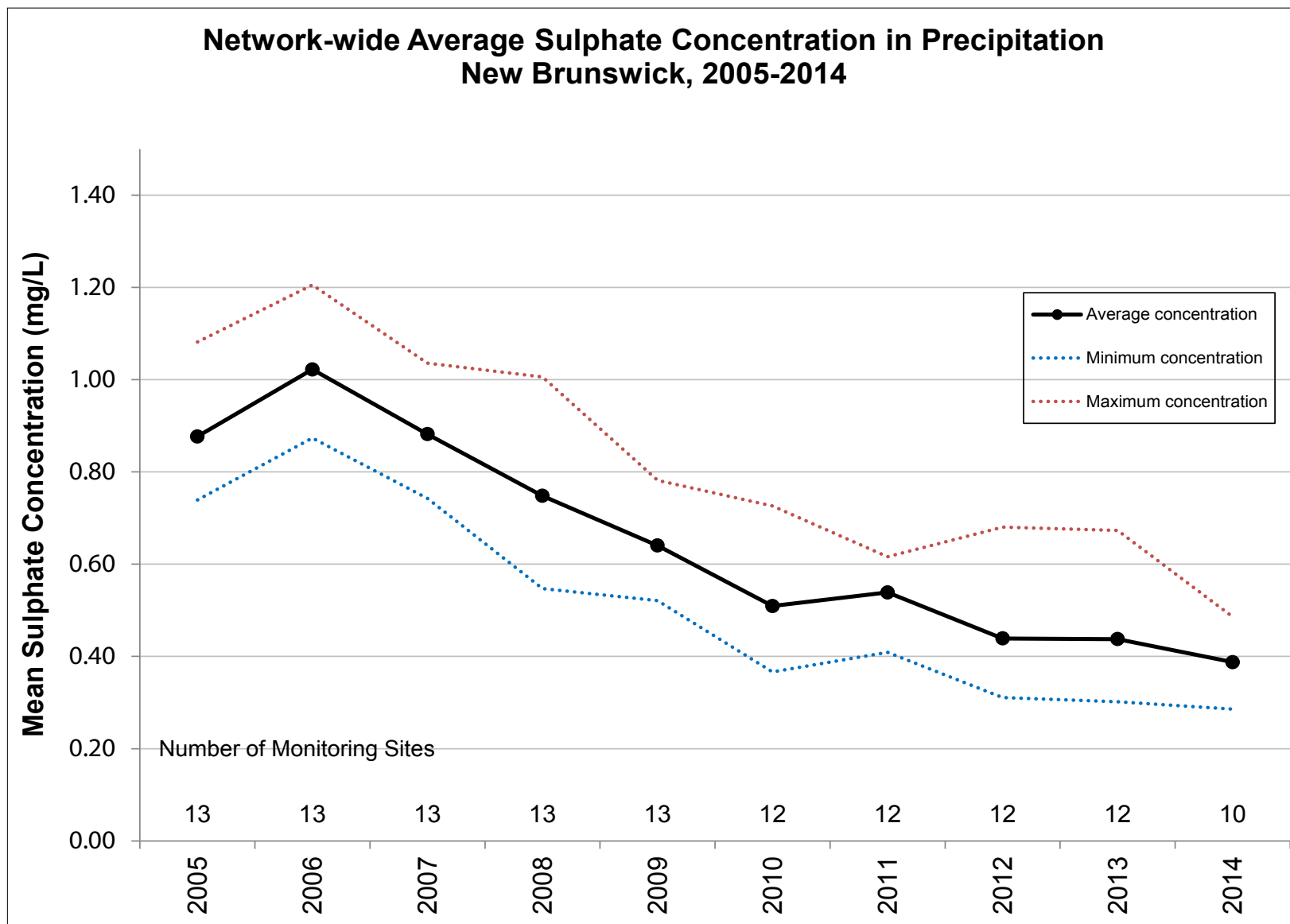
\*49 Weeks

\*\*48 Weeks

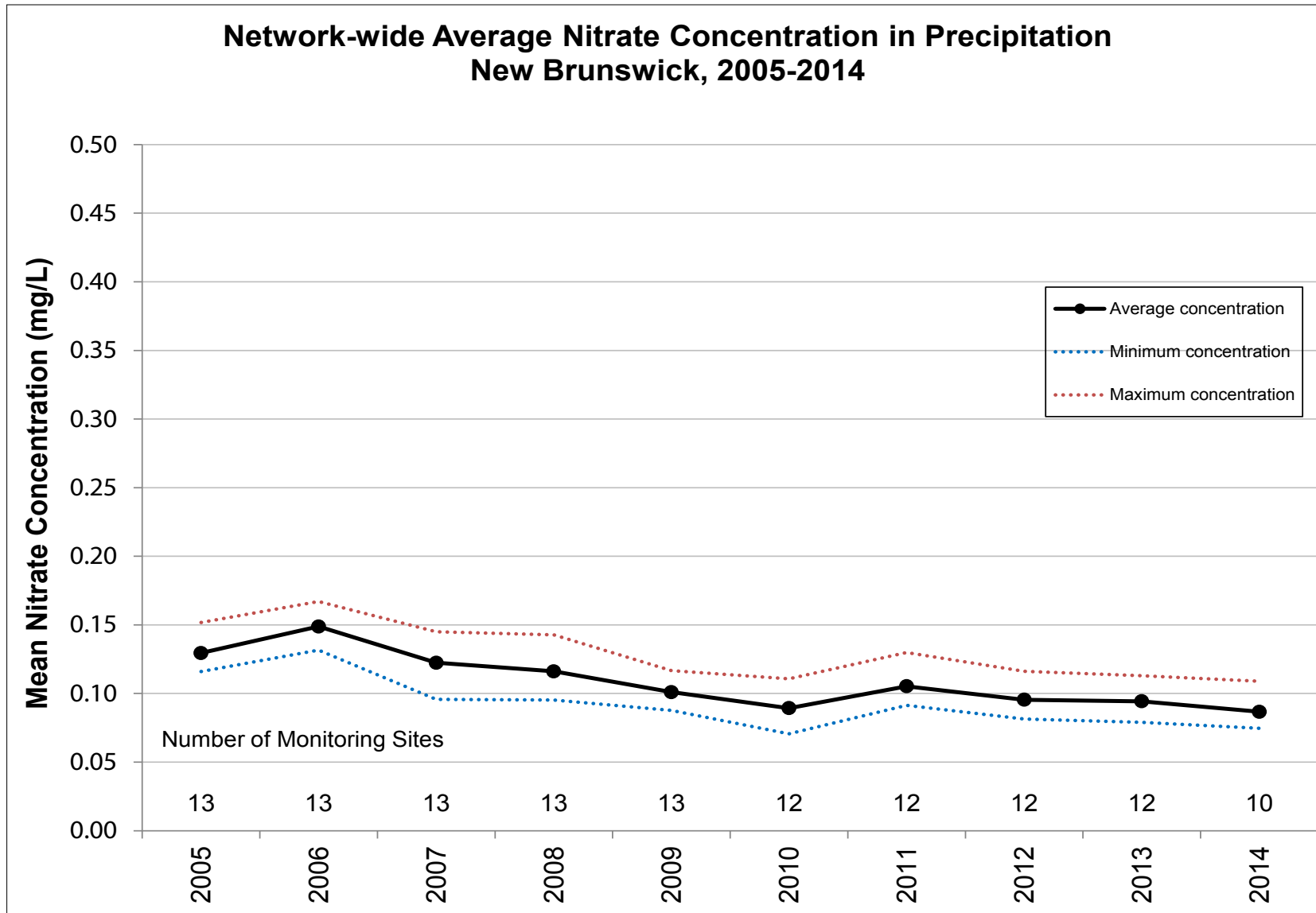
**PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends**



**PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends**

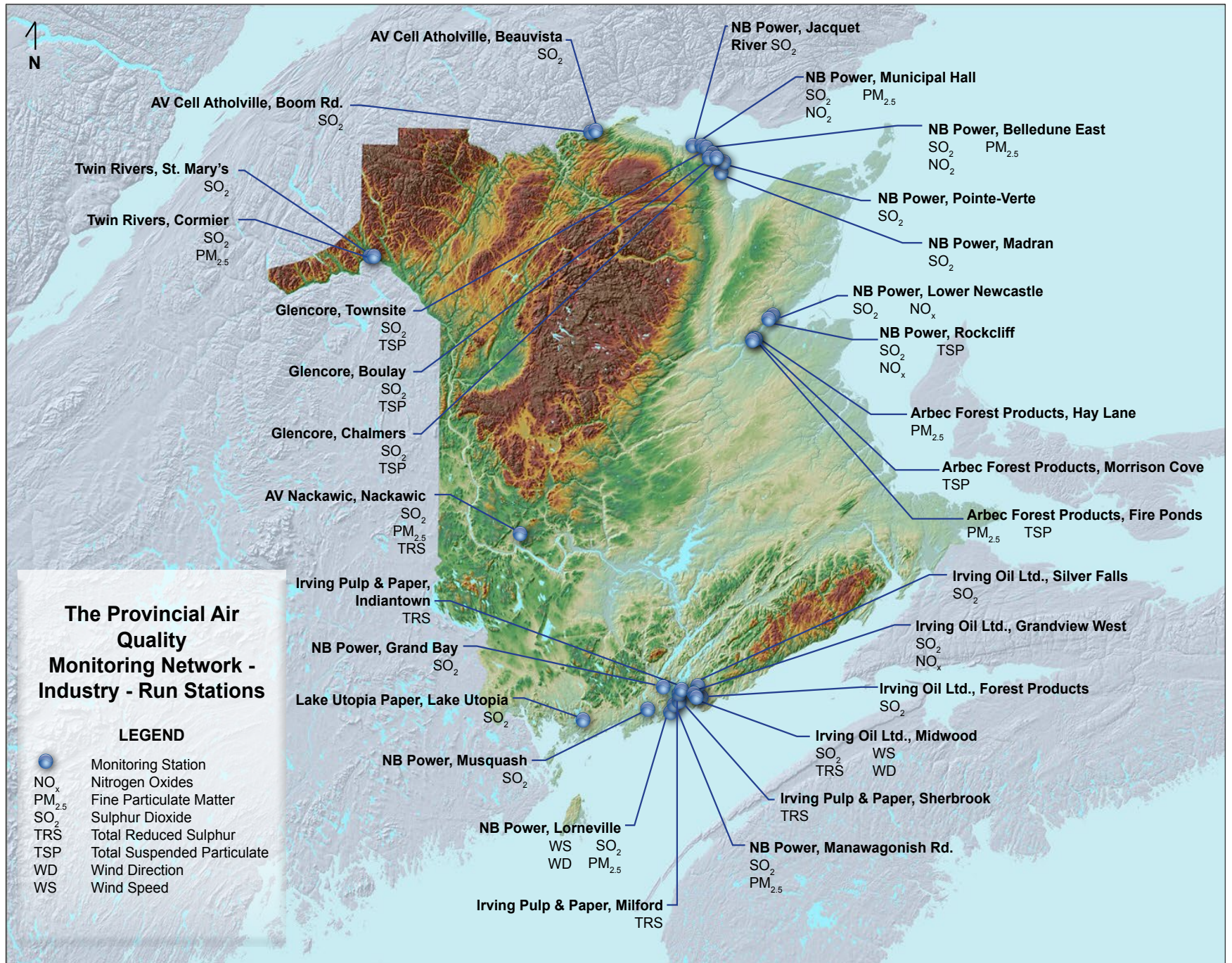


**PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends**



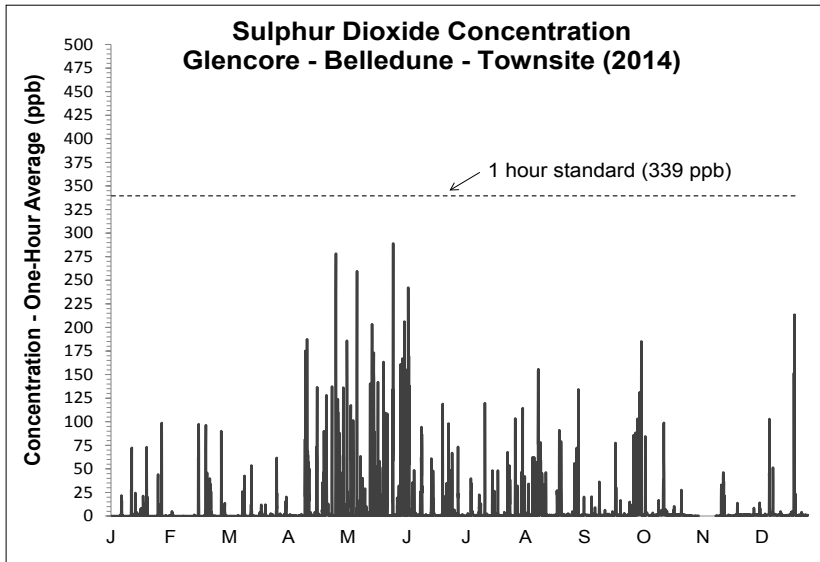
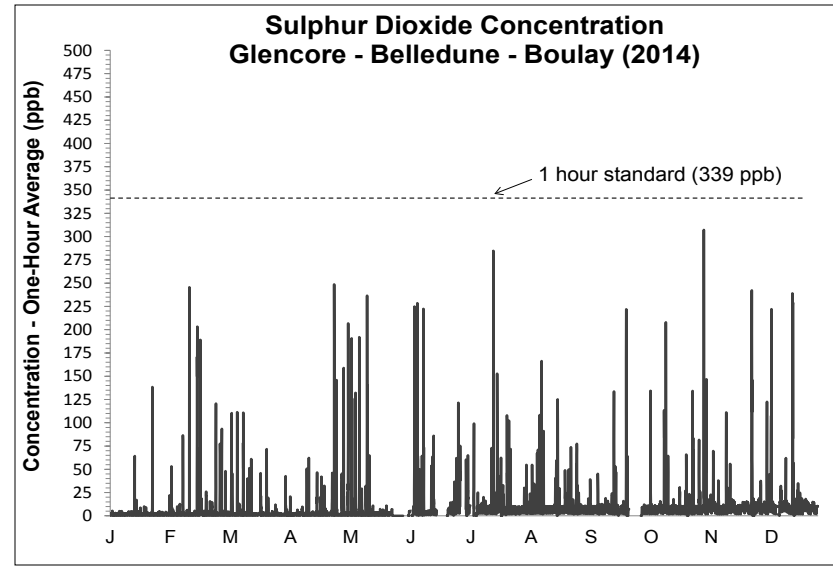
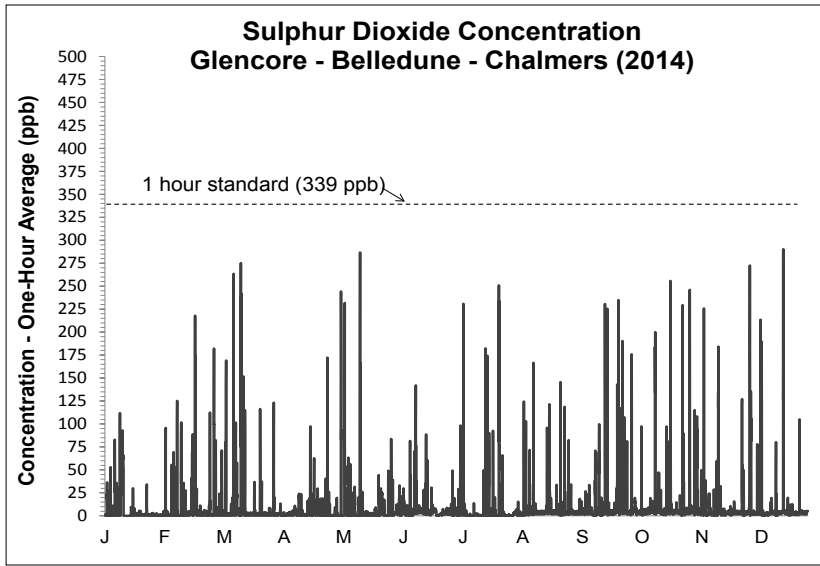
**PART III:**

**INDUSTRY-OPERATED AIR QUALITY MONITORING NETWORKS**

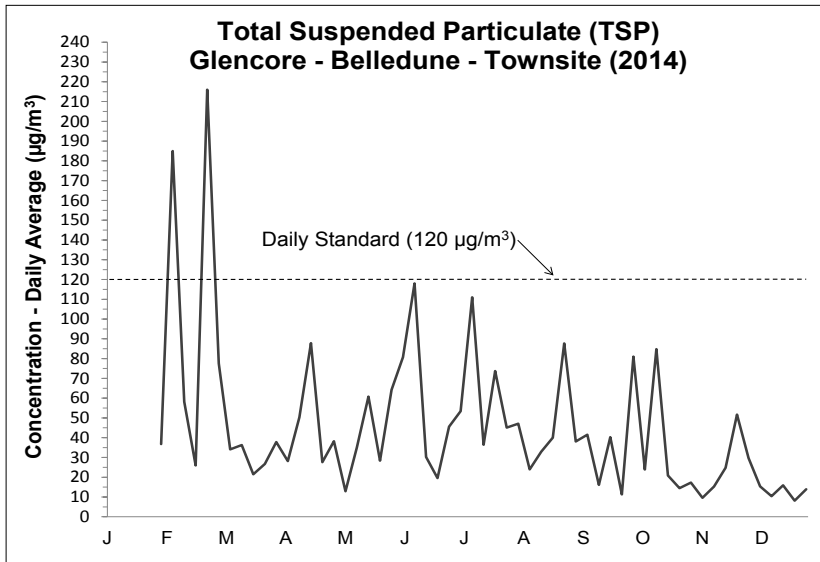
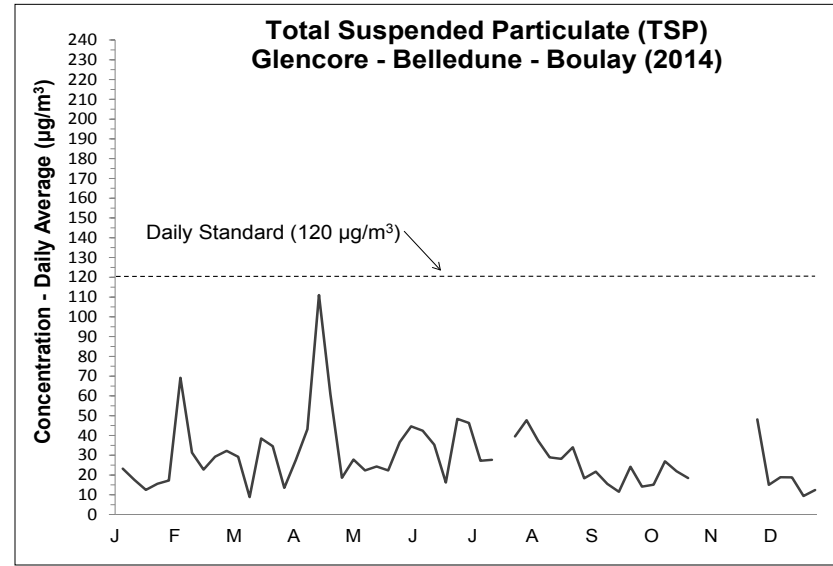
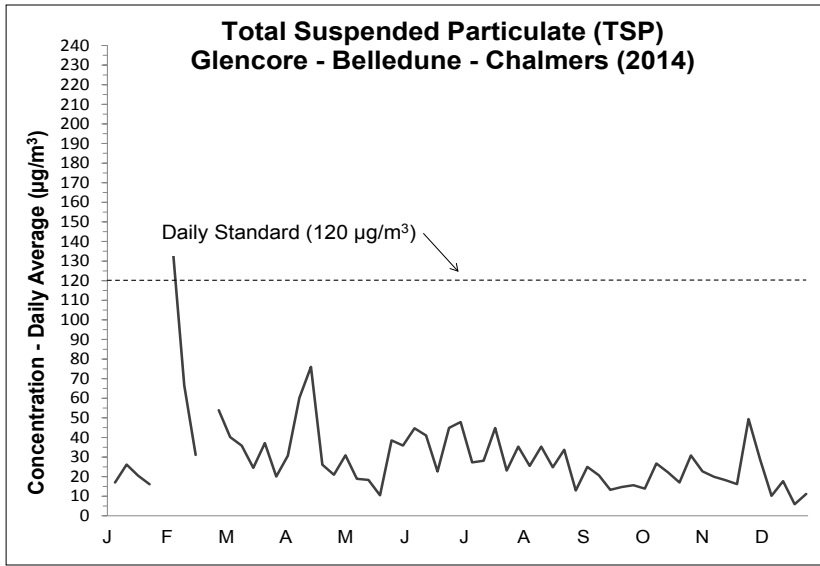




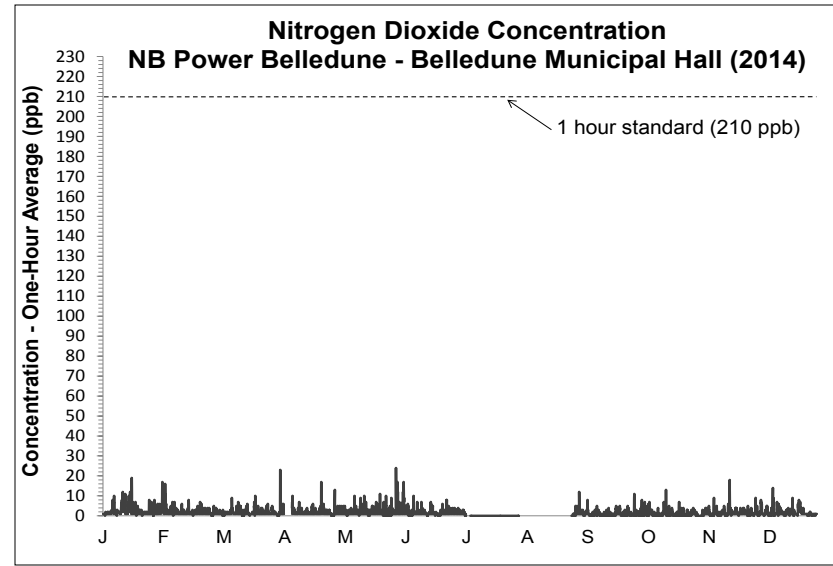
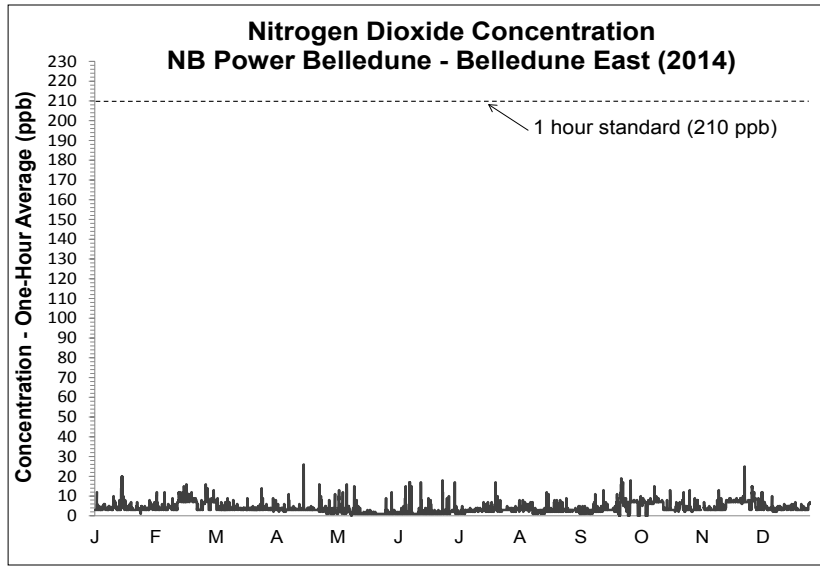
**PART III: INDUSTRY-OPERATED NETWORKS - Glencore, Belledune - Sulphur Dioxide**



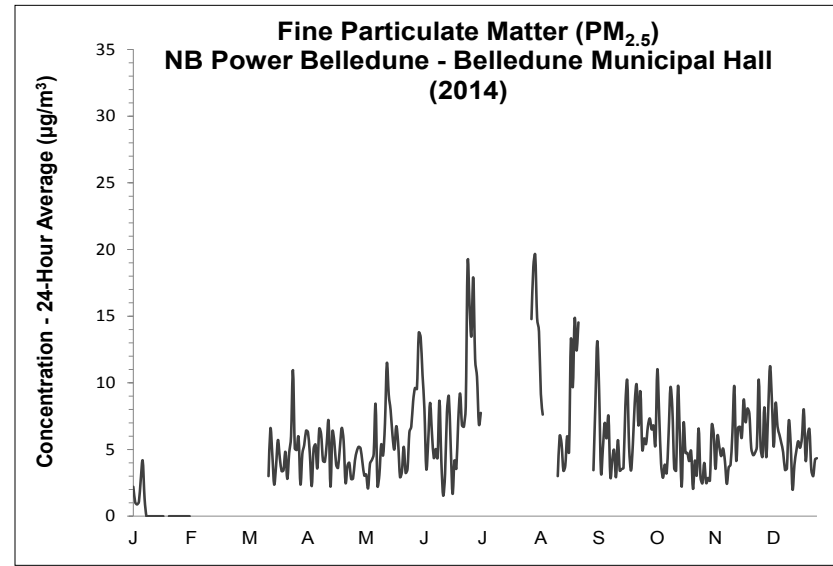
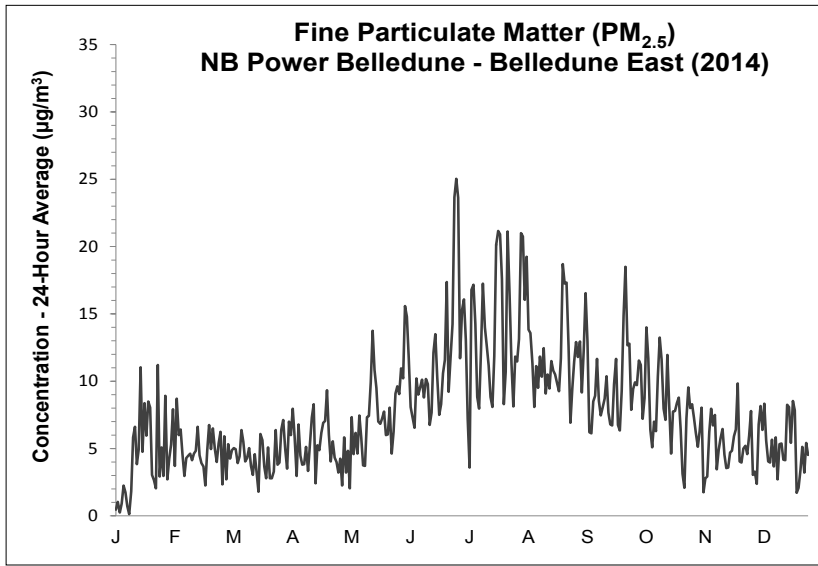
**PART III: INDUSTRY-OPERATED NETWORKS - Glencore, Belledune - Total Suspended Particulate**



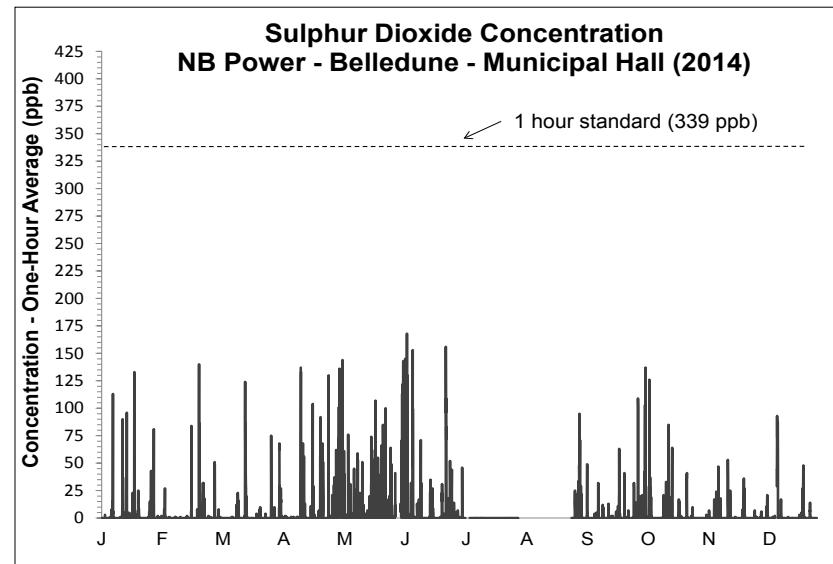
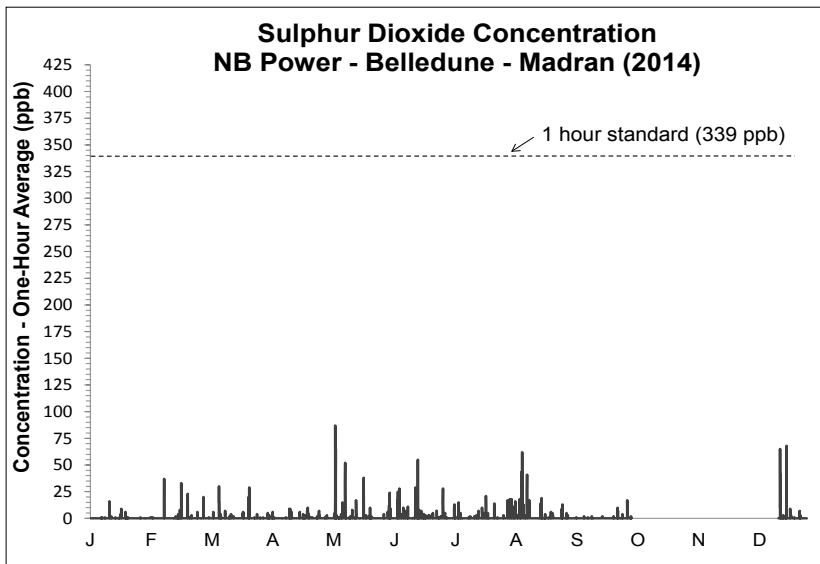
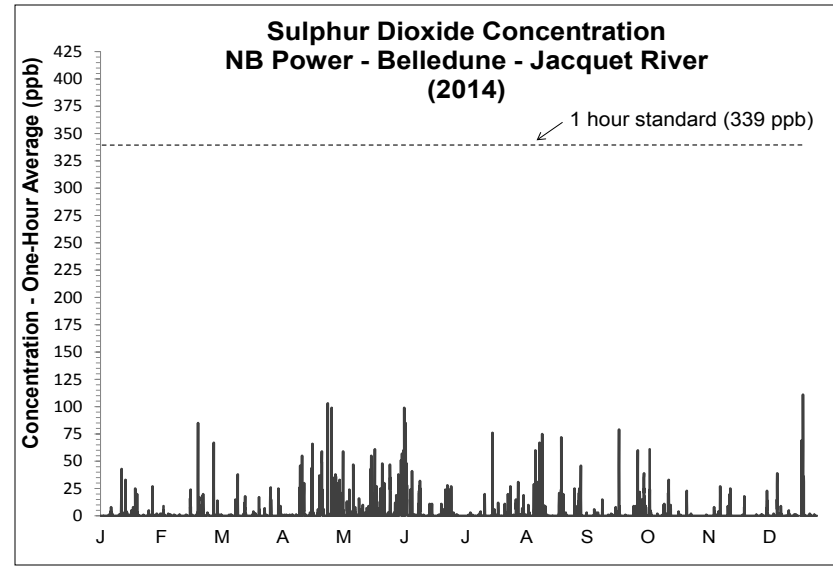
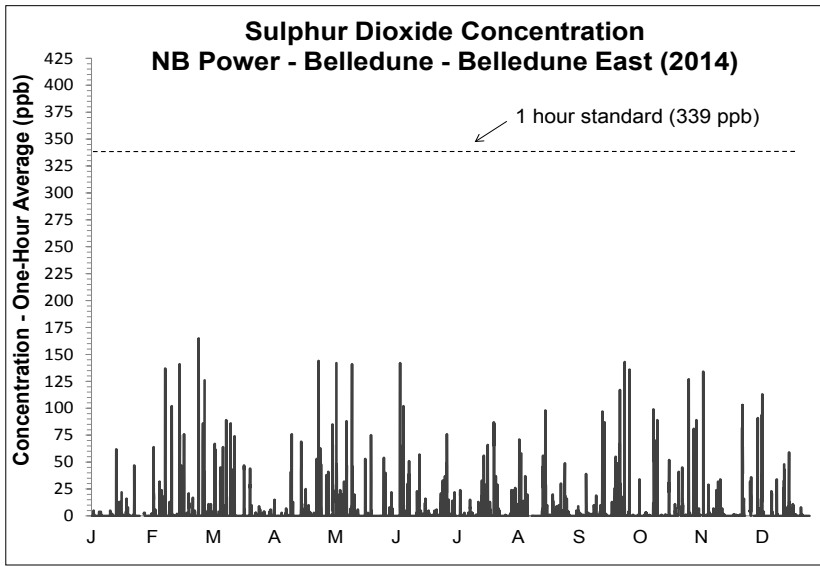
**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Nitrogen Dioxide**



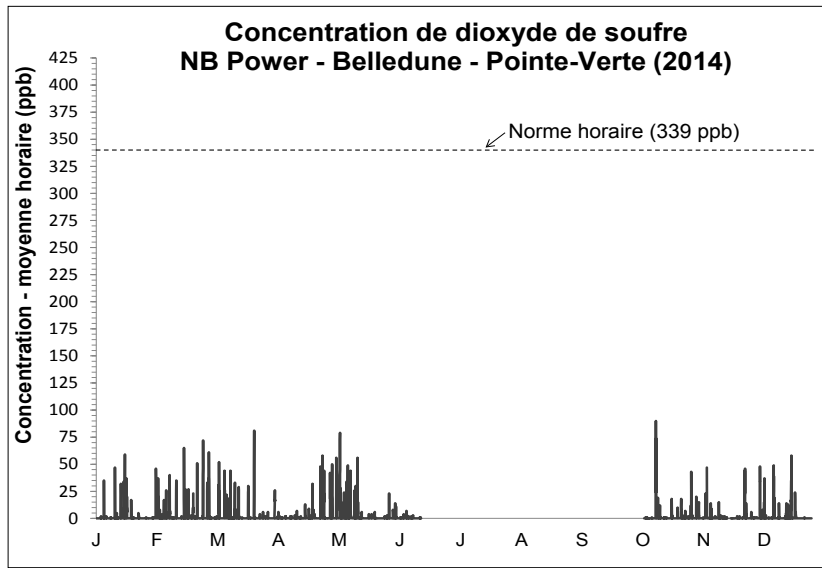
**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Fine Particulate Matter**



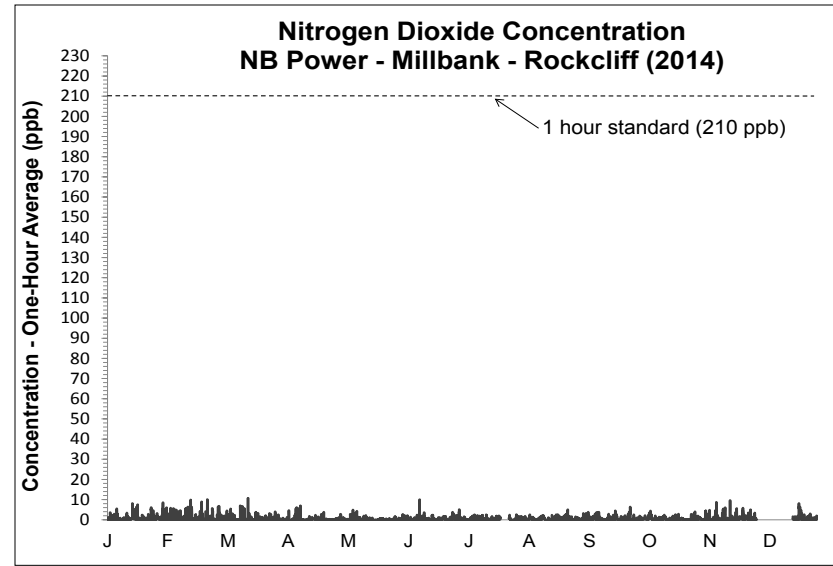
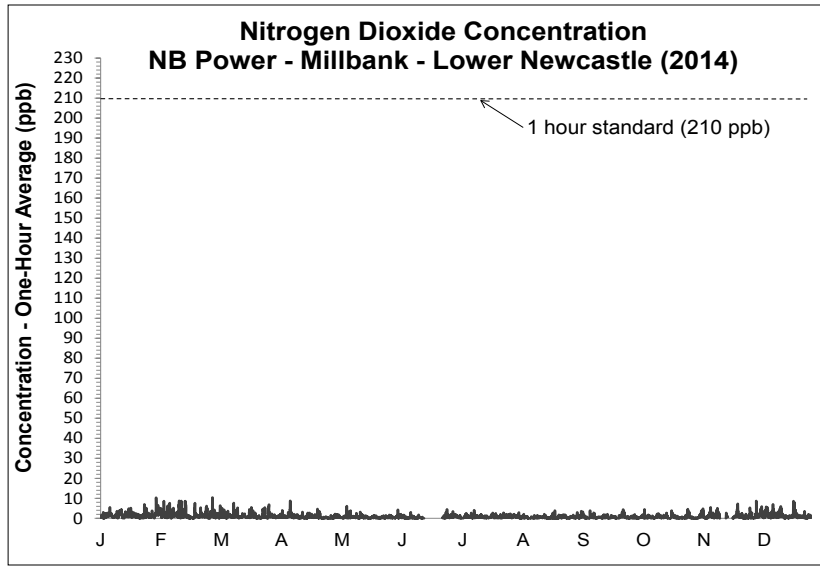
**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Sulphur Dioxide**



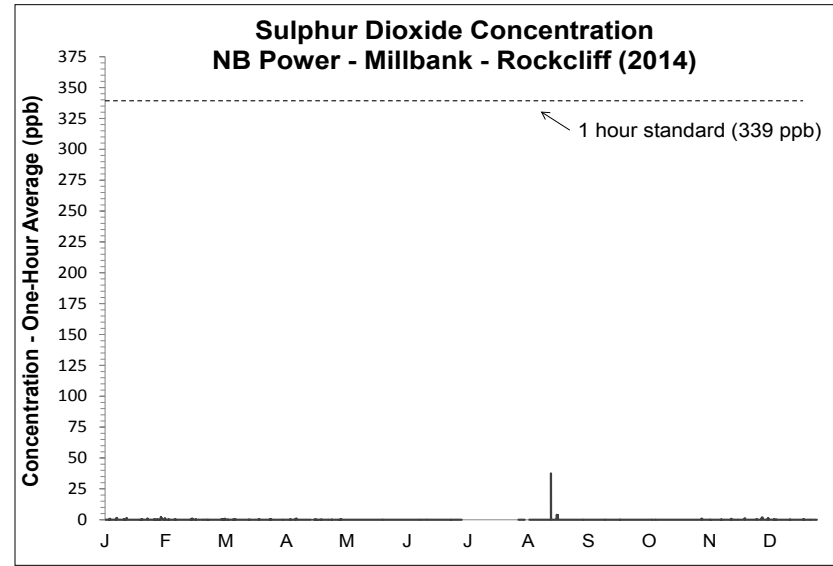
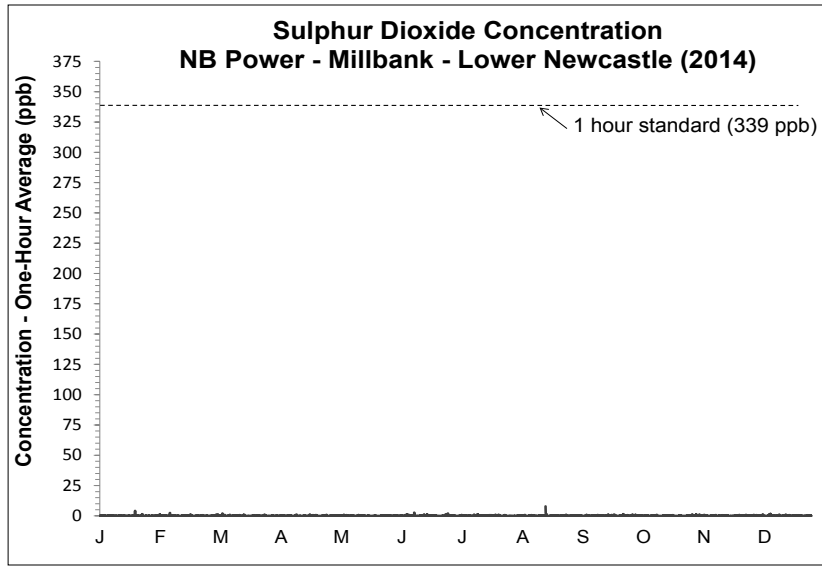
### PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Sulphur Dioxide



**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Nitrogen Dioxide**

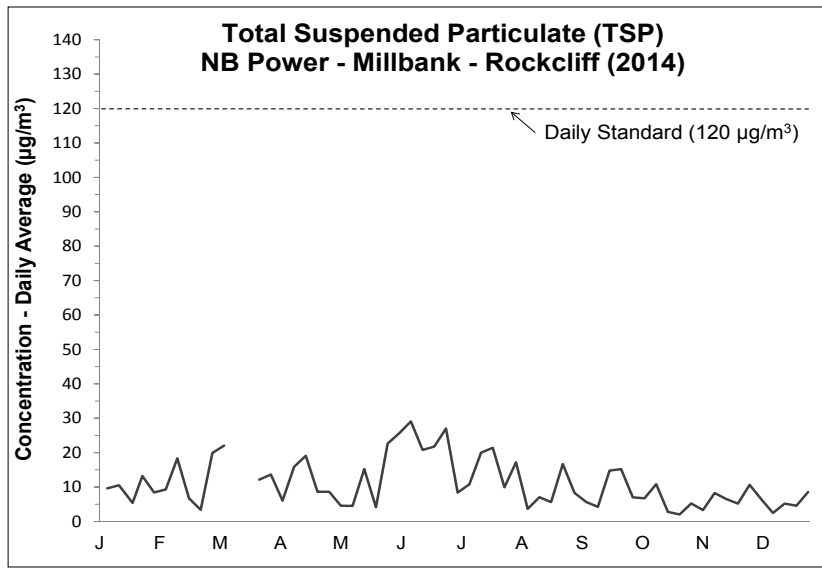


**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Sulphur Dioxide**

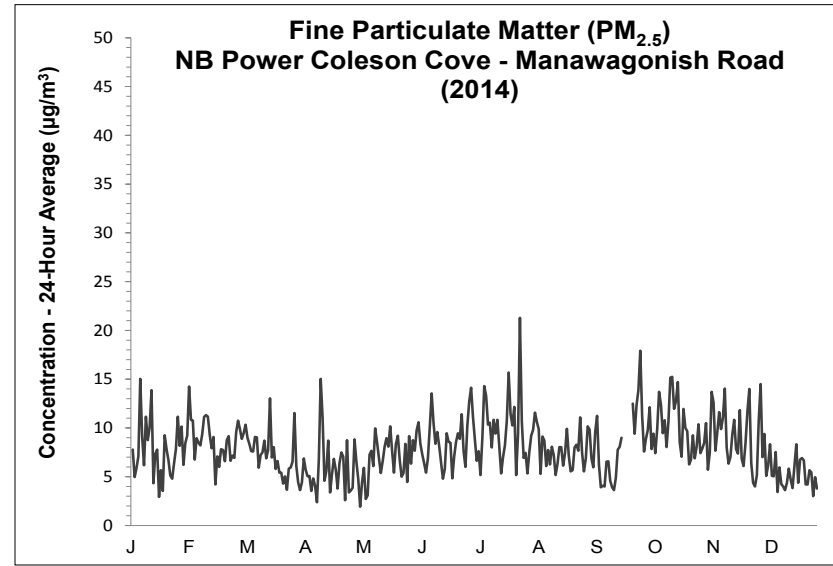
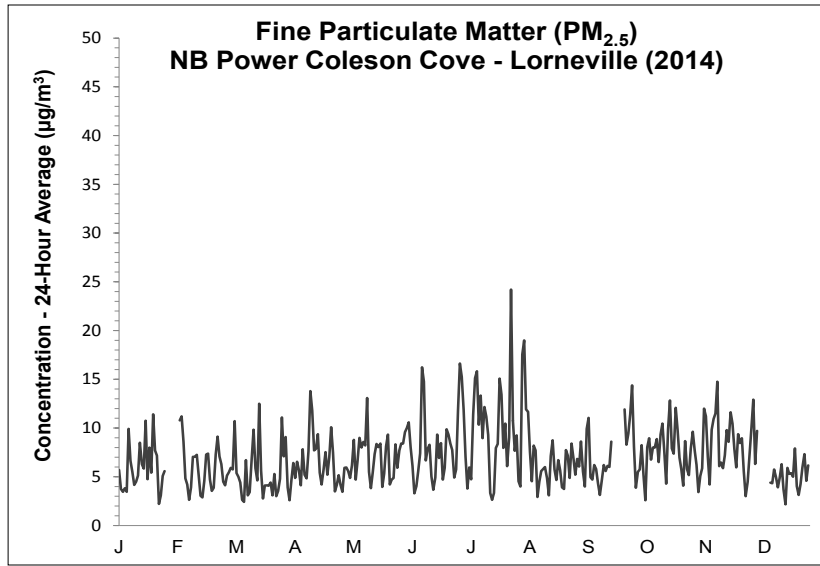




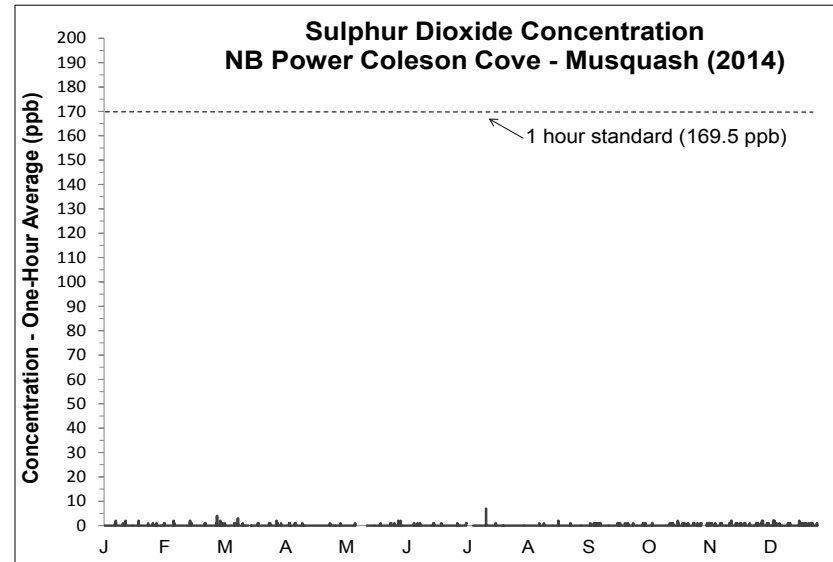
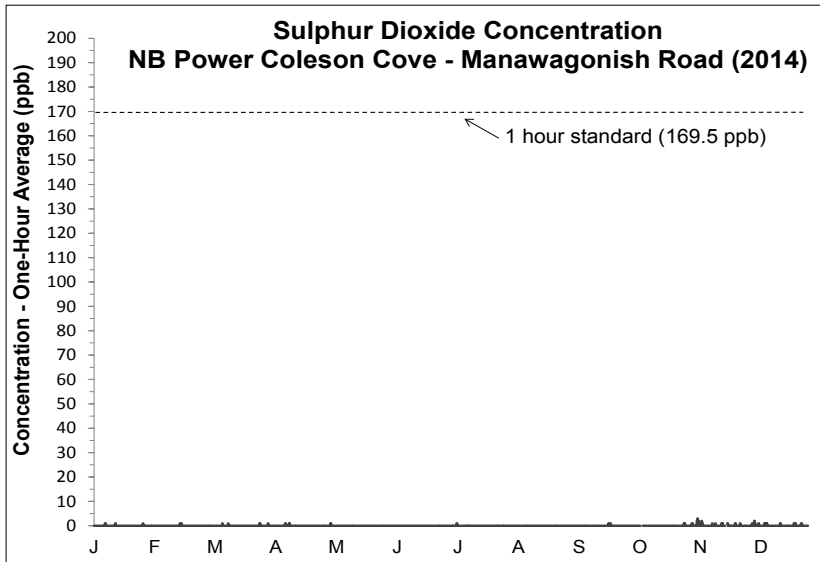
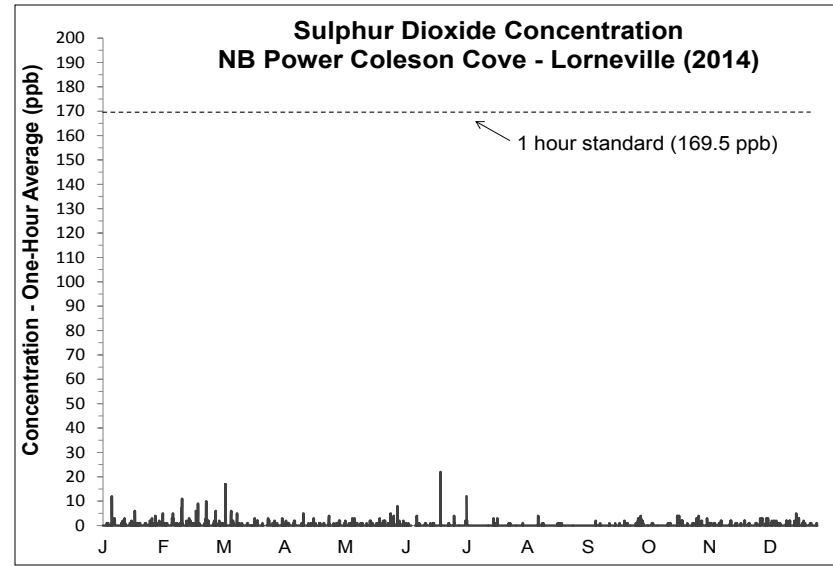
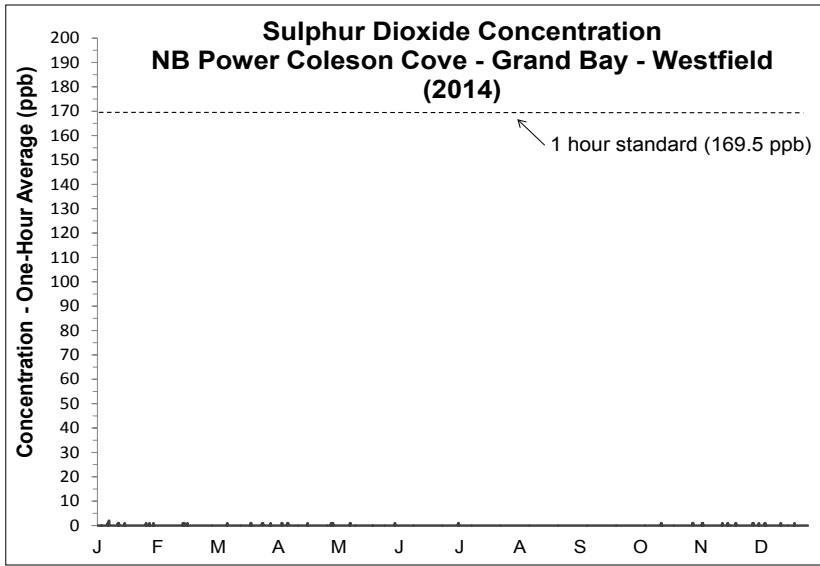
### PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Total Suspended Particulate



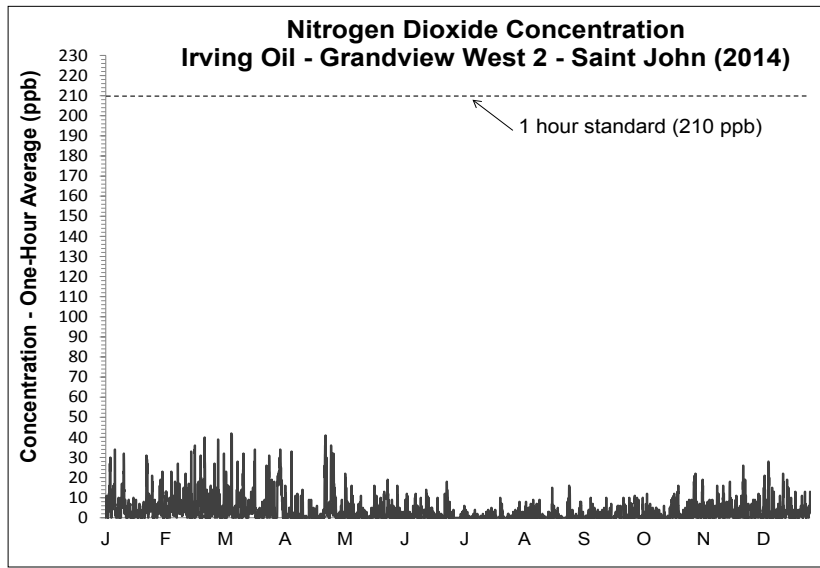
**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Coleson Cove - Fine Particulate Matter**



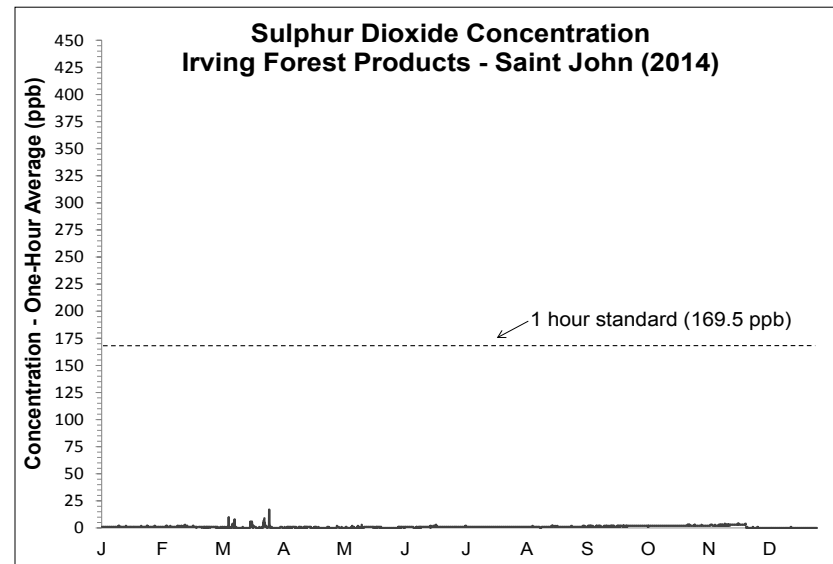
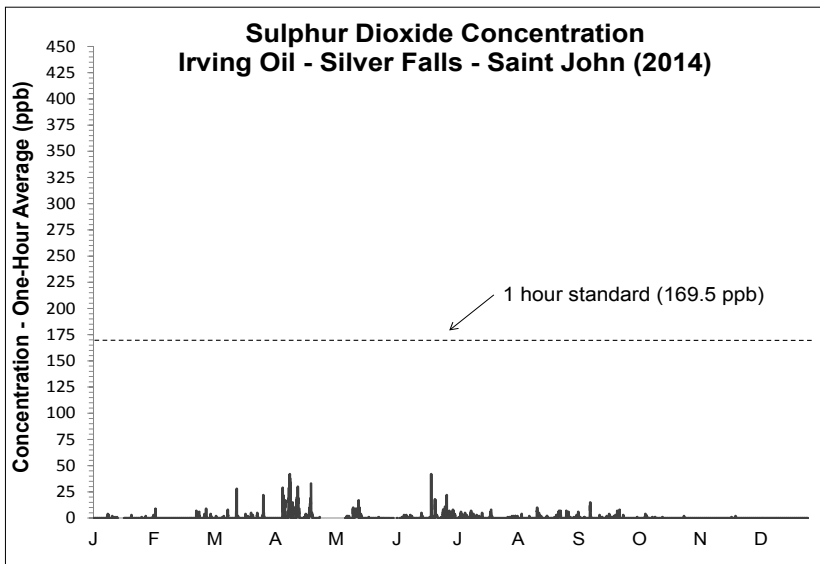
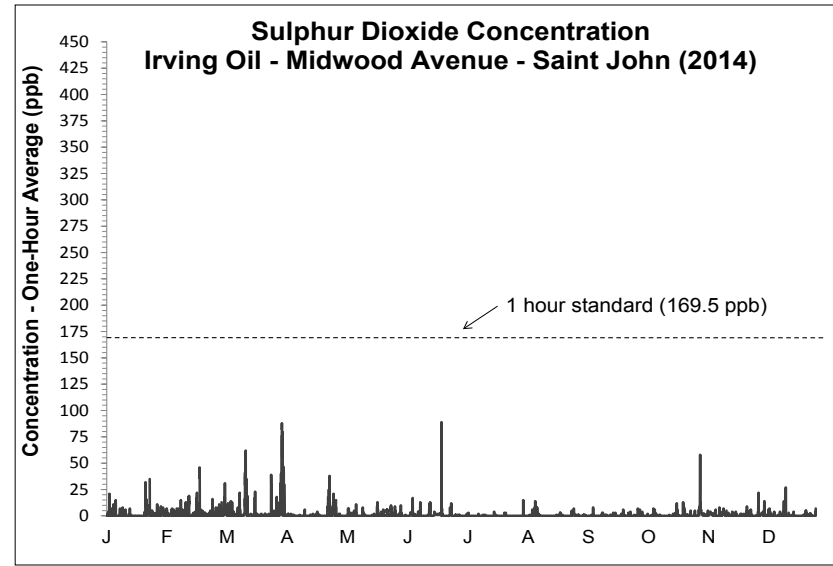
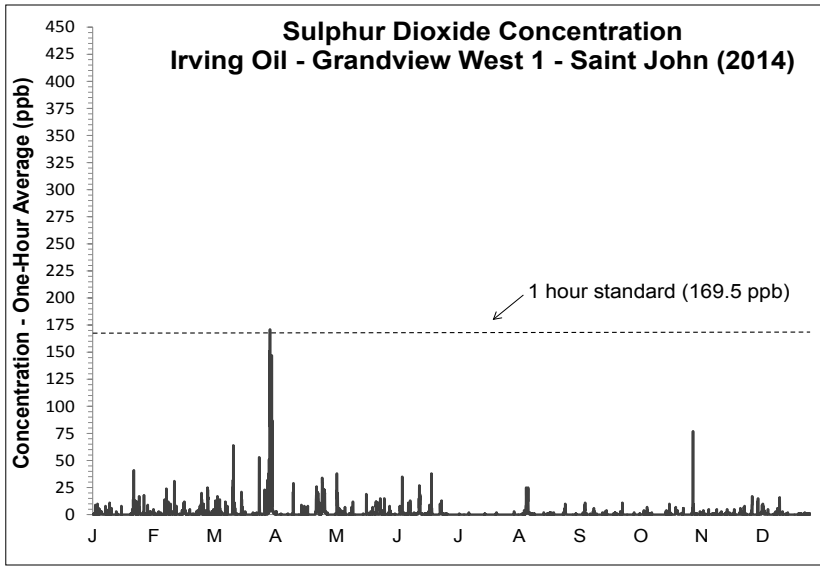
**PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Coleson Cove - Sulphur Dioxide**



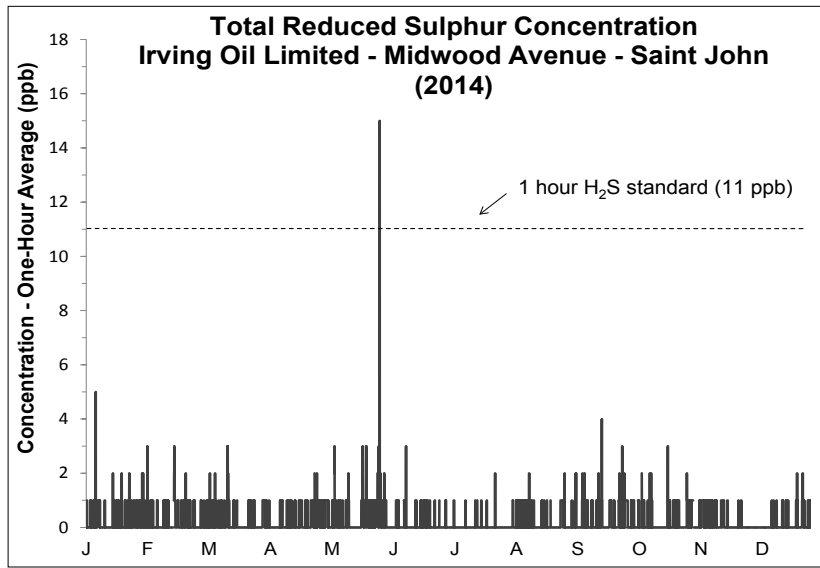
**PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Nitrogen Dioxide**



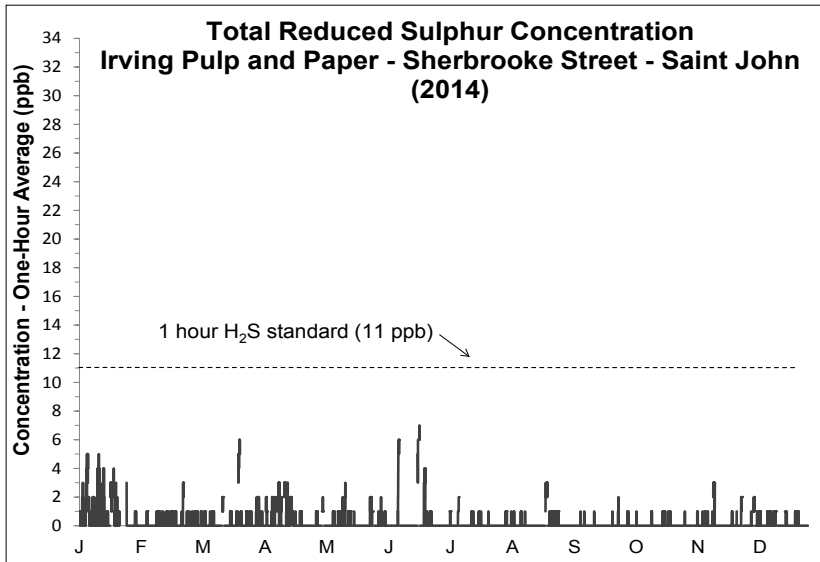
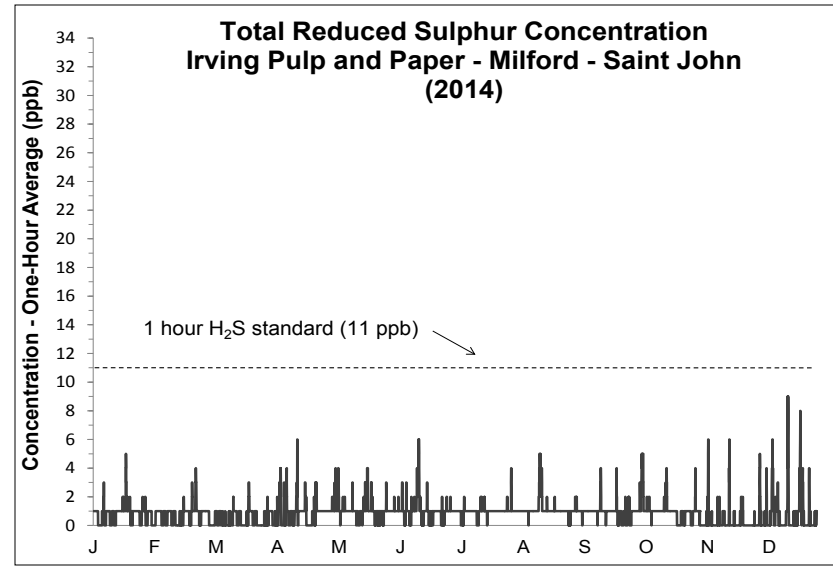
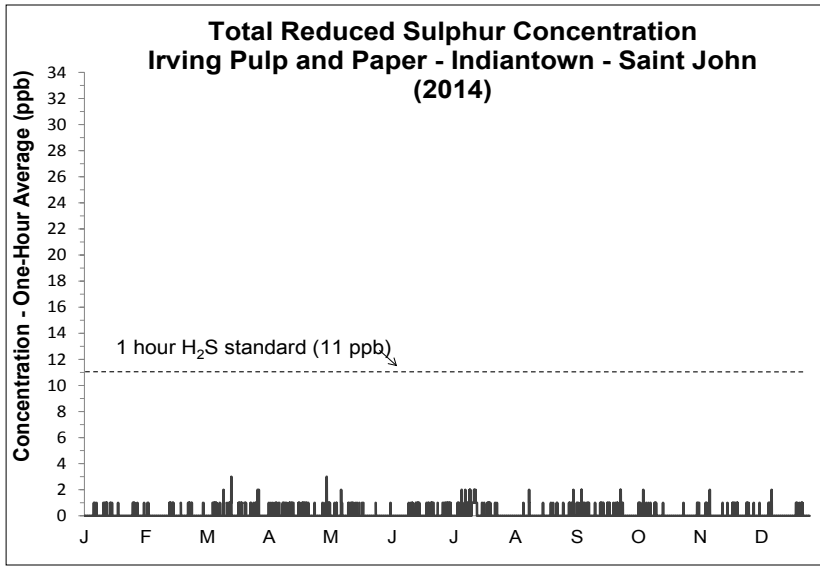
**PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Sulphur Dioxide**



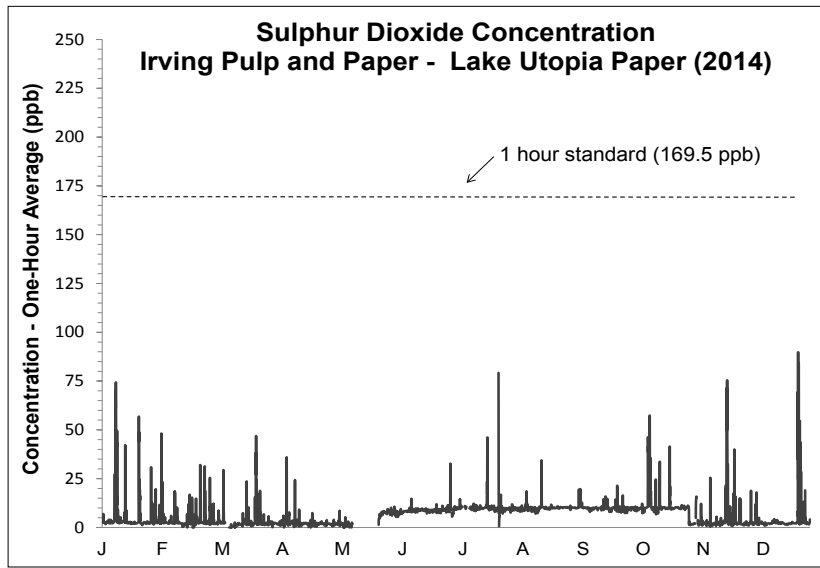
**PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Total Reduced Sulphur**



**PART III: INDUSTRY-OPERATED NETWORKS - Irving Pulp and Paper, Saint John - Total Reduced Sulphur**

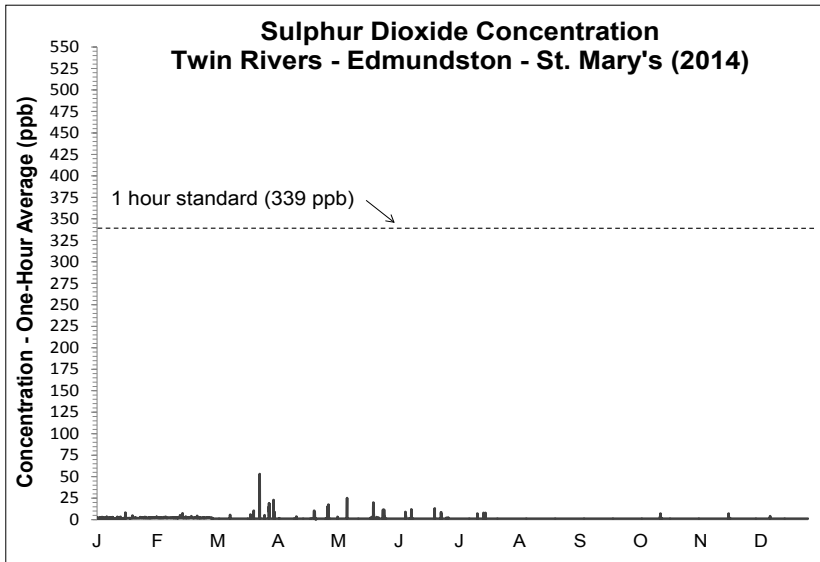
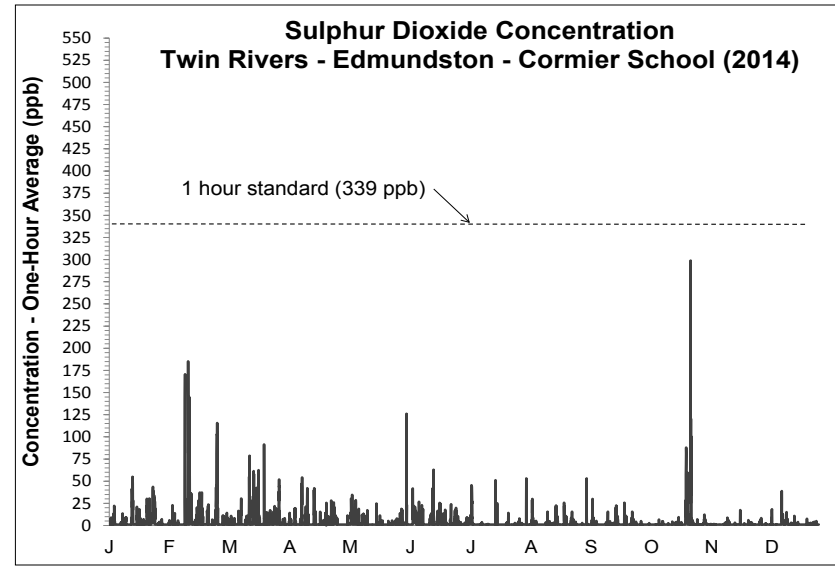
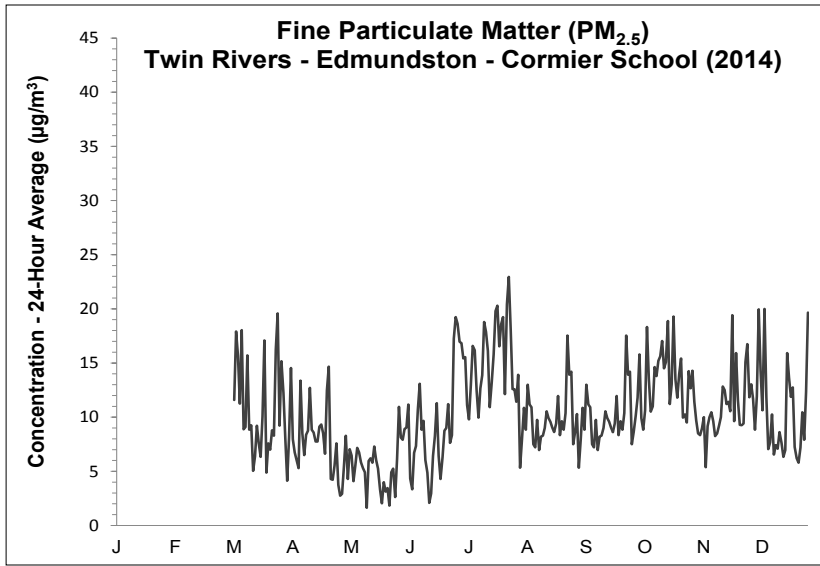


### PART III: INDUSTRY-OPERATED NETWORKS - Irving Pulp and Paper, Lake Utopia - Sulphur Dioxide

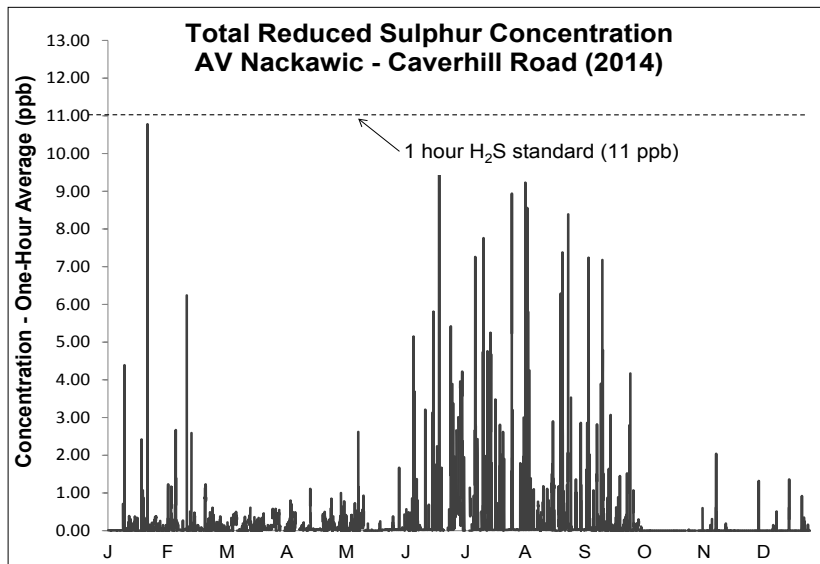
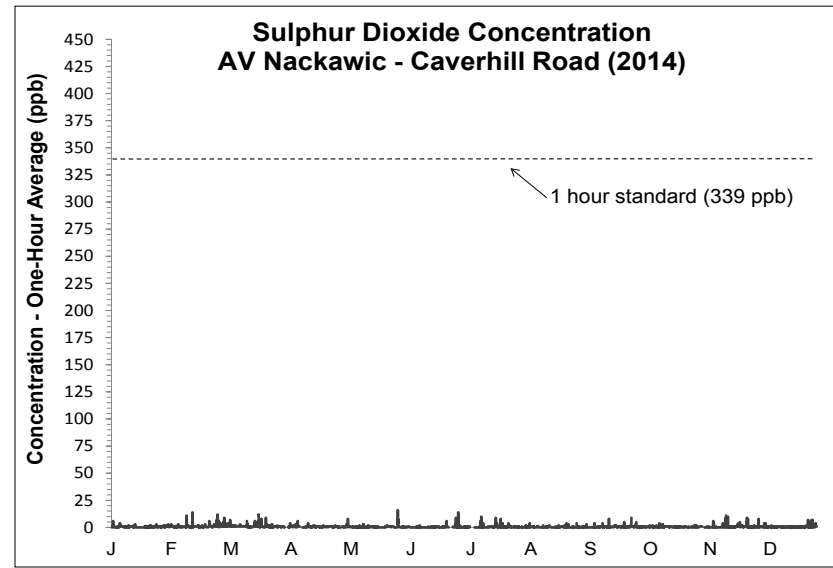
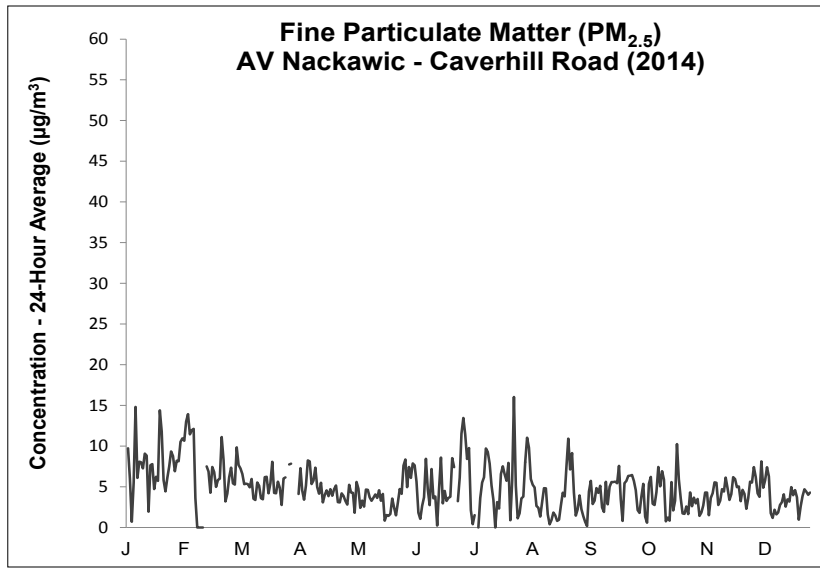




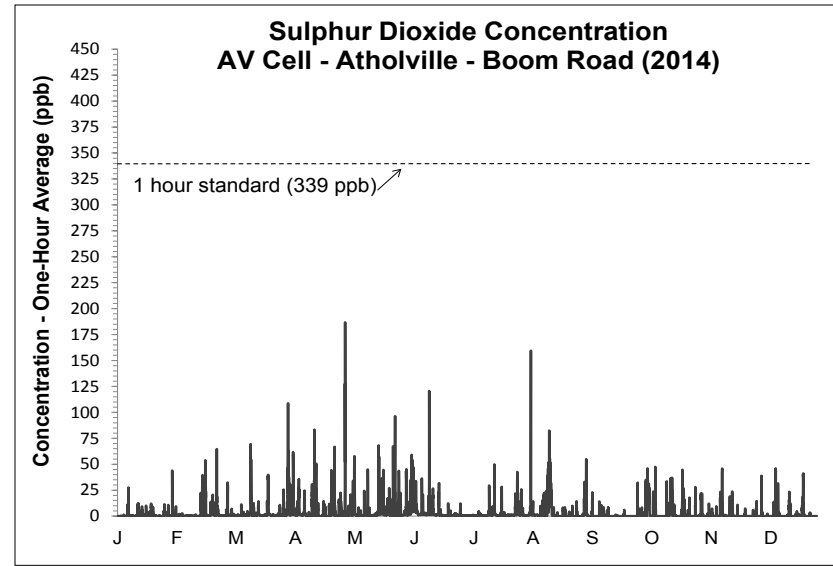
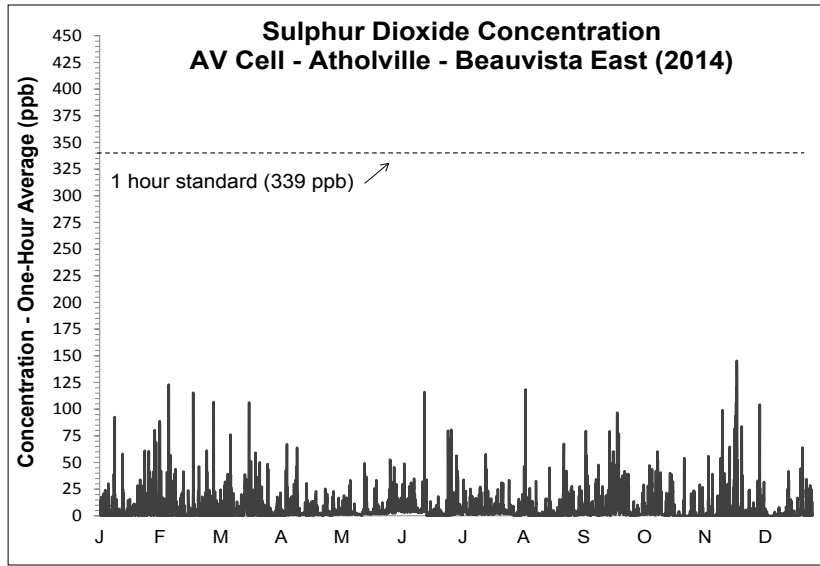
**PART III: INDUSTRY-OPERATED NETWORKS - Twin Rivers Paper Company, Edmundston - All Parameters**



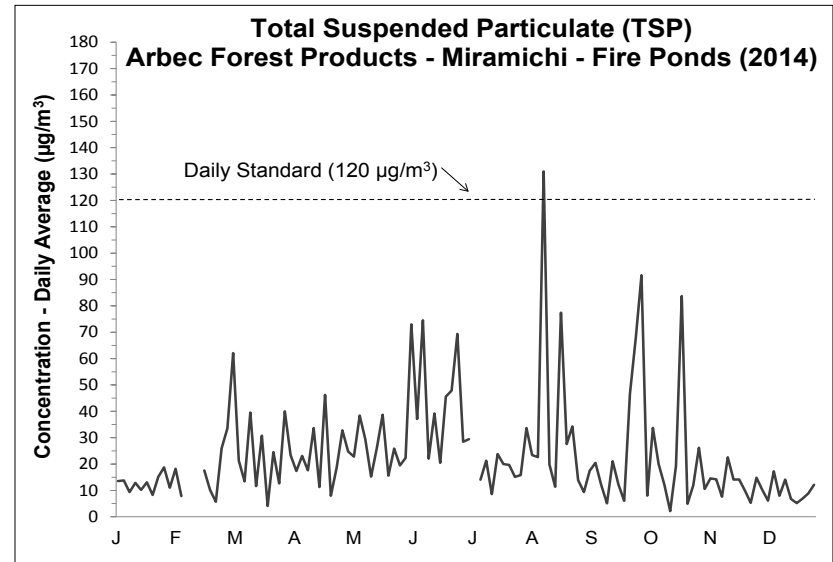
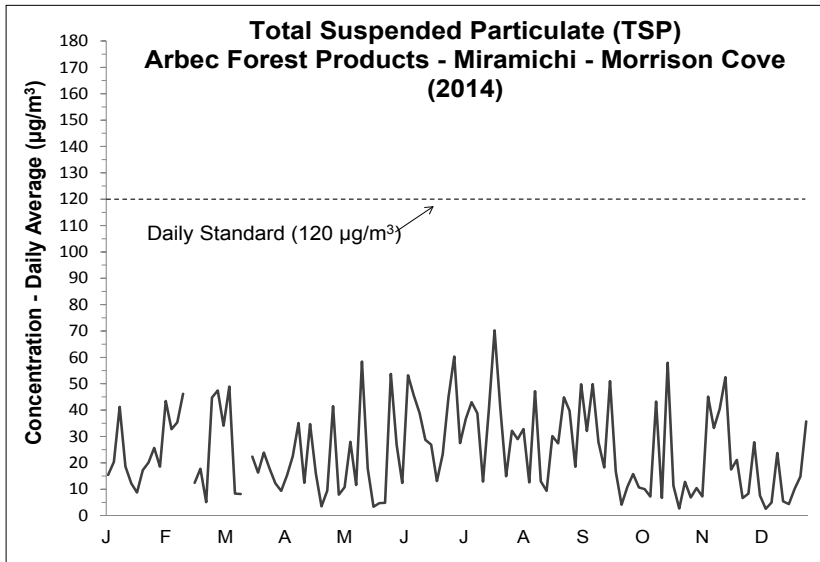
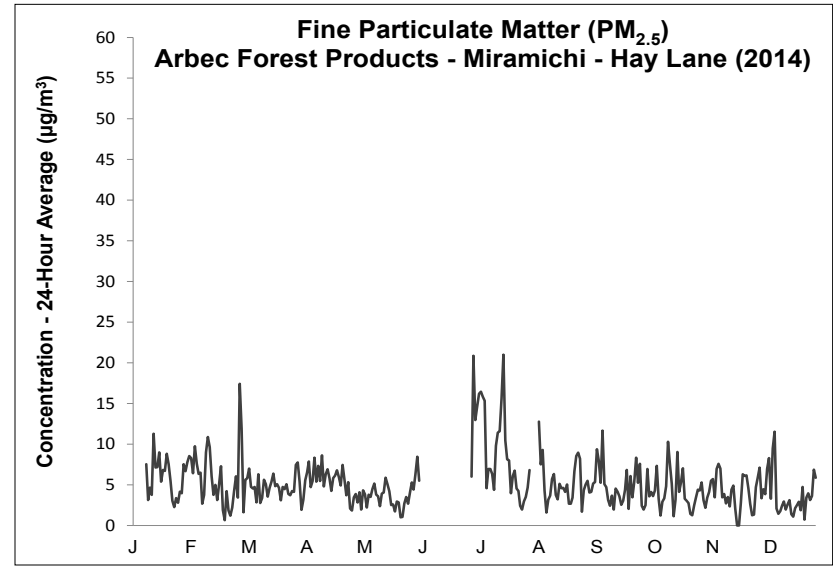
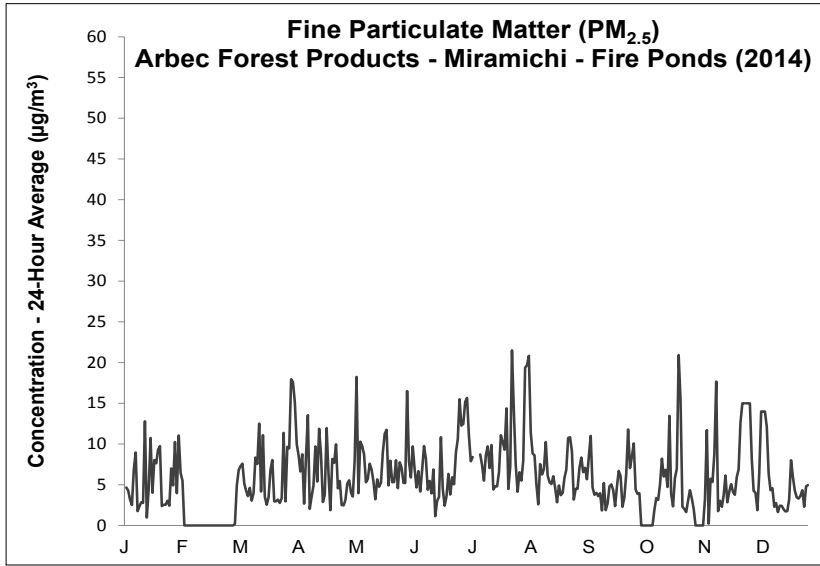
**PART III: INDUSTRY-OPERATED NETWORKS - AV Nackawic, Nackawic - All Parameters**



### PART III: INDUSTRY-OPERATED NETWORKS - AV Cell, Atholville - Sulphur Dioxide



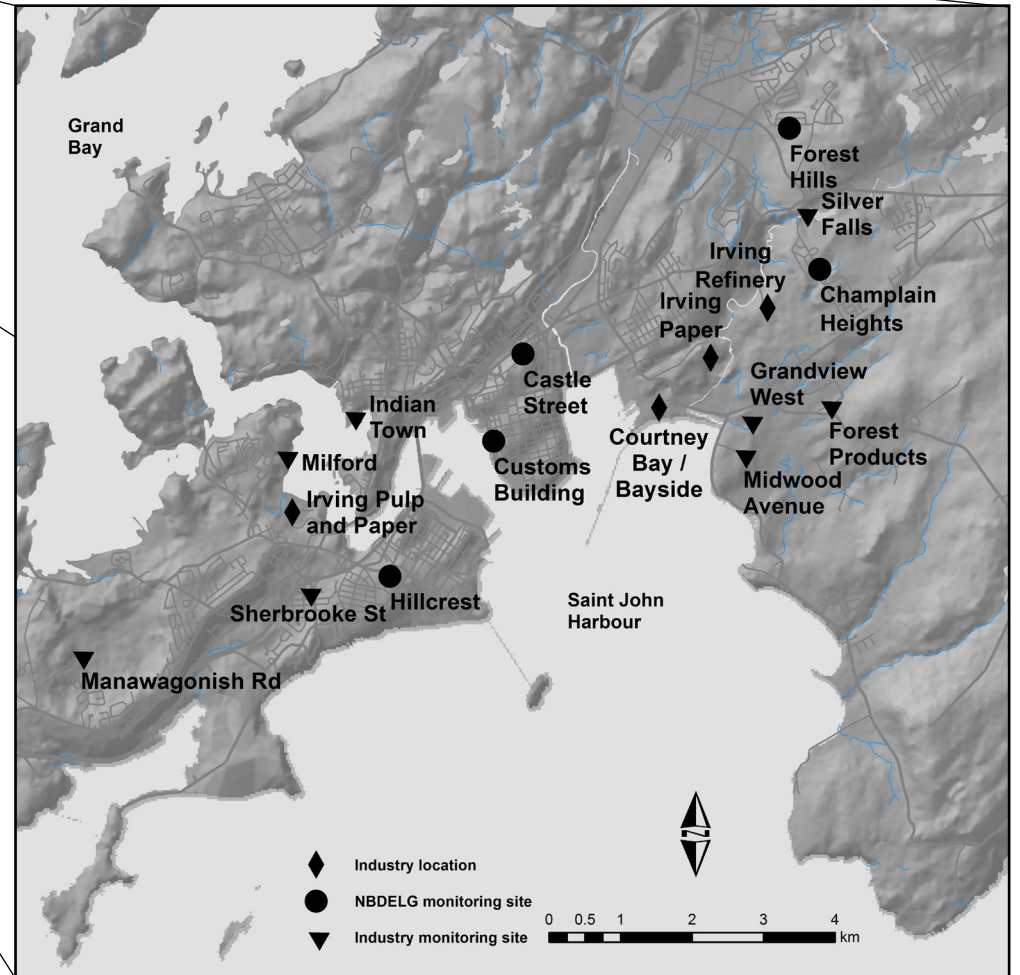
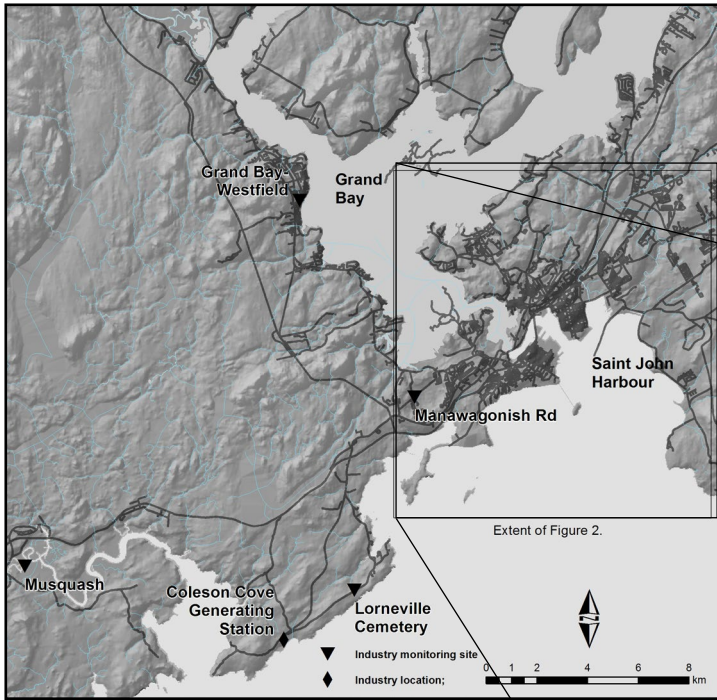
**PART III: INDUSTRY-OPERATED NETWORKS - Arbec Forest Products, Miramichi- All Parameters**



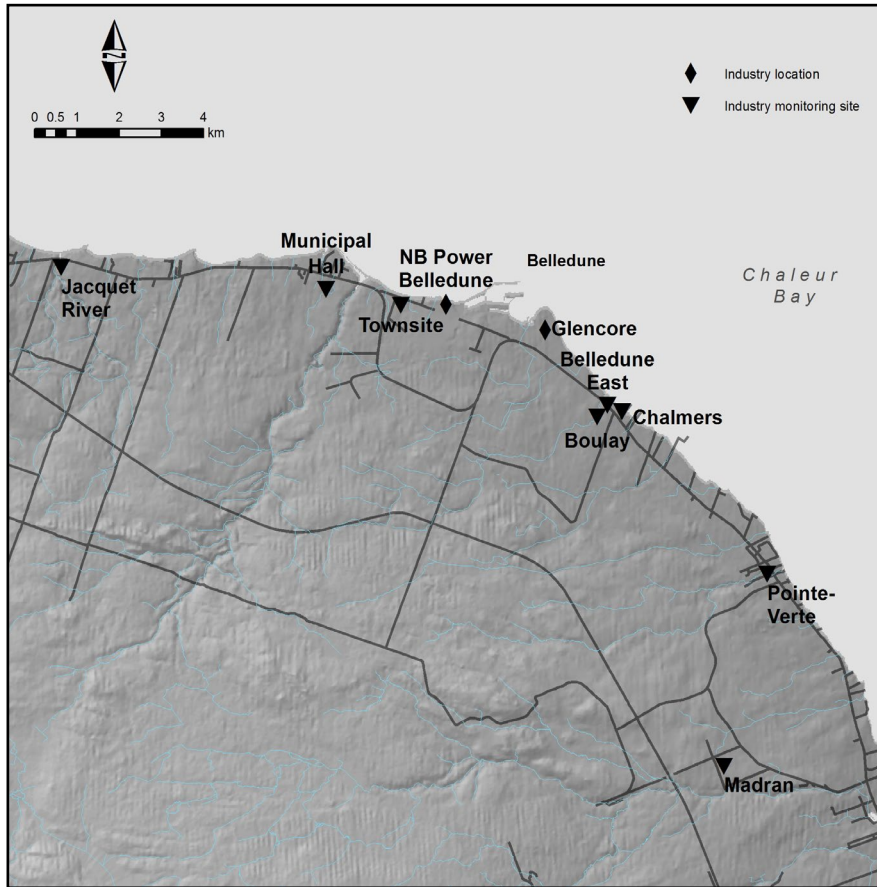
**PART IV:**  
**DETAILED STATION LOCATION MAPS**

**PART IV: DETAILED STATION LOCATION MAPS - Saint John Region**

**Grand Bay/Musquash/Saint John Area**

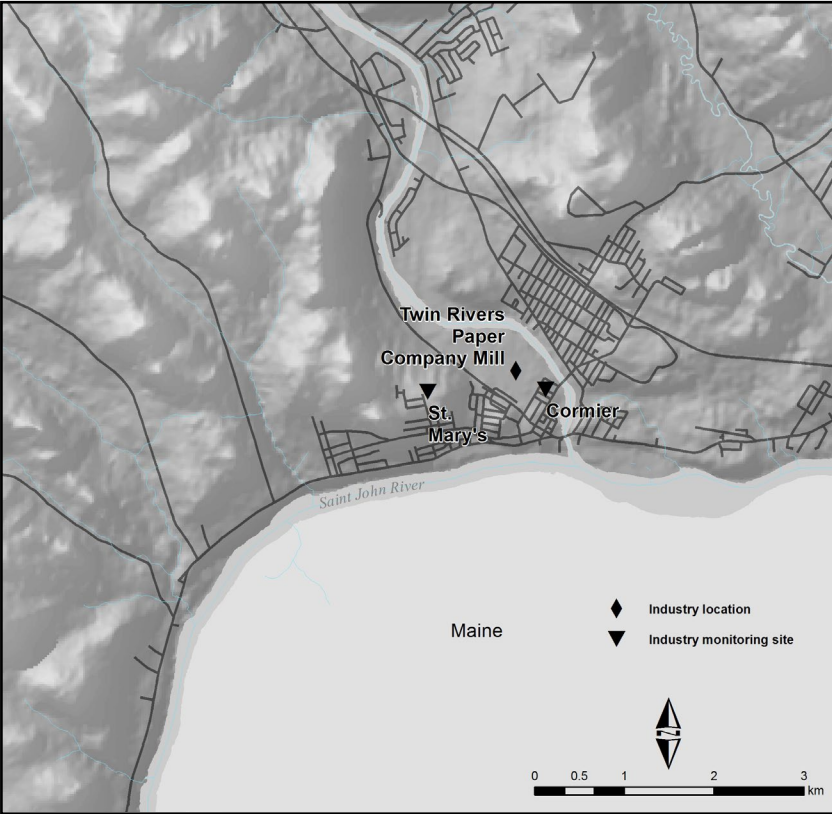


# PART IV: DETAILED STATION LOCATION MAPS - Belledune

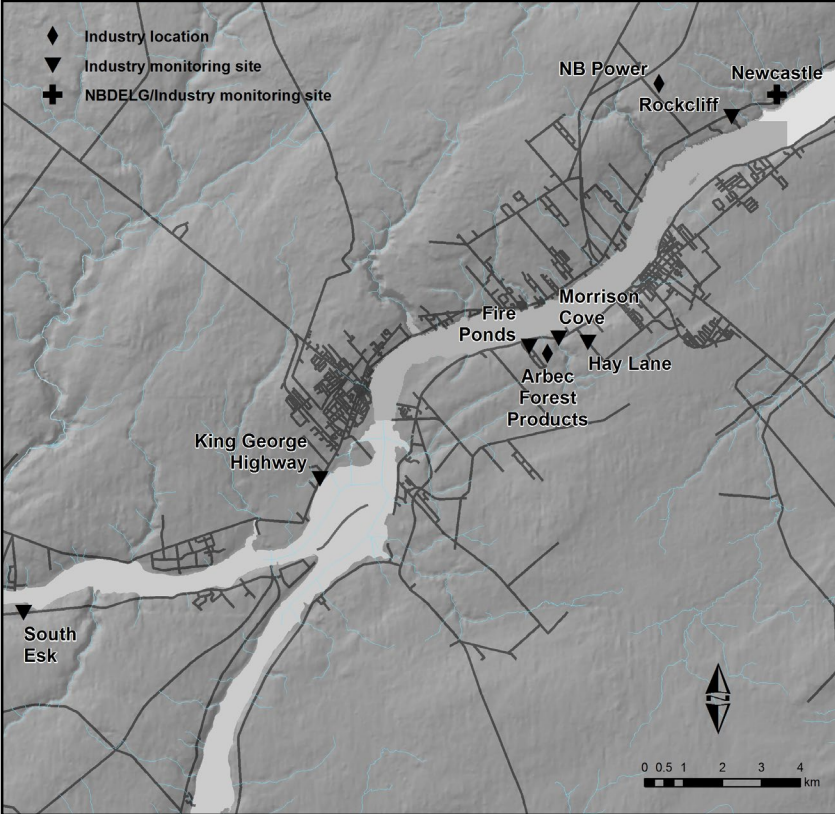


Belledune Area

**PART IV: DETAILED STATION LOCATION MAPS - Edmundston and Lower Newcastle**



Edmundston Area



Lower Newcastle