



Air Quality Monitoring Results

Supplementary Data 2012-13

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 2012-13" report, which is available electronically via the DELG website:

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 with any comments.

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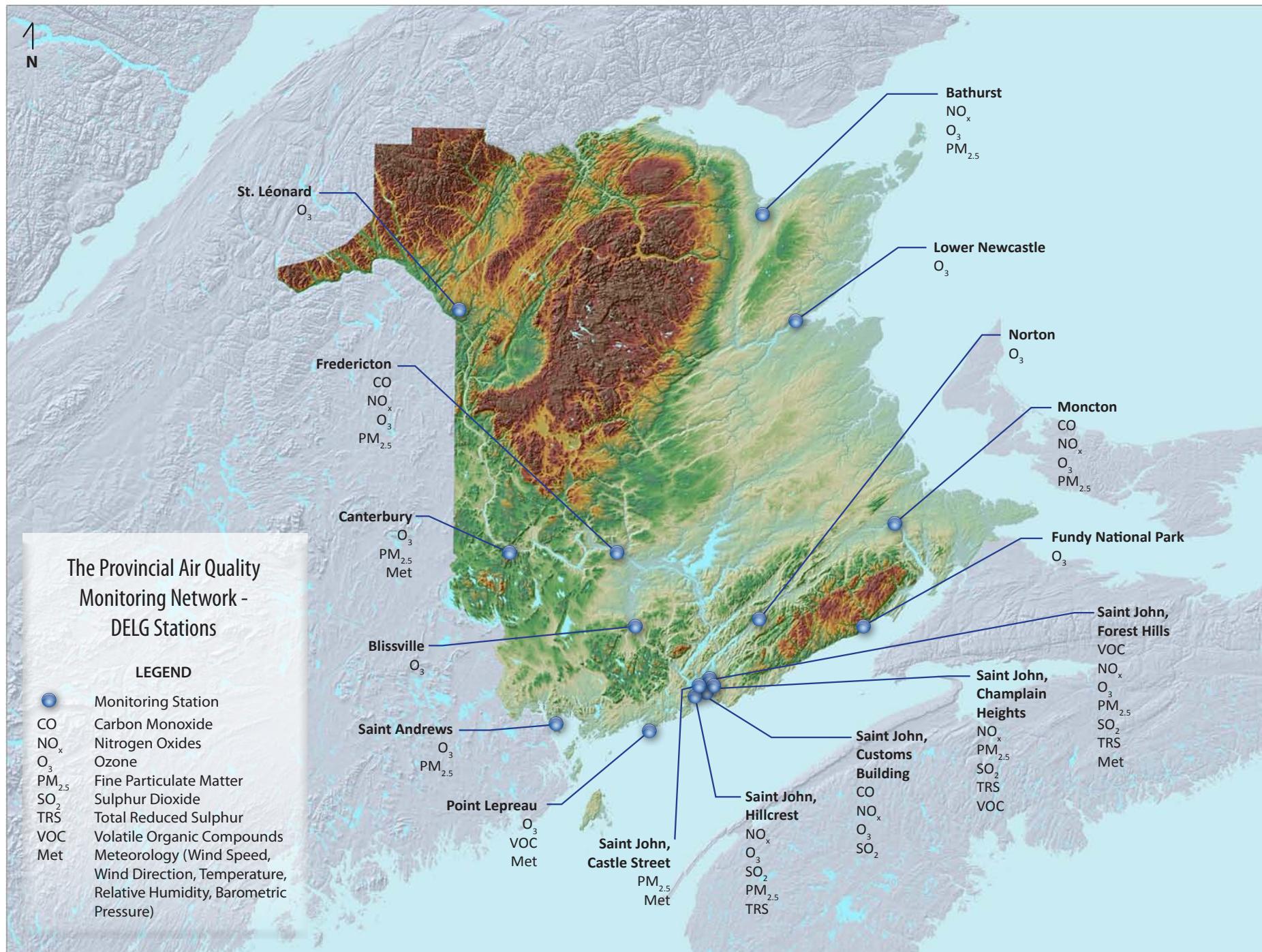
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List of Acronyms and Abbreviations

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

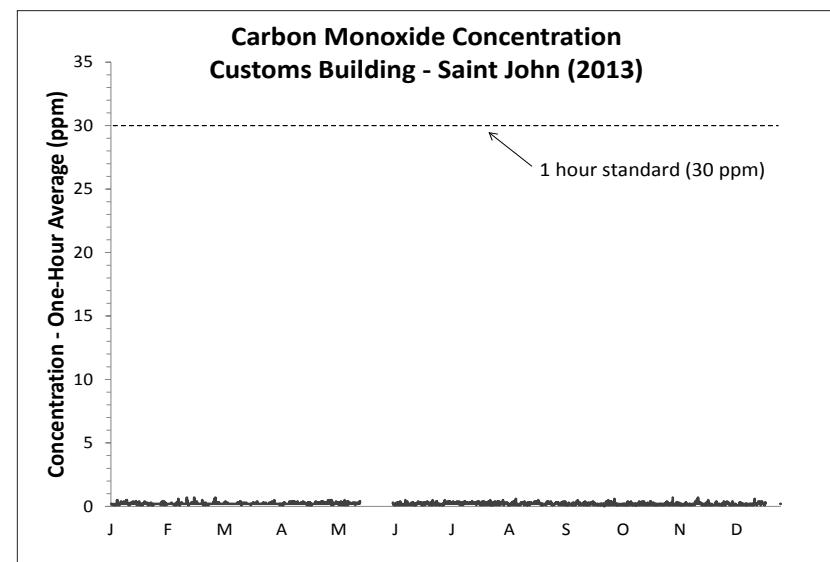
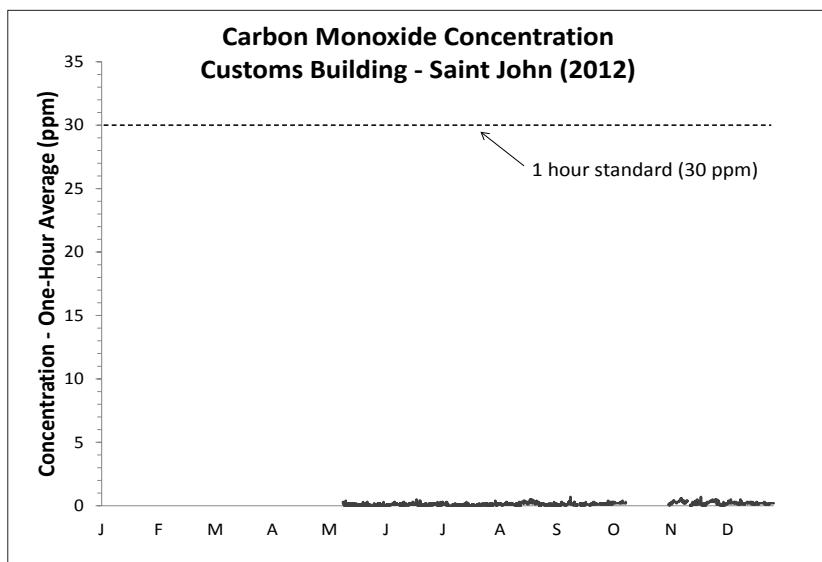
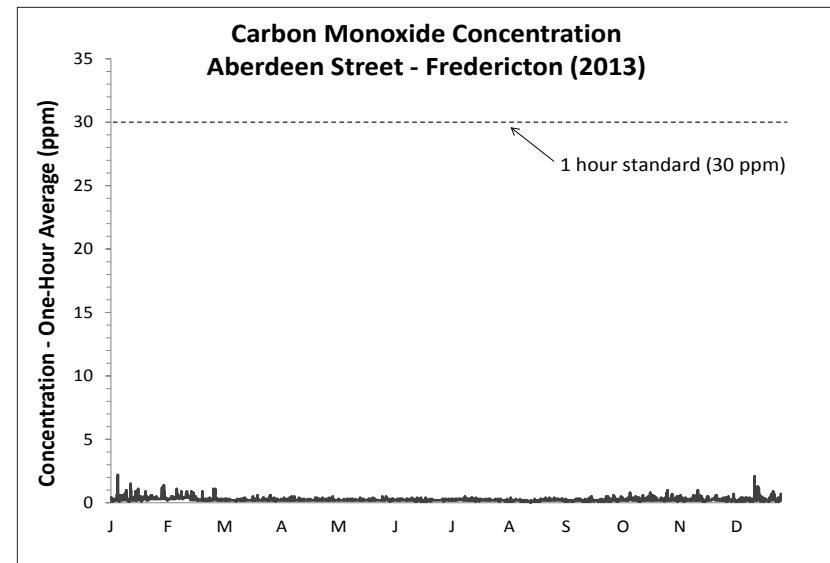
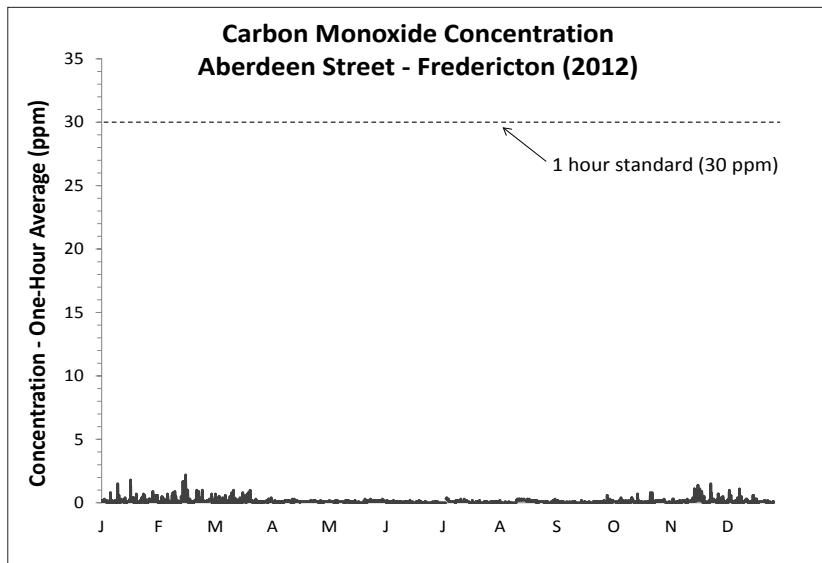
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PROVINCIAL AIR QUALITY MONITORING NETWORKS



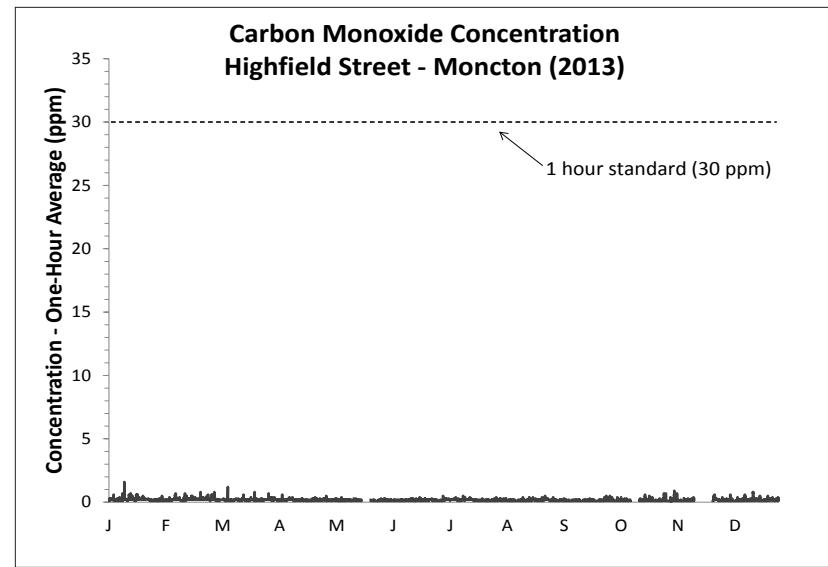
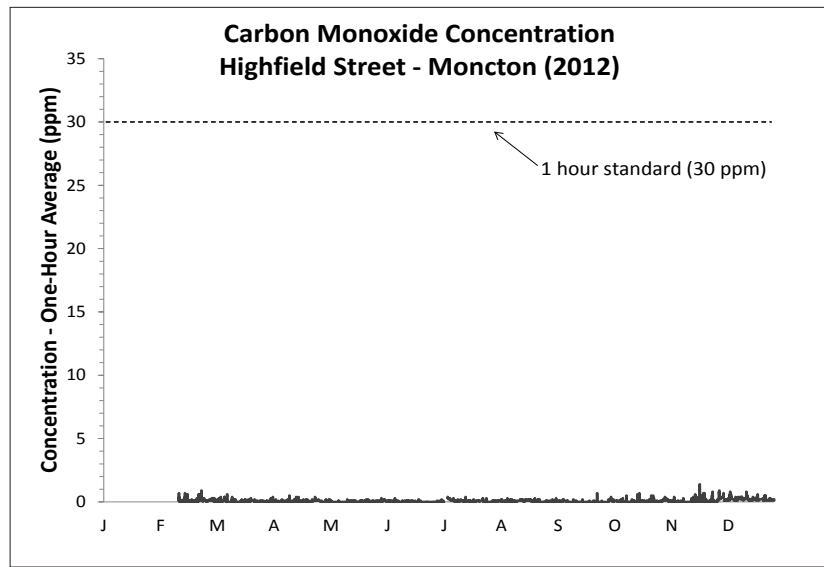
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Carbon Monoxide



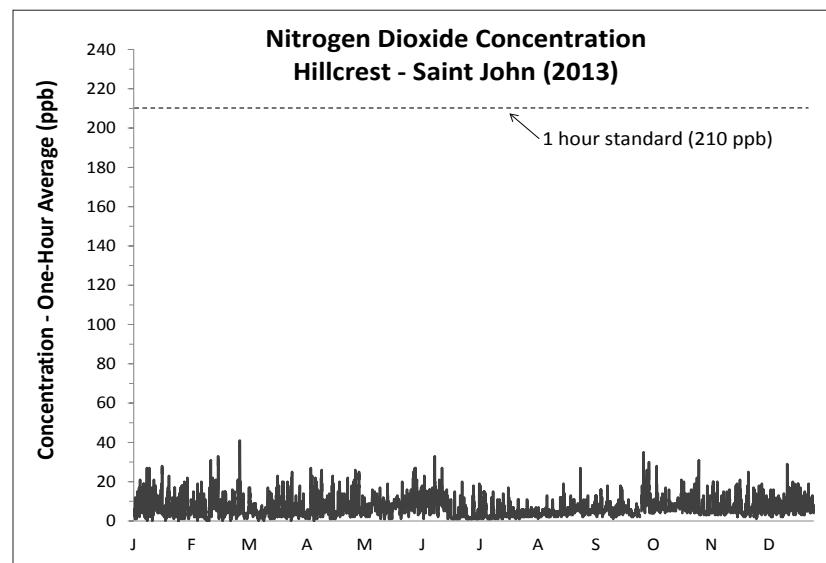
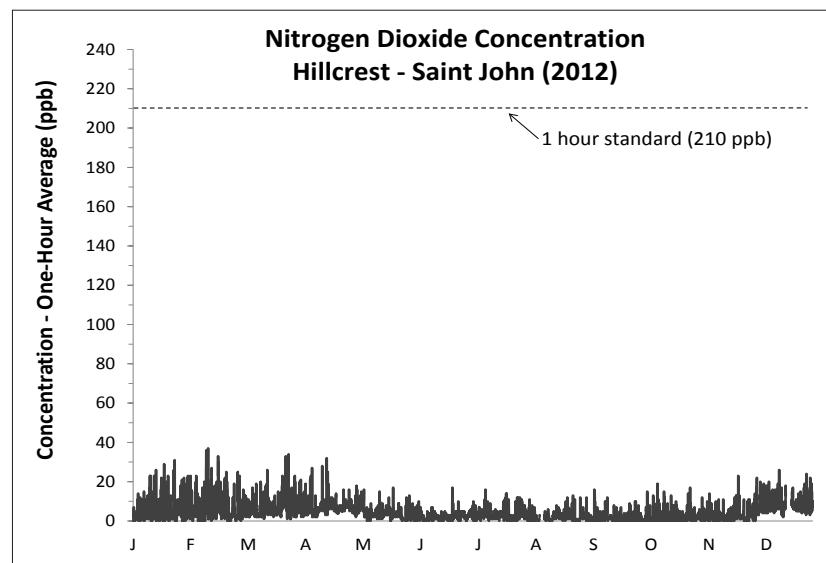
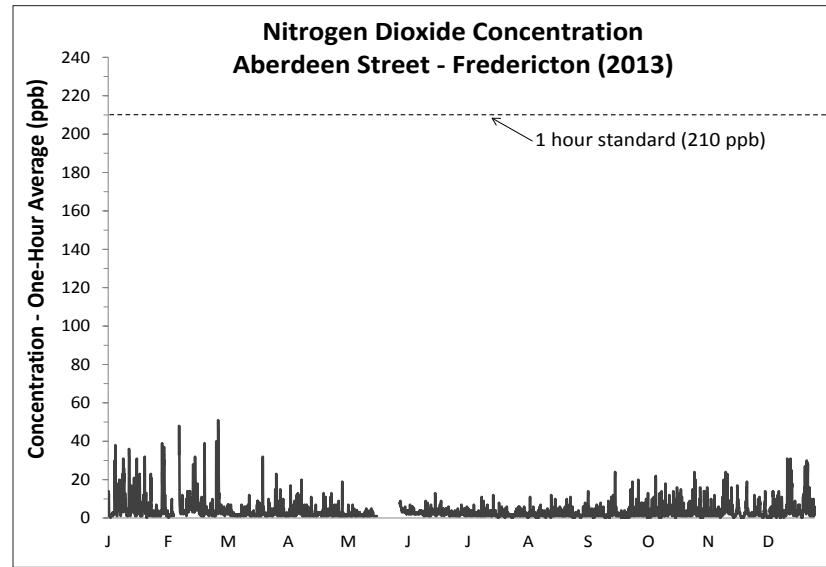
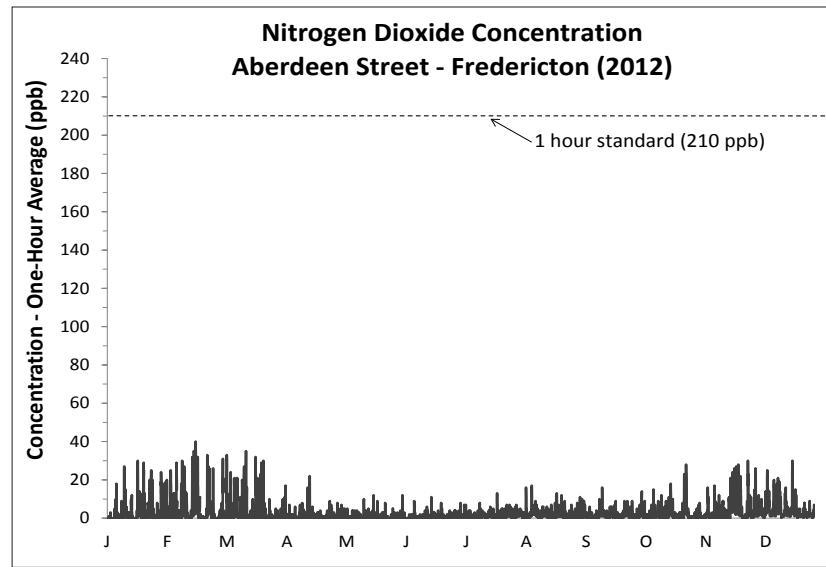
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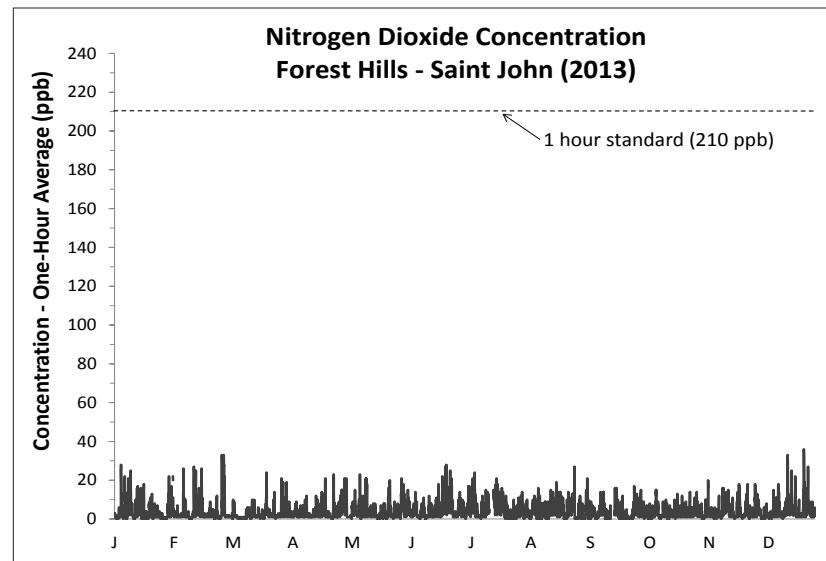
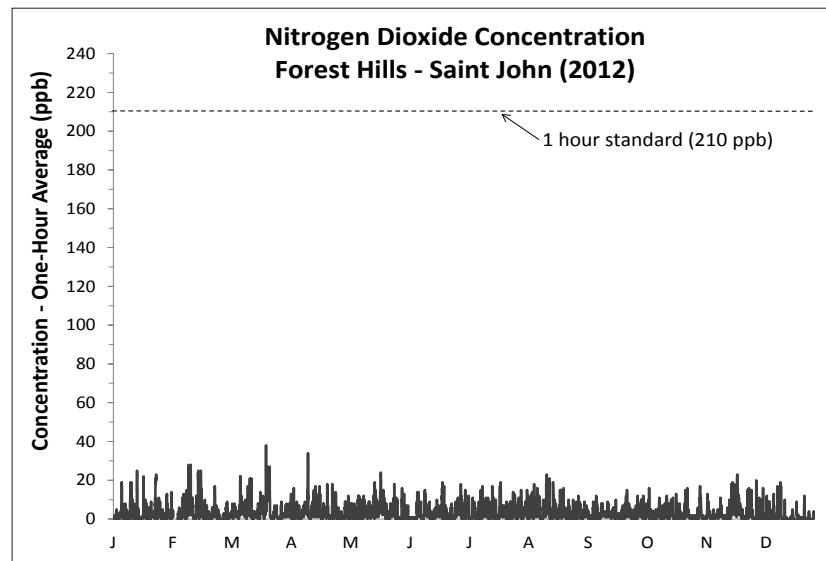
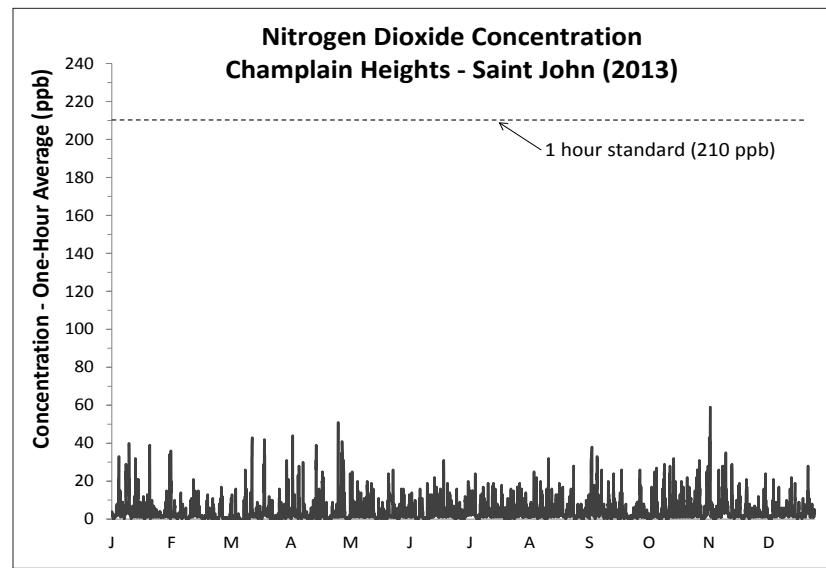
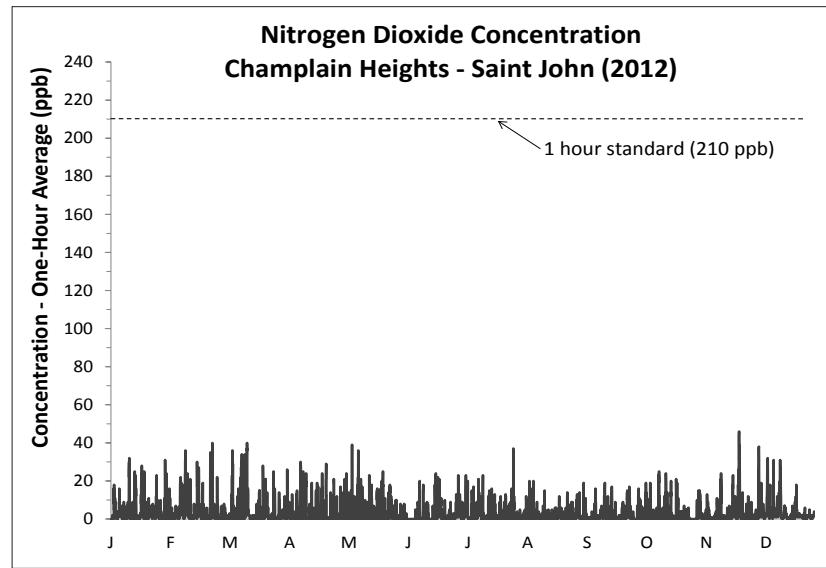
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Nitrogen Dioxide



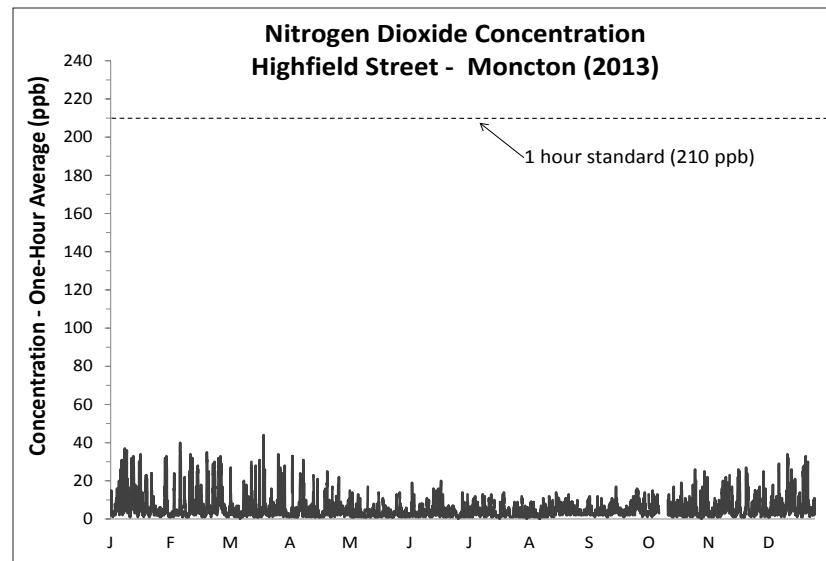
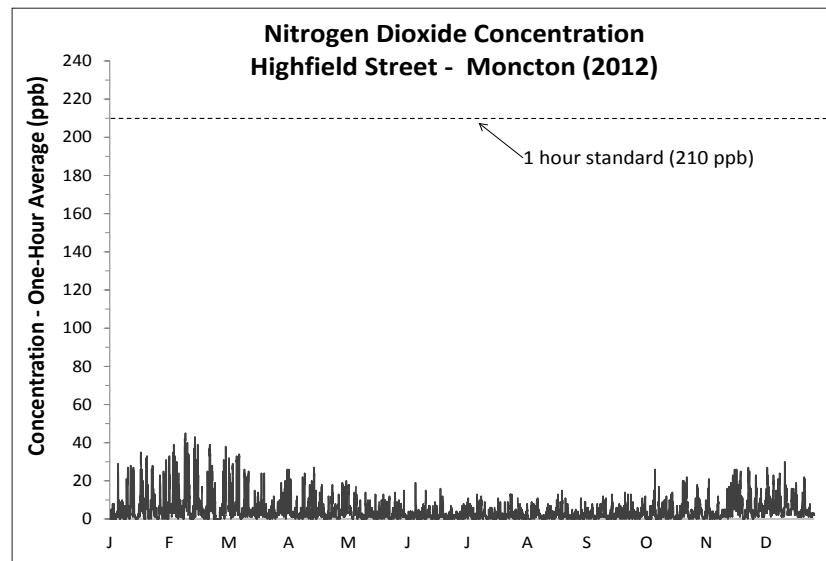
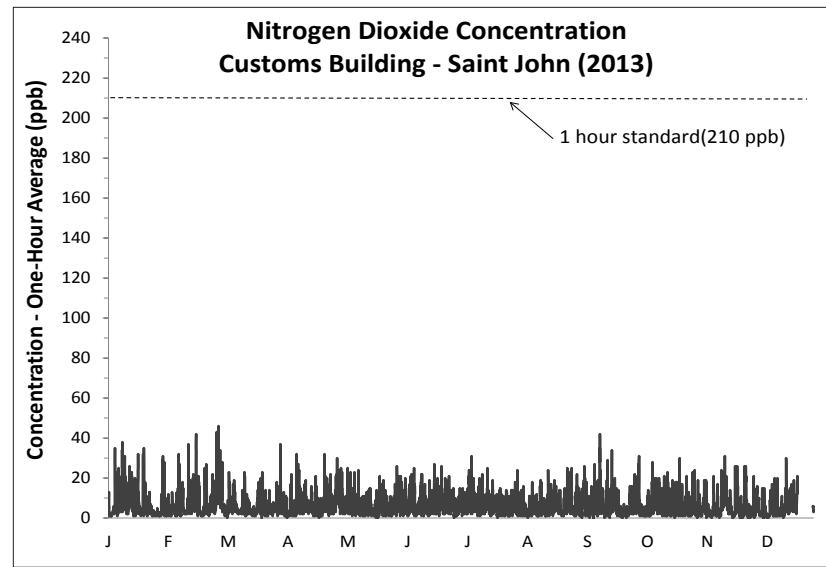
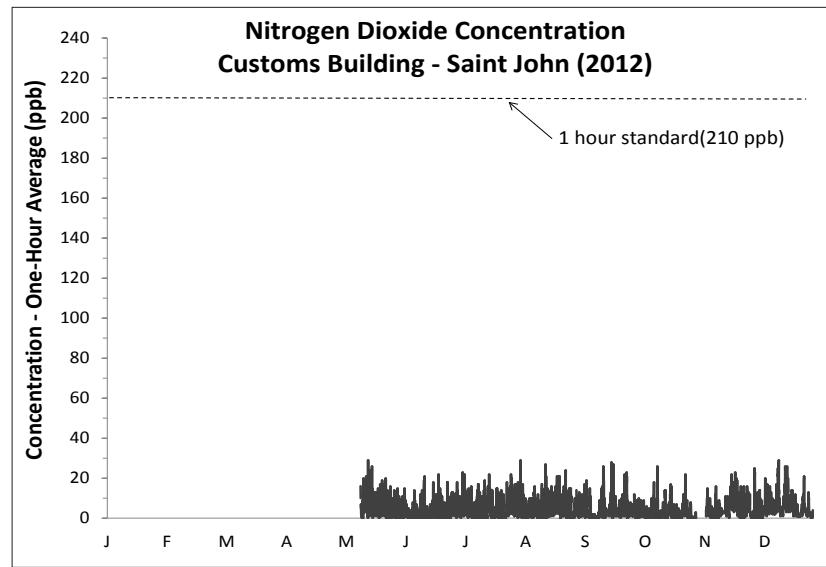
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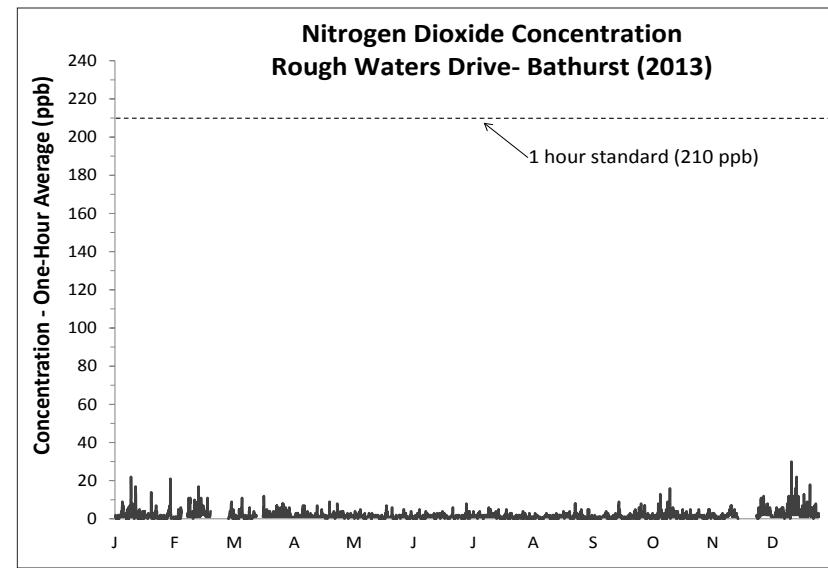
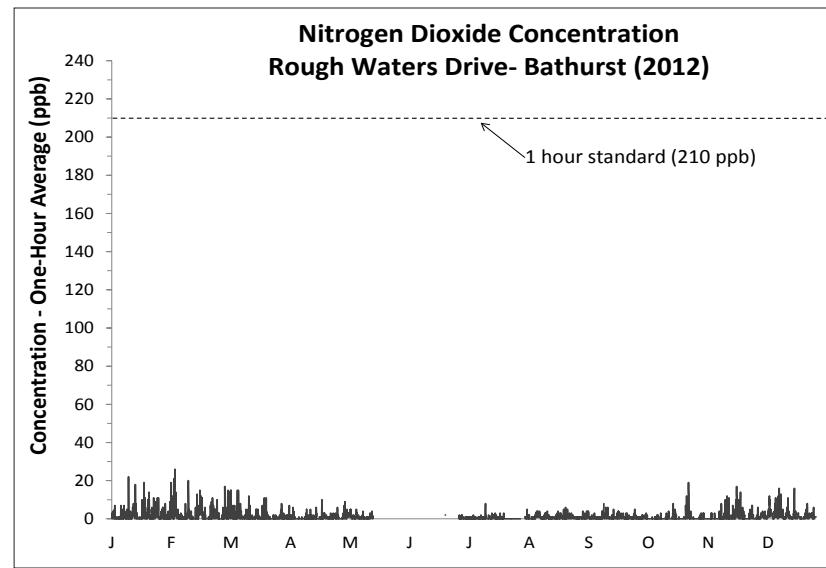
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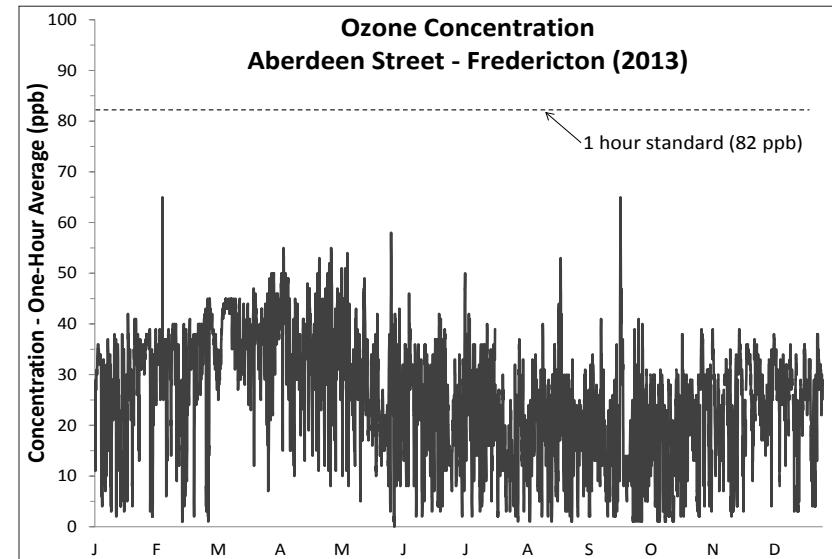
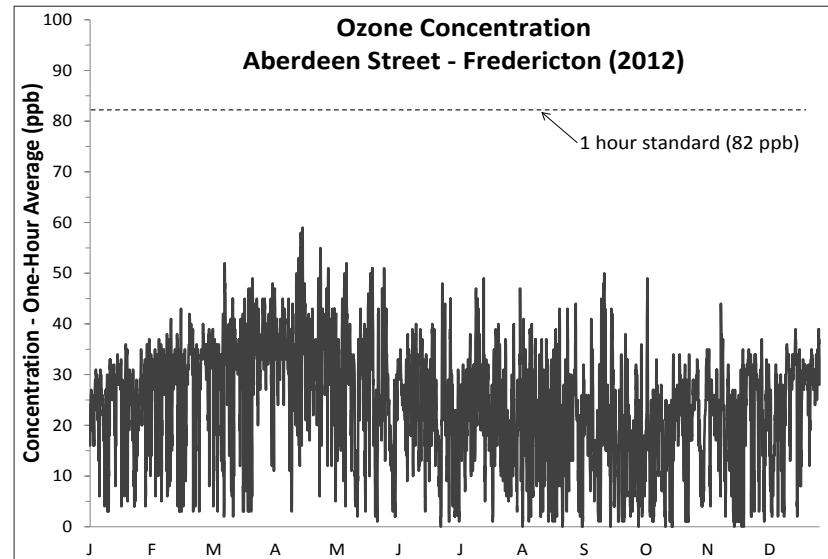
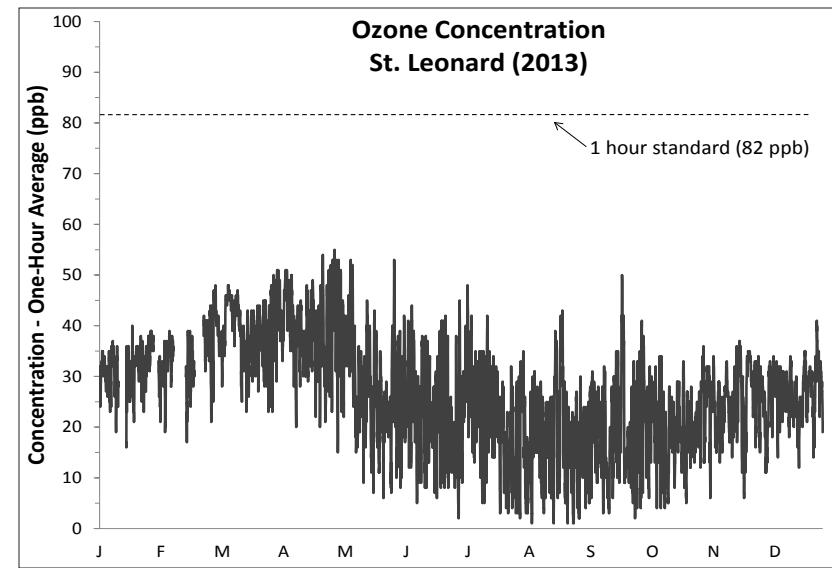
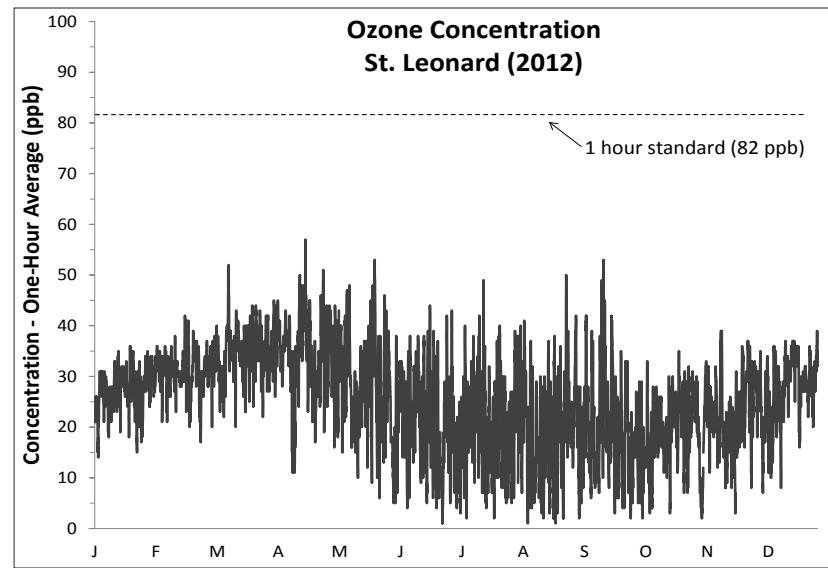
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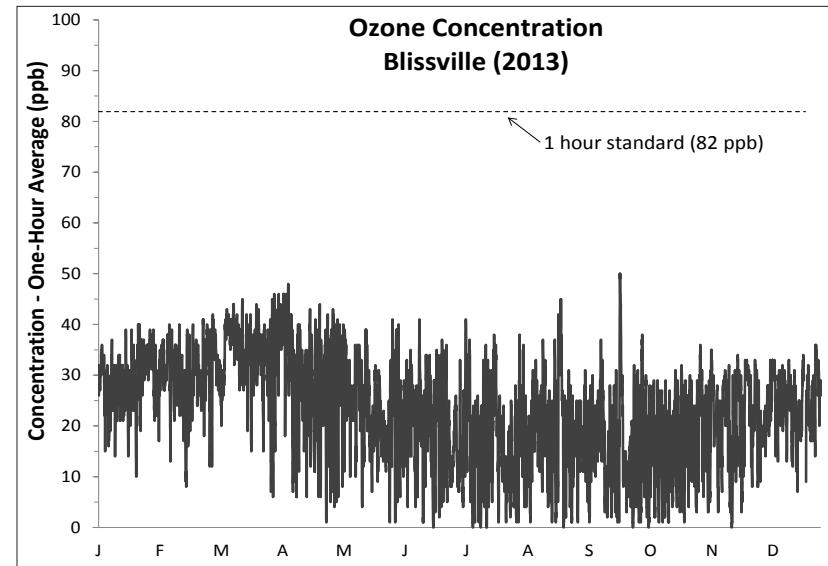
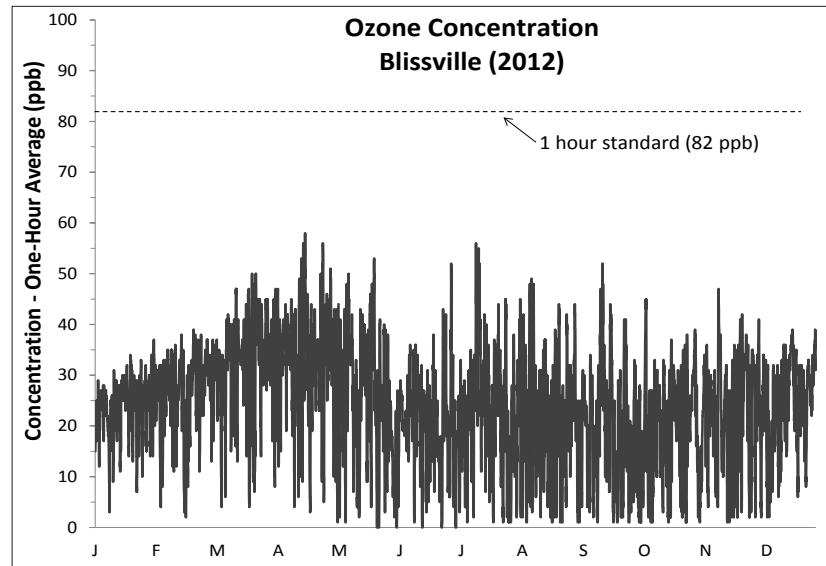
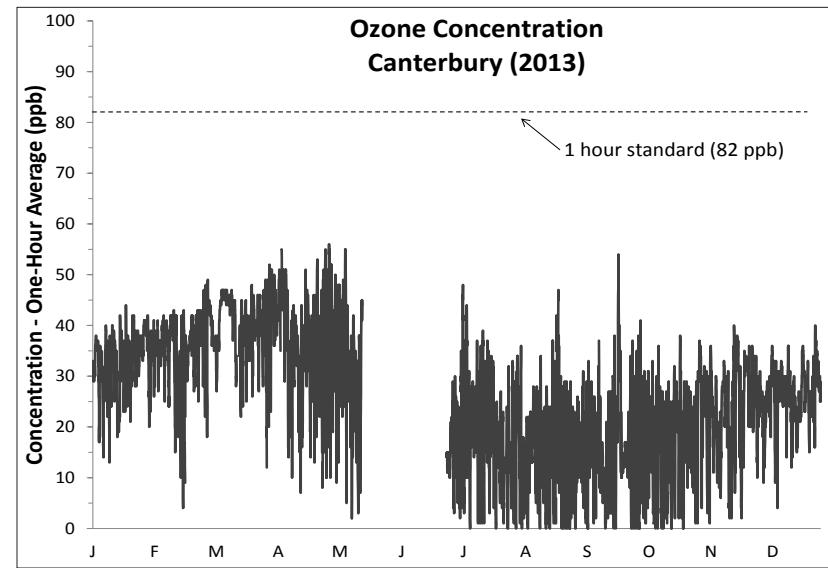
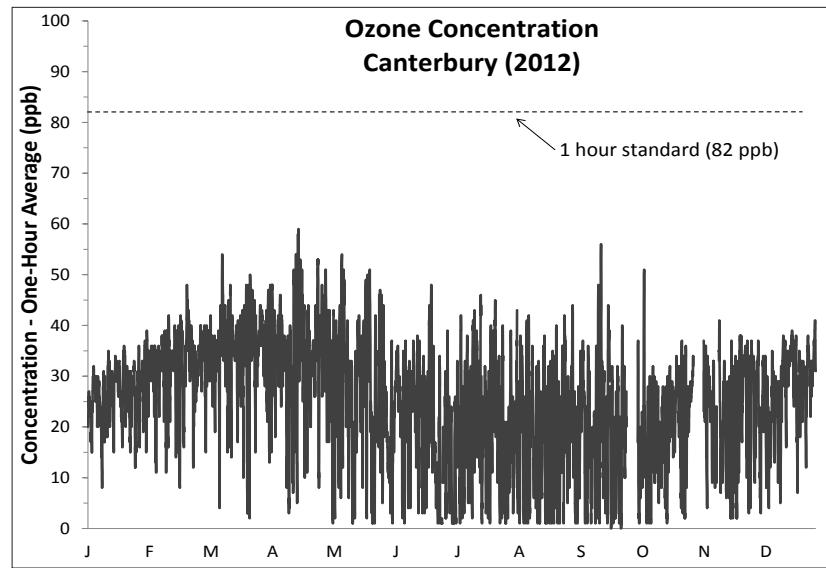
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Ozone



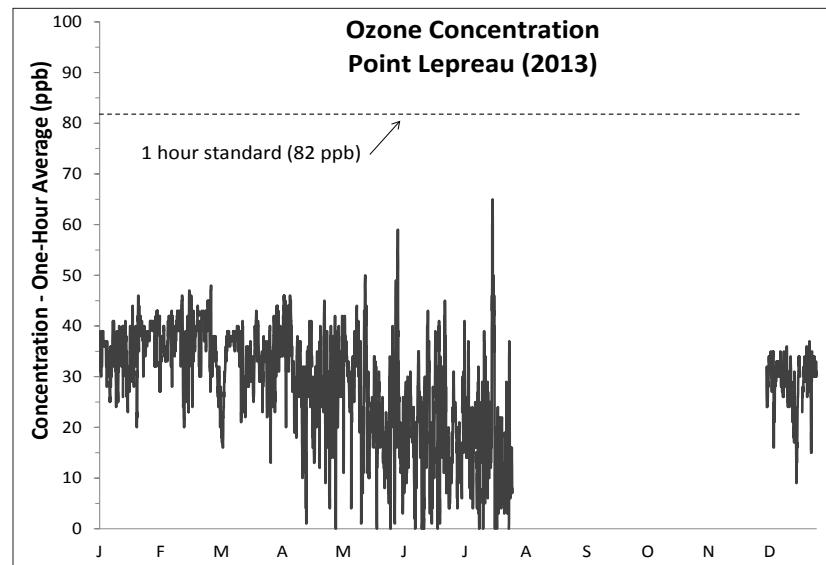
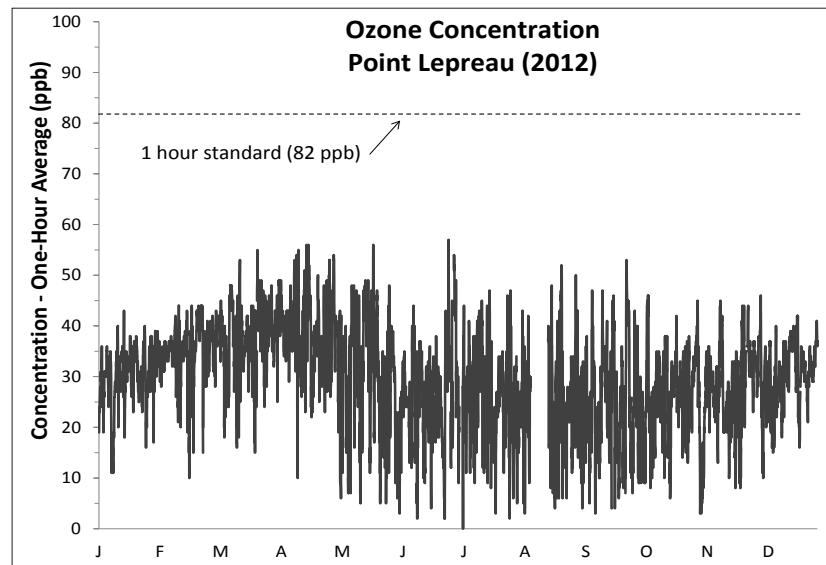
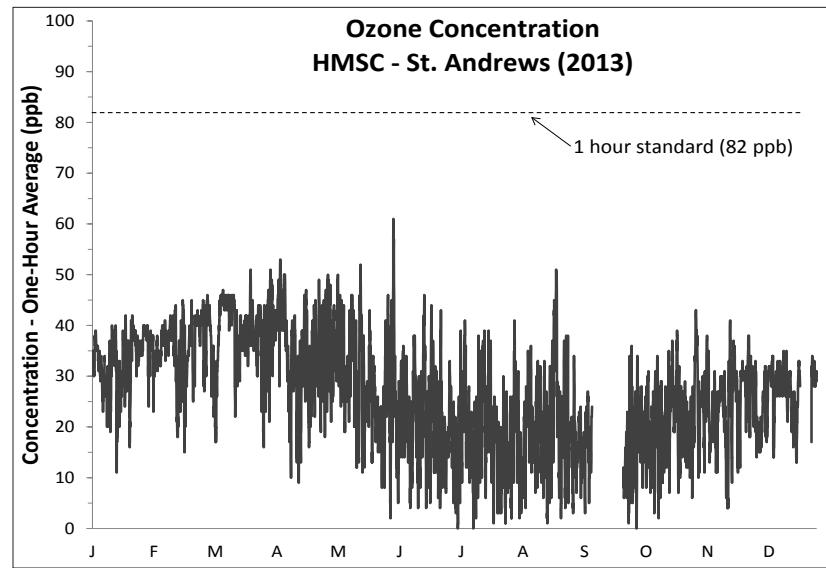
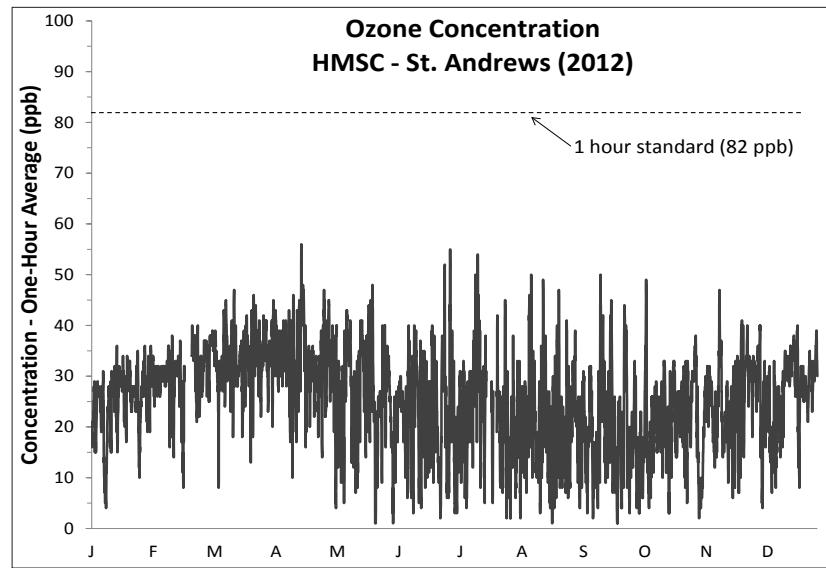
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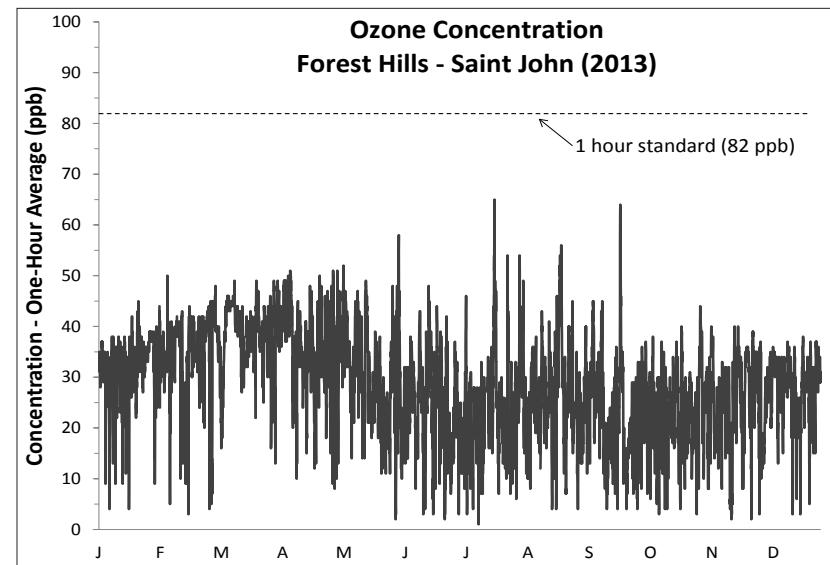
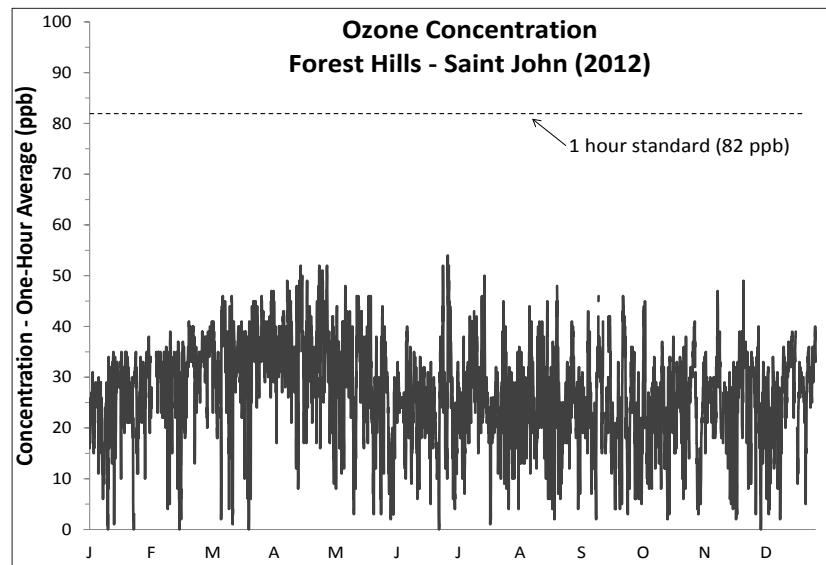
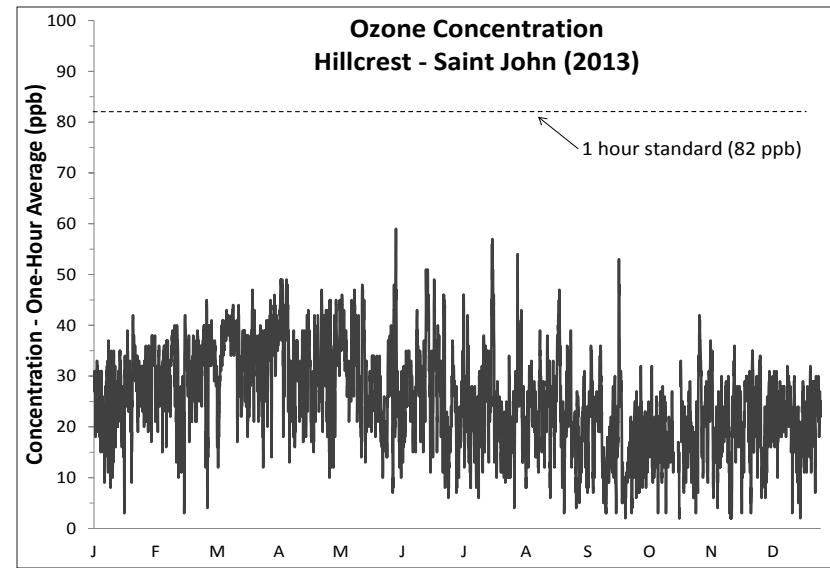
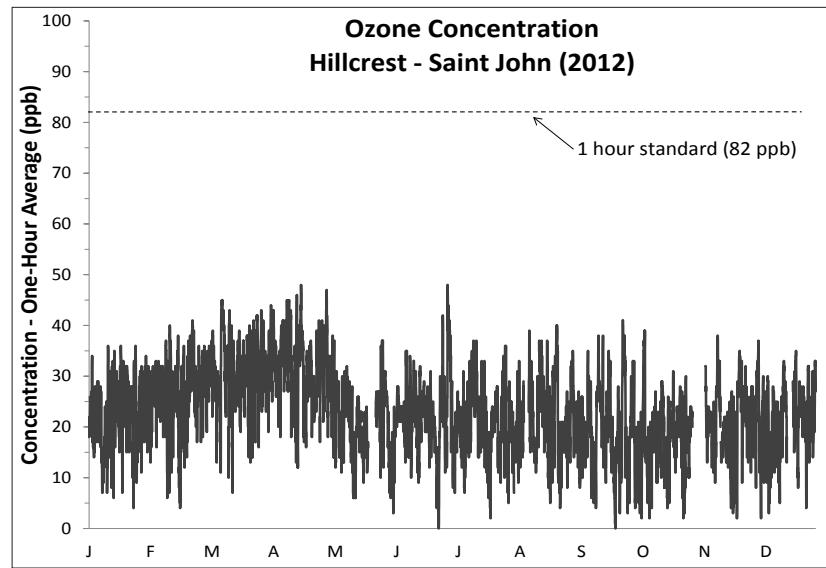
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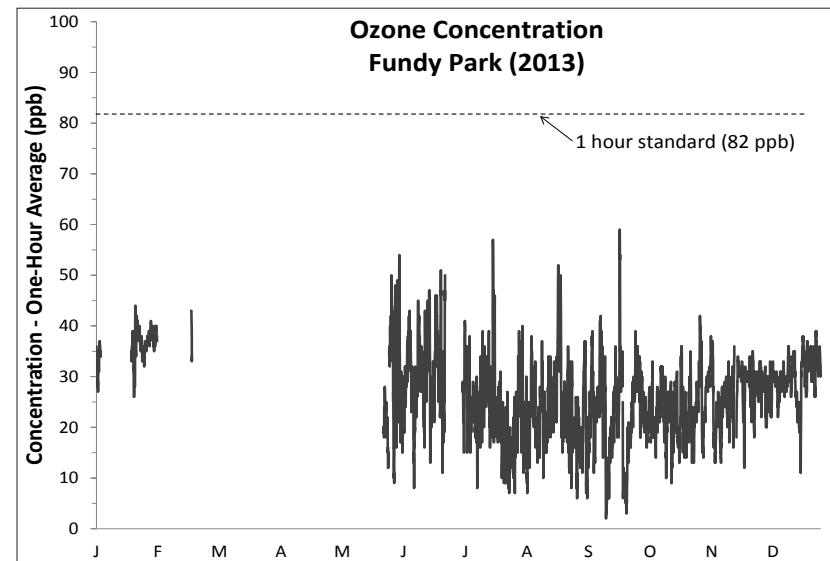
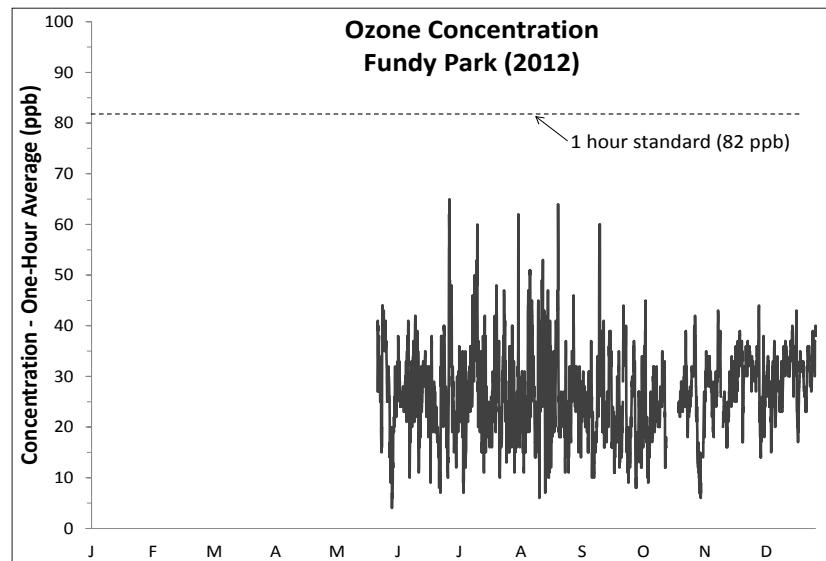
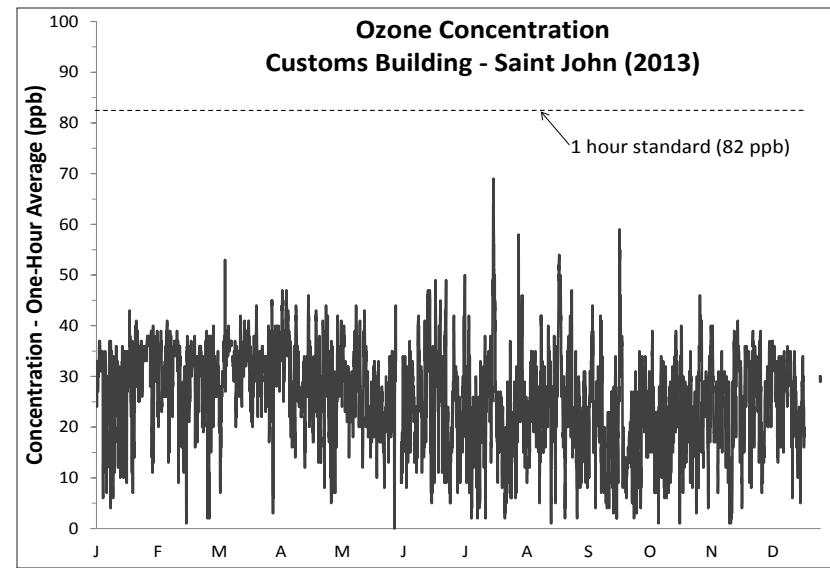
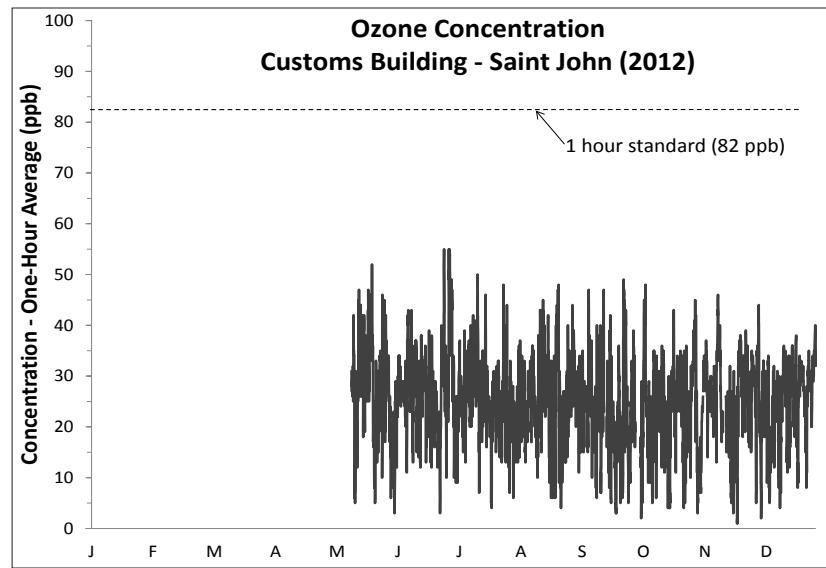
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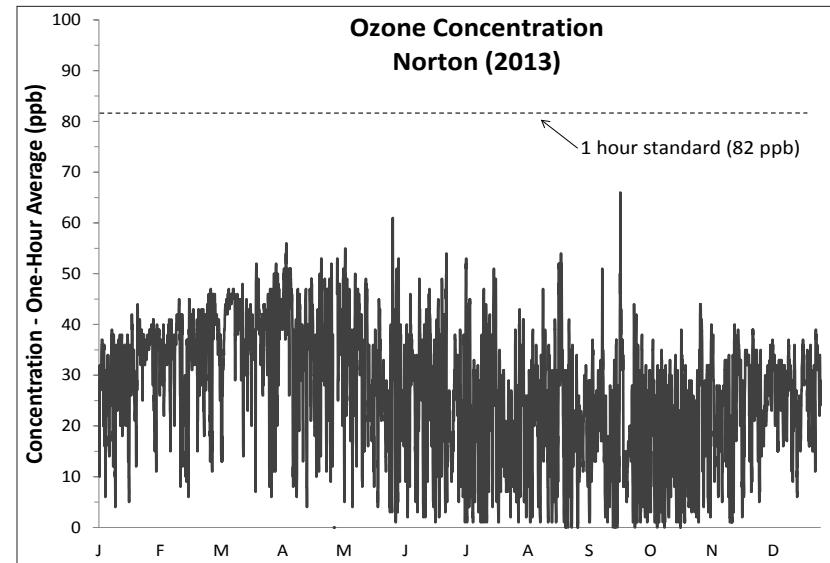
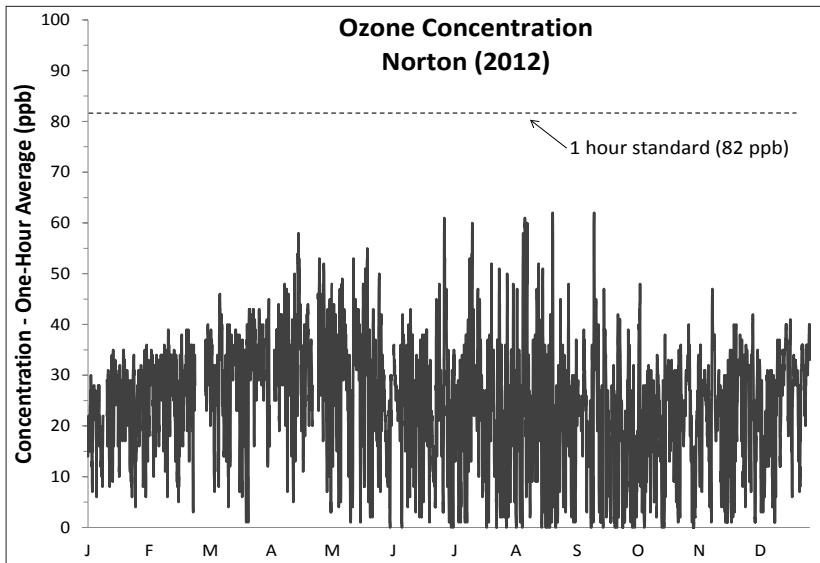
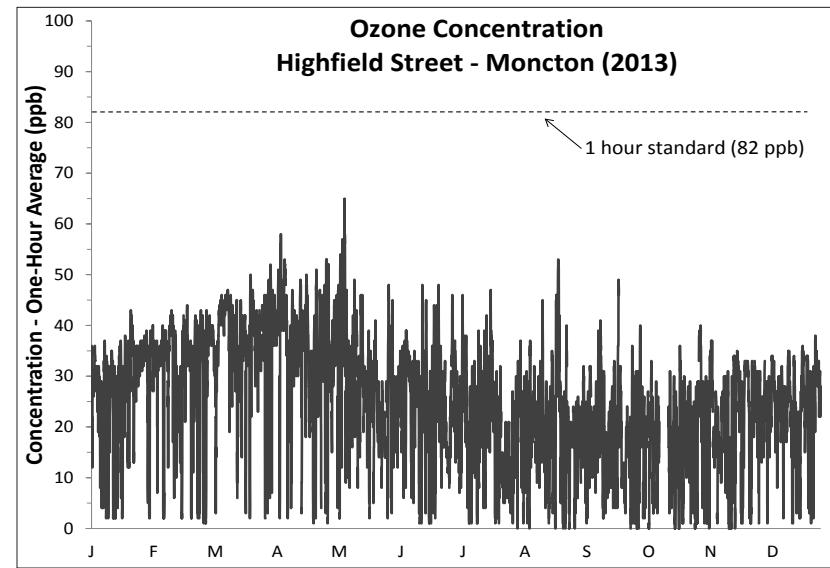
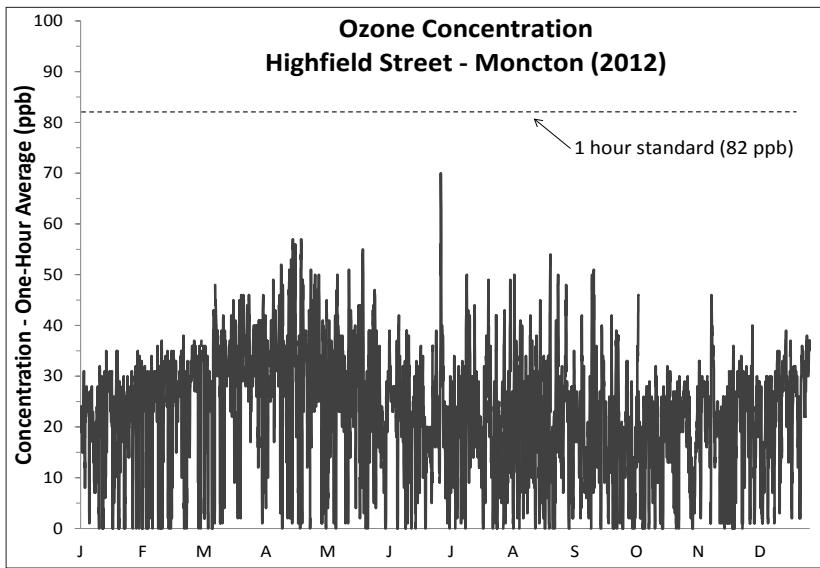
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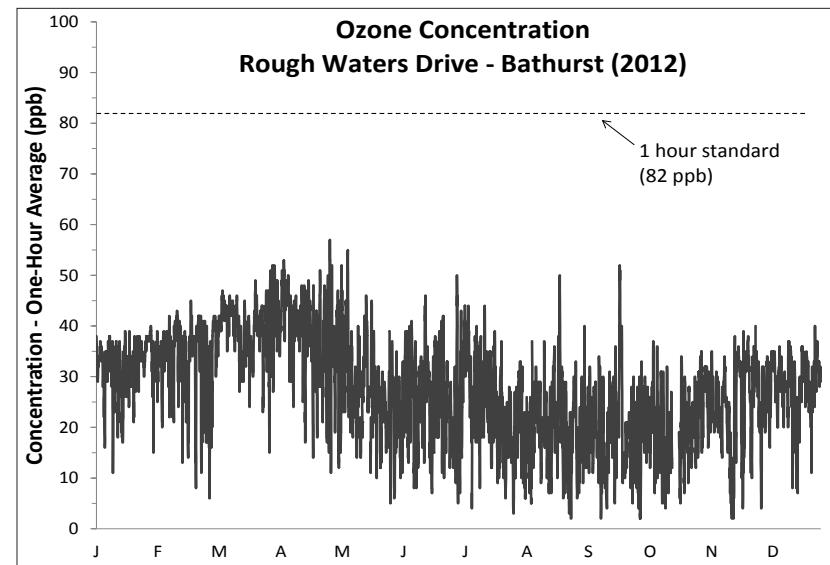
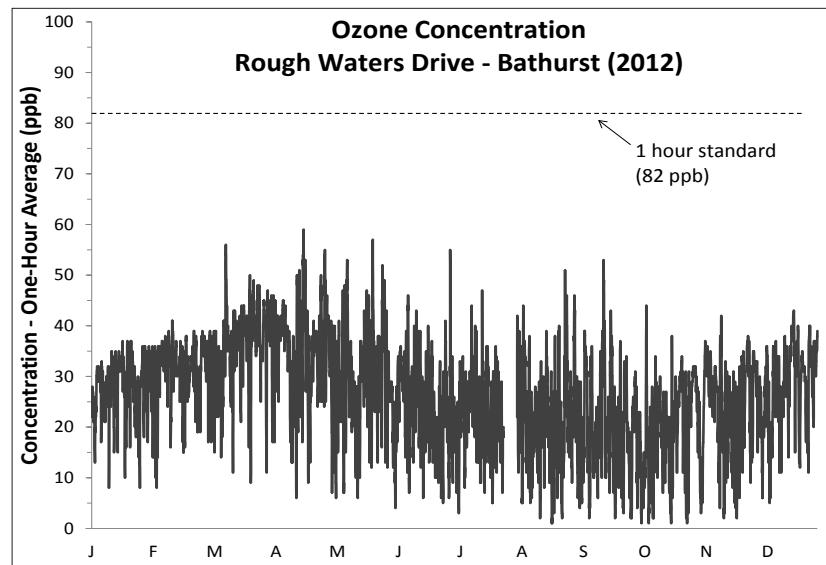
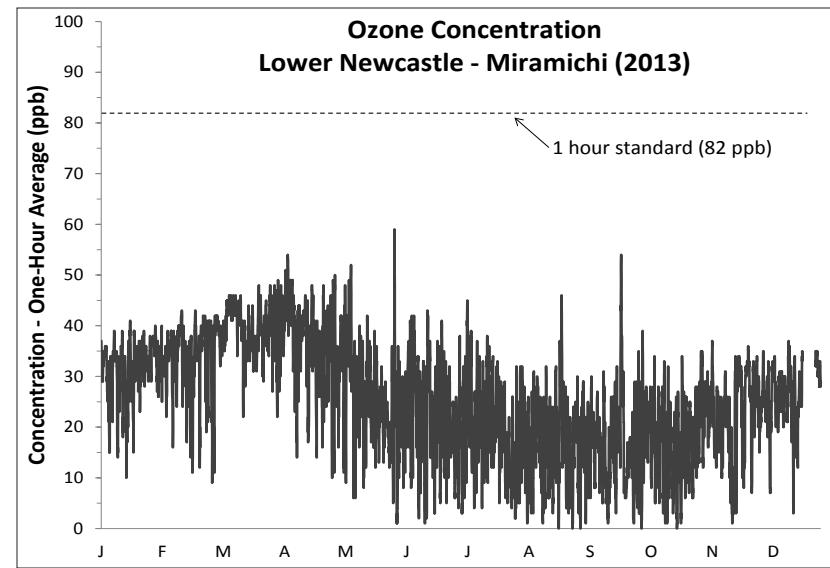
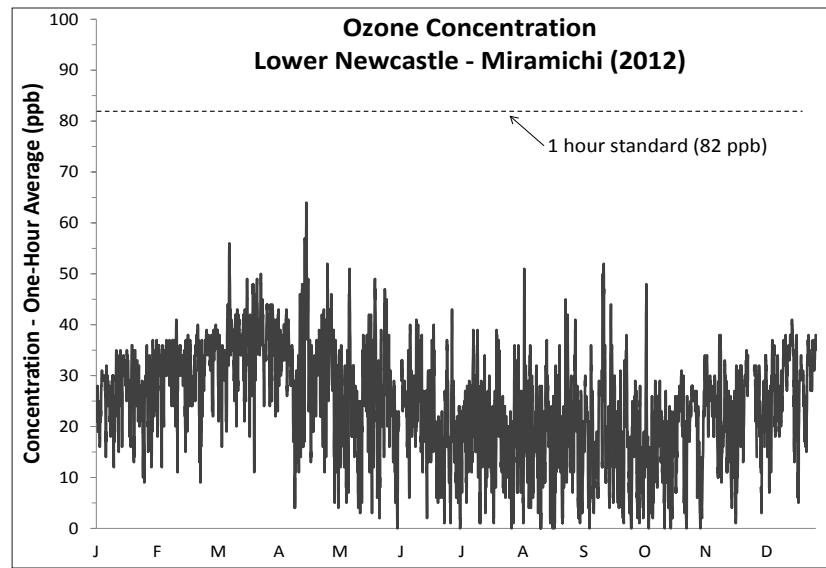
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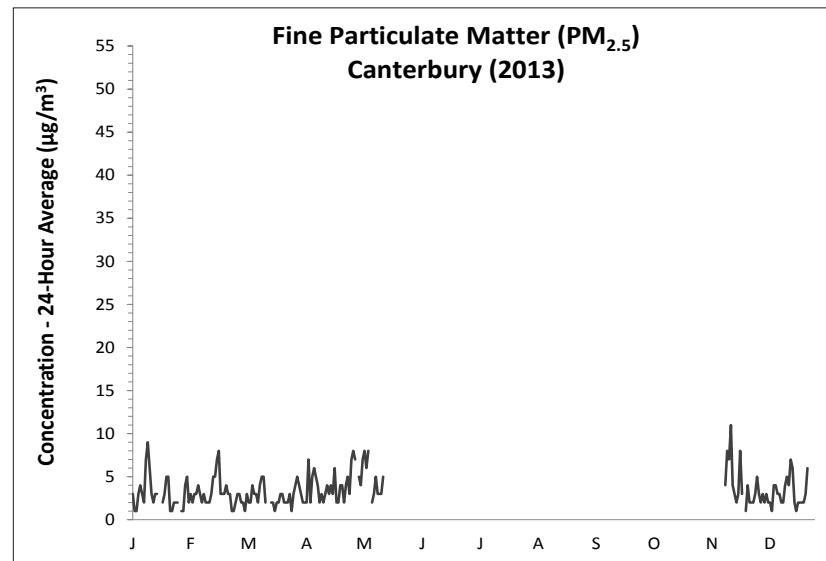
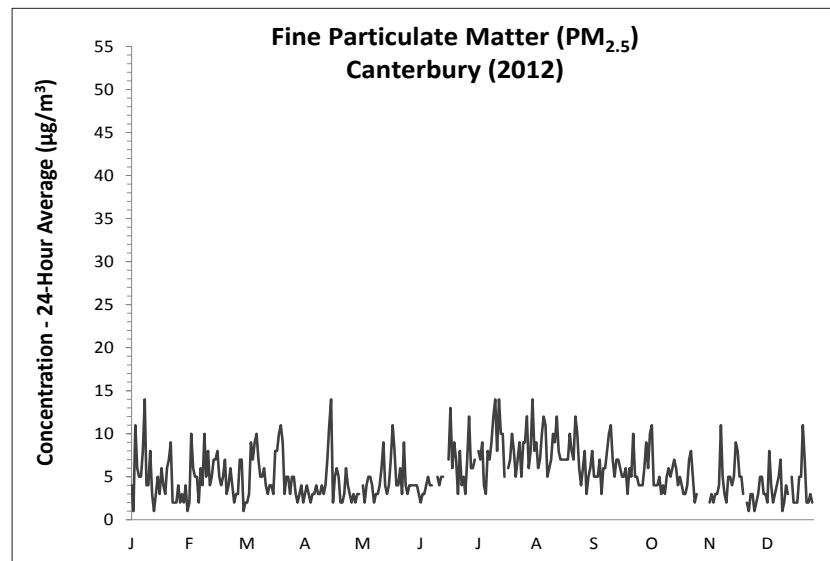
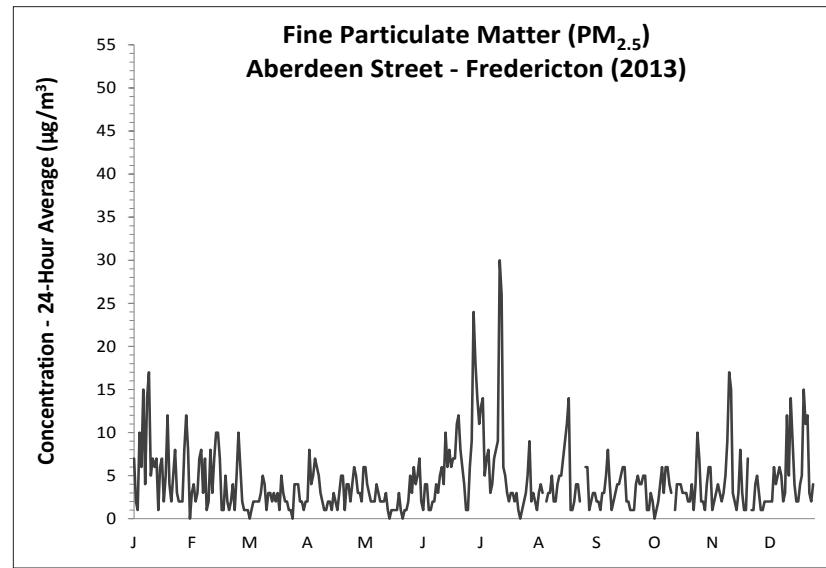
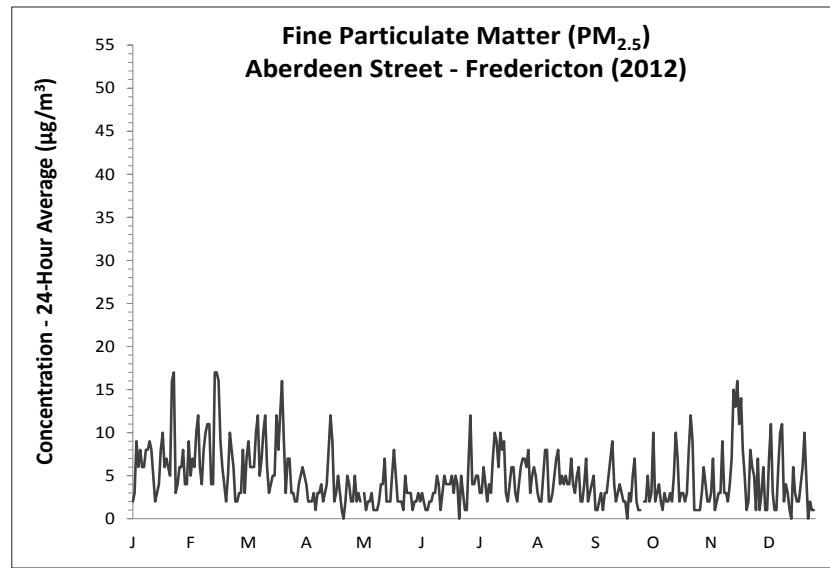
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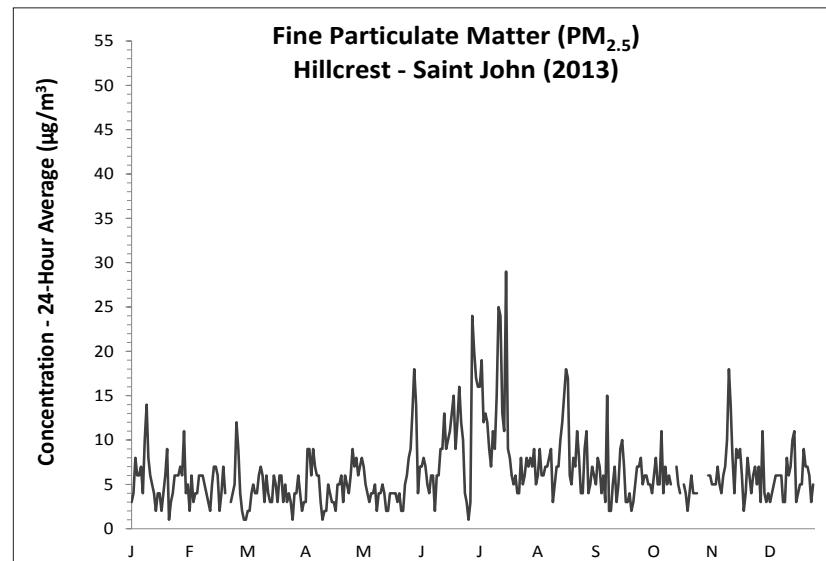
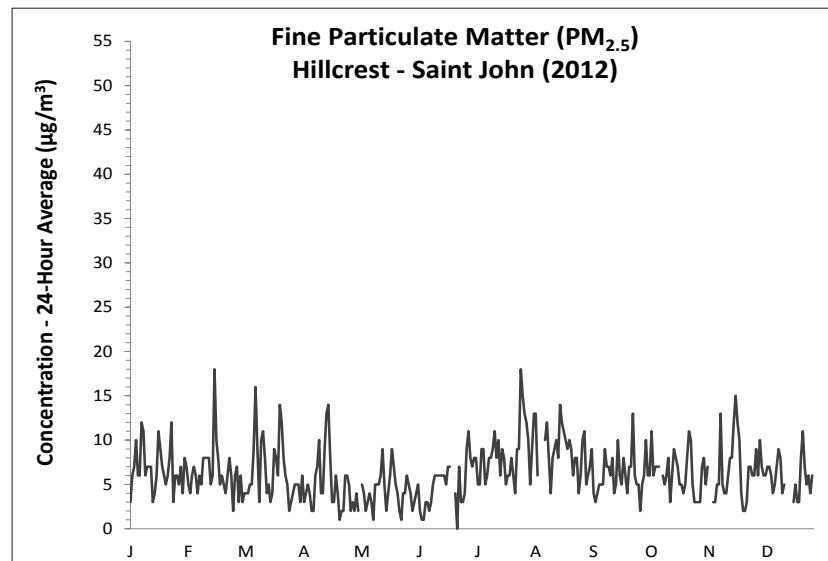
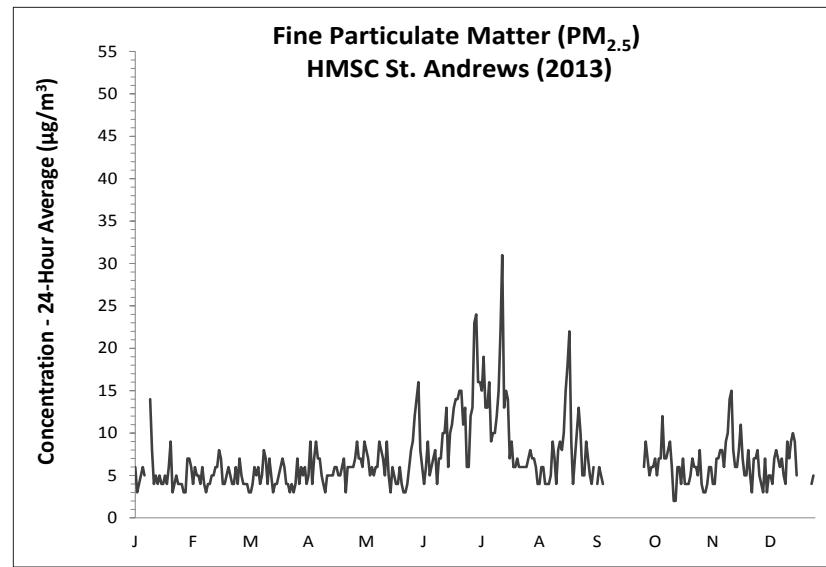
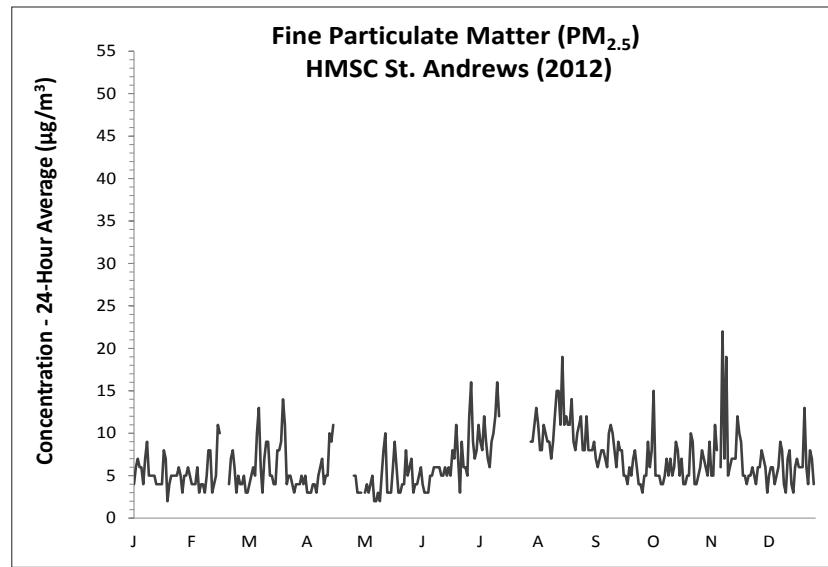
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Fine Particulate Matter



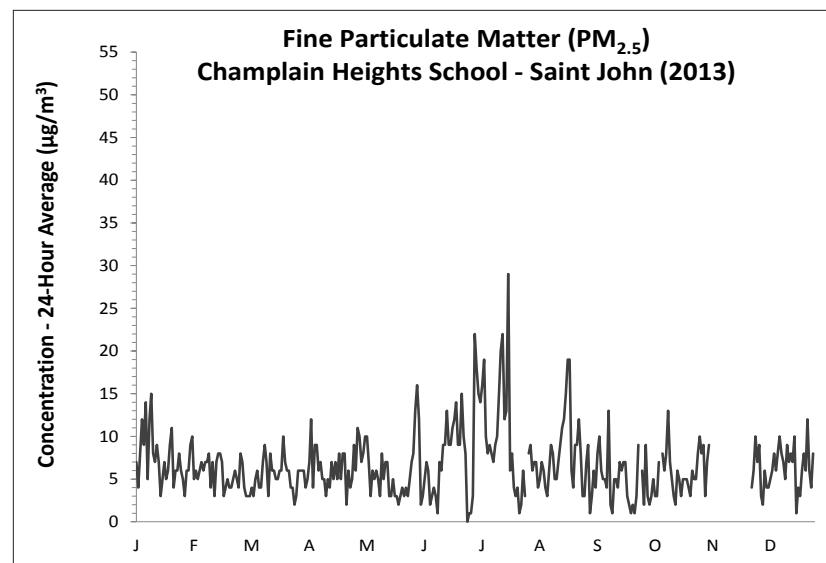
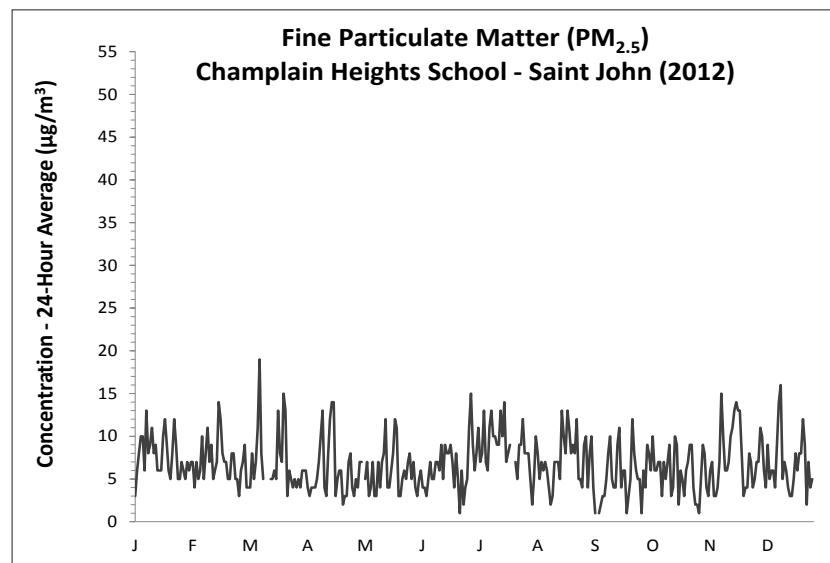
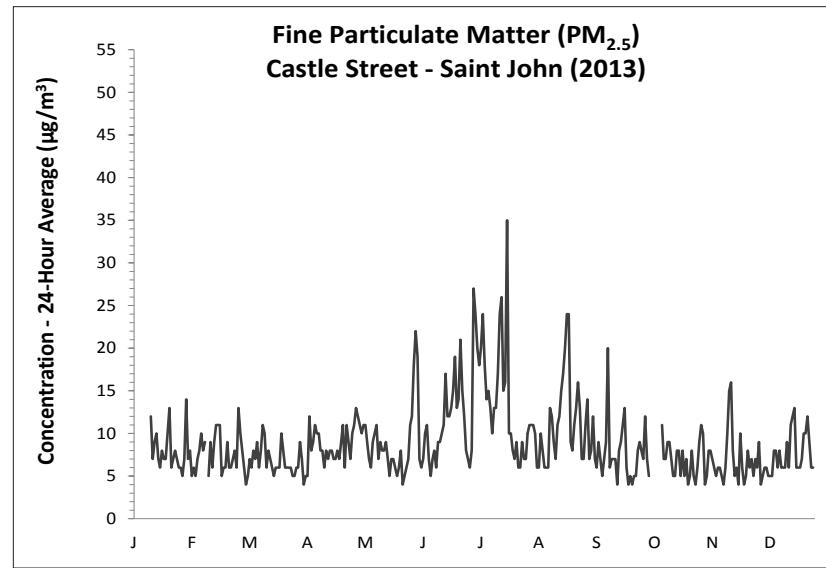
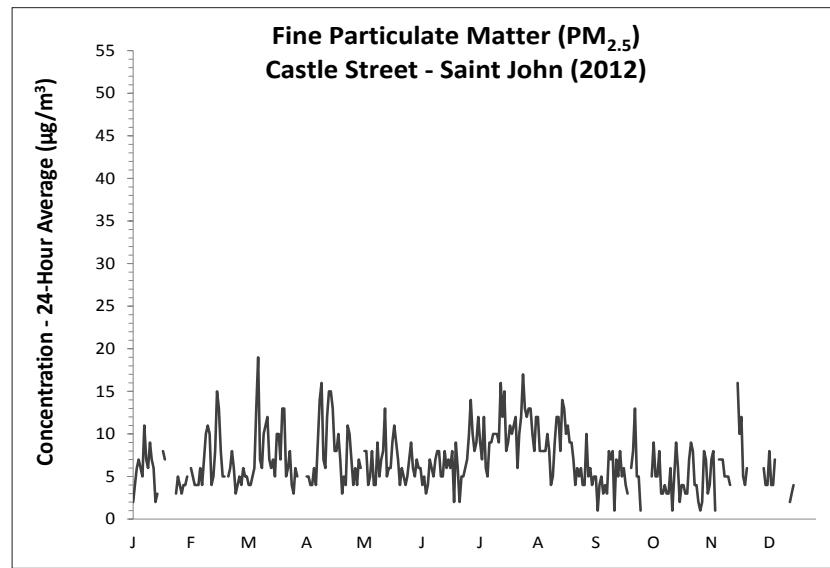
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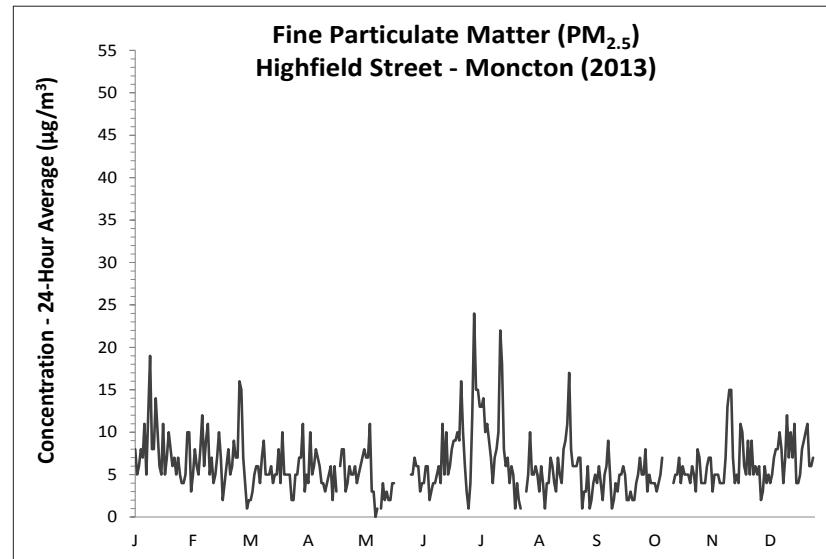
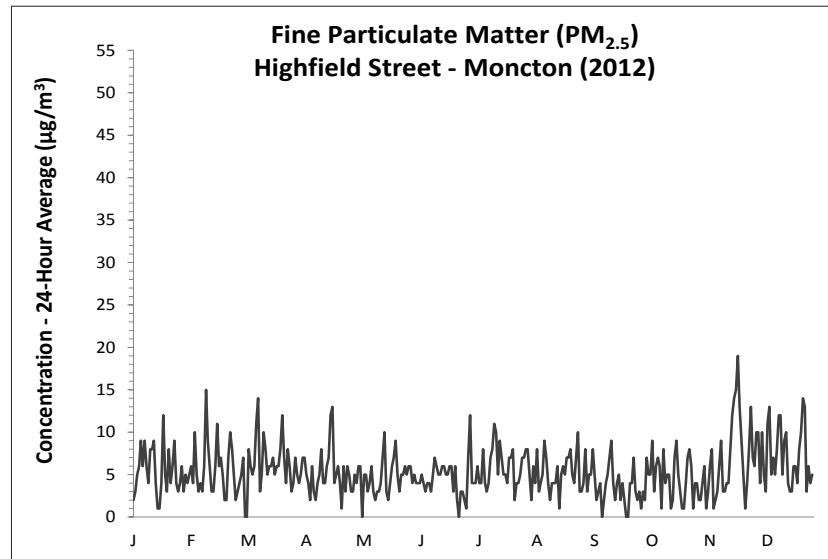
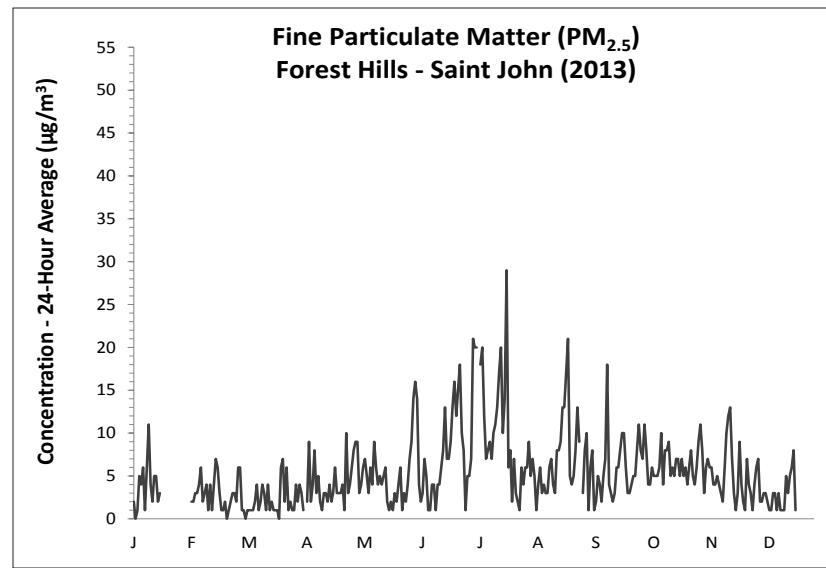
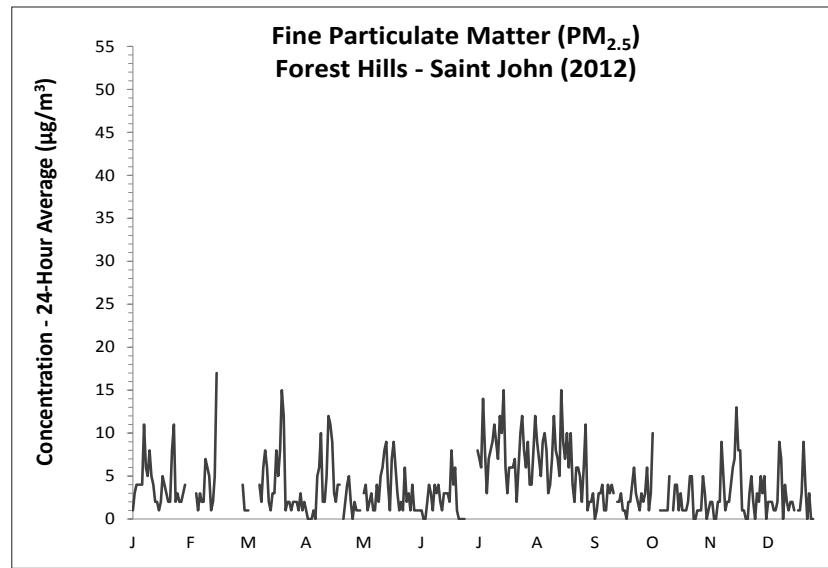
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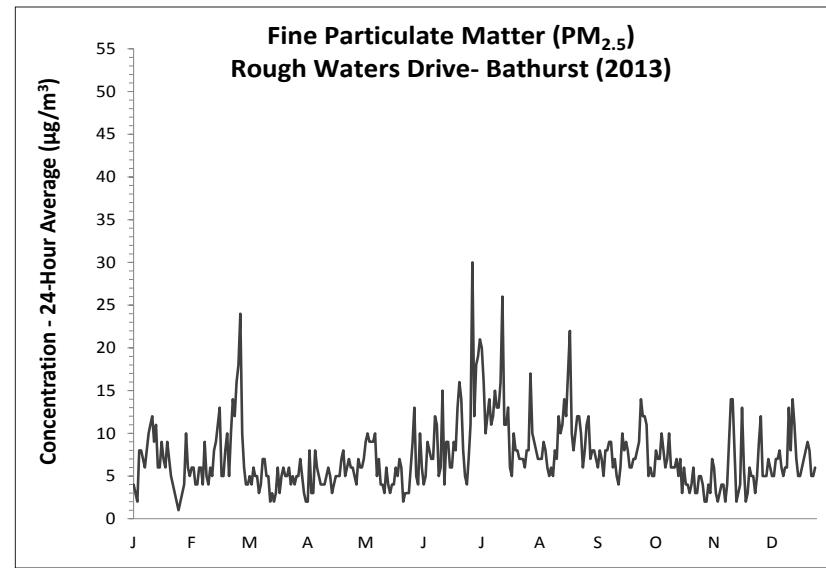
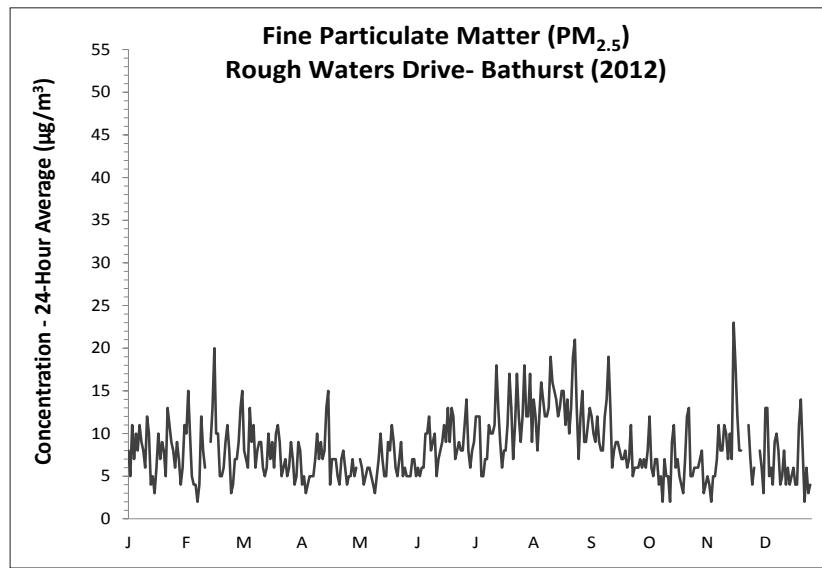
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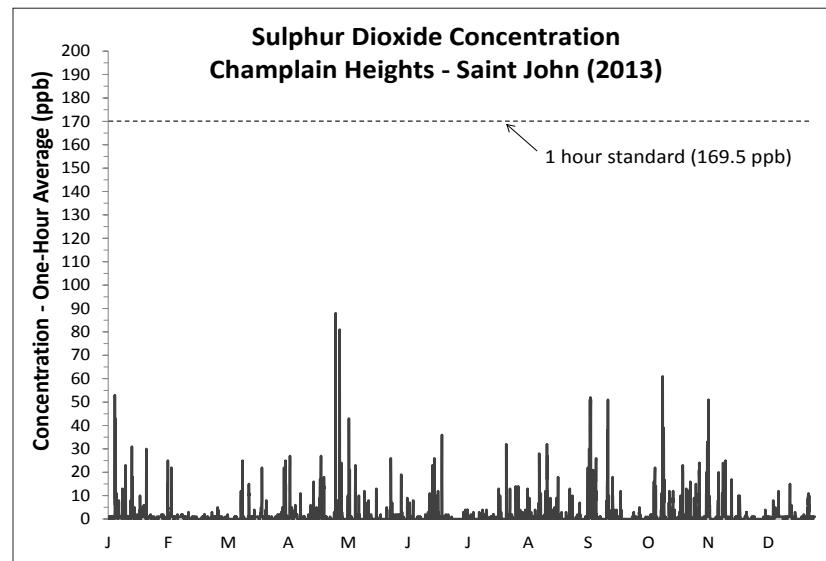
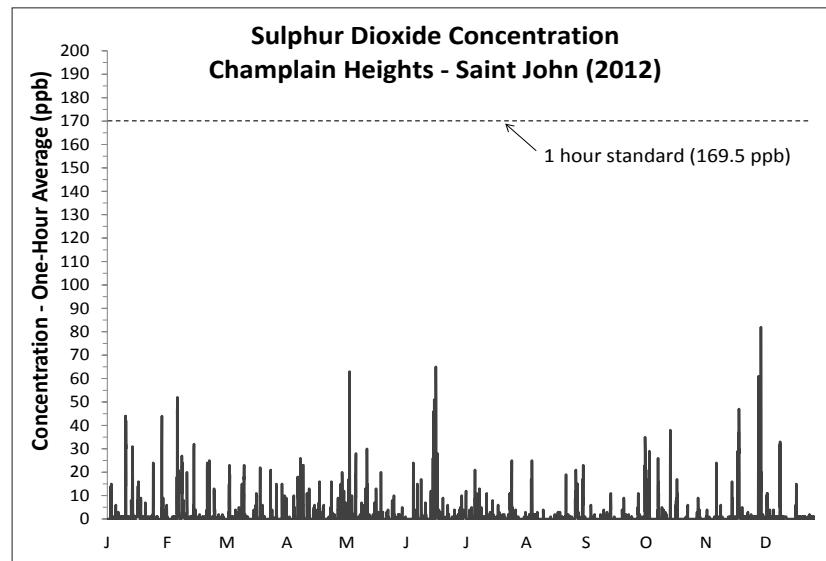
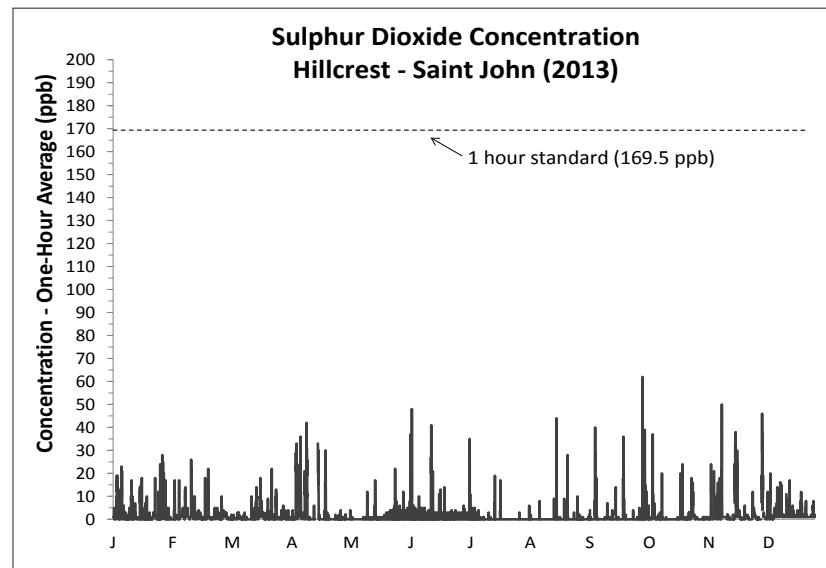
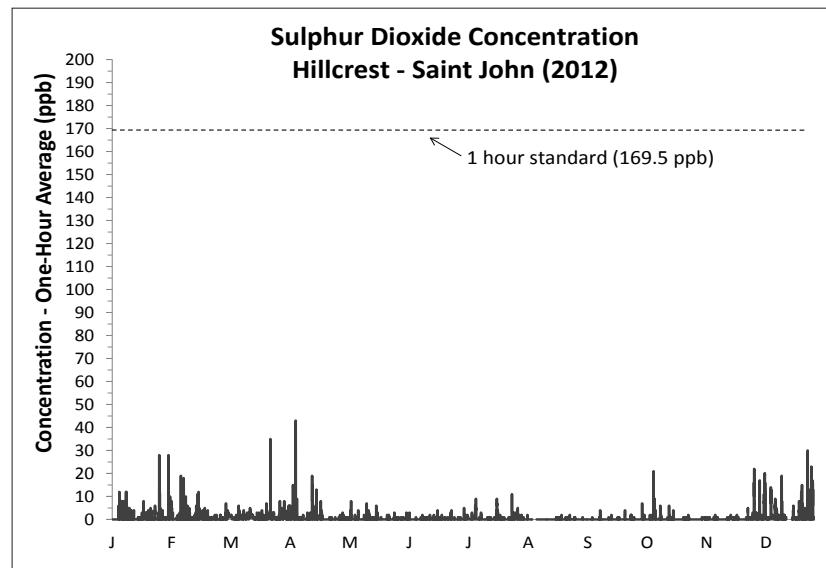
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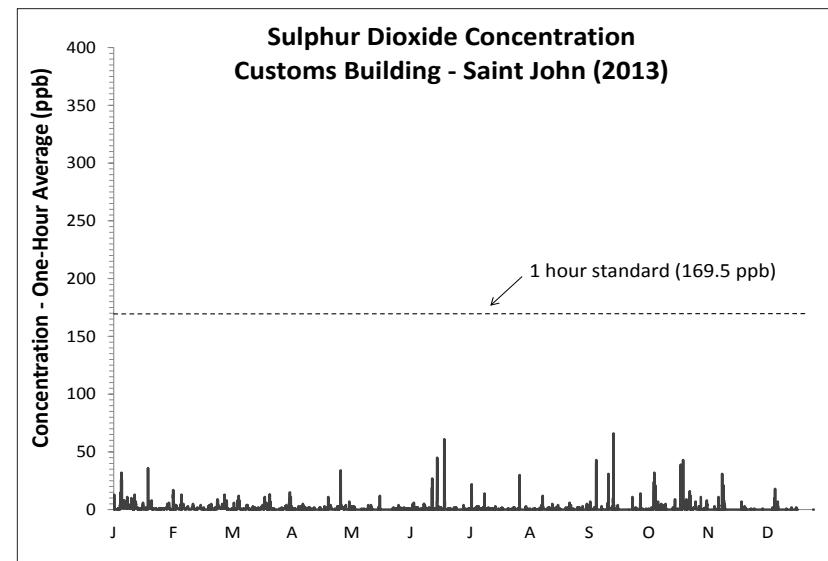
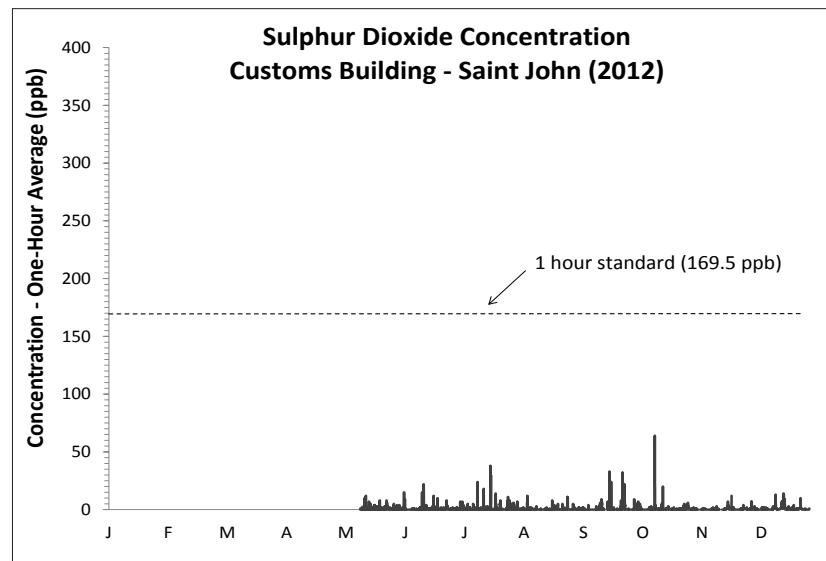
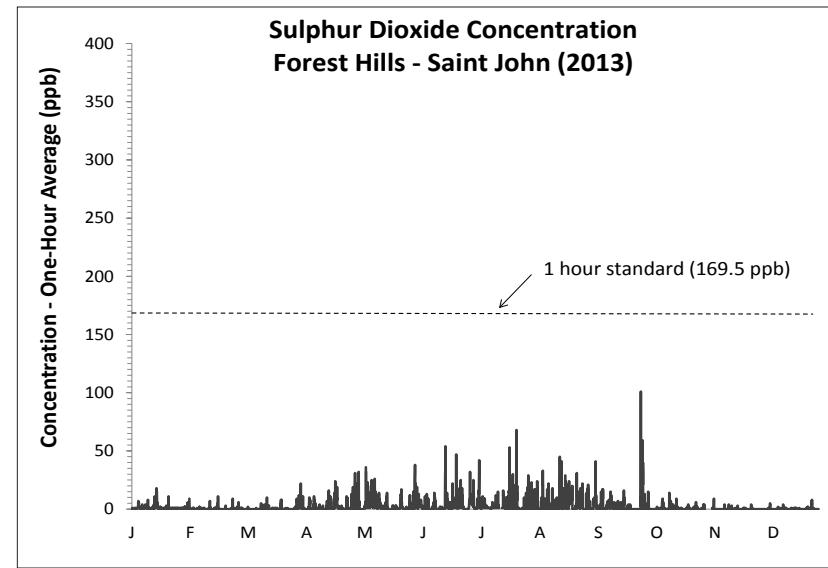
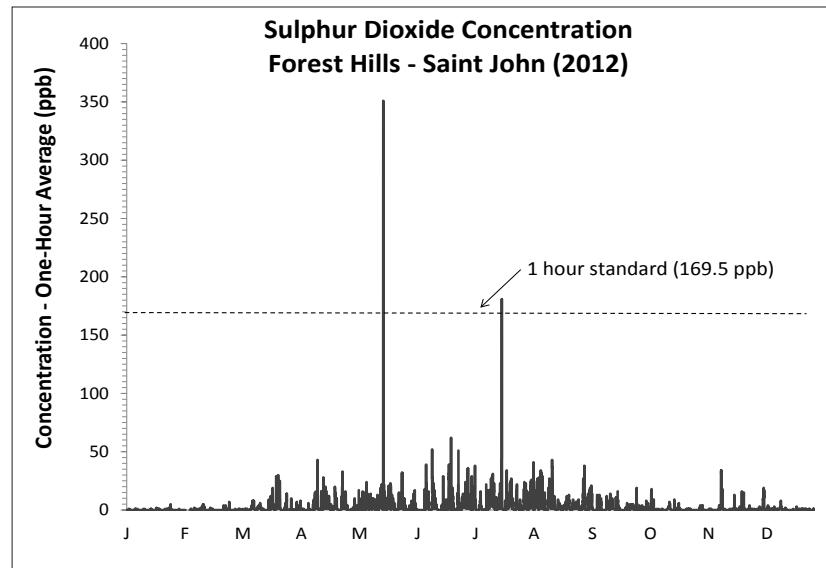
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Sulphur Dioxide



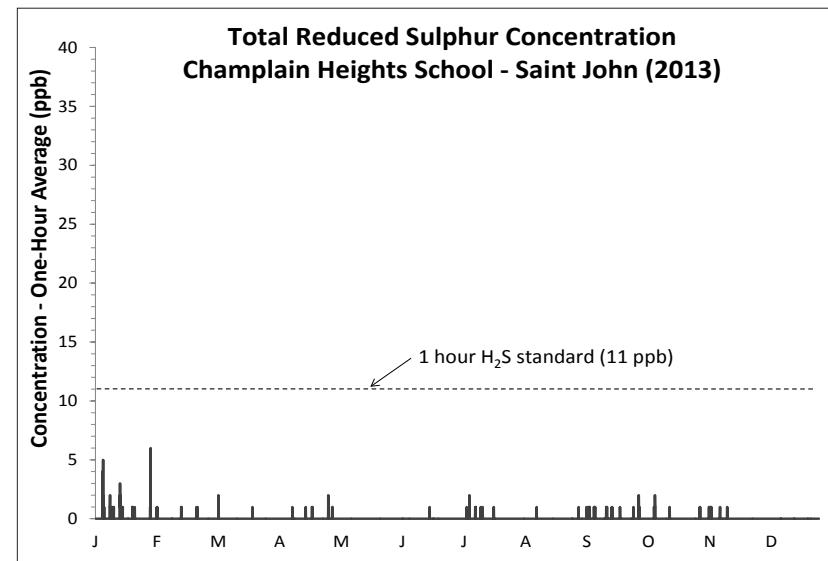
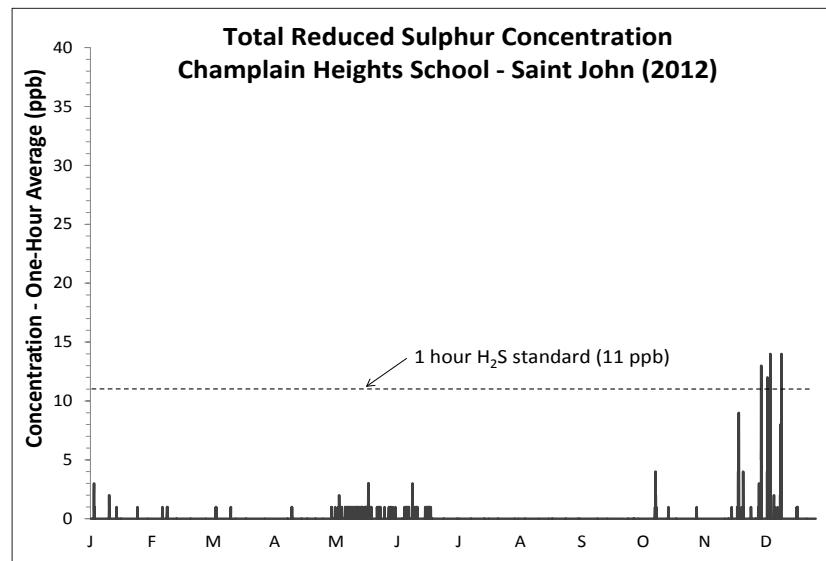
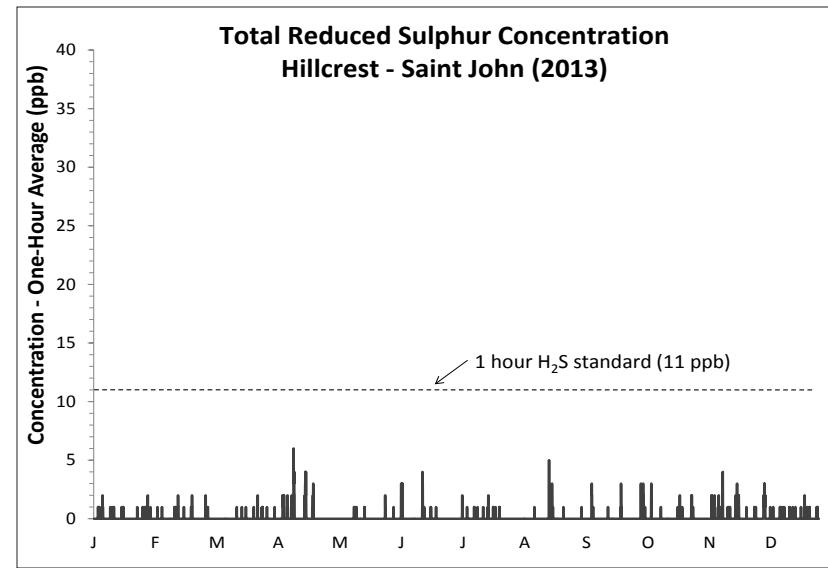
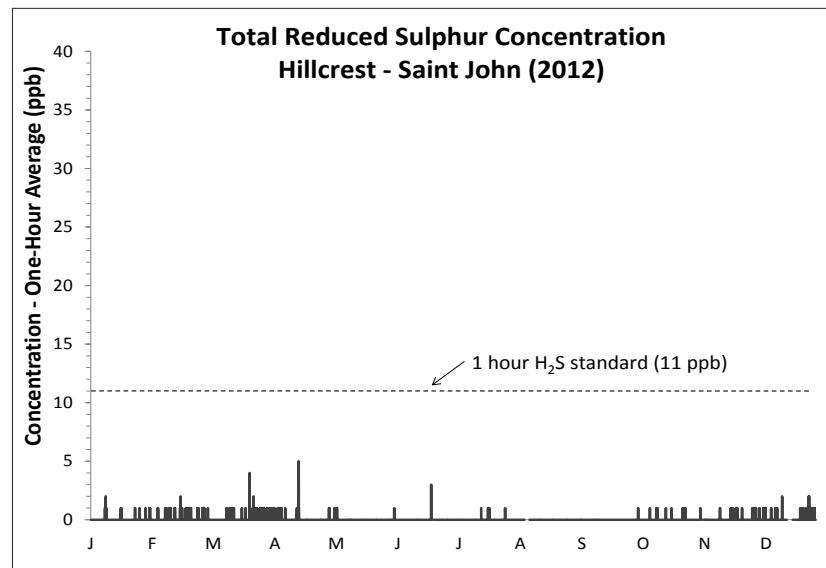
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Sulphur Dioxide



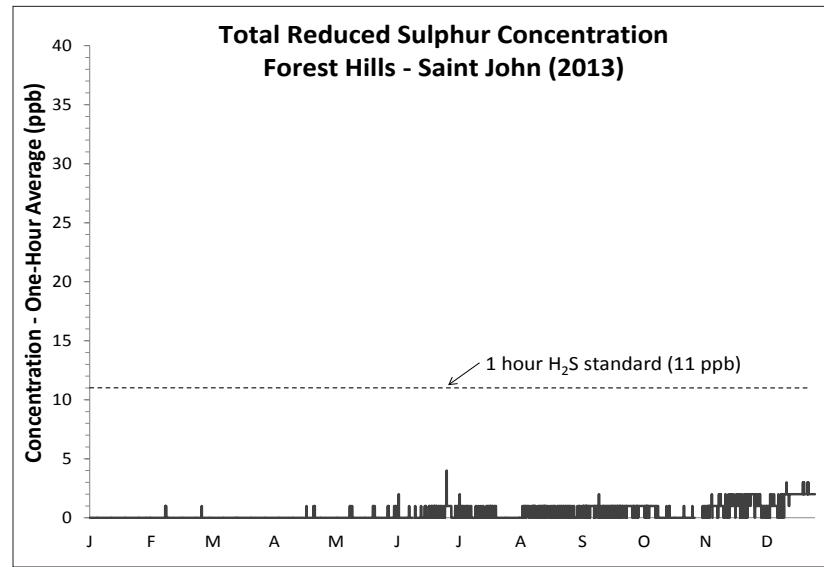
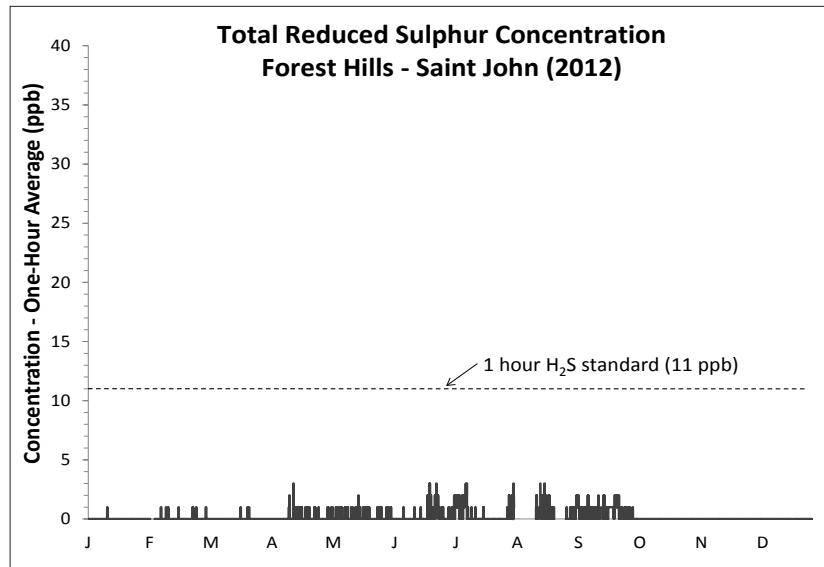
PART I: PROVINCIAL OPERATED NETWORKS - Continuous Air Quality Monitoring Results

Total Reduced Sulphur



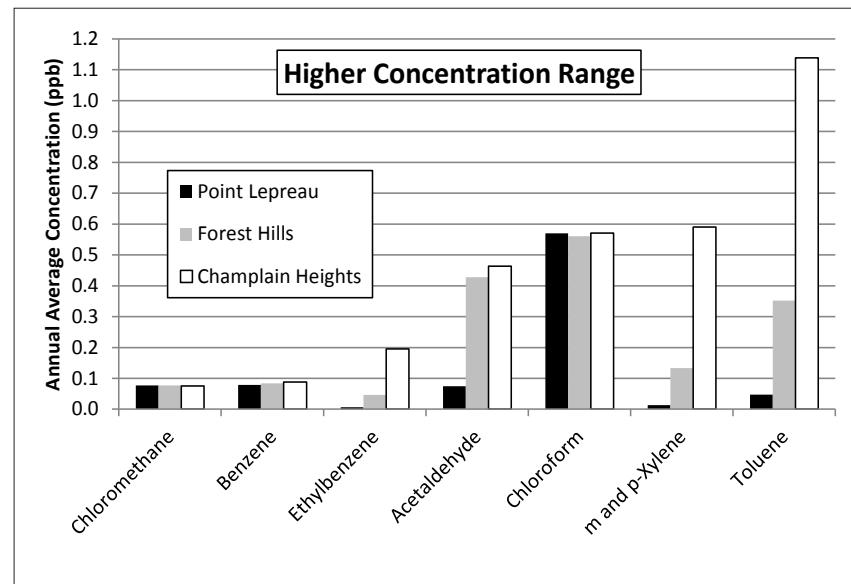
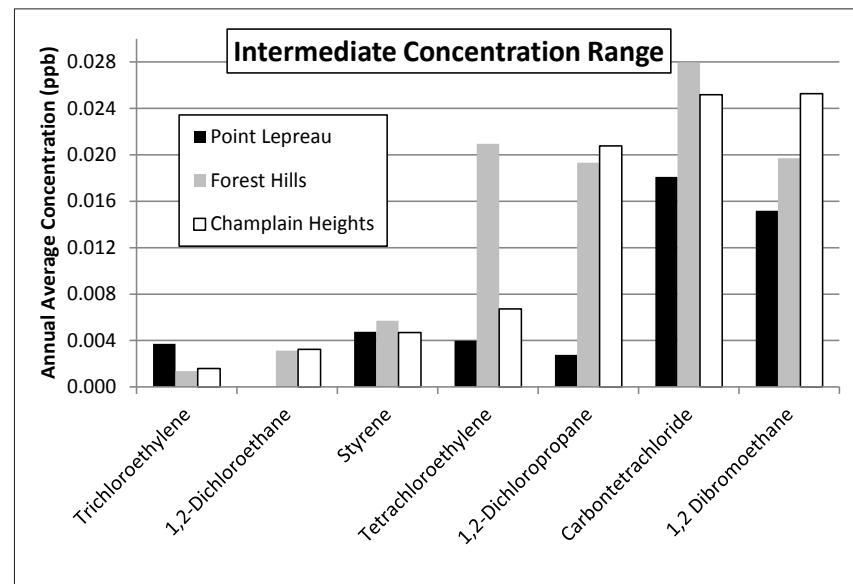
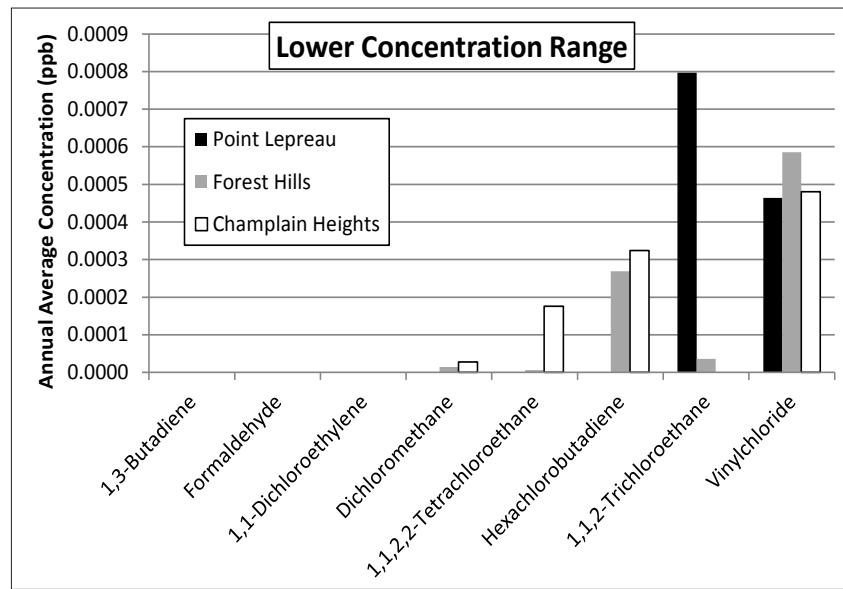
PART I: PROVINCIAL OPERATED NETWORKS - Continuous Air Quality Monitoring Results

Total Reduced Sulphur



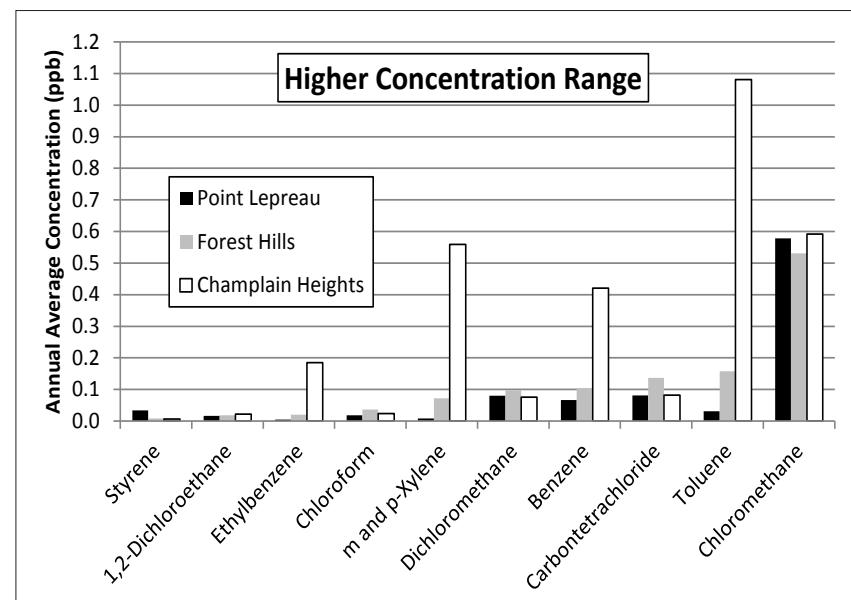
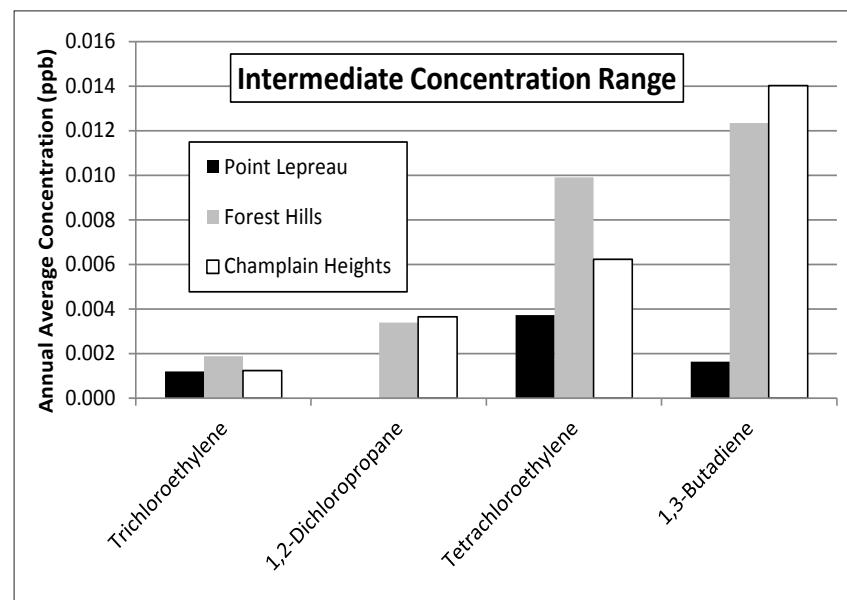
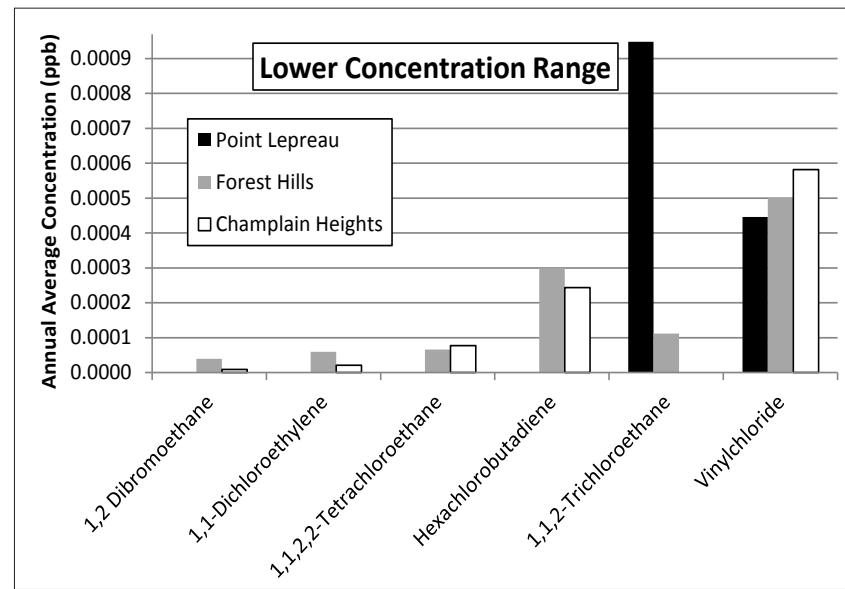
PART I: PROVINCIAL OPERATED NETWORKS - Volatile Organic Compounds, Saint John Region

Air Toxics - 2012 Annual Average Concentration Range Charts



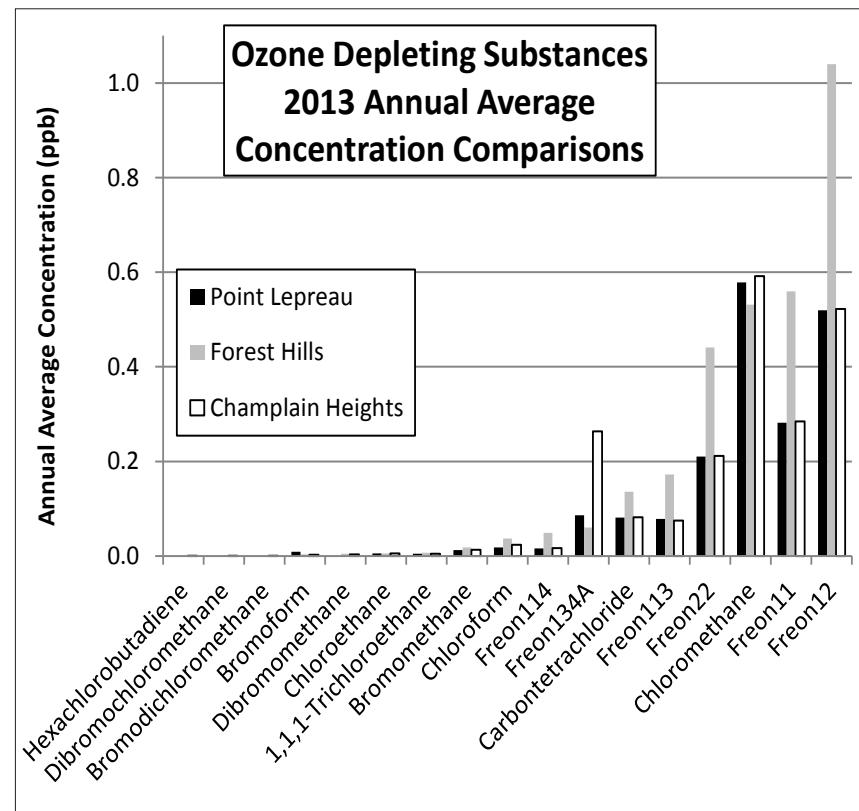
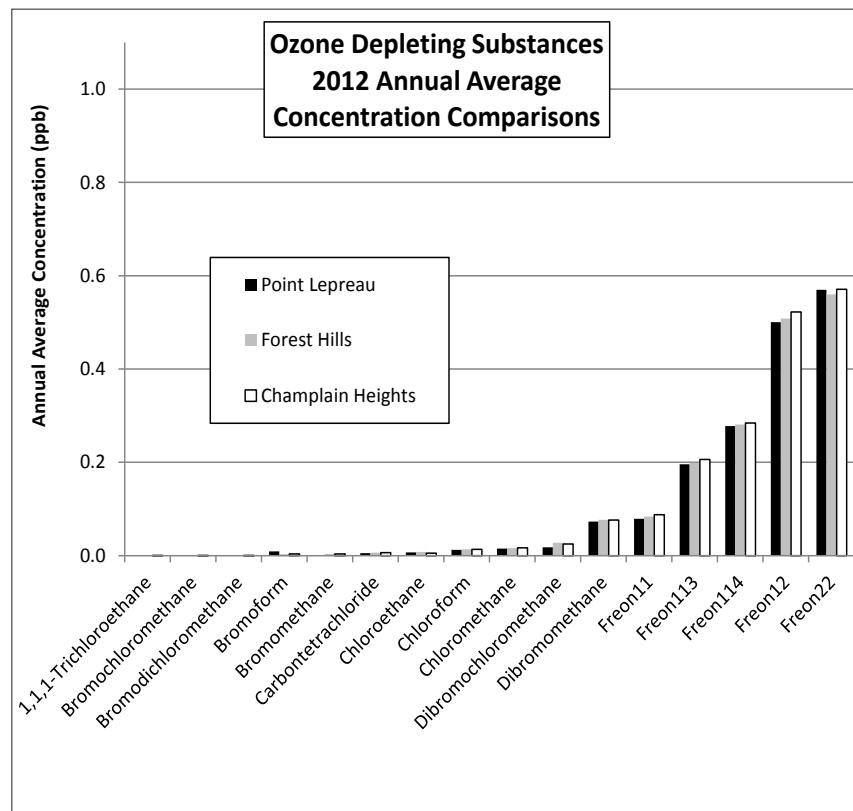
PART I: PROVINCIAL OPERATED NETWORKS - Volatile Organic Compounds, Saint John Region

Air Toxics - 2013 Annual Average Concentration Range Charts



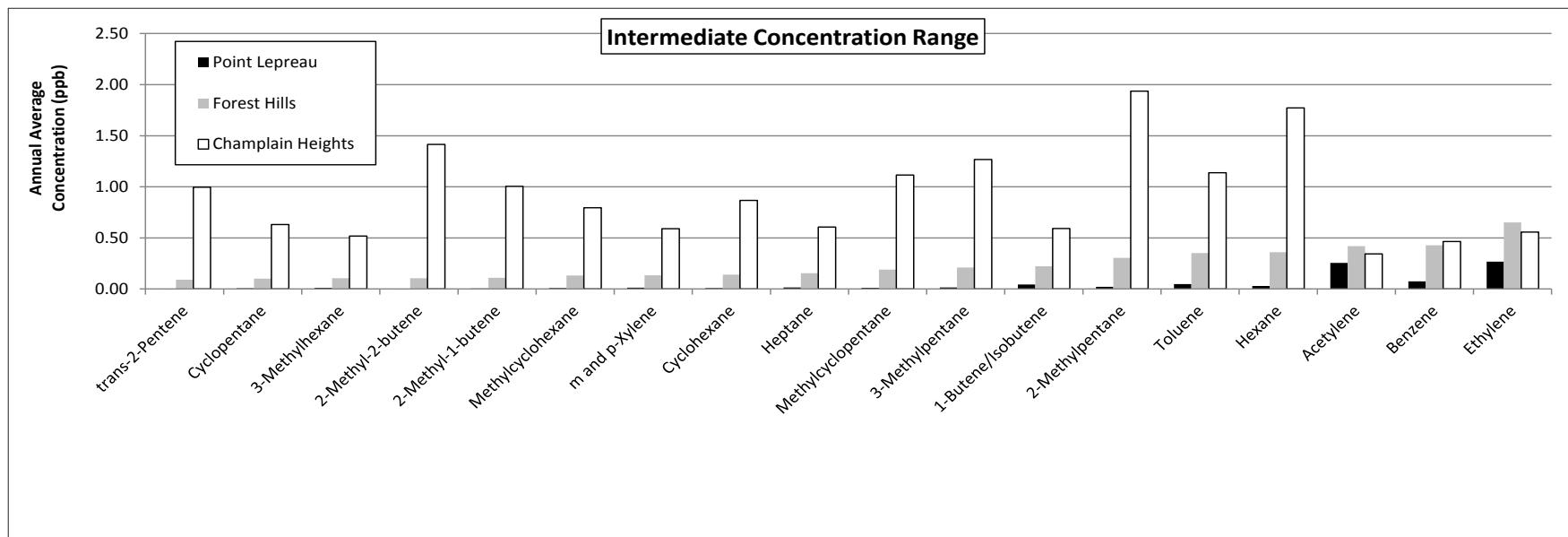
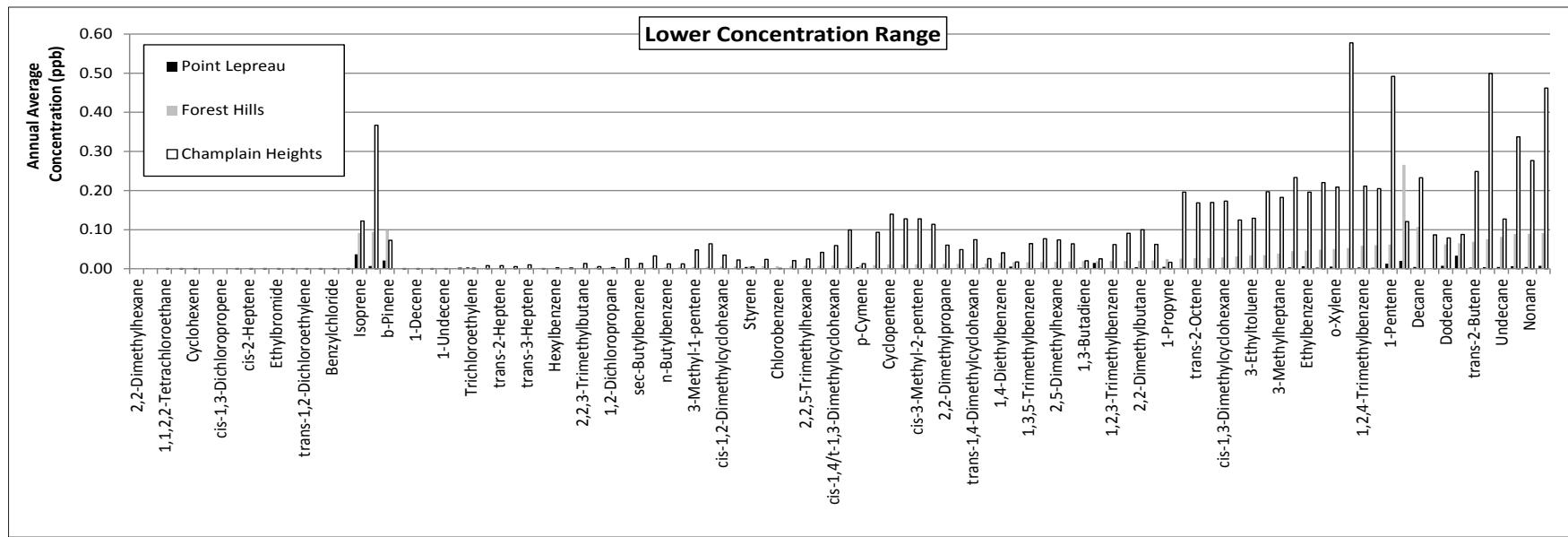
PART I: PROVINCIAL OPERATED NETWORKS - Volatile Organic Compounds - Saint John Region

Ozone Depleting Substances



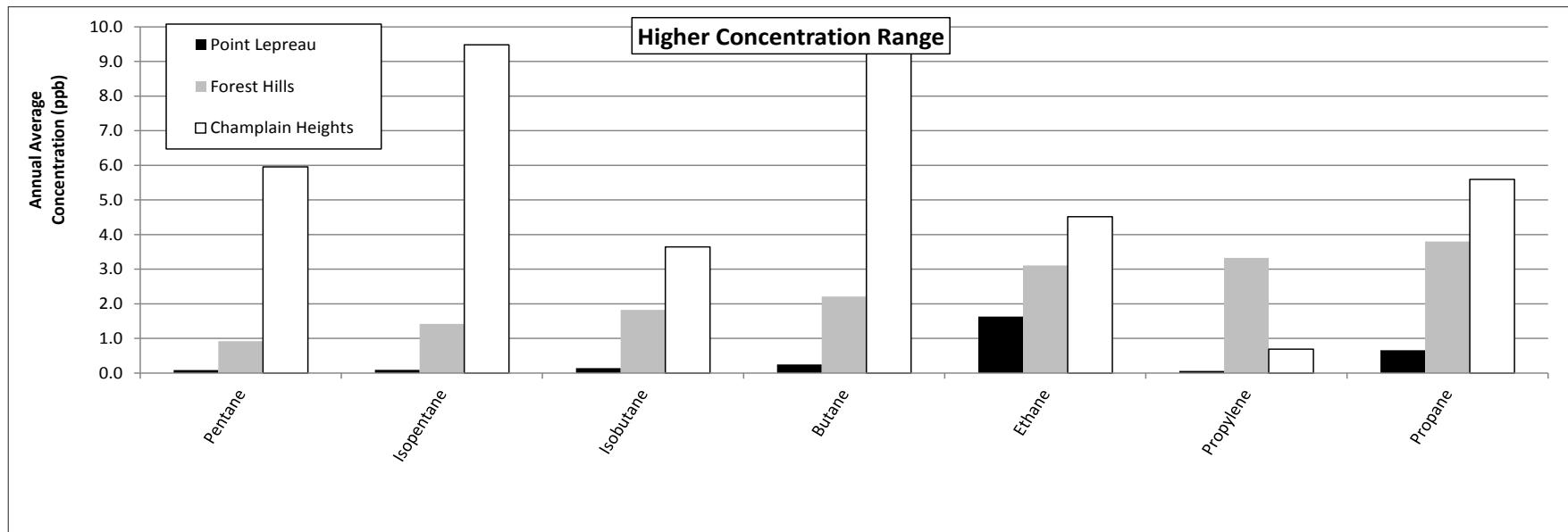
PART I: PROVINCIAL OPERATED NETWORKS - Volatile Organic Compounds - Saint John Region

Smog-Forming VOCs - 2012 Annual Average Concentration Range Charts



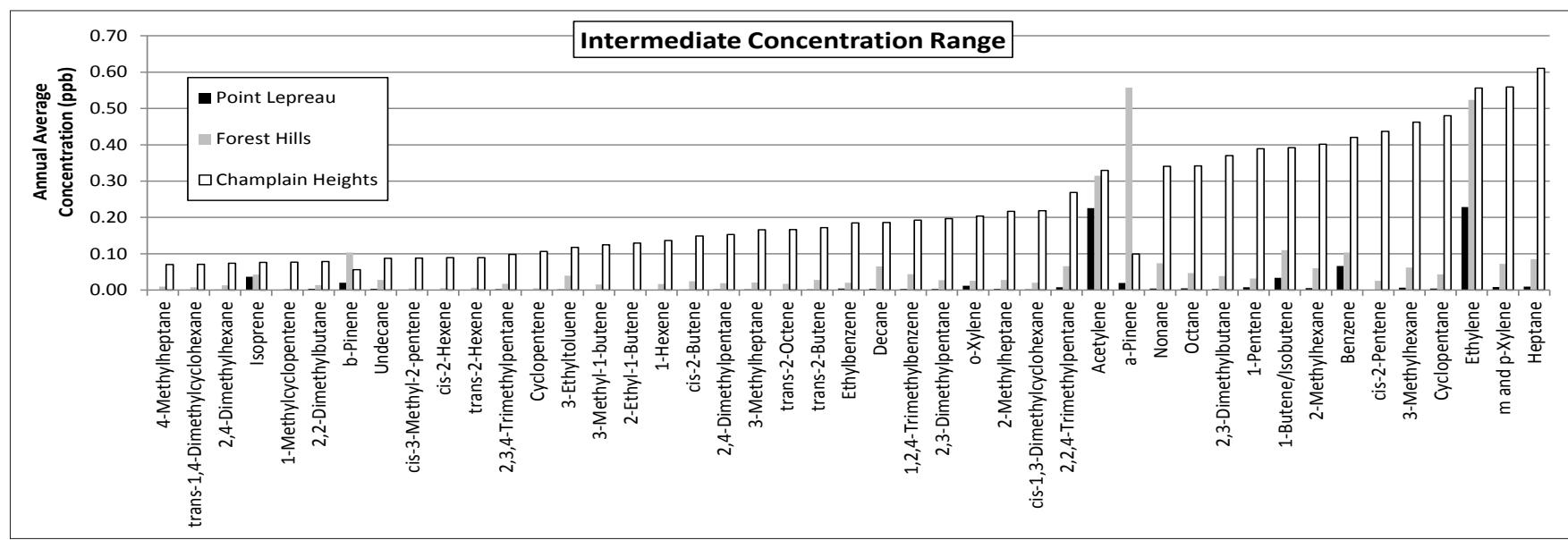
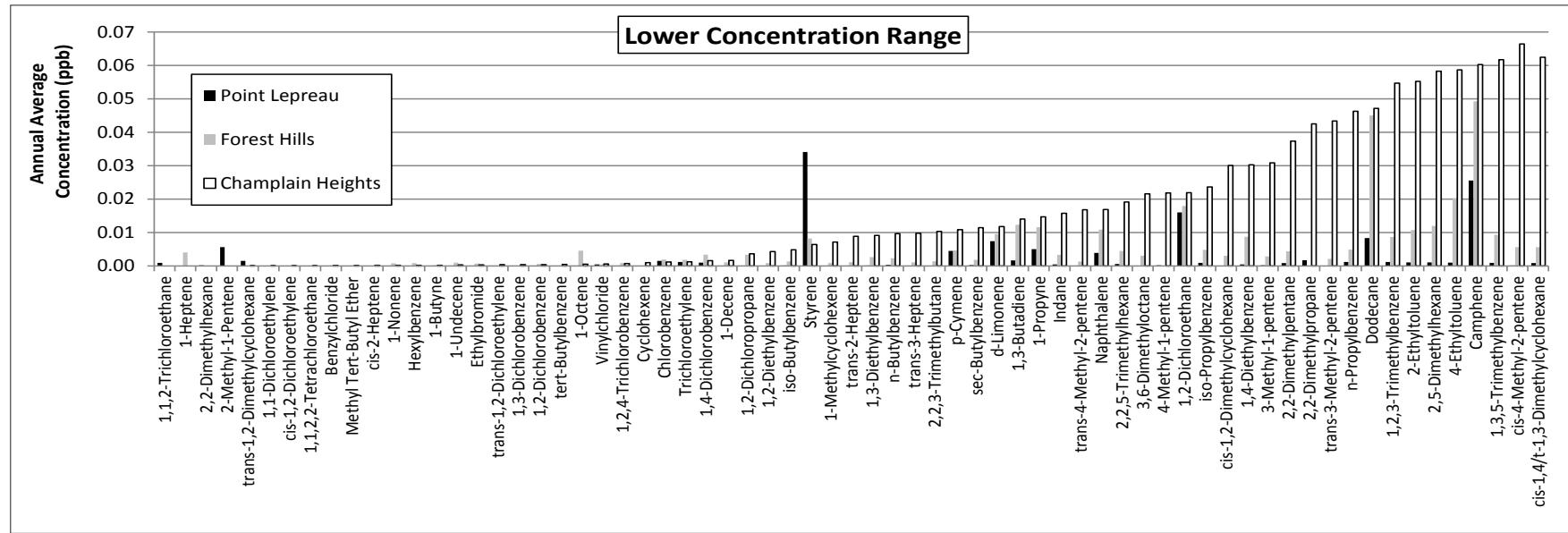
PART I: PROVINCIAL OPERATED NETWORKS - Volatile Organic Compounds - Saint John Region

Smog-Forming VOCs - 2012 Annual Average Concentration Range Charts



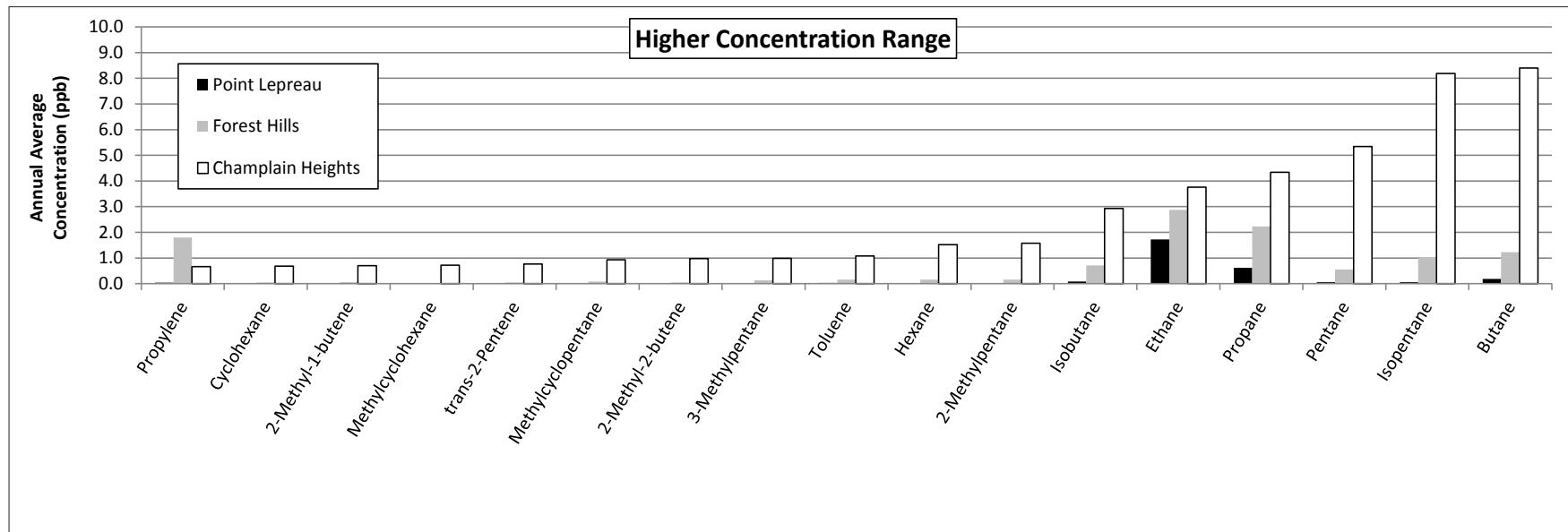
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Smog-Forming VOCs - 2013 Annual Average Concentration Range Charts



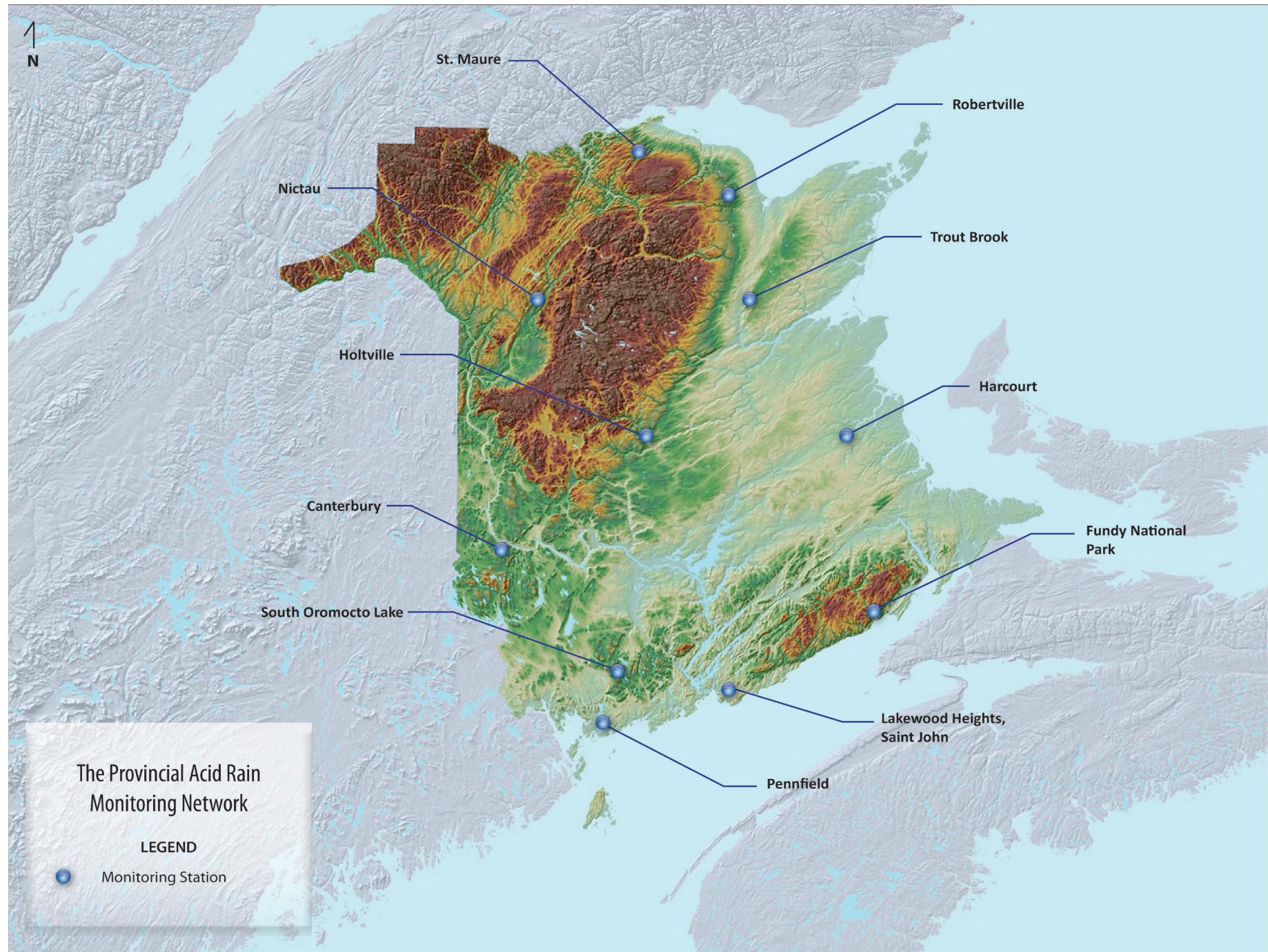
PART I: PROVINCIAL OPERATED NETWORKS - Volatile Organic Compounds - Saint John Region

Smog-Forming VOCs - 2013 Annual Average Concentration Range Charts



PART II:

ACID PRECIPITATION MONITORING NETWORK



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, 2004-2013

Site	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
St. Maure	184.90	262.51	251.96	244.51	253.52	176.43	177.00	168.80	120.53	121.30
Robertville	197.28	323.47	308.98	239.47	239.60	200.84	184.26	173.56	118.33	124.20
Nictau	196.80	224.63	274.52	184.48*	198.12	154.56	121.21	150.02	96.50	108.13
Trout Brook	156.94	264.01	262.48	210.02	195.52	163.08	135.17	134.02	101.20	100.78
Holtville	207.39	296.02	294.78	215.82	269.87	210.01	122.63	184.33	98.19	127.23
Harcourt	183.48	249.76	255.02	204.46	256.90	199.91	159.91	139.40	91.68	99.92
Canterbury	180.35	328.16	--	--	237.95	172.54	136.32	195.51	125.42	--
Coles Island	200.35	231.23	224.21	217.17	199.47	177.45	131.60	143.83	88.01	--
South Oromocto Lake	--	--	301.26	267.54	278.39	230.26	163.31	164.09	128.81	154.73
Pennfield	326.19	448.75	431.99	329.09	409.11	349.97	290.78	--	228.24	265.32
Lakewood Heights	322.64	340.69**	383.18	302.87	357.59	310.16	194.27	--	169.58	193.66
Fundy	334.86	436.28	446.06	332.23	428.04	322.81	226.37	263.55	208.08	249.13

-- 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, 2004-2013

Site	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
St. Maure	8.00	11.51	10.89	10.62	11.02	7.67	7.80	7.19	5.17	5.06
Robertville	8.56	14.20	13.34	10.49	10.32	8.76	8.06	7.38	4.92	5.17
Nictau	8.20	9.53	11.72	7.91*	8.21	6.44	5.01	6.07	3.77	4.25
Trout Brook	6.68	11.33	11.28	9.17	8.26	6.91	5.69	5.49	4.09	4.01
Holtville	8.83	12.63	12.64	9.26	11.43	8.93	4.99	7.52	3.88	5.02
Harcourt	7.78	10.72	10.90	8.79	10.92	8.52	6.76	5.69	3.67	3.92
Canterbury	7.52	13.86	---	---	9.92	7.29	5.49	8.00	4.92	---
Coles Island	8.64	9.86	9.62	9.38	8.39	7.43	5.44	5.84	3.45	---
South Oromocto Lake	---	---	12.96	11.55	11.89	9.80	6.77	6.73	5.16	6.24
Pennfield	14.01	19.67	18.85	14.41	17.81	15.20	12.49	---	9.65	11.28
Lakewood Heights	14.07	14.79**	16.64	13.32	15.67	13.48	8.29	---	7.20	8.20
Fundy	14.40	19.00	19.51	14.53	18.79	13.91	9.65	11.20	8.86	10.64

-- 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, 2004-2013

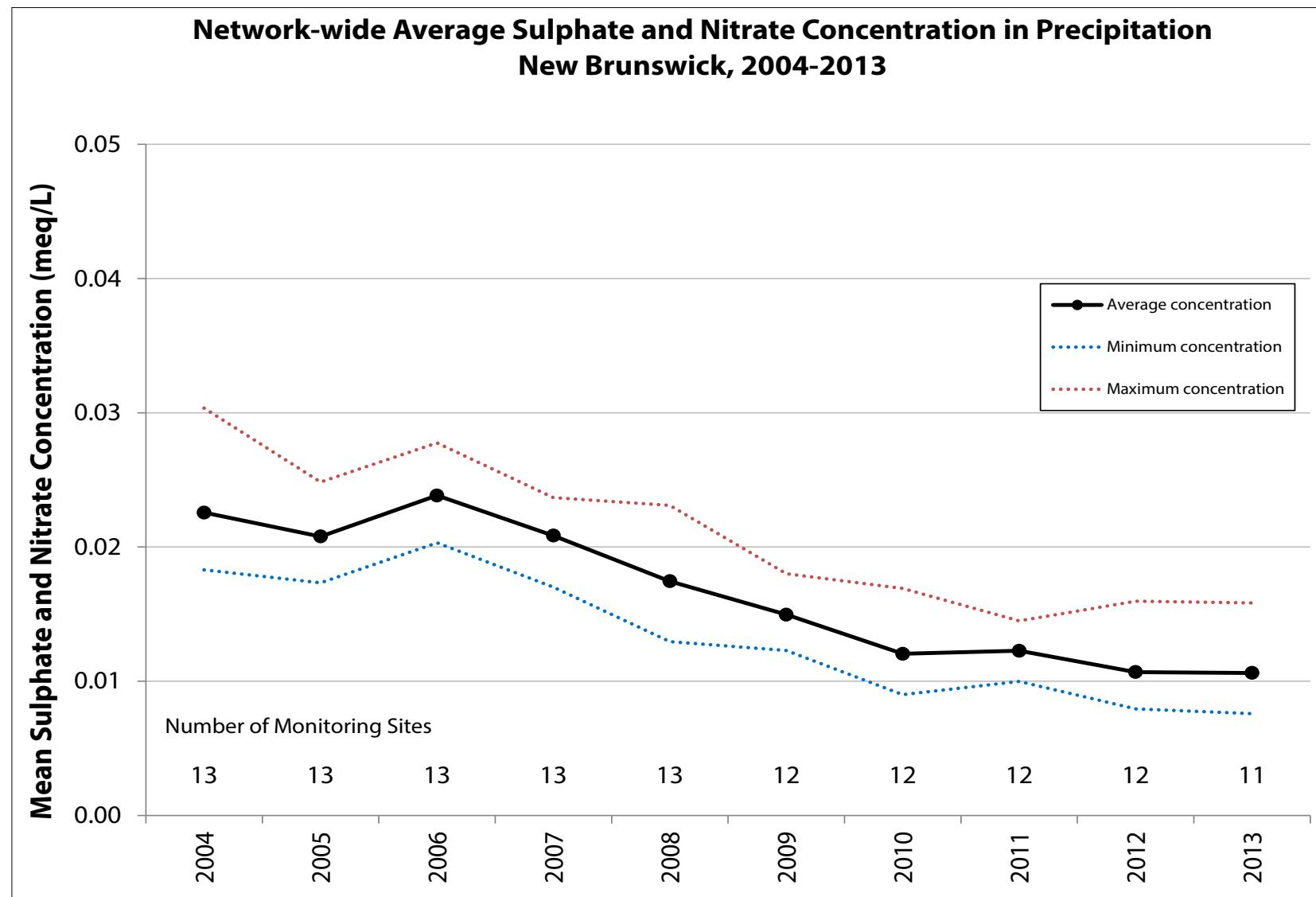
Site	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
St. Maure	1.13	1.42	1.56	1.45	1.50	1.03	0.90	1.18	0.80	0.99
Robertville	1.18	1.73	1.94	1.31	1.53	1.15	1.02	1.24	0.99	1.03
Nictau	1.62	1.63	1.90	1.23*	1.69	1.27	1.05	1.46	1.12	1.23
Trout Brook	1.11	1.75	1.71	1.18	1.47	1.19	1.04	1.23	1.00	1.07
Holtville	1.46	2.05	1.96	1.43	1.98	1.50	1.16	1.72	1.08	1.41
Harcourt	1.33	1.65	1.75	1.34	1.84	1.40	1.19	1.30	0.95	1.14
Canterbury	1.47	2.45	---	---	1.95	1.29	1.36	1.80	1.43	---
Coles Island	1.27	1.61	1.48	1.36	1.53	1.41	1.14	1.38	1.01	---
South Oromocto Lake	---	---	1.95	1.68	1.92	1.63	1.39	1.49	1.33	1.54
Pennfield	2.15	2.43	2.45	1.80	2.38	2.08	1.90	---	1.70	1.89
Lakewood Heights	1.84	2.03**	2.27	1.59	1.95	1.84	1.35	---	1.22	1.42
Fundy	2.18	2.53	2.48	1.84	2.29	2.06	1.58	1.89	1.46	1.71

-- insufficient data

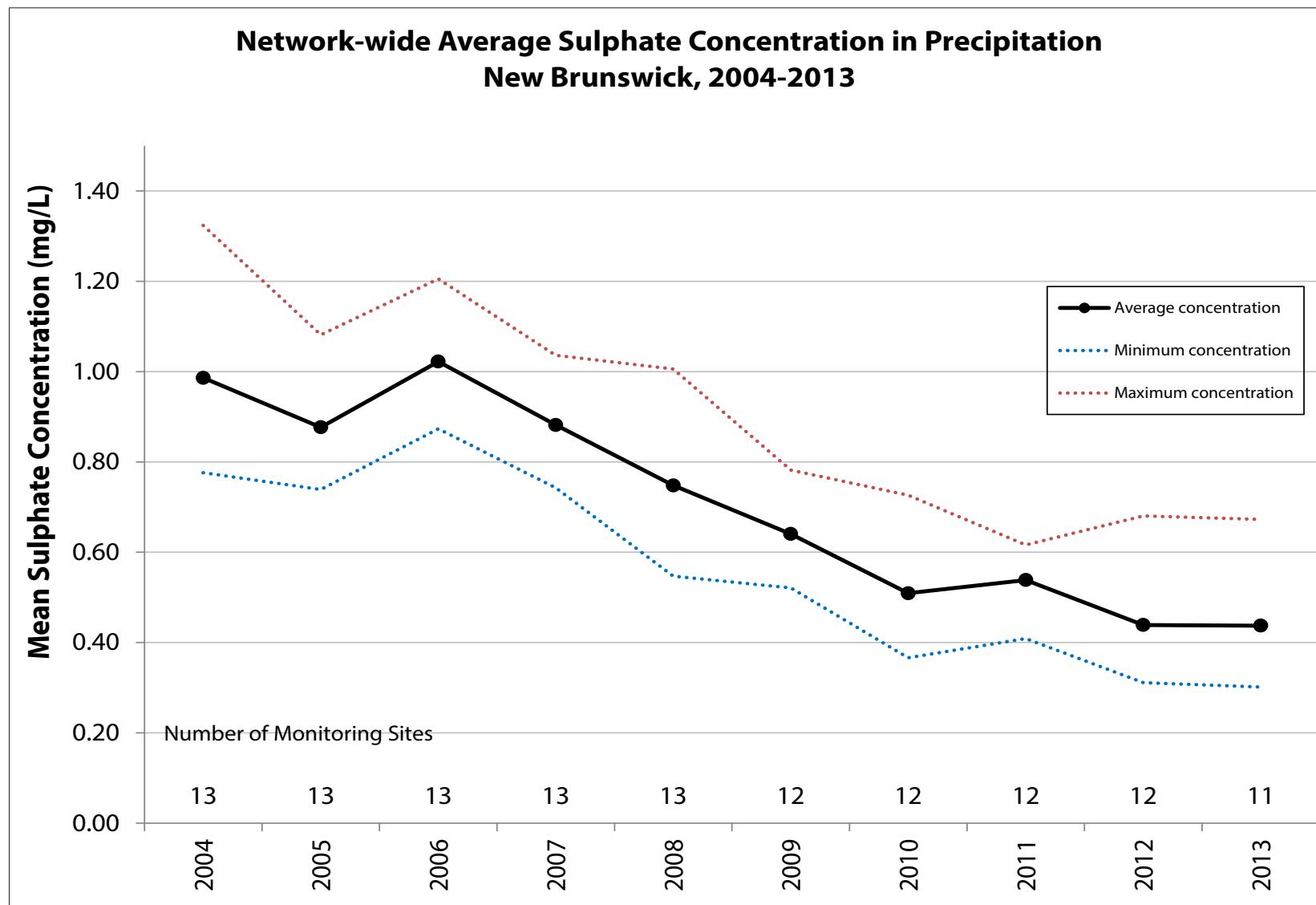
*49 Weeks

**48 Weeks

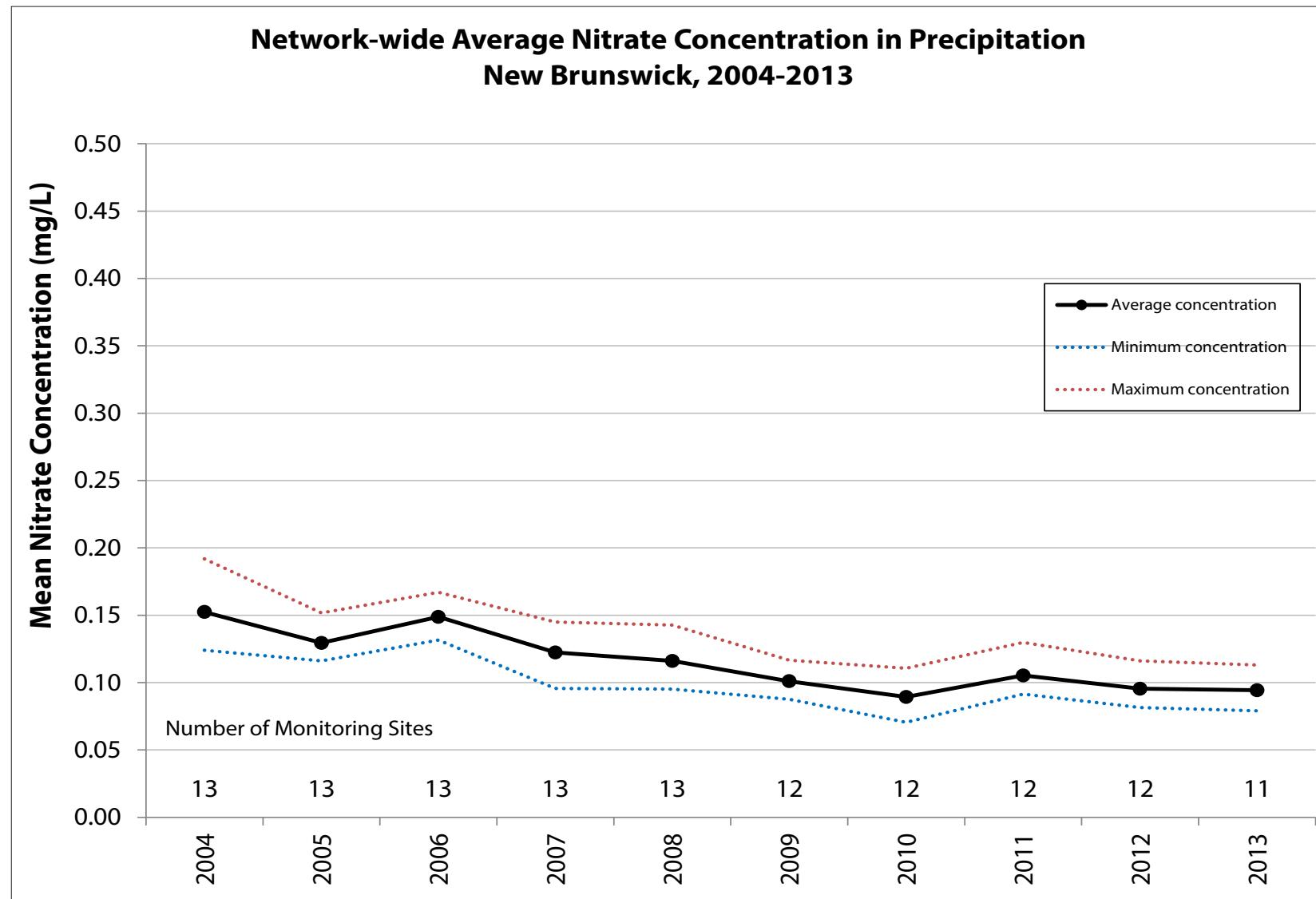
PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends



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

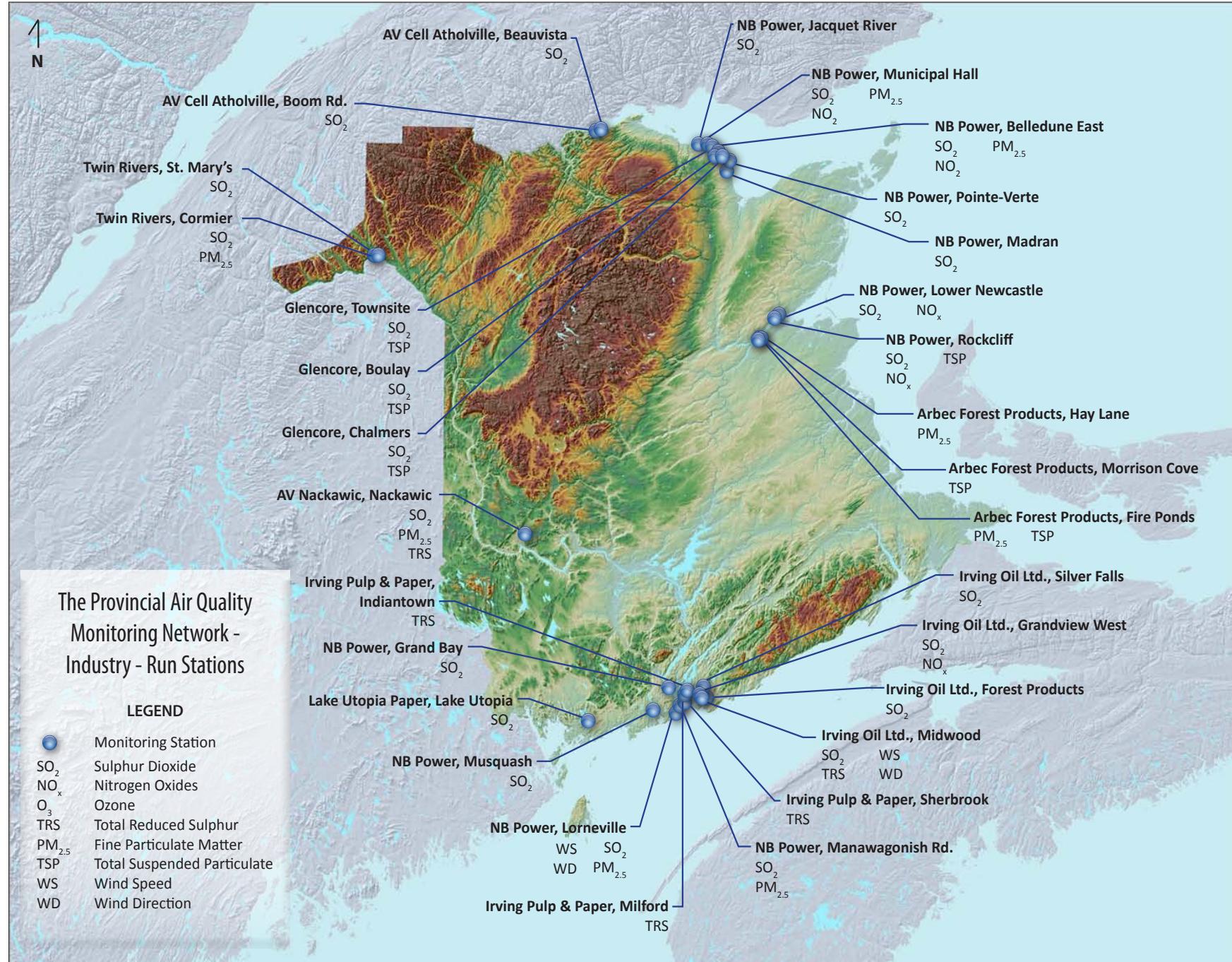


PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends

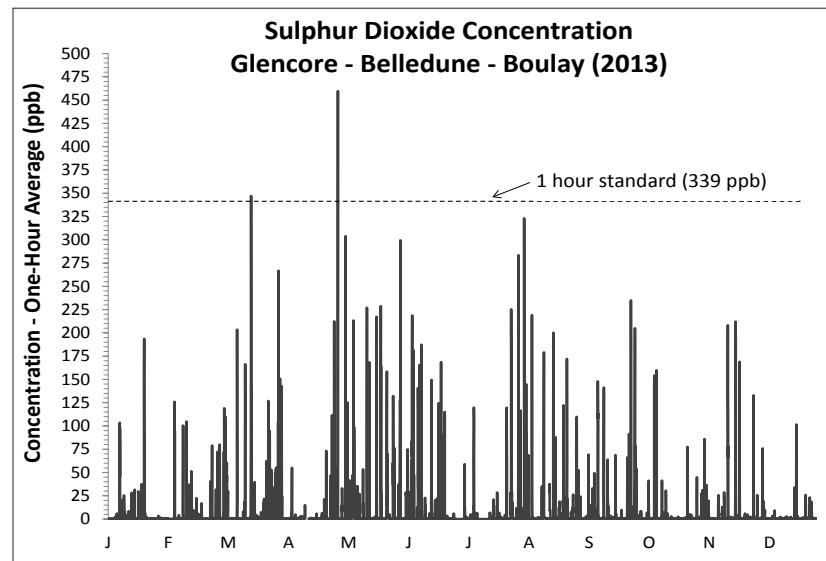
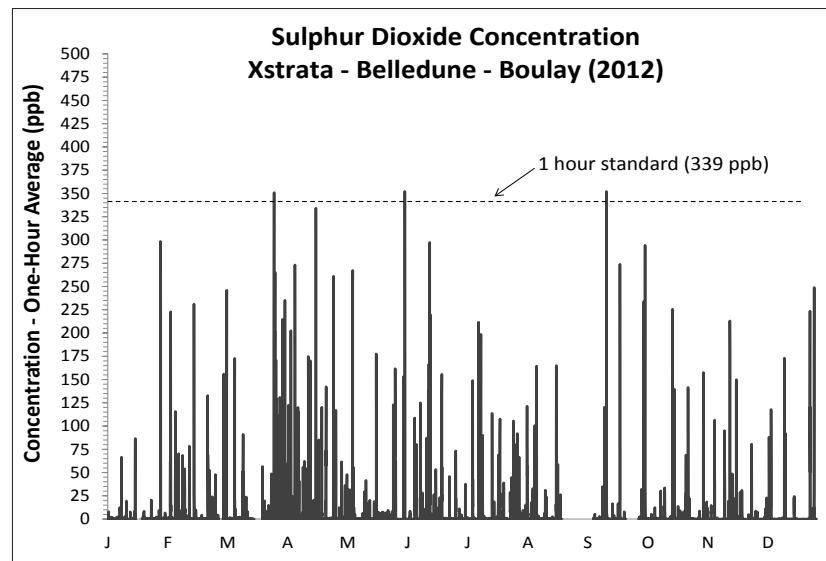
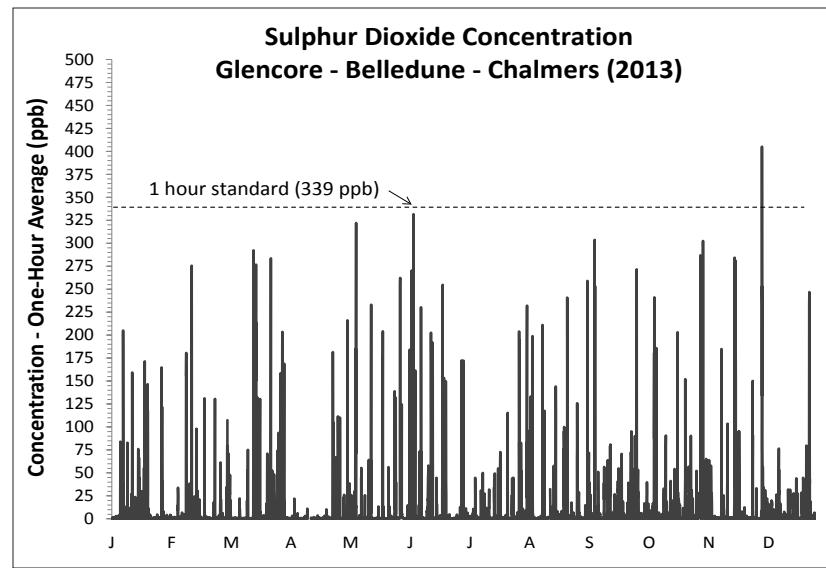
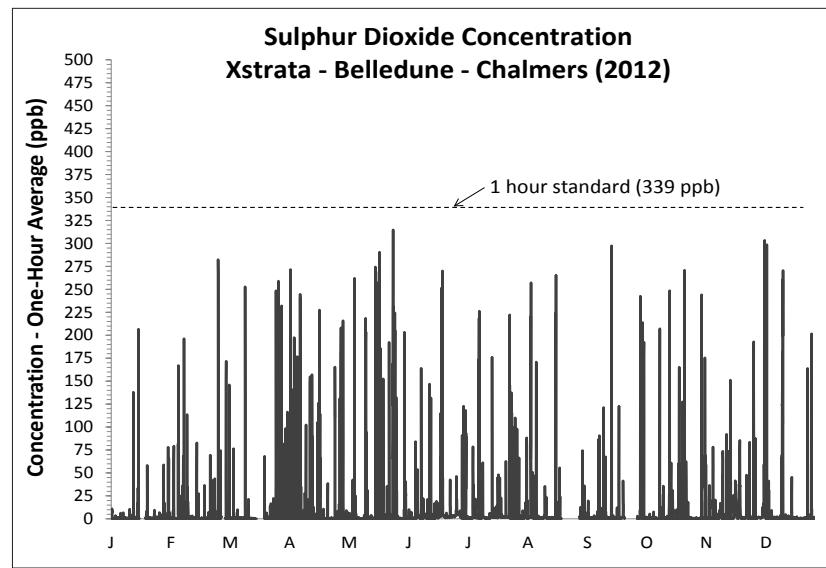


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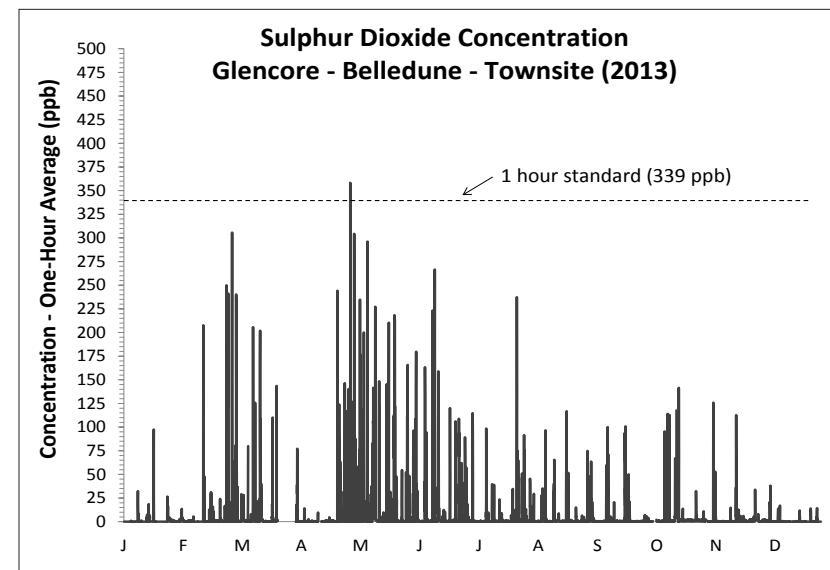
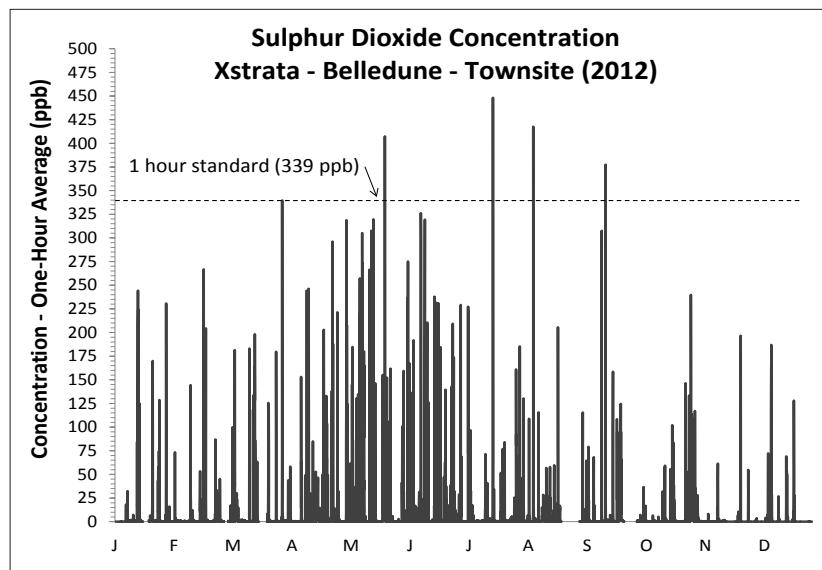
INDUSTRY-OPERATED AIR QUALITY MONITORING NETWORKS



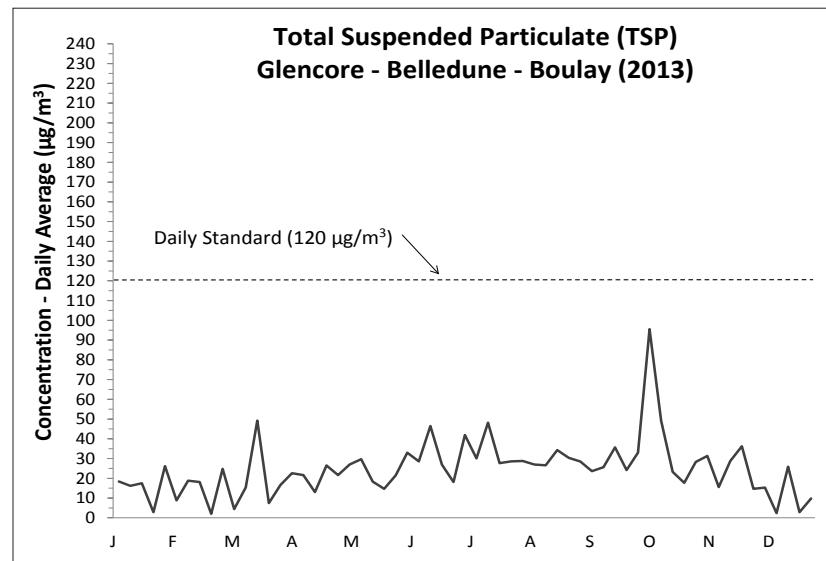
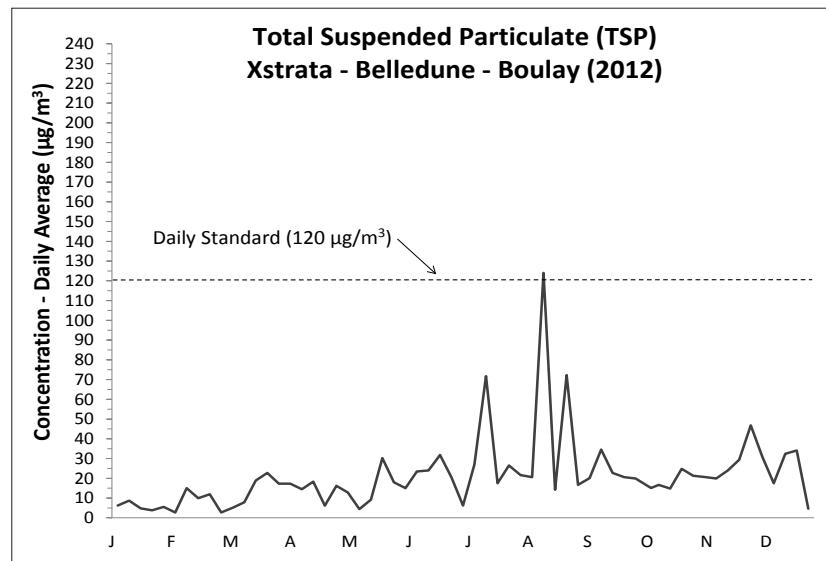
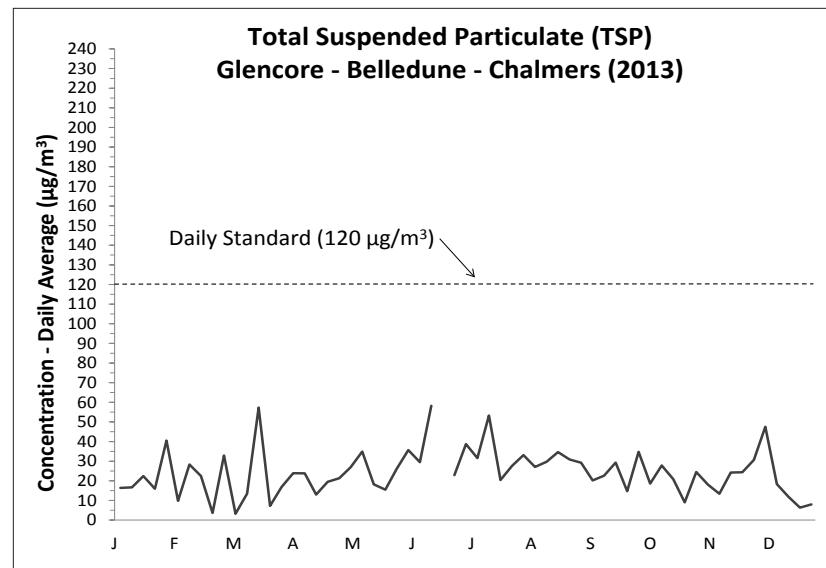
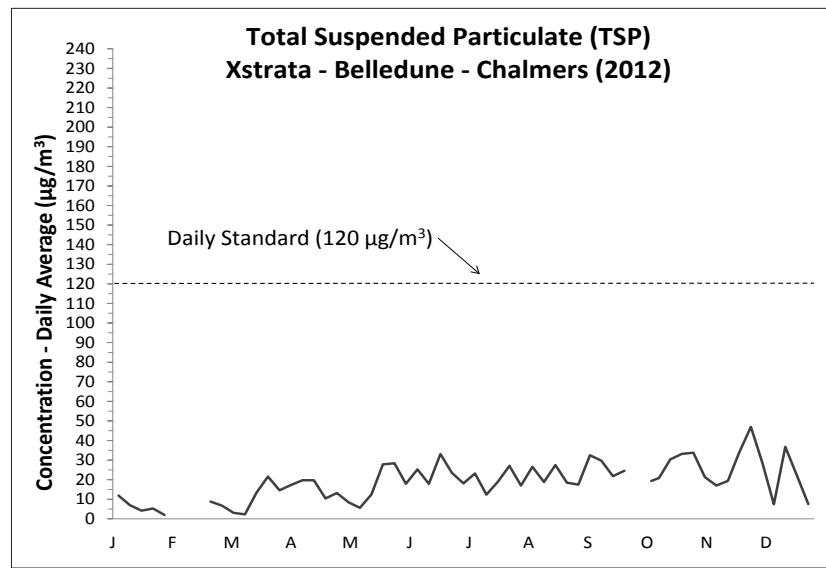
PART III: INDUSTRY-OPERATED NETWORKS - Glencore, Belledune - Sulphur Dioxide



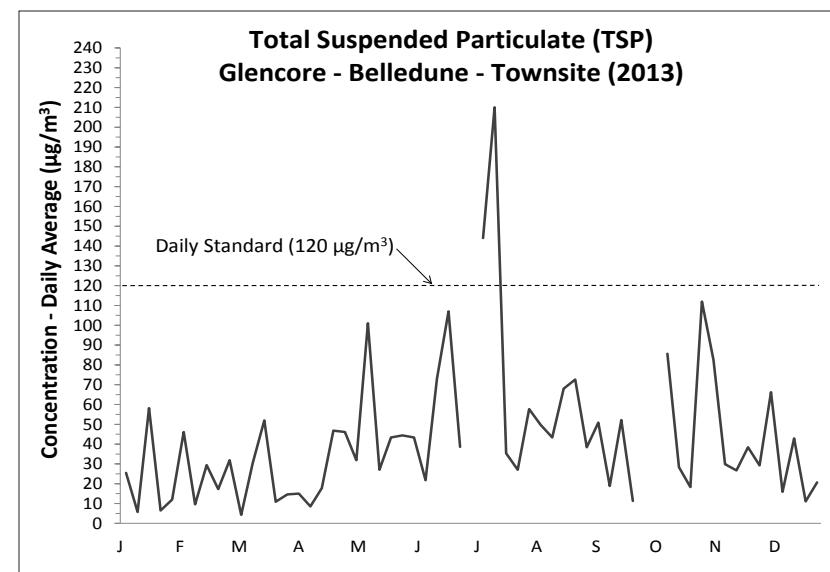
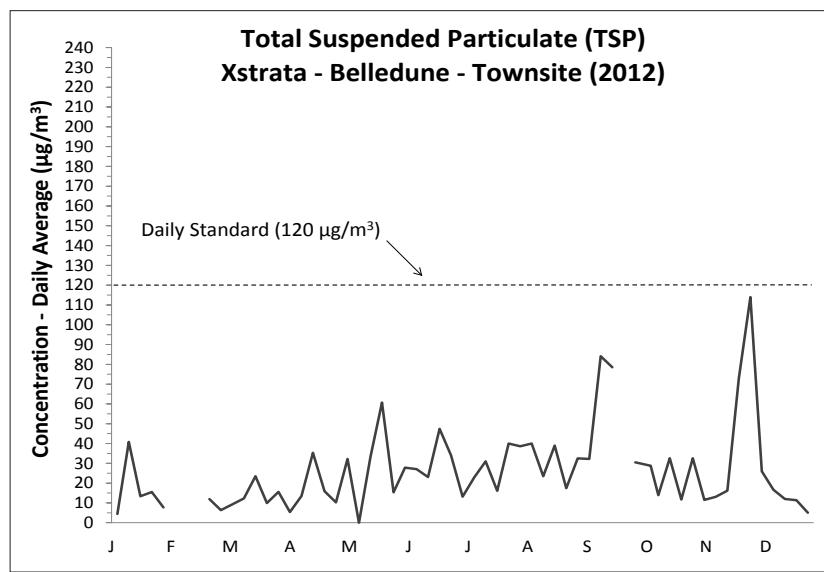
PART III: INDUSTRY-OPERATED NETWORKS - Glencore, Belledune - Sulphur Dioxide



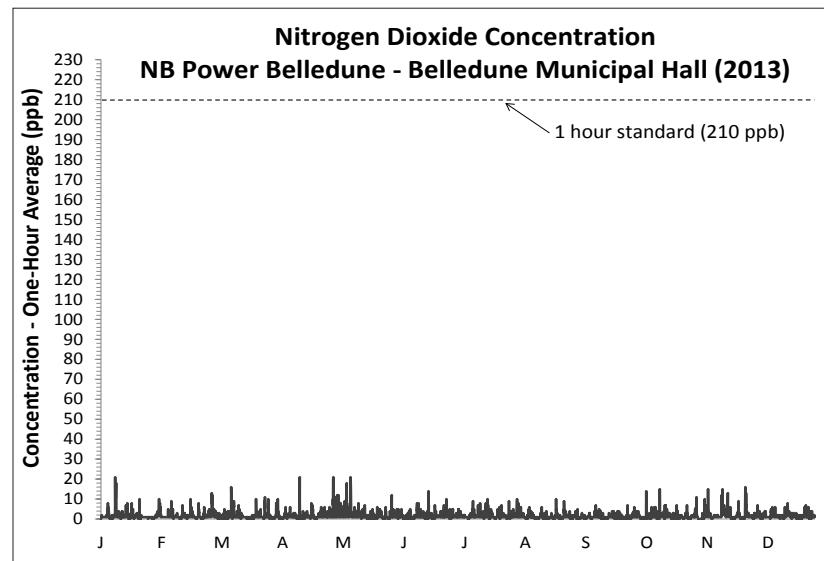
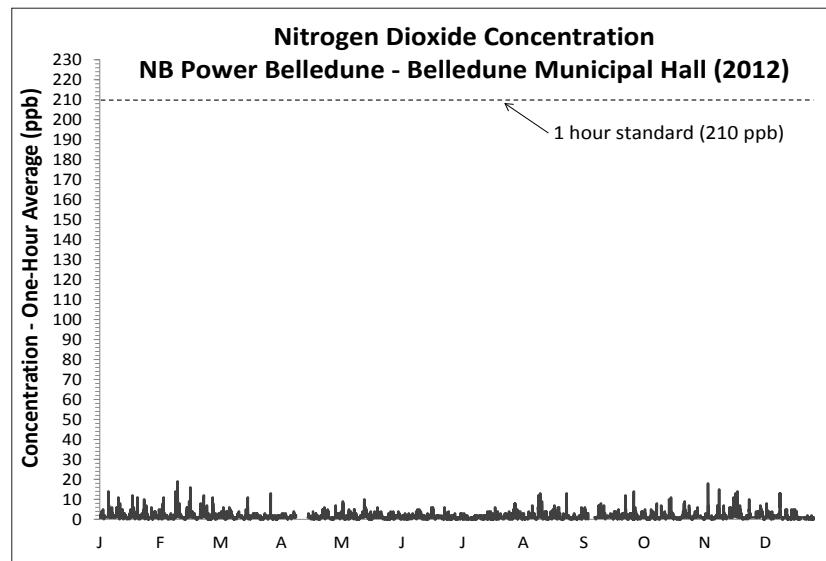
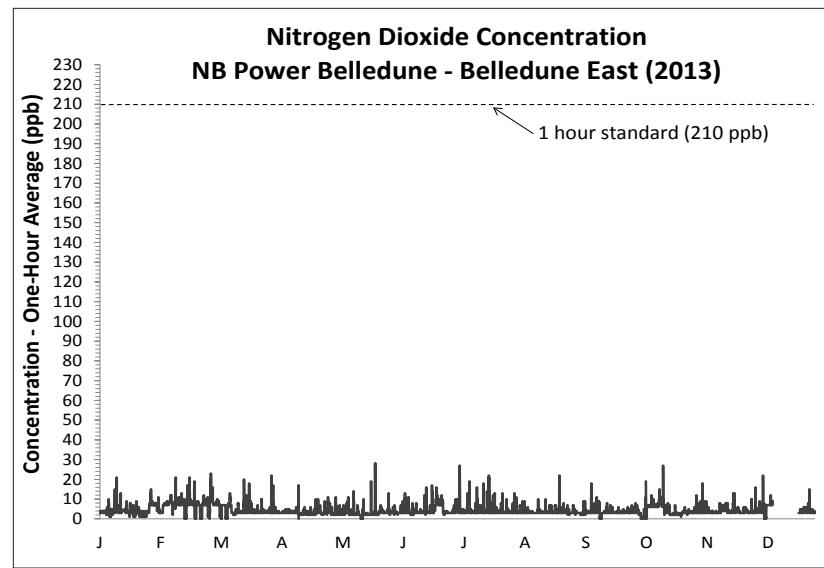
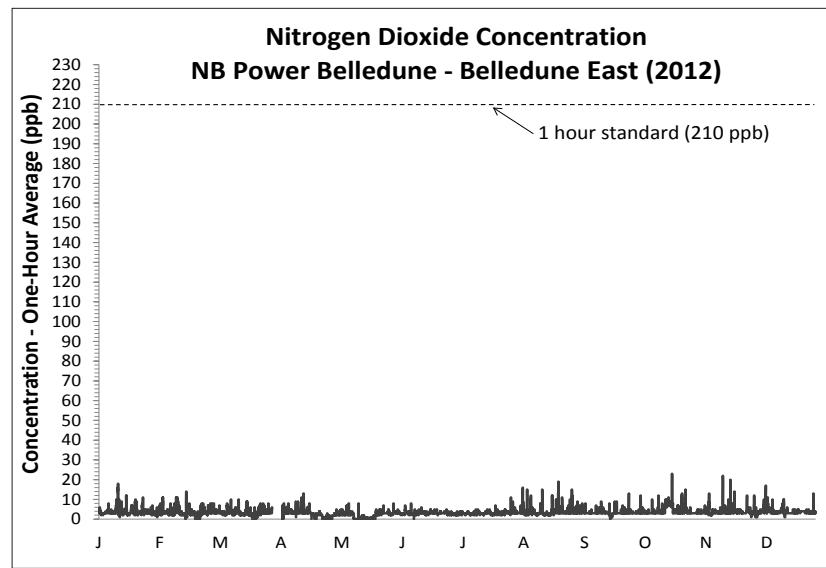
PART III: INDUSTRY-OPERATED NETWORKS - Glencore, Belledune - Total Suspended Particulate



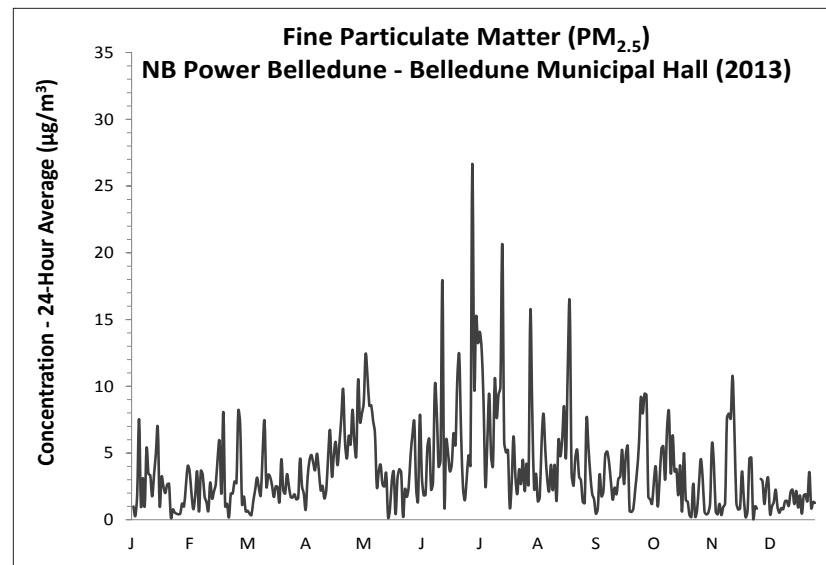
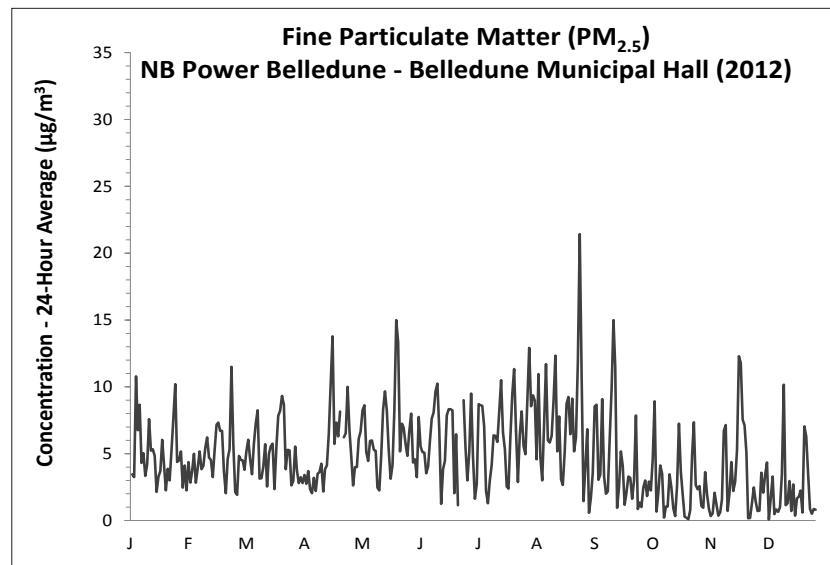
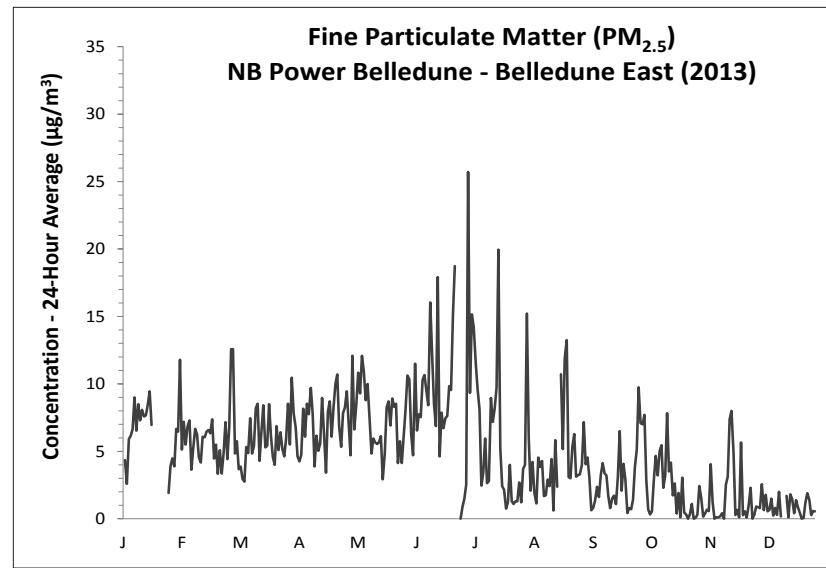
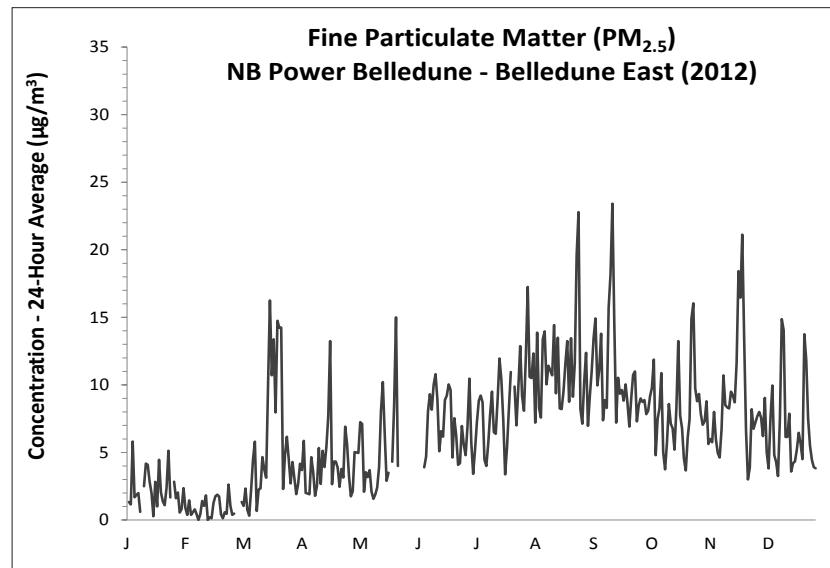
PART III: INDUSTRY-OPERATED NETWORKS - Glencore Xstrata, Belledune - Total Suspended Particulate



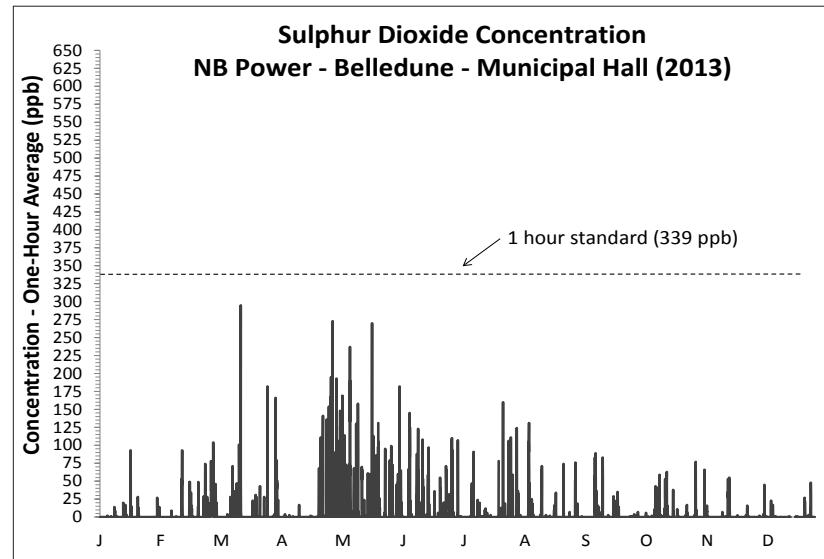
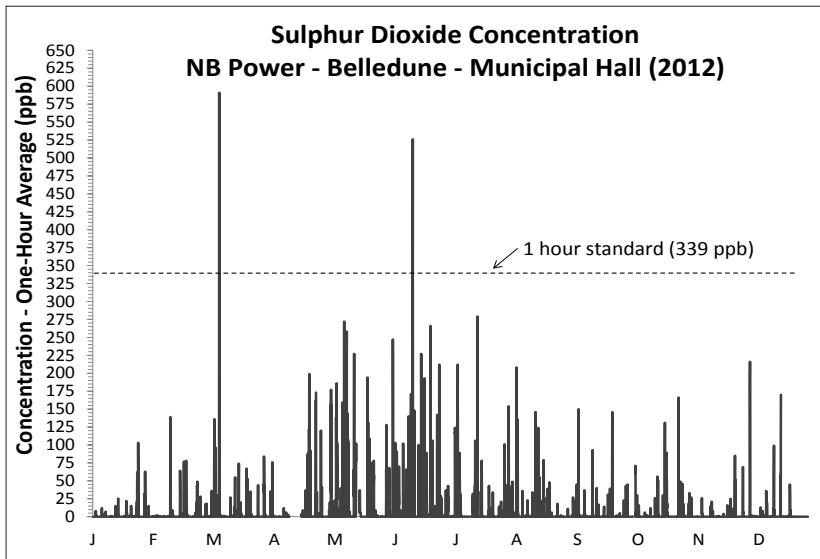
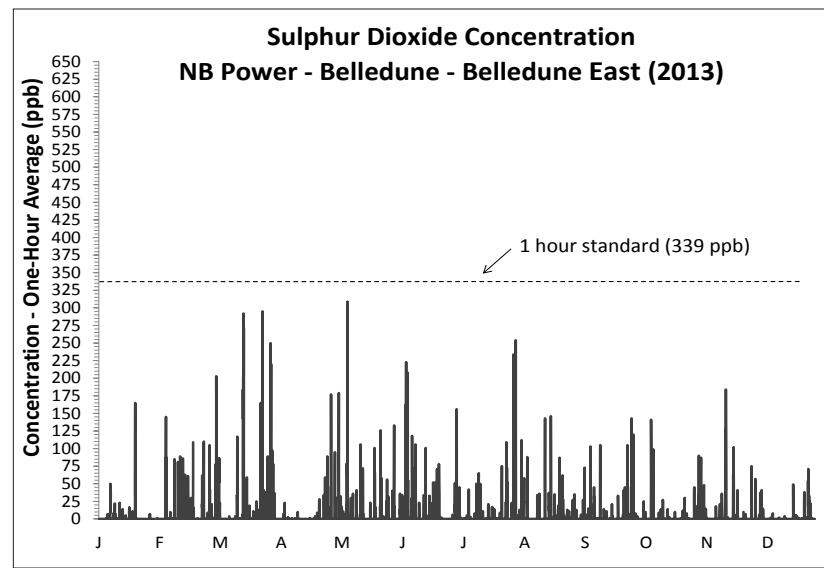
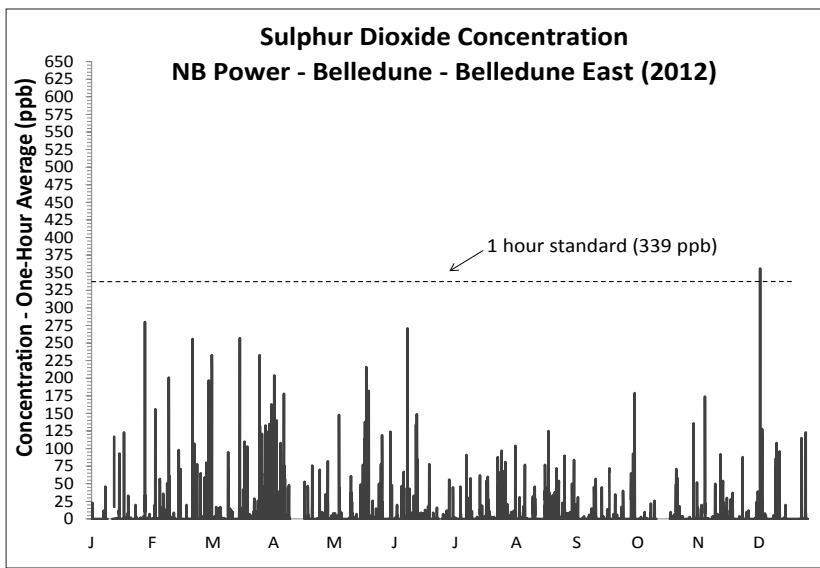
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Nitrogen Dioxide



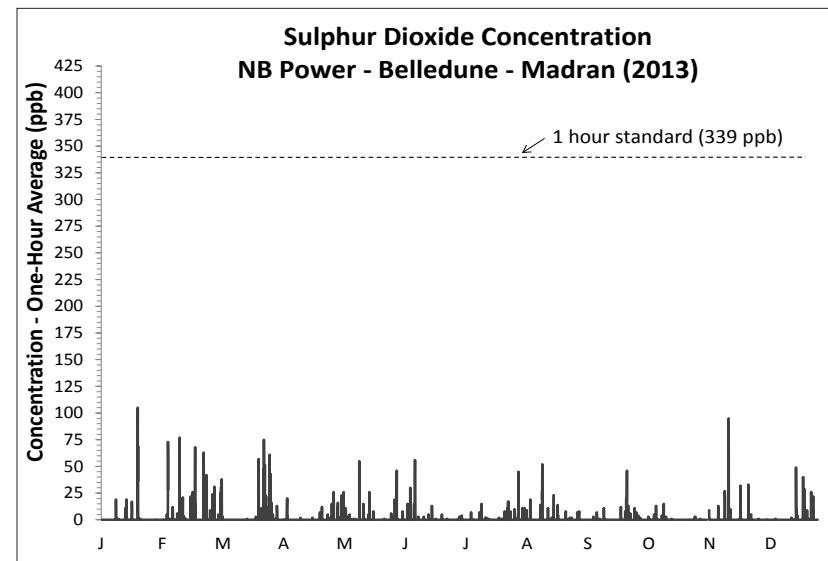
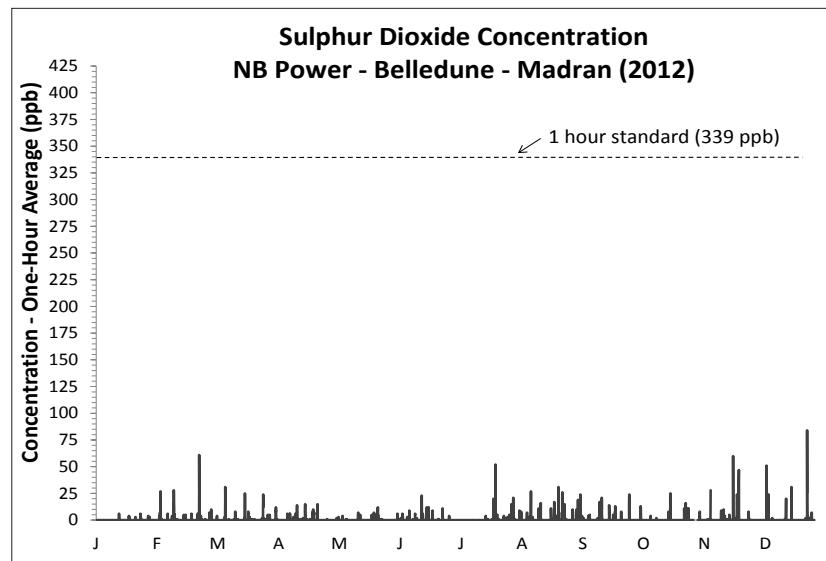
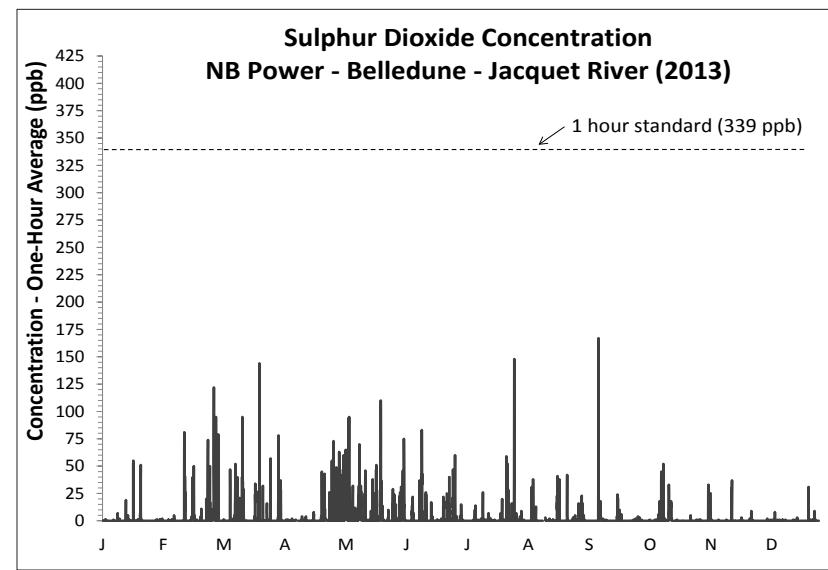
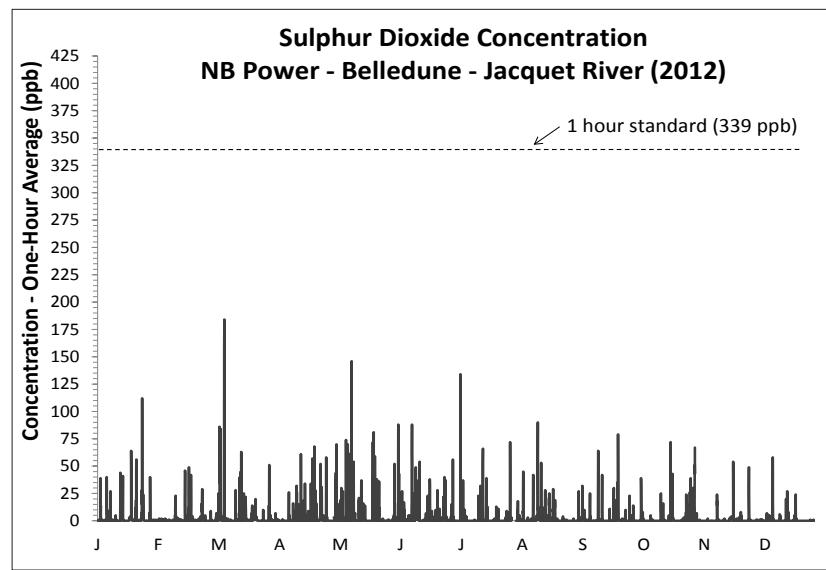
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Fine Particulate Matter



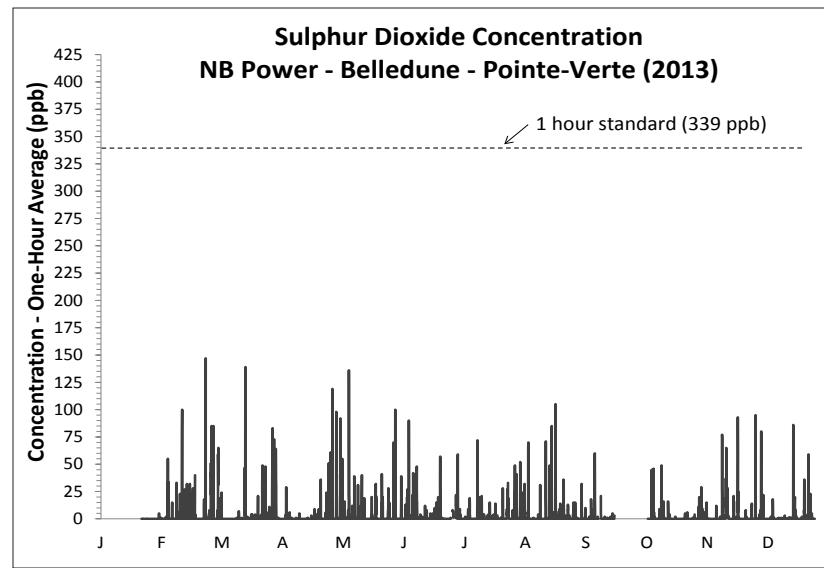
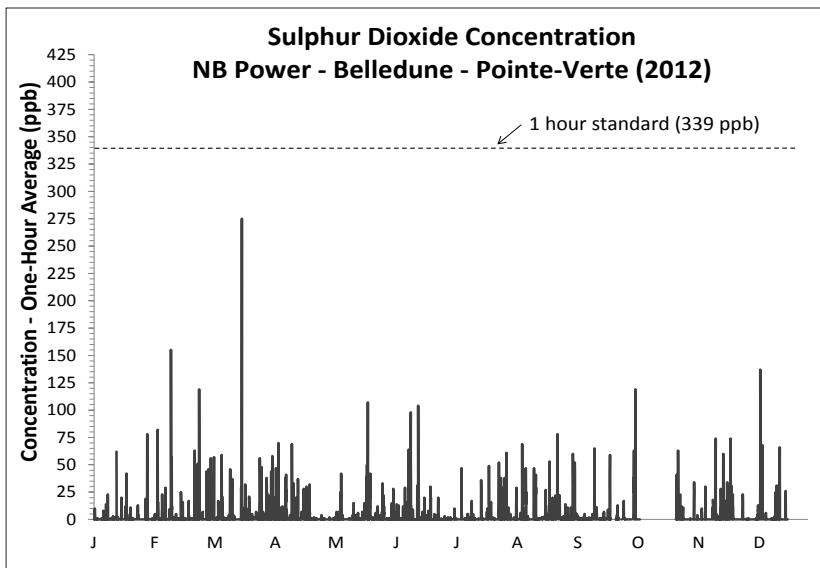
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Sulphur Dioxide



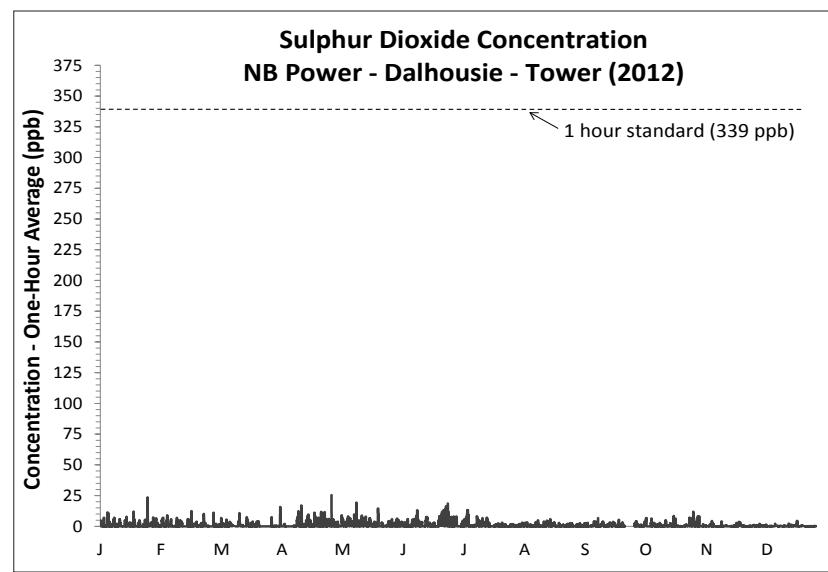
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Sulphur Dioxide



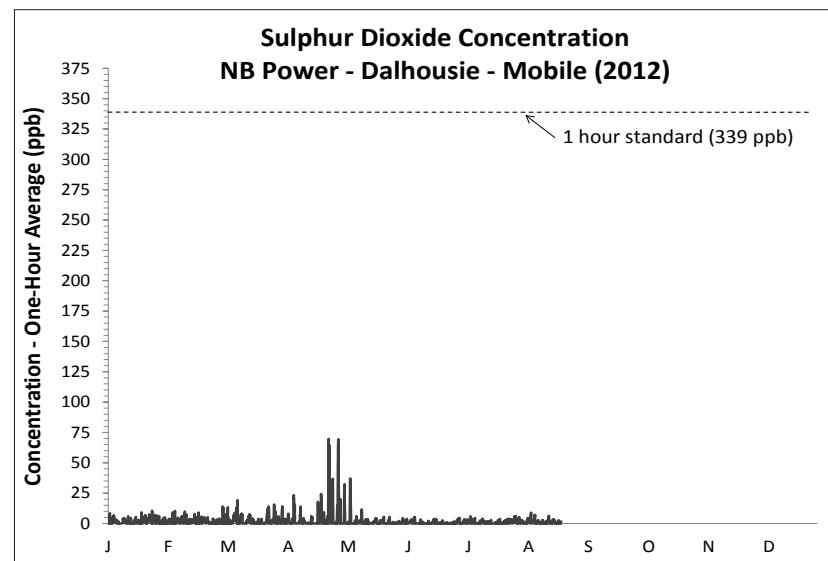
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Belledune - Sulphur Dioxide



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

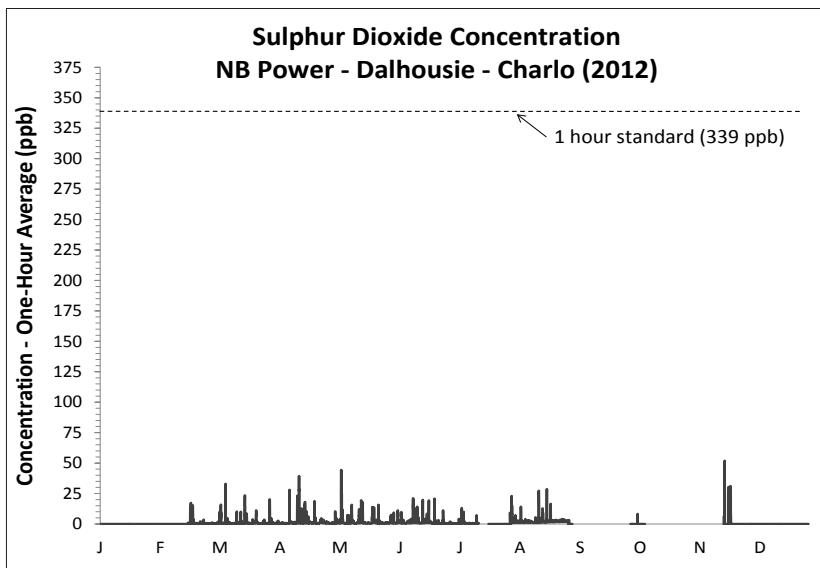


Facility closure- data not available

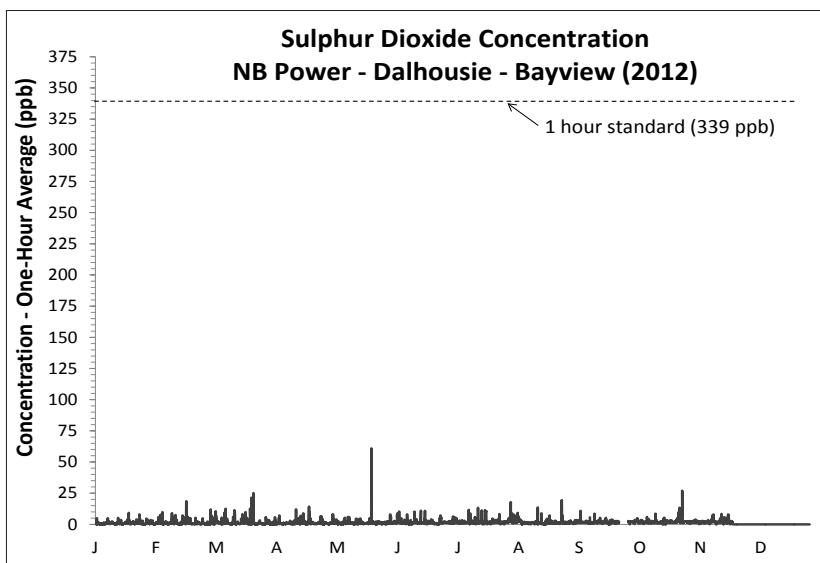


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PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Dalhousie - Sulphur Dioxide

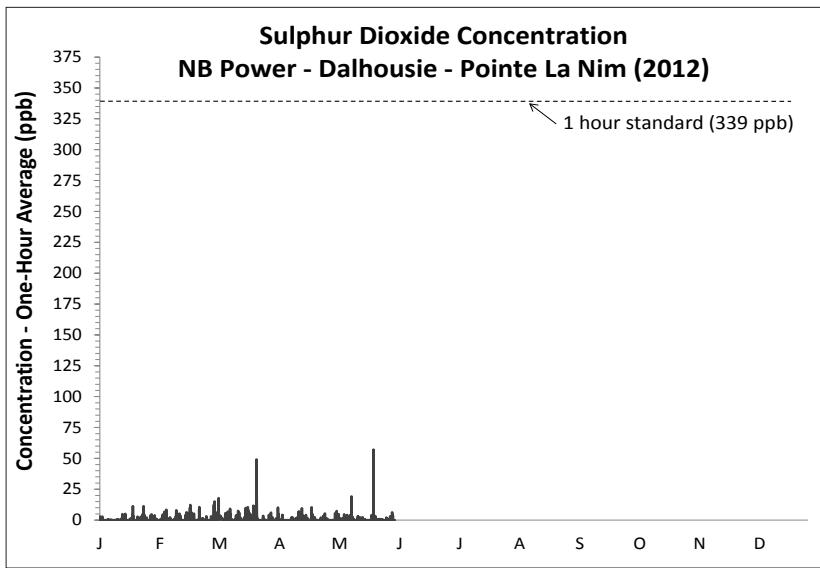


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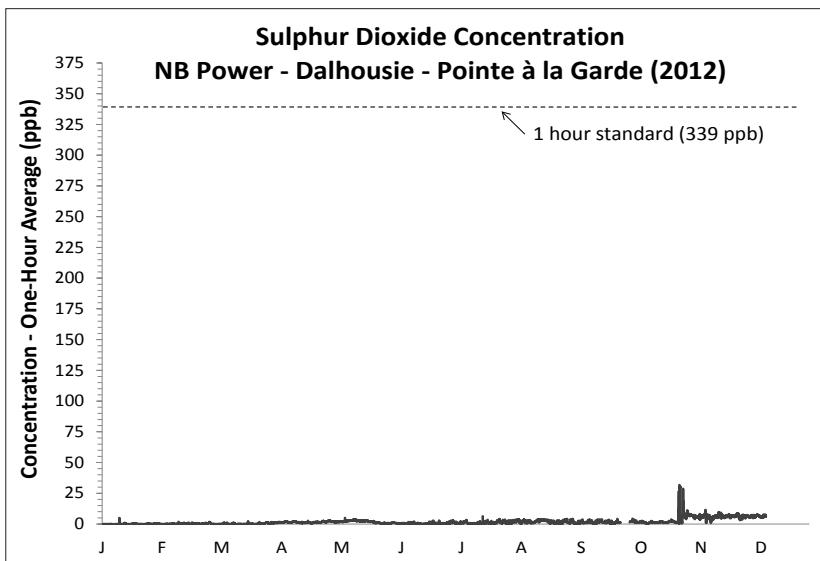


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PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Dalhousie - Sulphur Dioxide

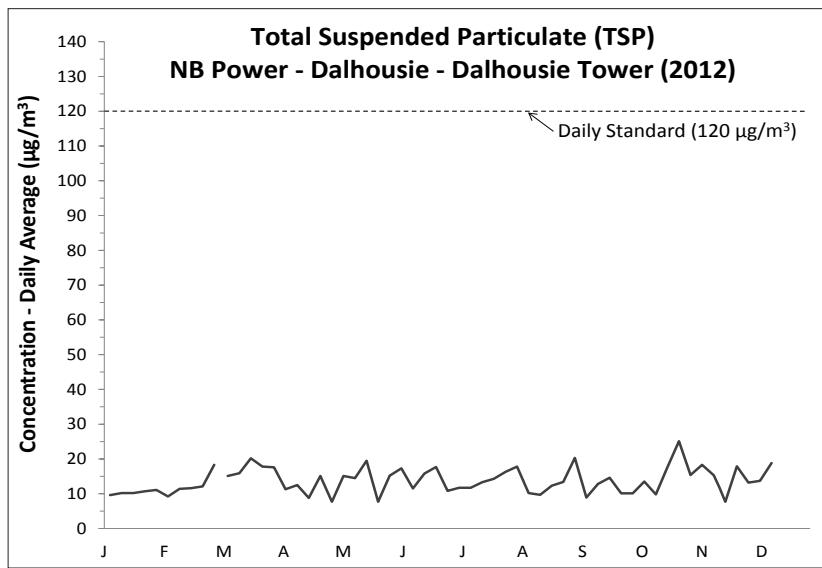


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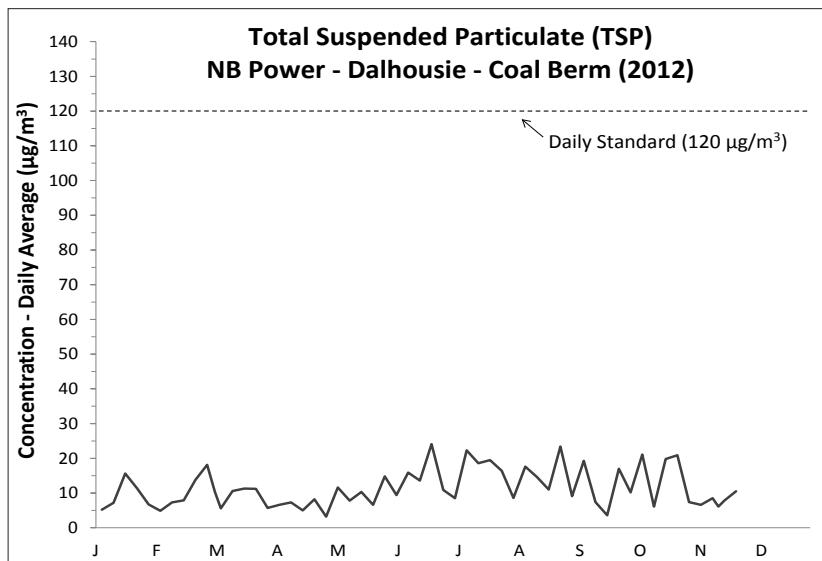


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PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Dalhousie - Total Suspended Particulate

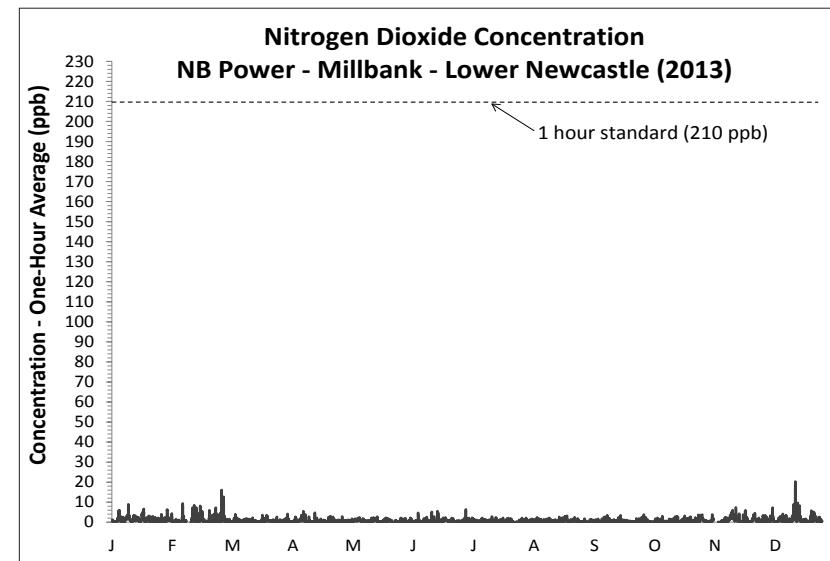
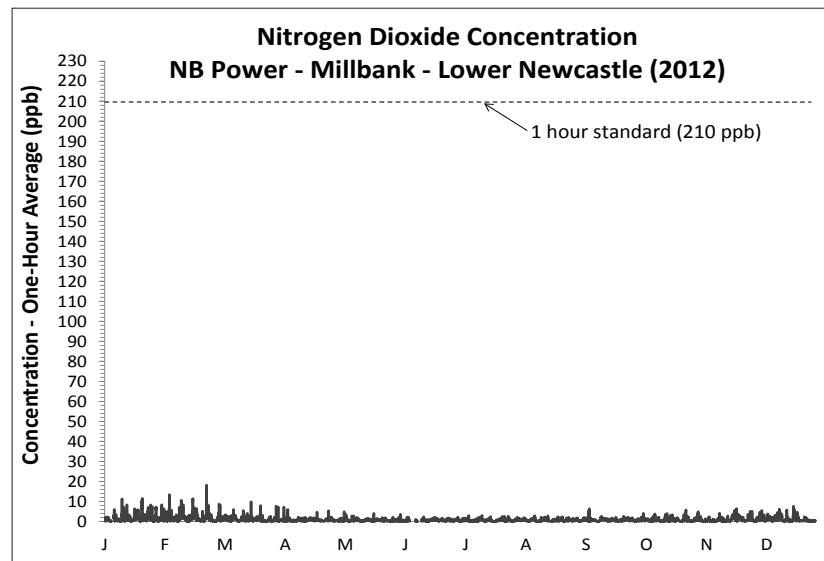
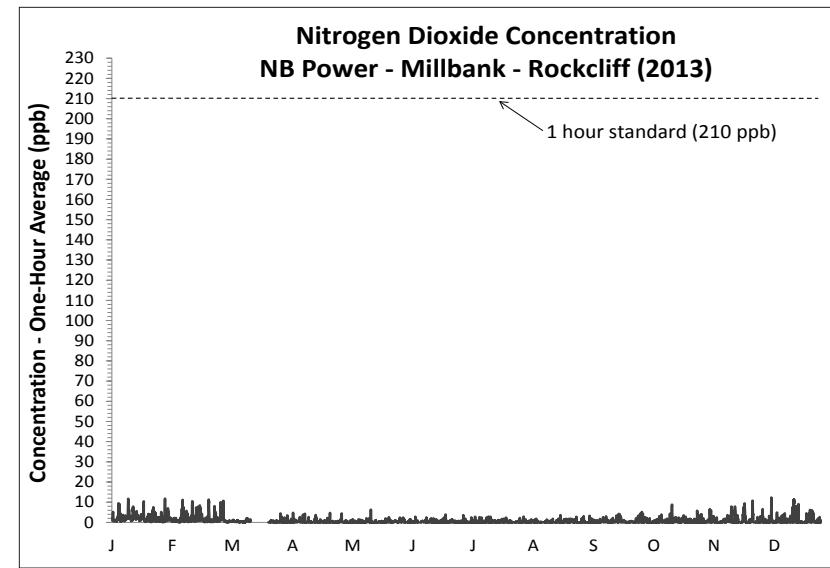
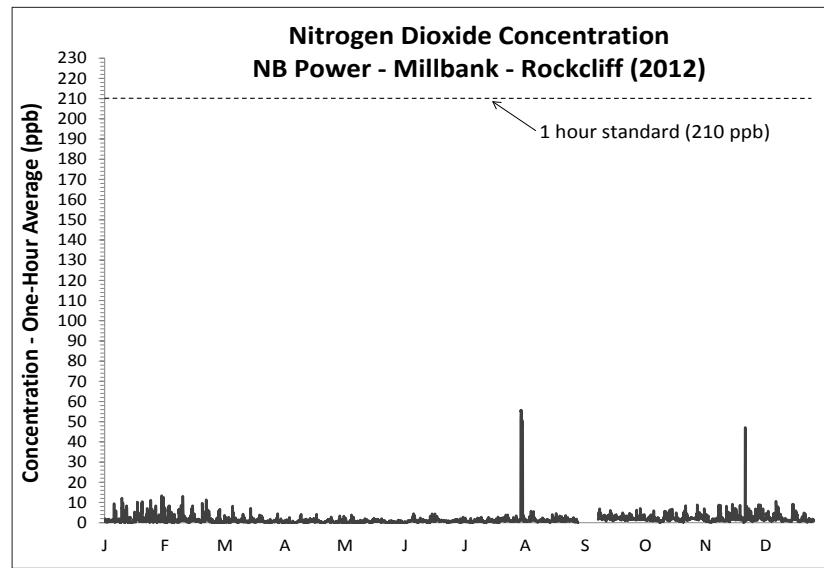


Facility closure- data not available

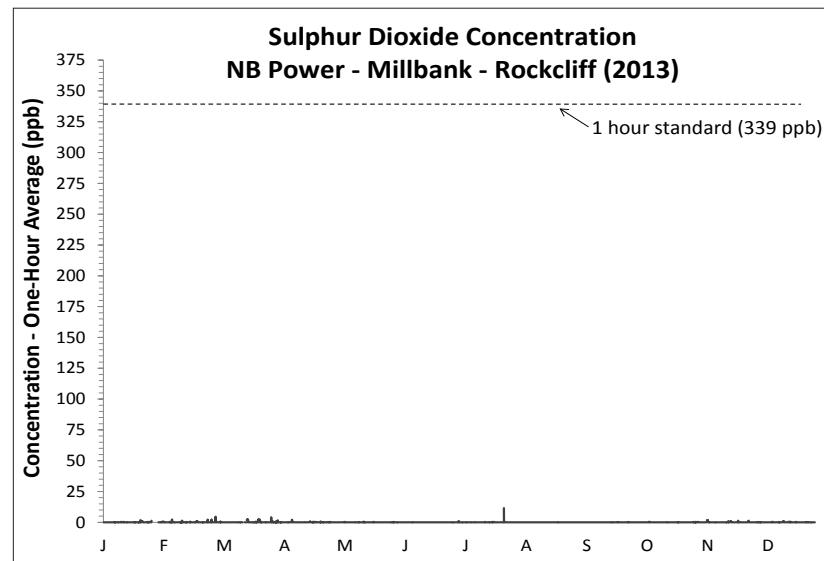
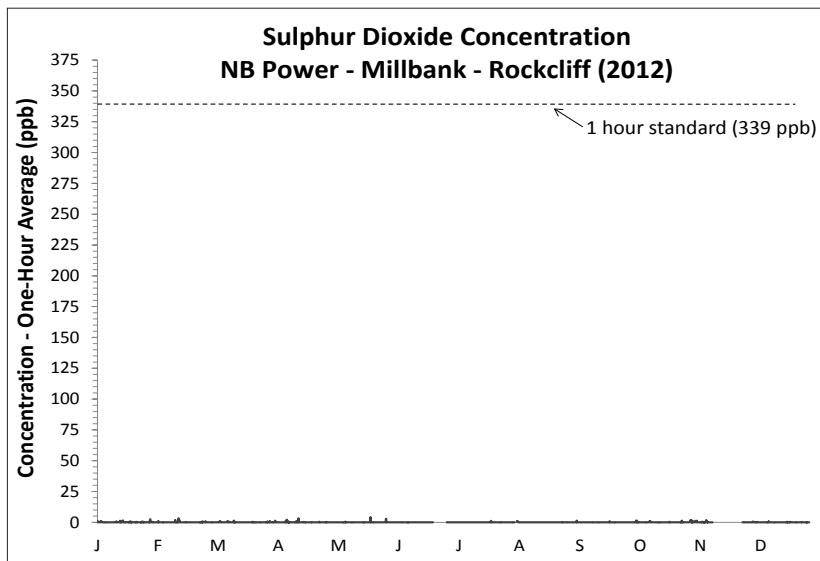
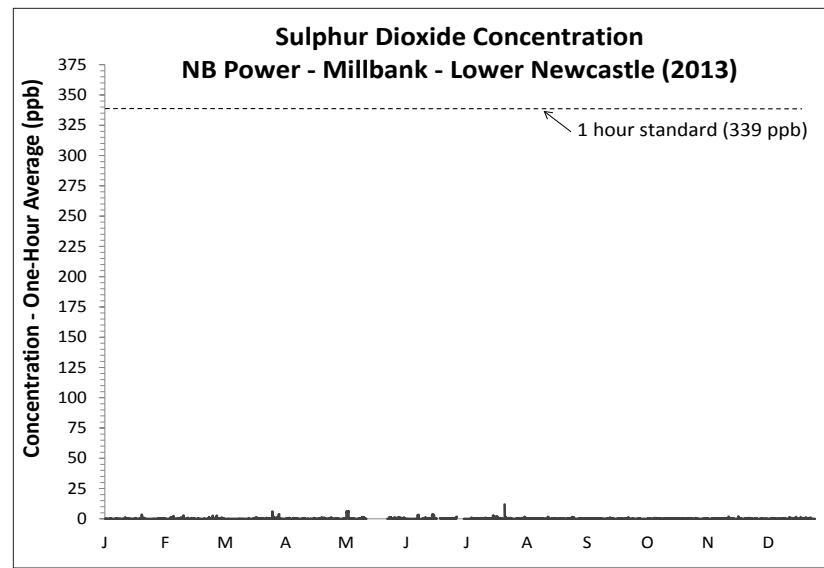
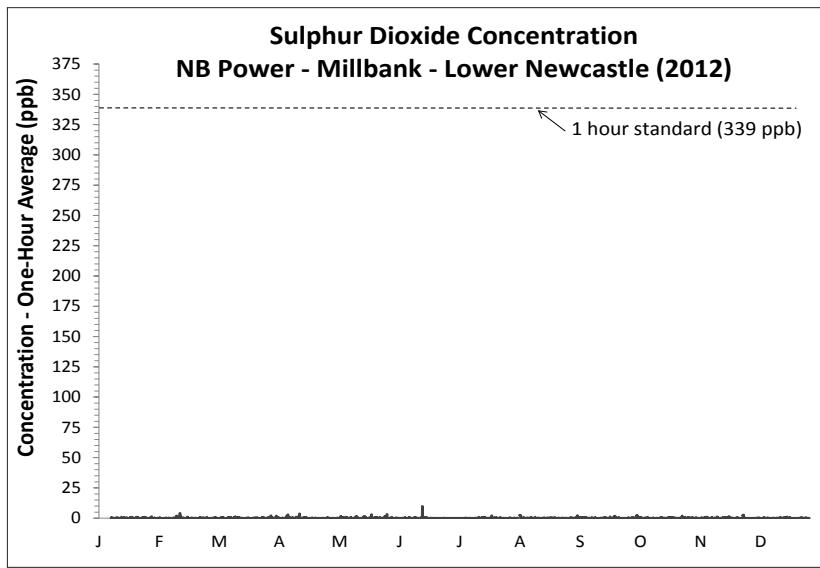


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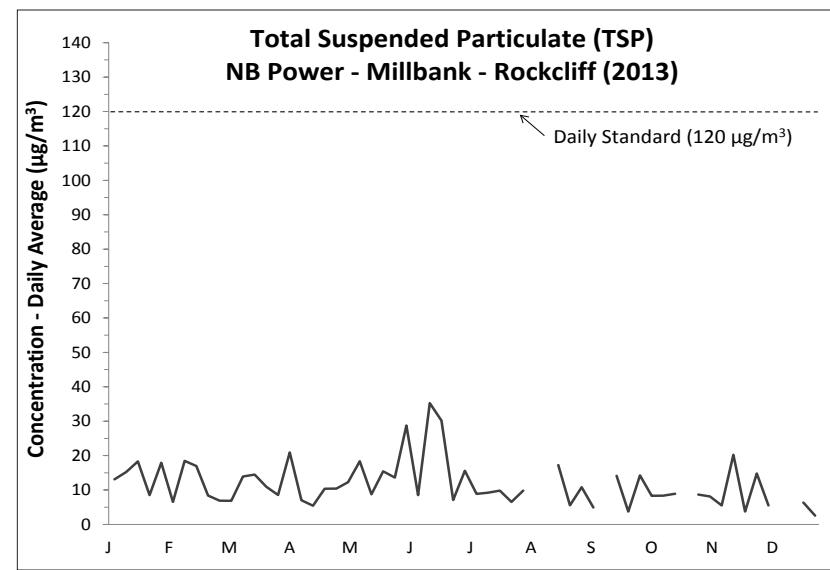
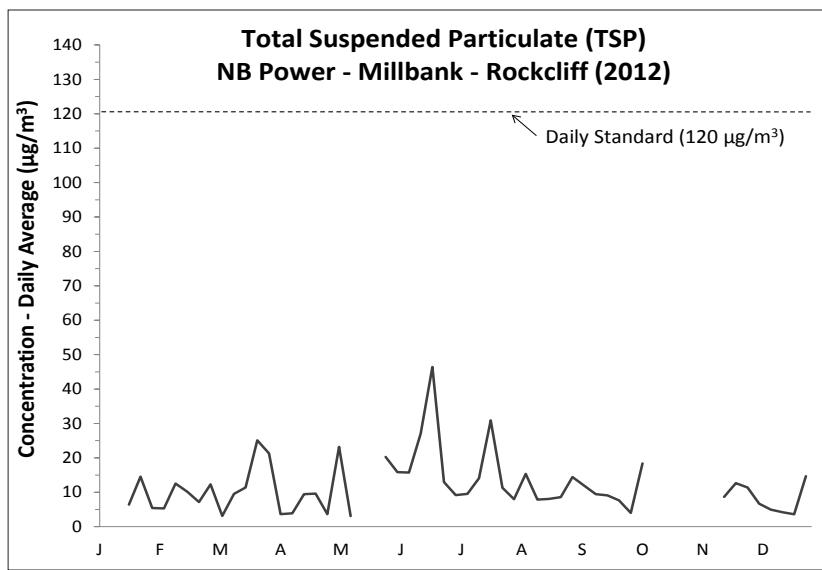
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Nitrogen Dioxide



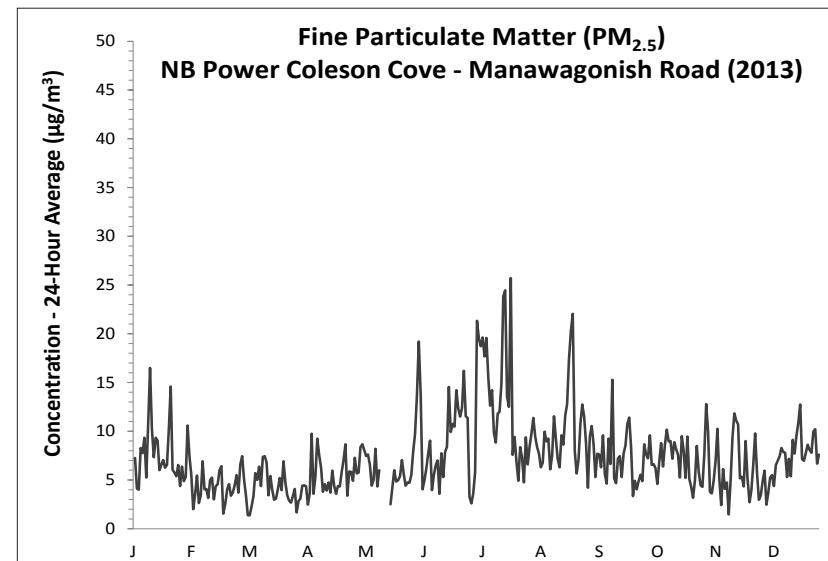
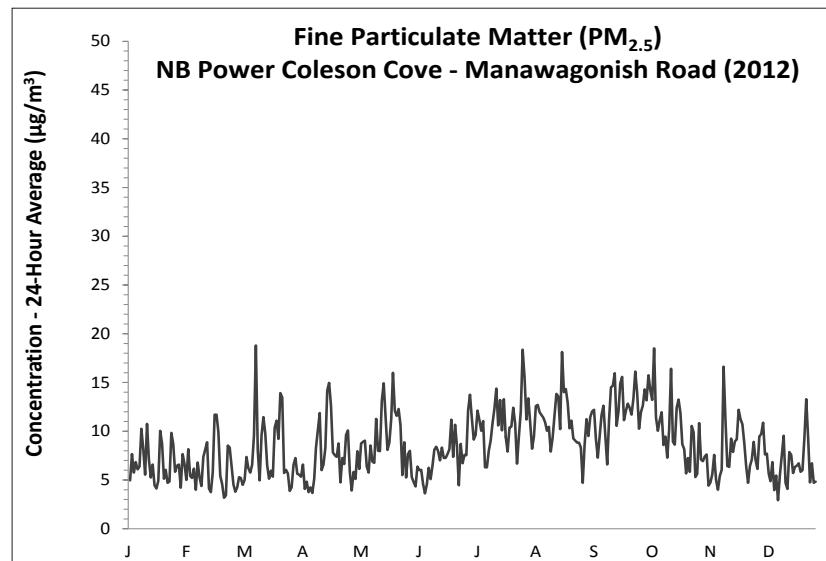
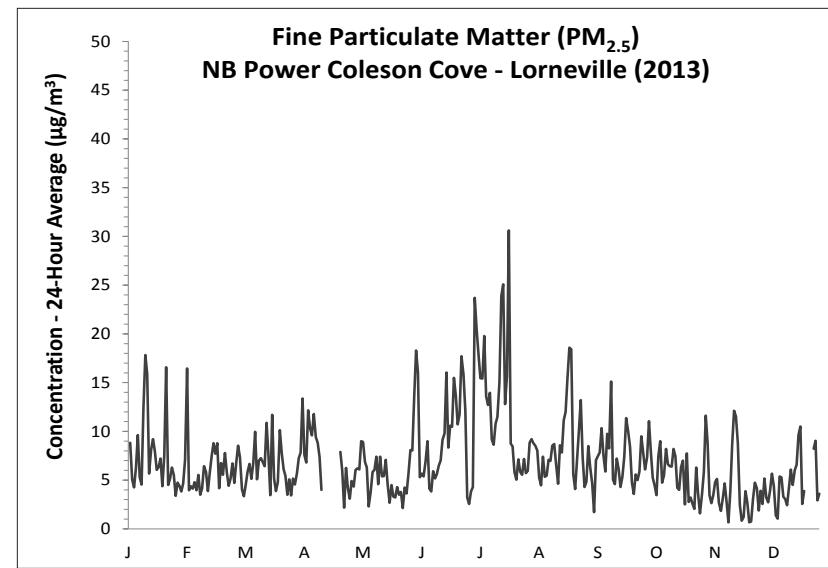
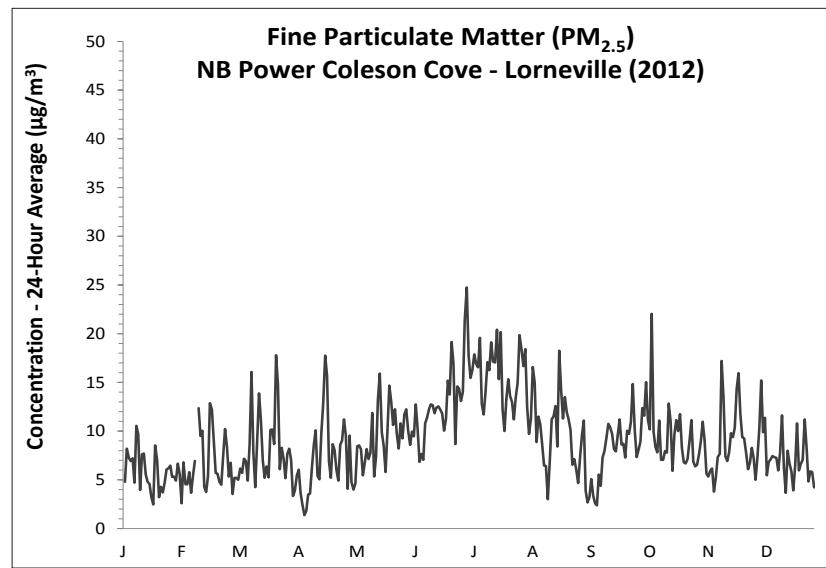
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Sulphur Dioxide



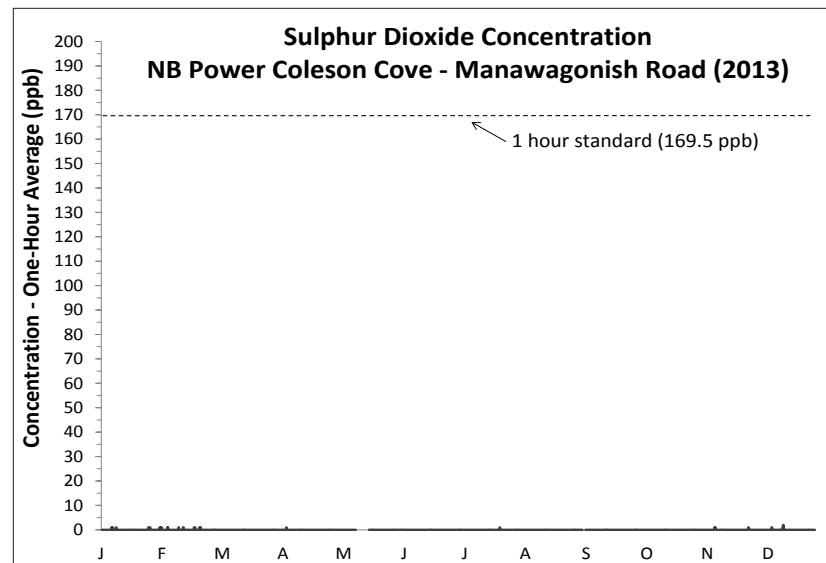
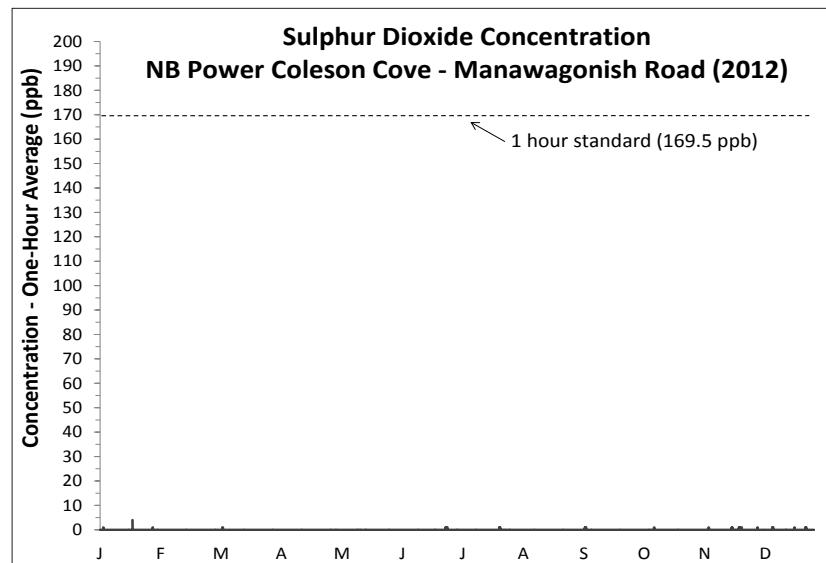
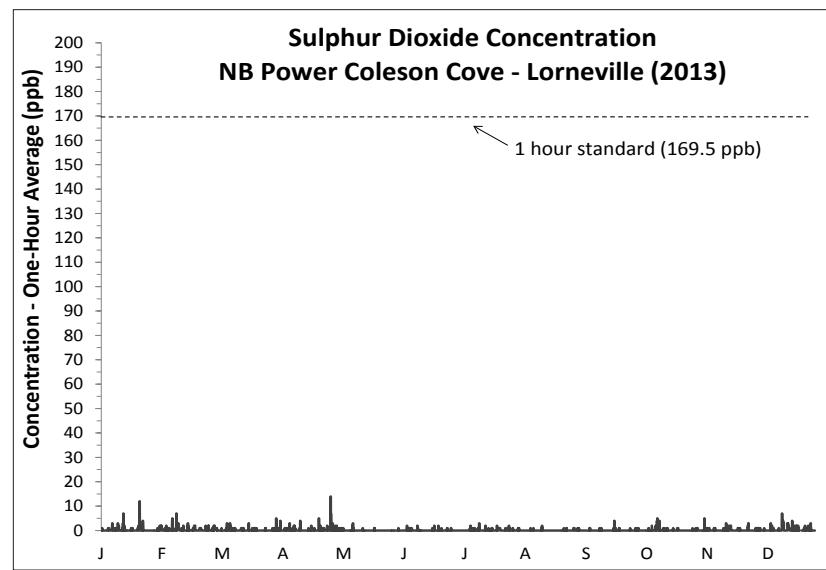
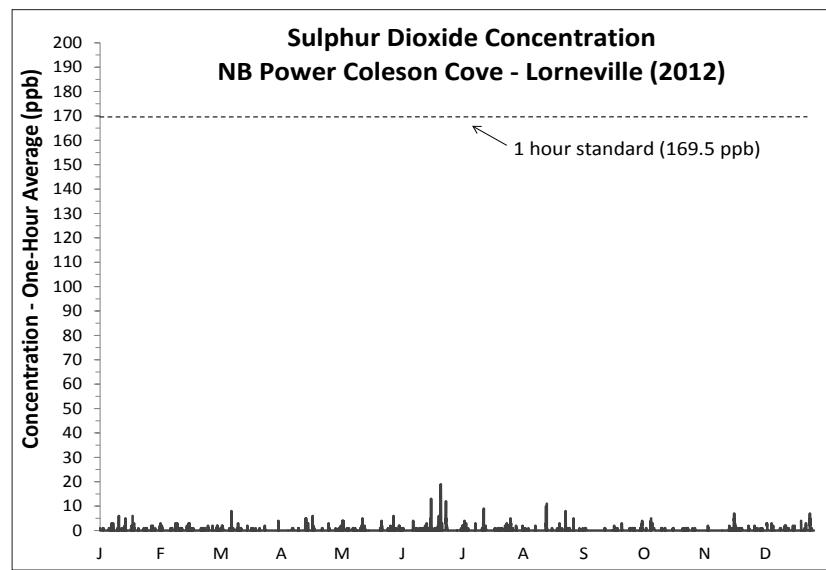
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Total Suspended Particulate



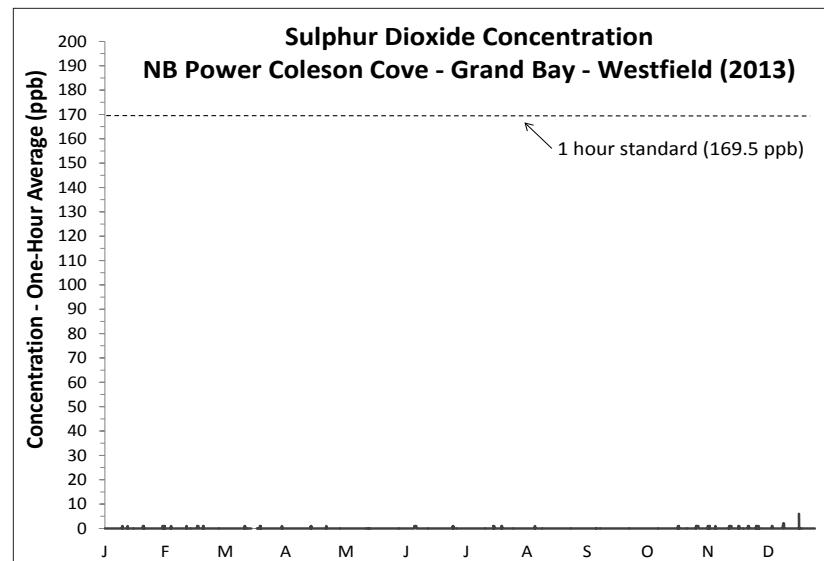
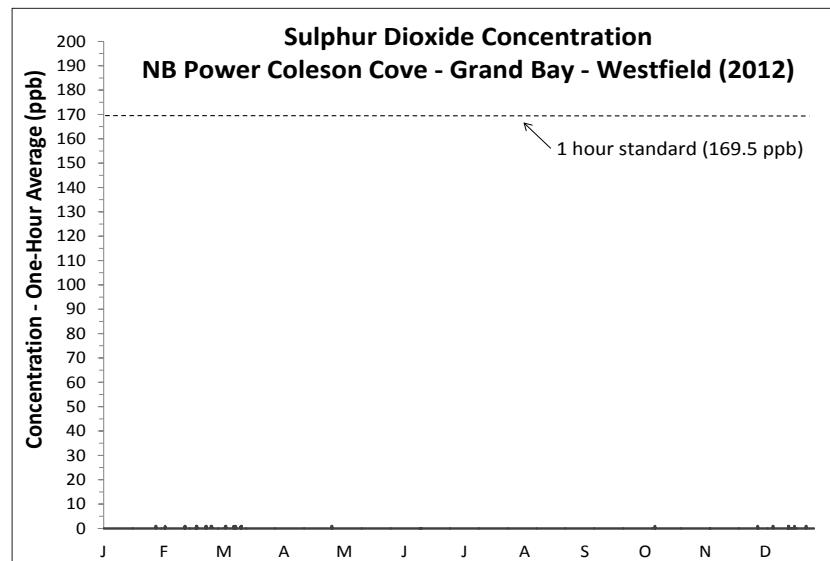
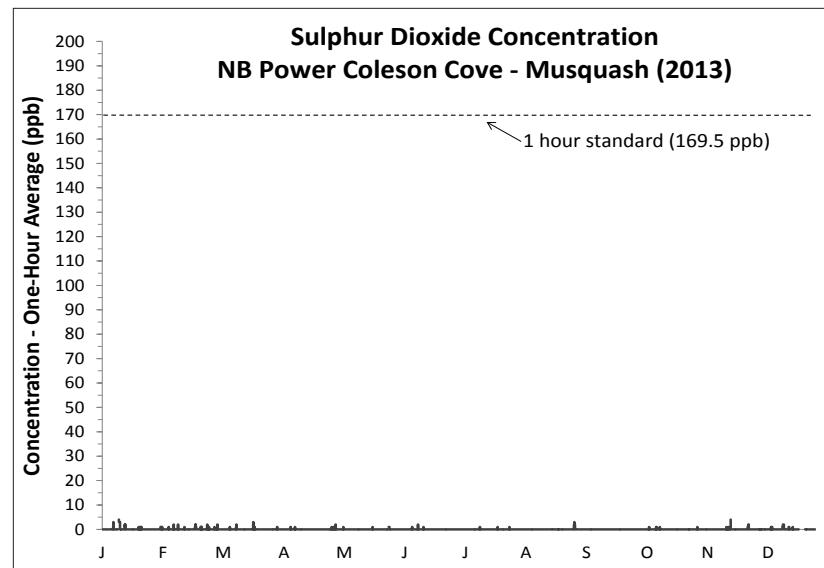
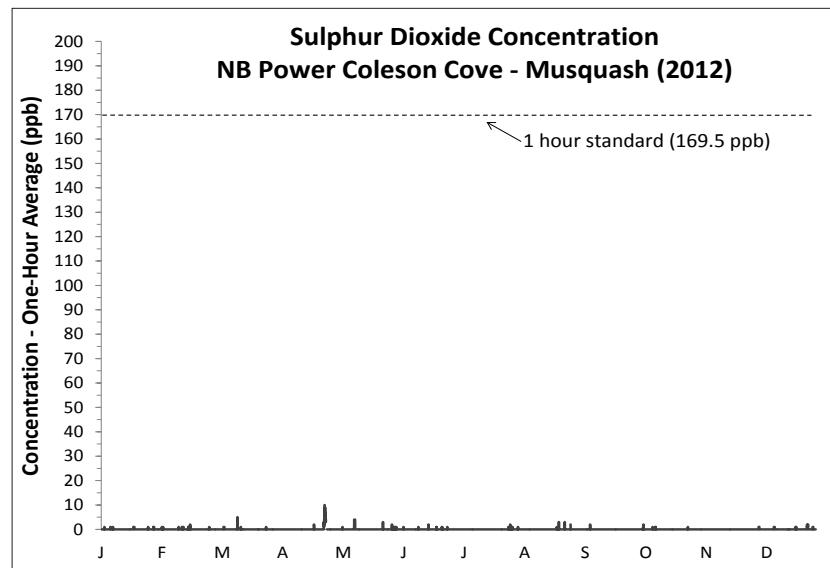
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Coleson Cove - Fine Particulate Matter



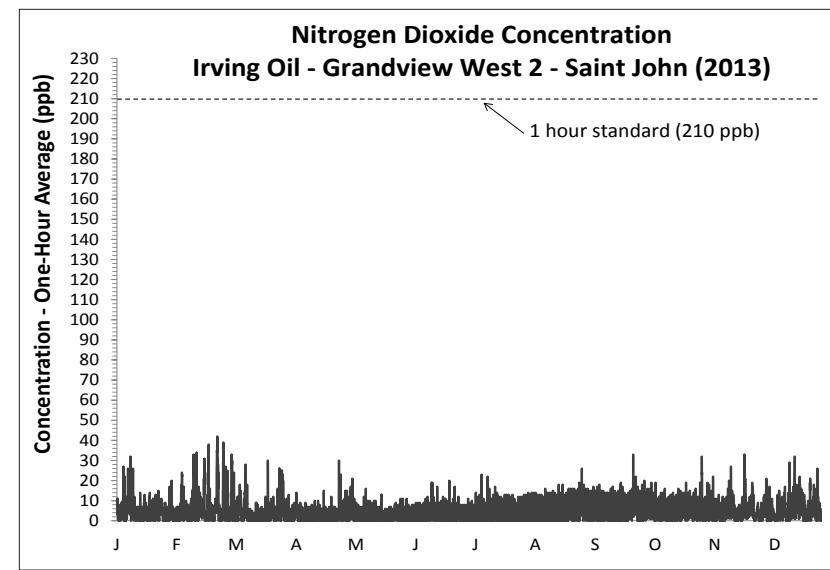
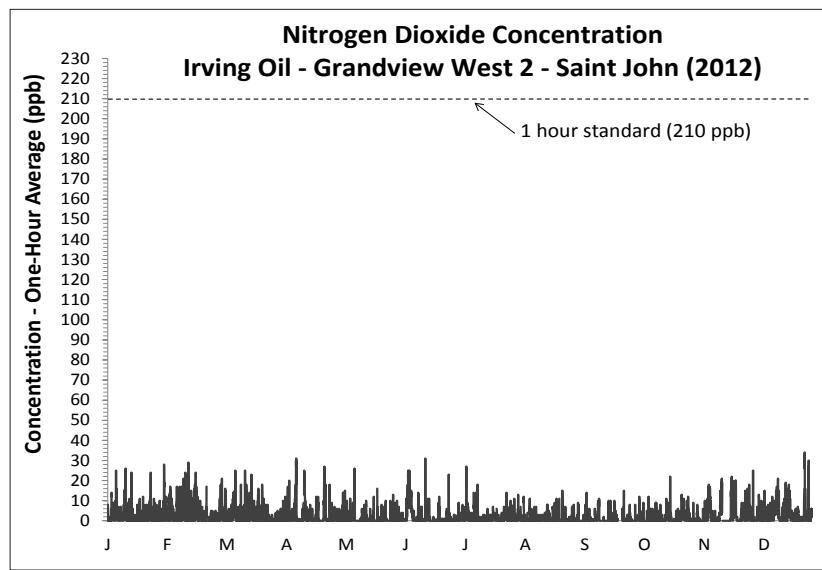
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Coleson Cove - Sulphur Dioxide



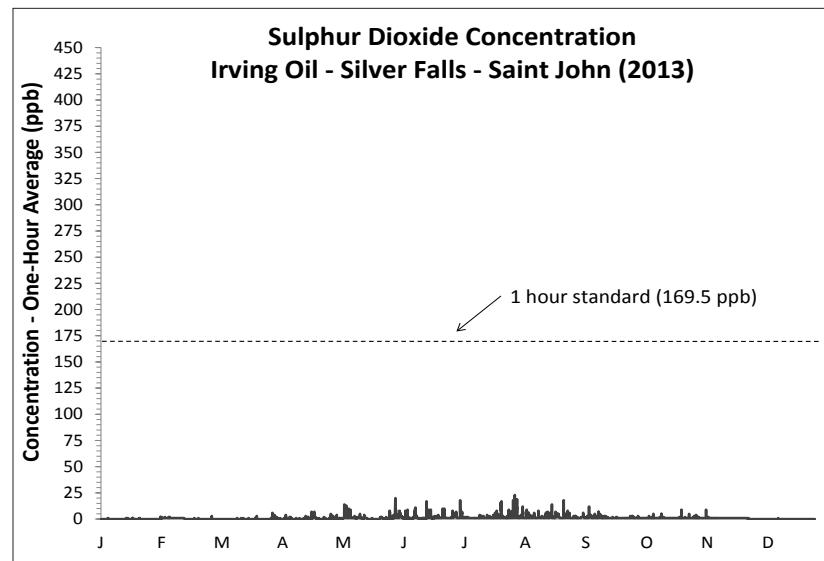
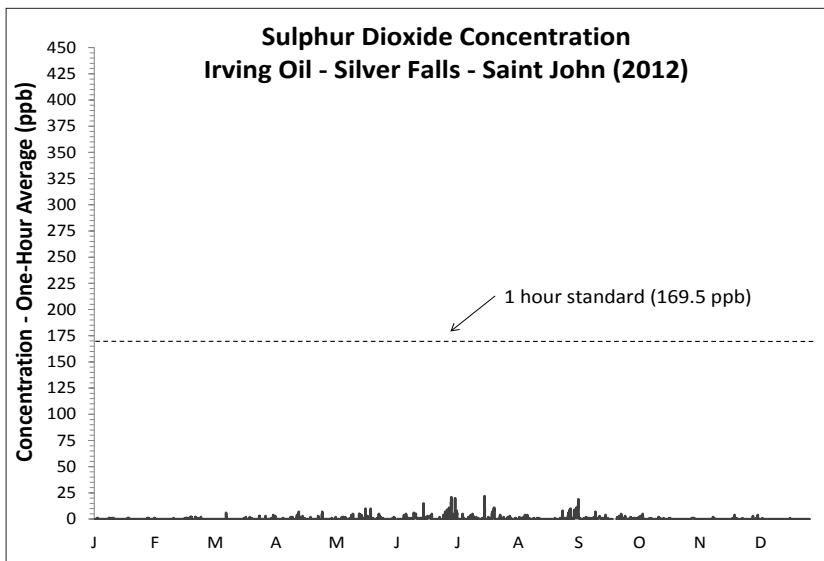
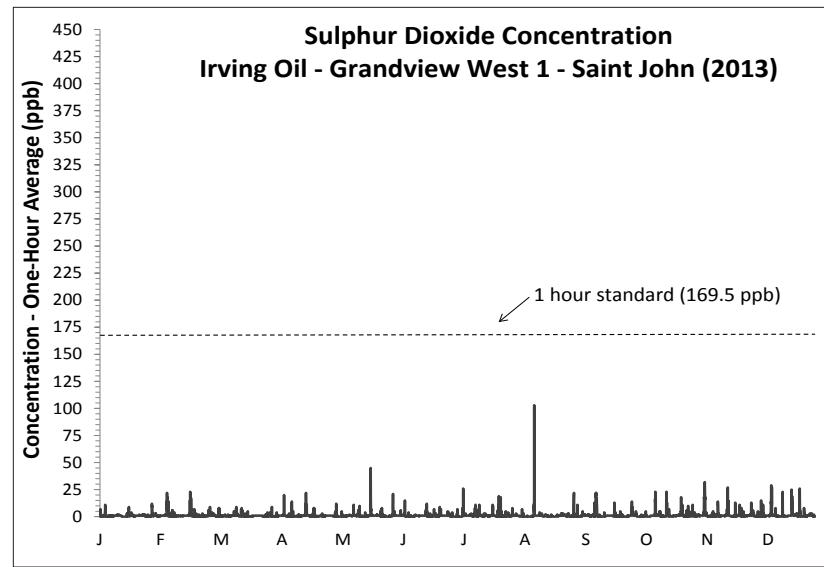
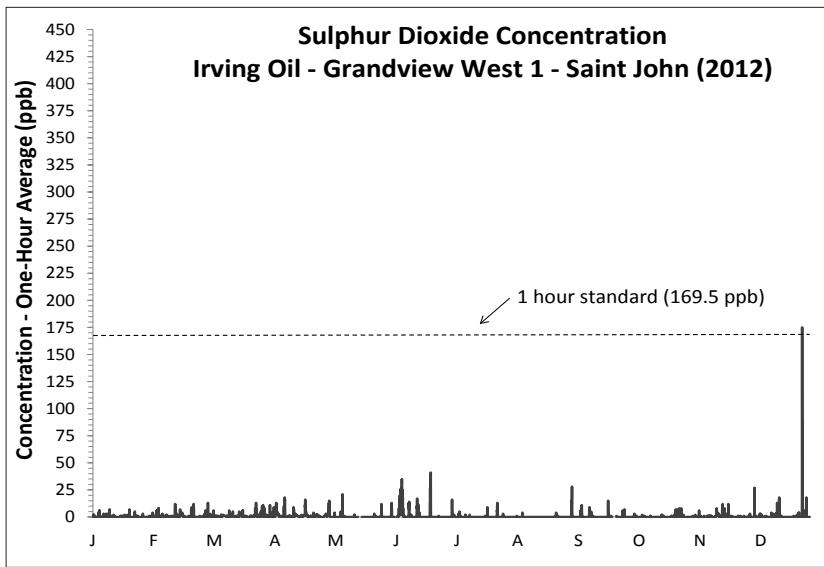
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Coleson Cove - Sulphur Dioxide



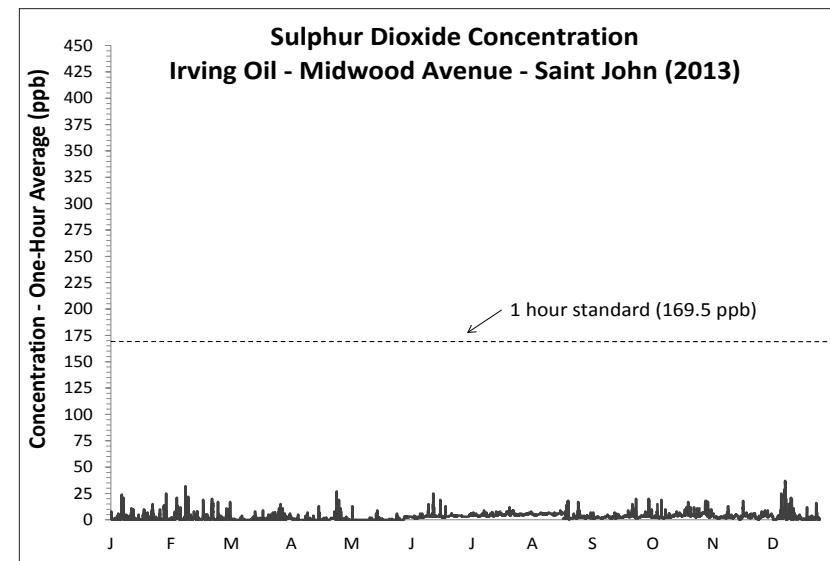
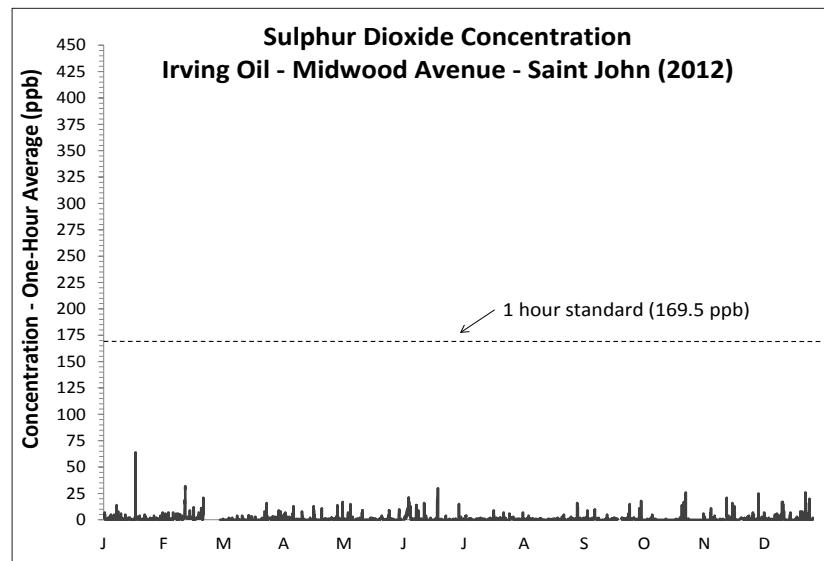
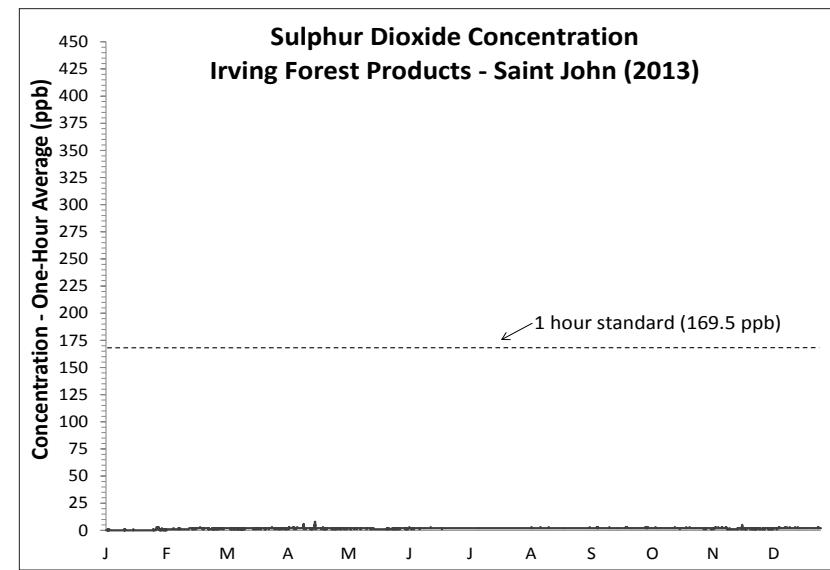
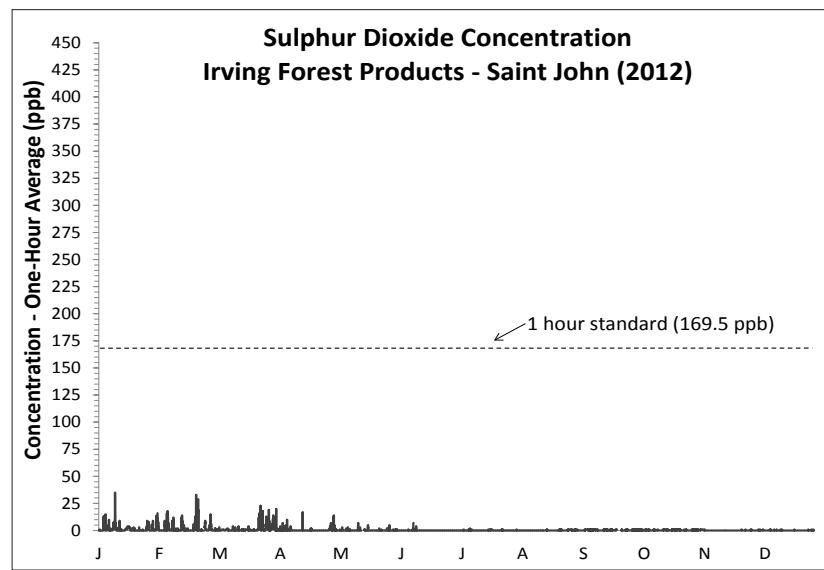
PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Nitrogen Dioxide



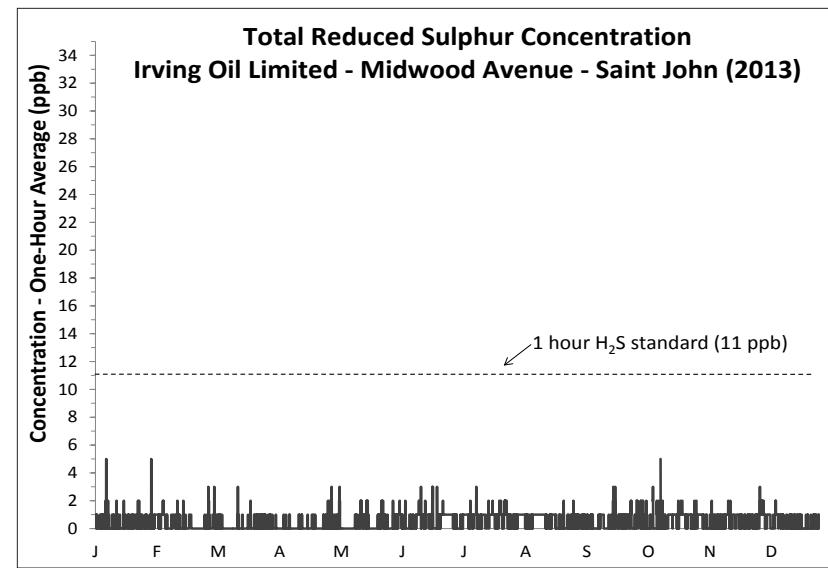
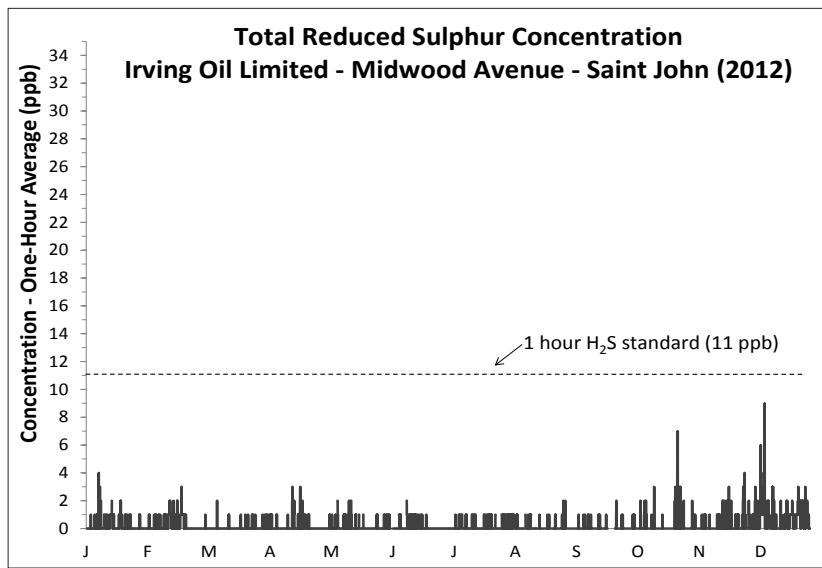
PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Sulphur Dioxide



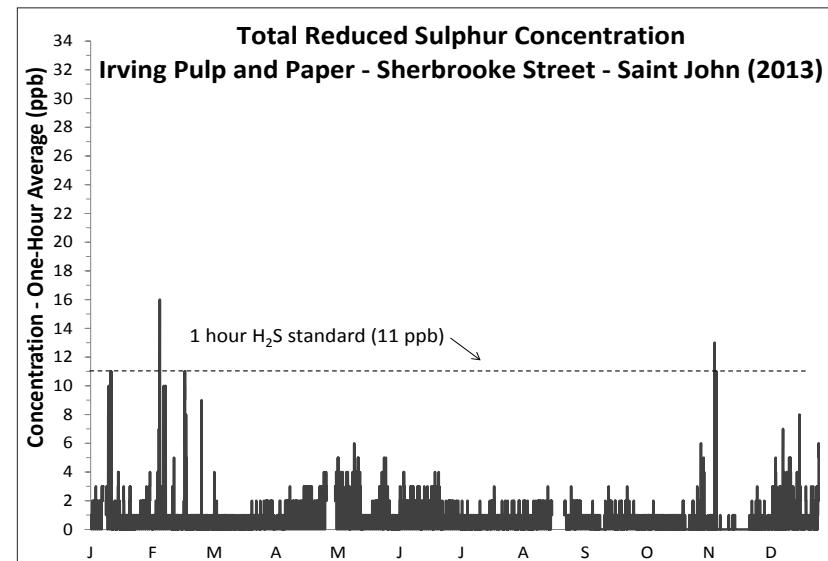
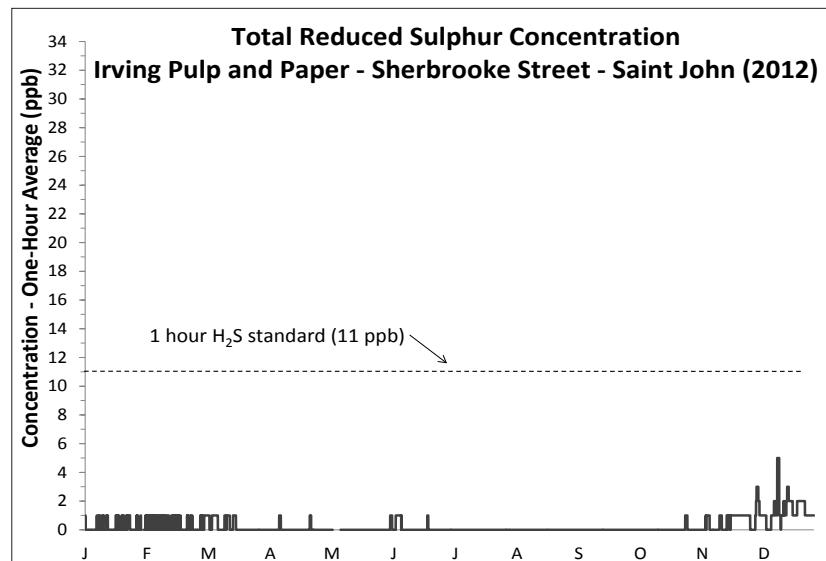
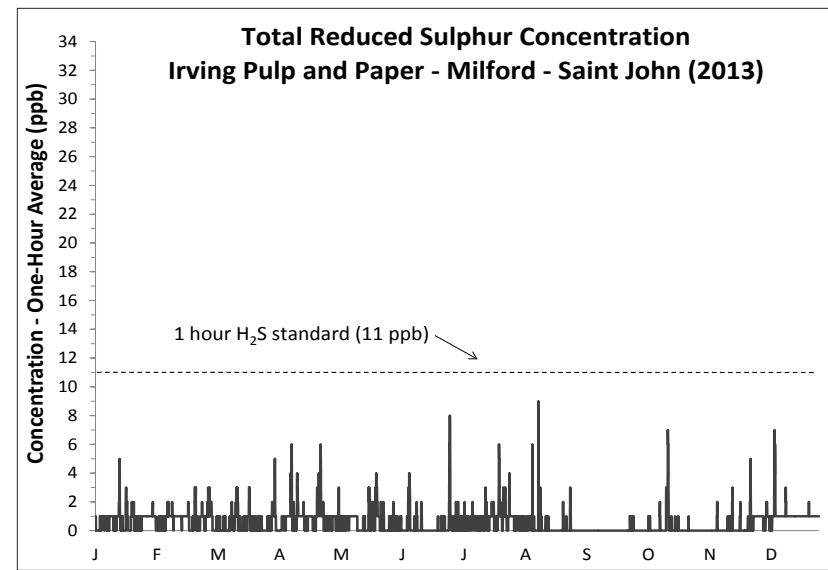
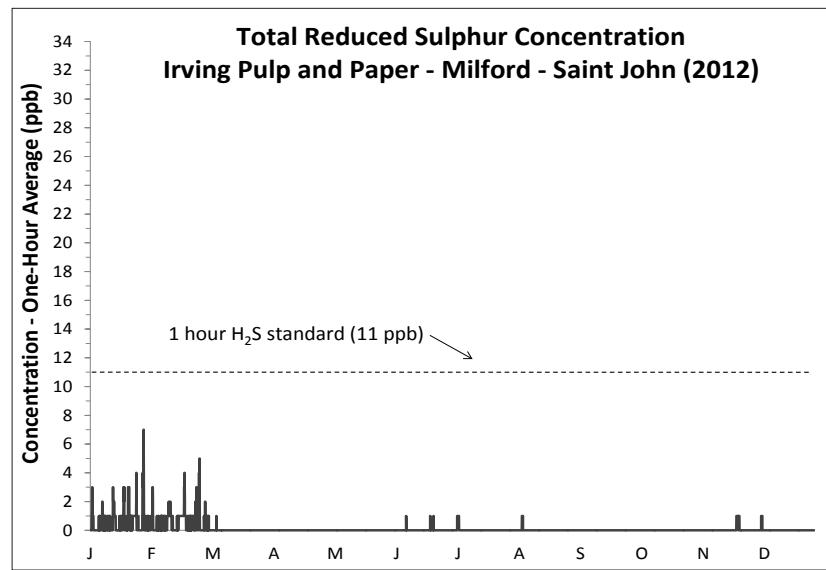
PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Sulphur Dioxide



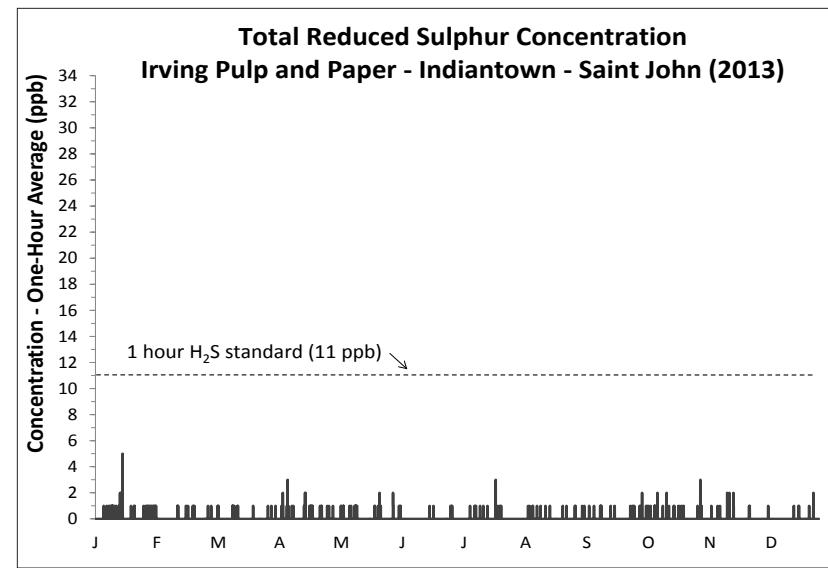
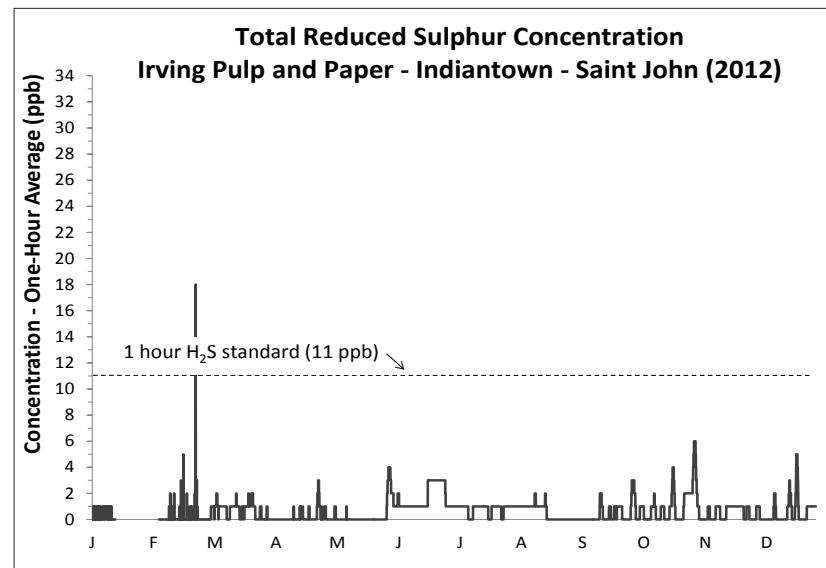
PART III: INDUSTRY-OPERATED NETWORKS - Irving Oil Ltd., Saint John - Total Reduced Sulphur



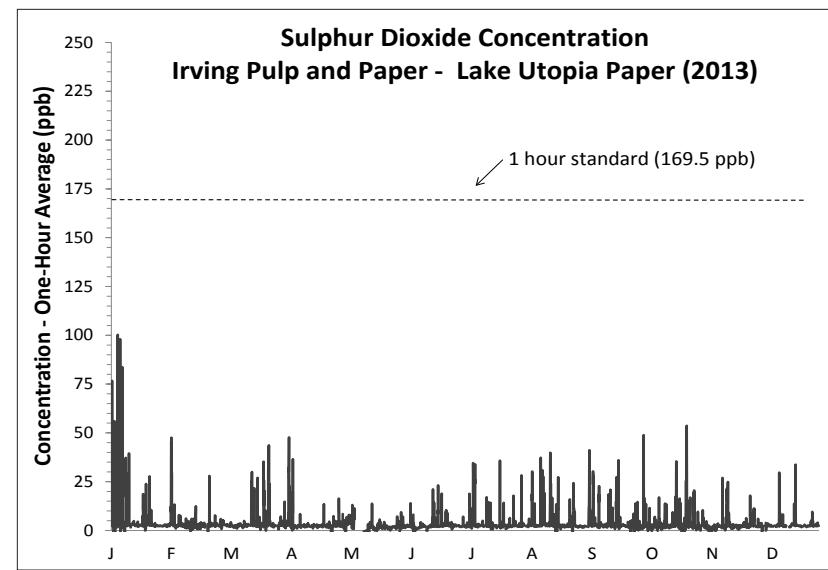
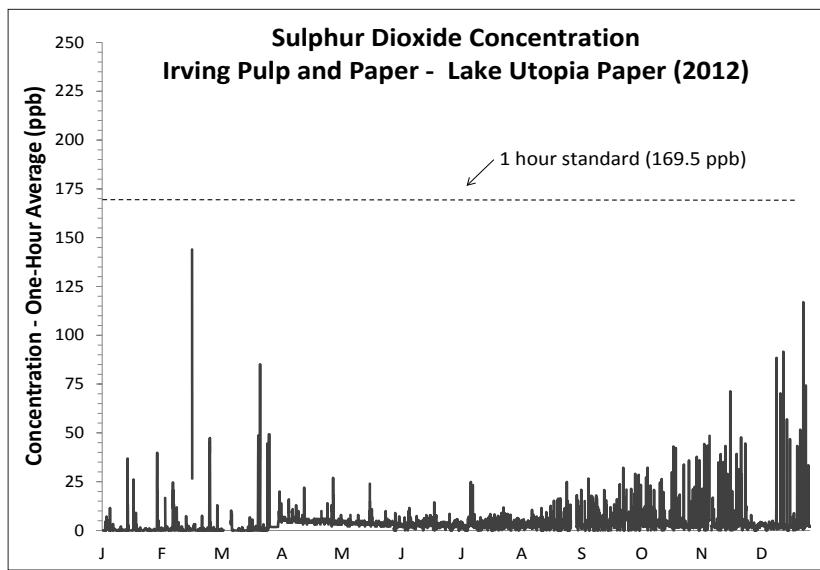
PART III: INDUSTRY-OPERATED NETWORKS - Irving Pulp and Paper, Saint John - Total Reduced Sulphur



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



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

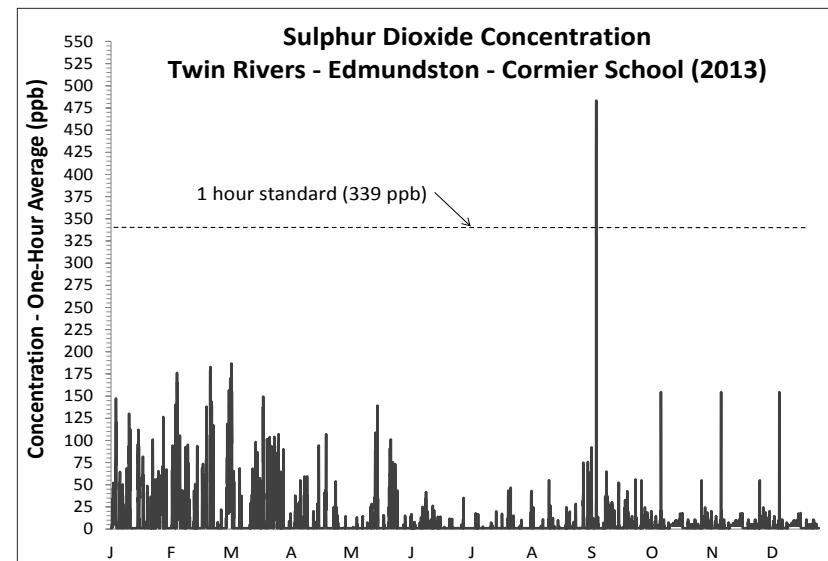
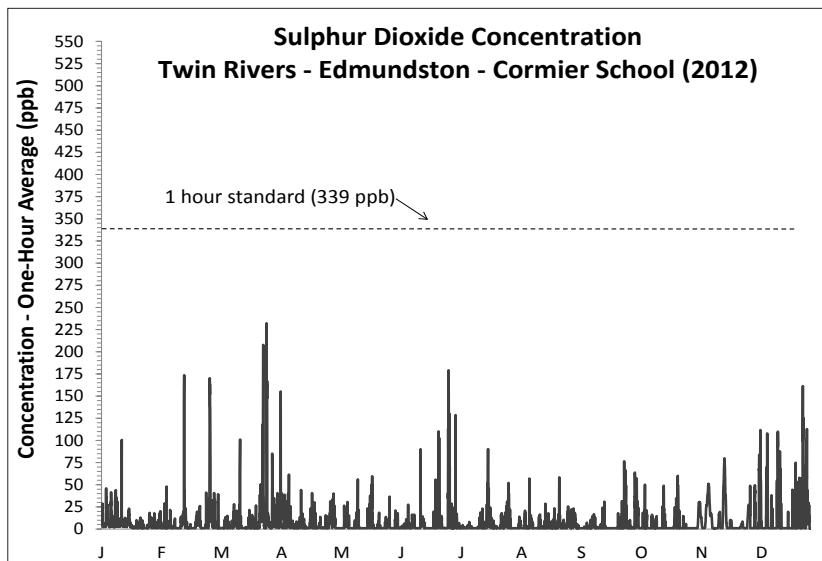
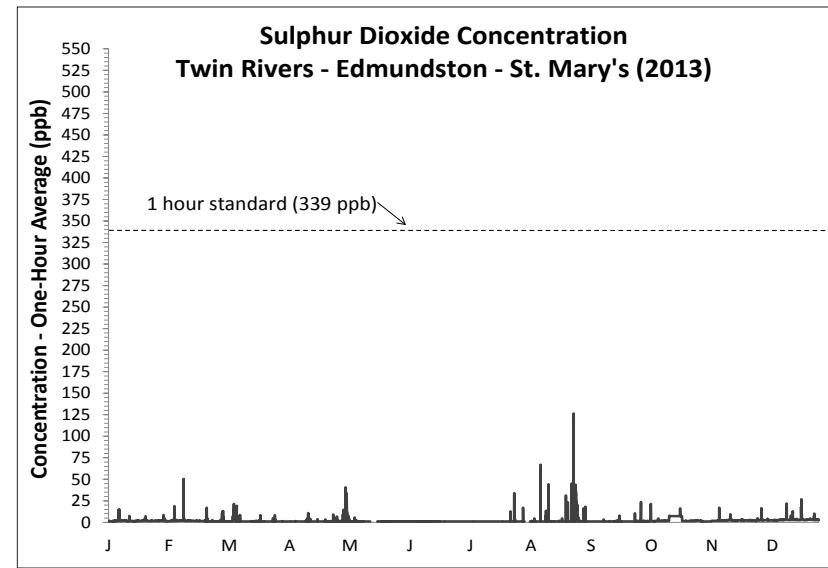
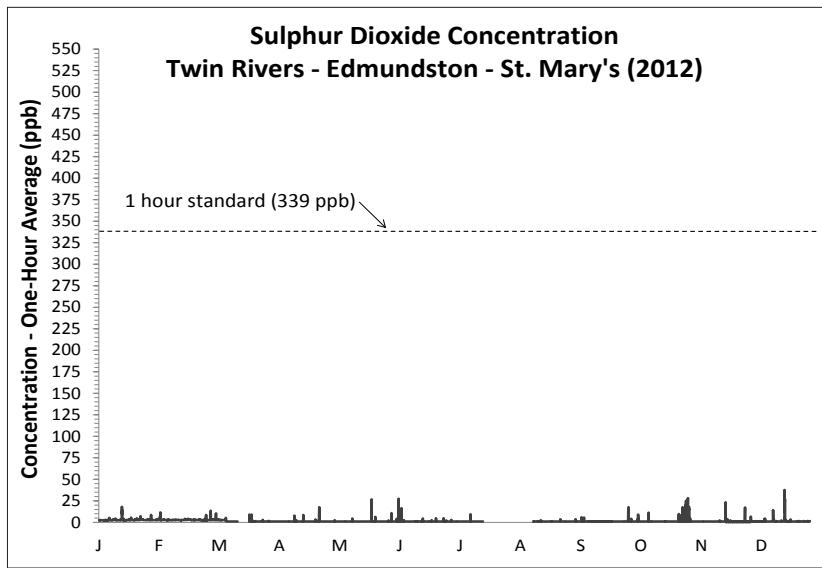


PART III: INDUSTRY-OPERATED NETWORKS - Twin Rivers Paper Company, Edmundston - Fine Particulate Matter

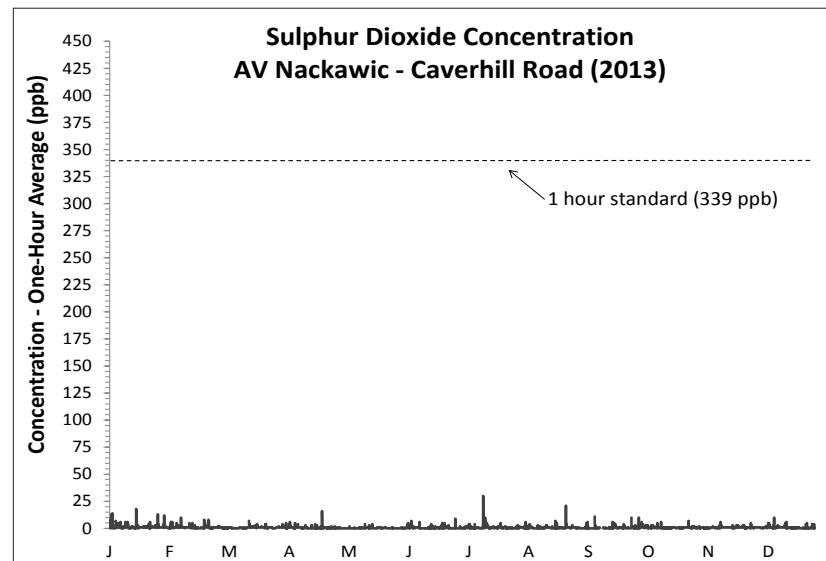
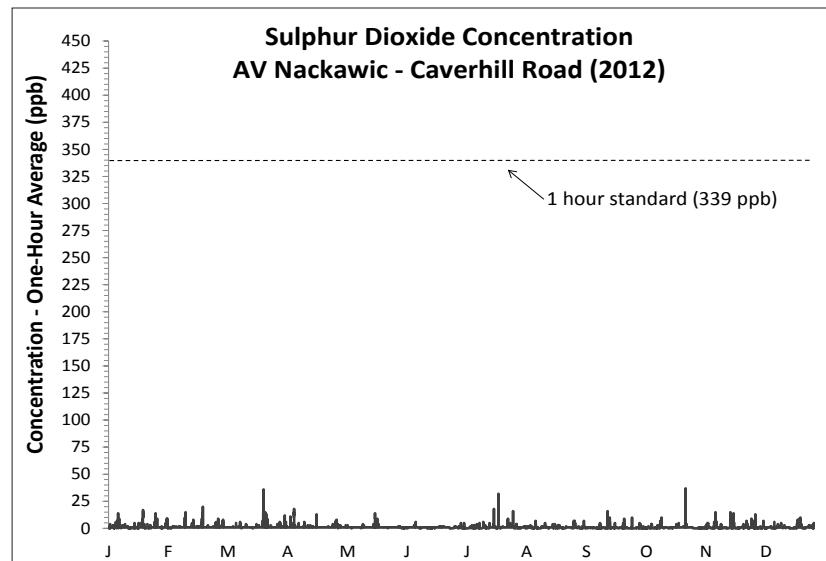
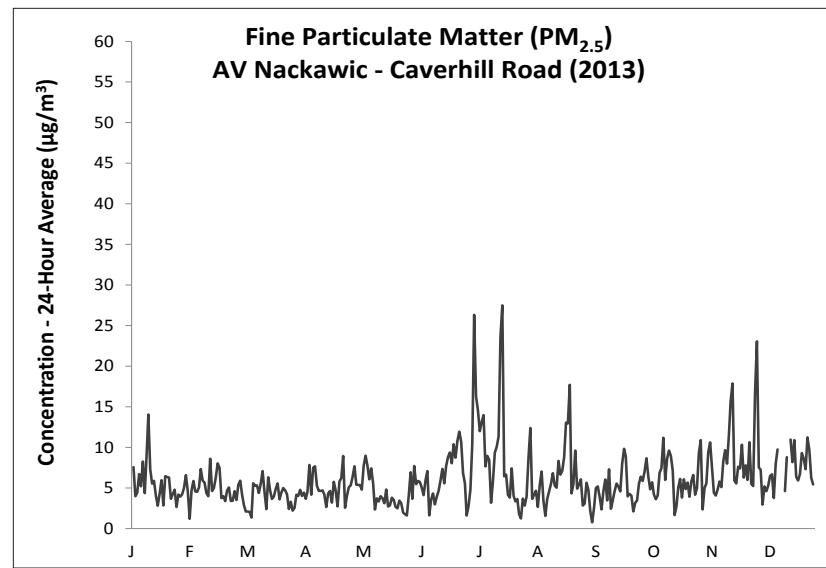
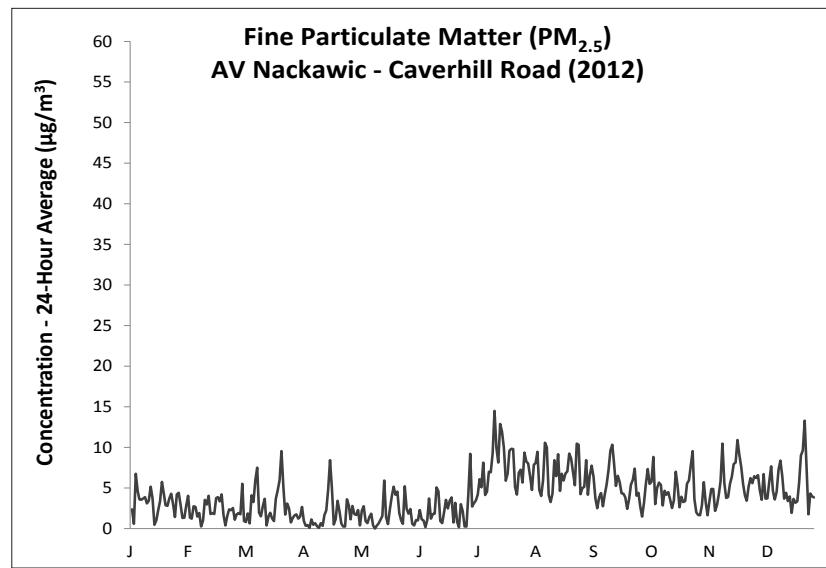
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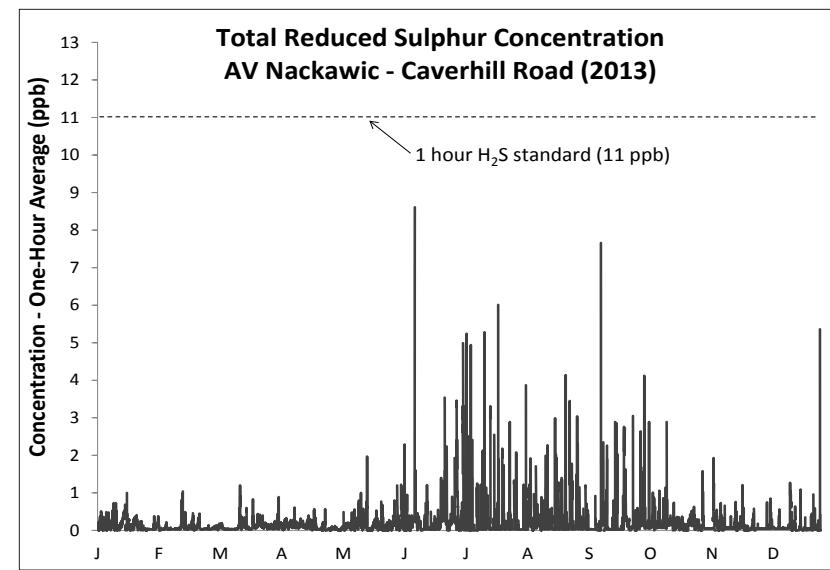
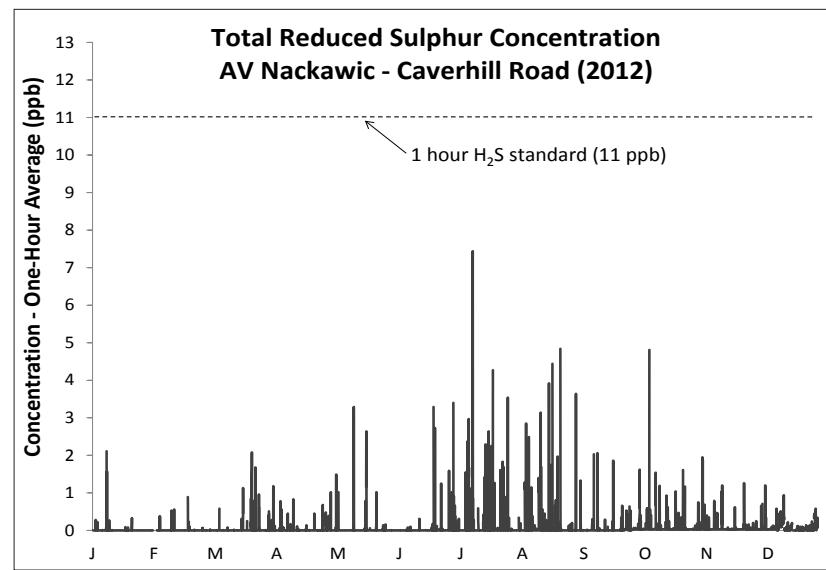
PART III: INDUSTRY-OPERATED NETWORKS - Twin Rivers Paper Company, Edmundston - Sulphur Dioxide



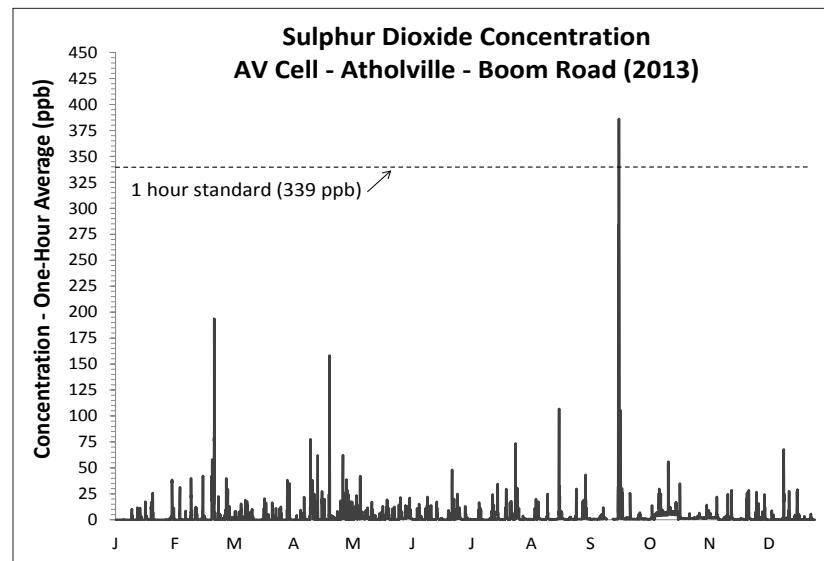
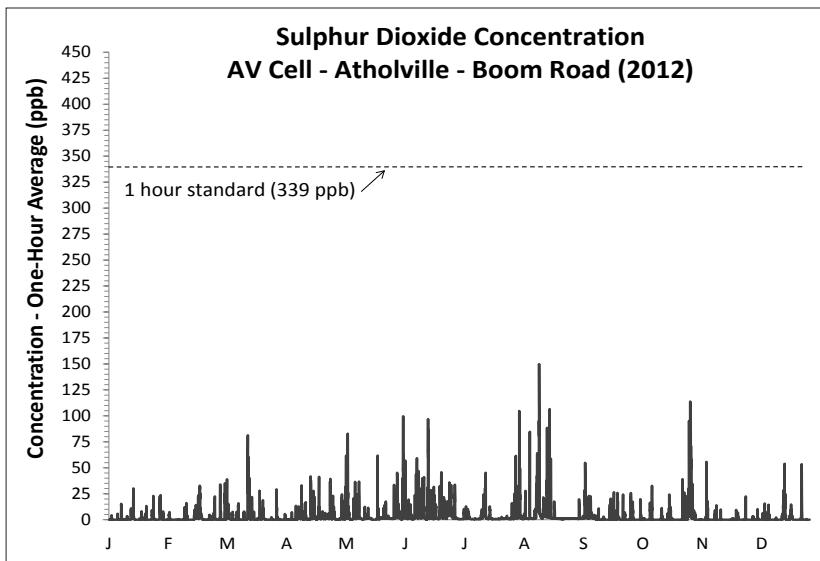
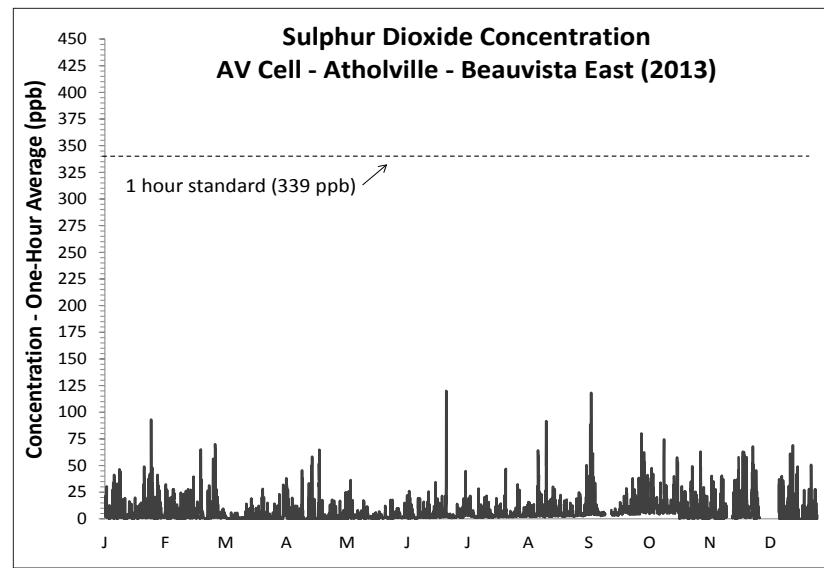
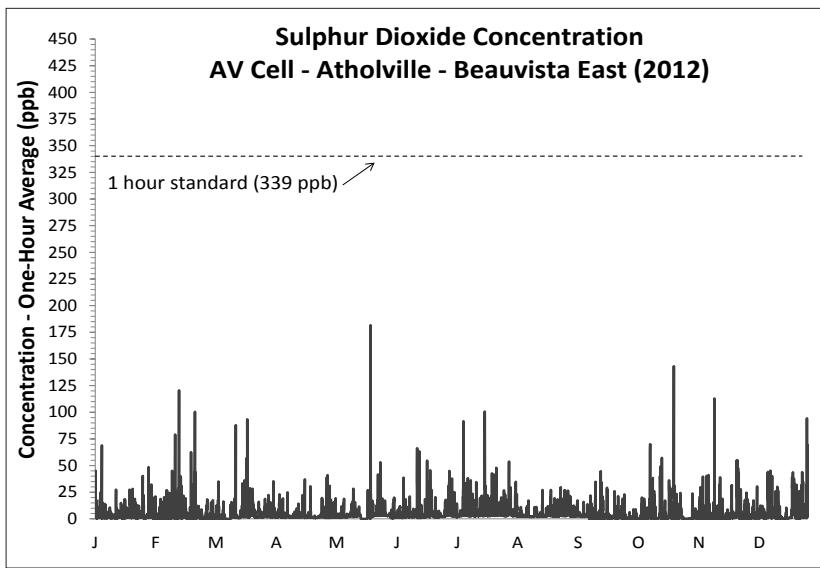
PART III: INDUSTRY-OPERATED NETWORKS - AV Nackawic, Nackawic - All Parameters



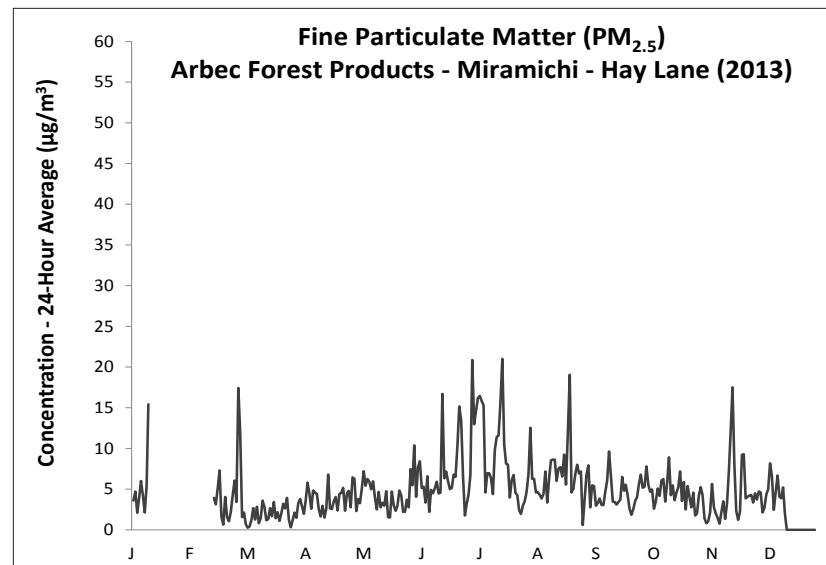
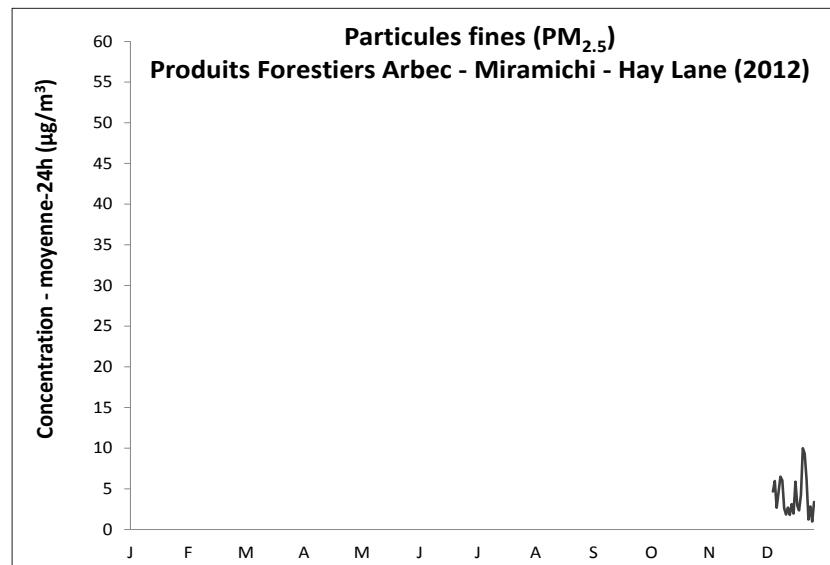
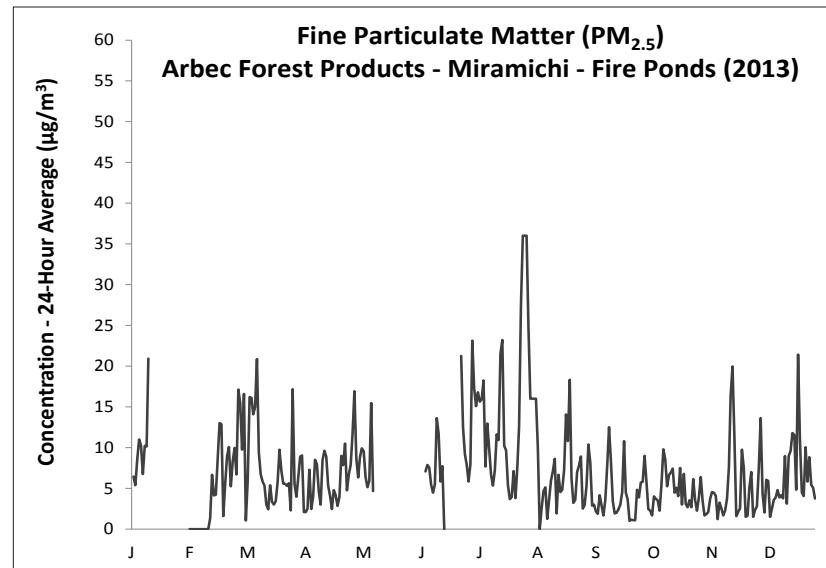
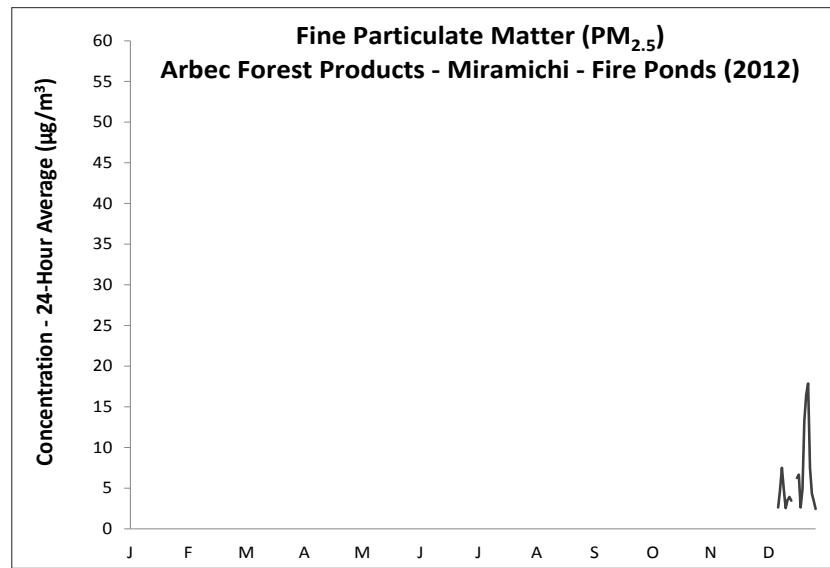
PART III: INDUSTRY-OPERATED NETWORKS - AV Nackawic, Nackawic - All Parameters



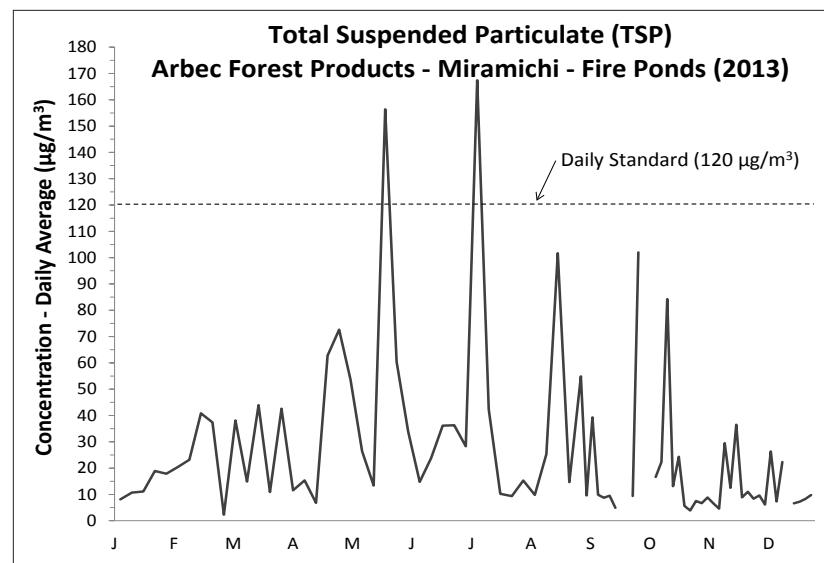
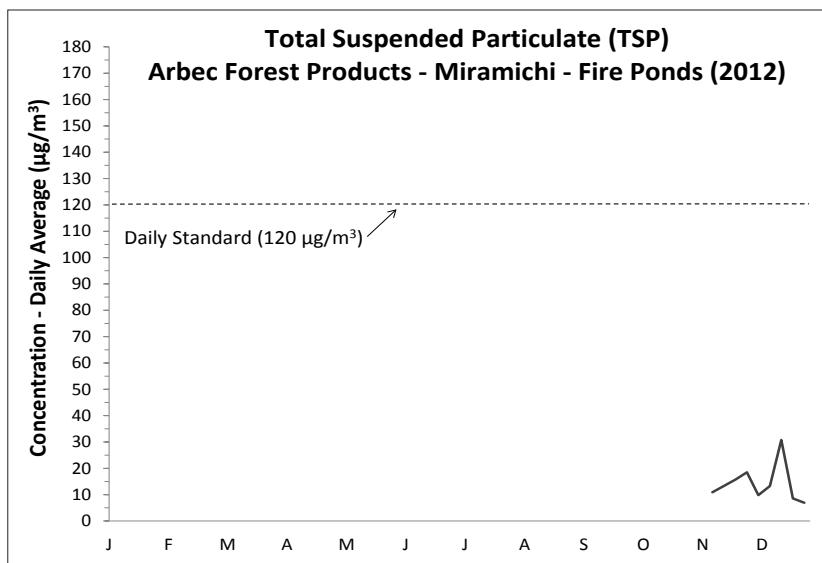
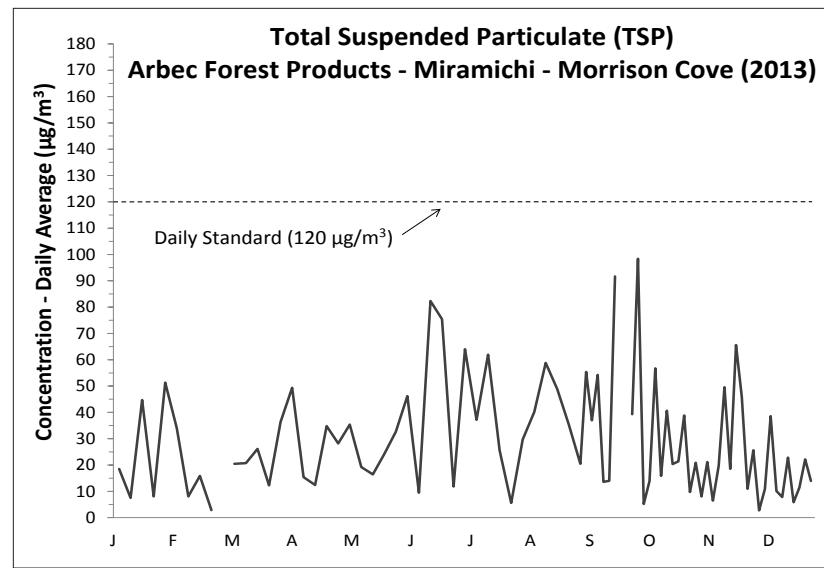
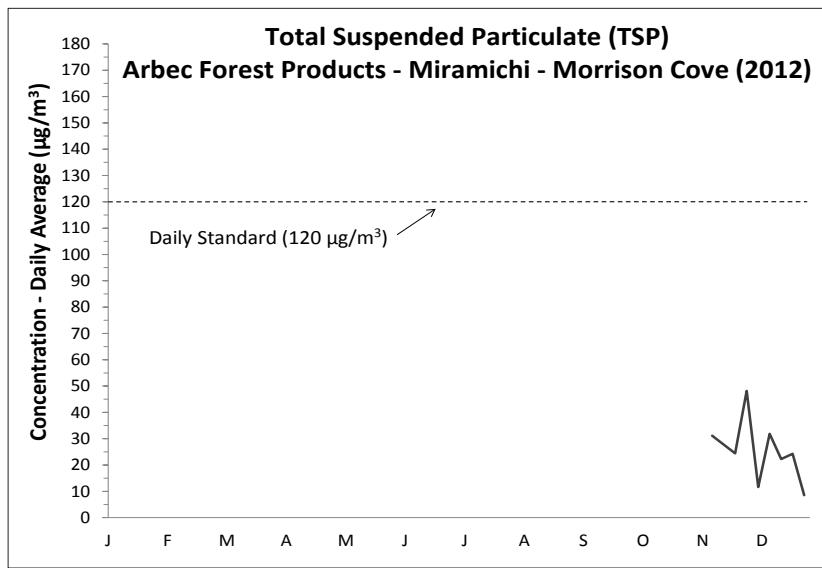
PART III: INDUSTRY-OPERATED NETWORKS - AV Cell, Atholville - Sulphur Dioxide



PART III: INDUSTRY-OPERATED NETWORKS - Arbec Forest Products, Miramichi- Fine Particulate Matter



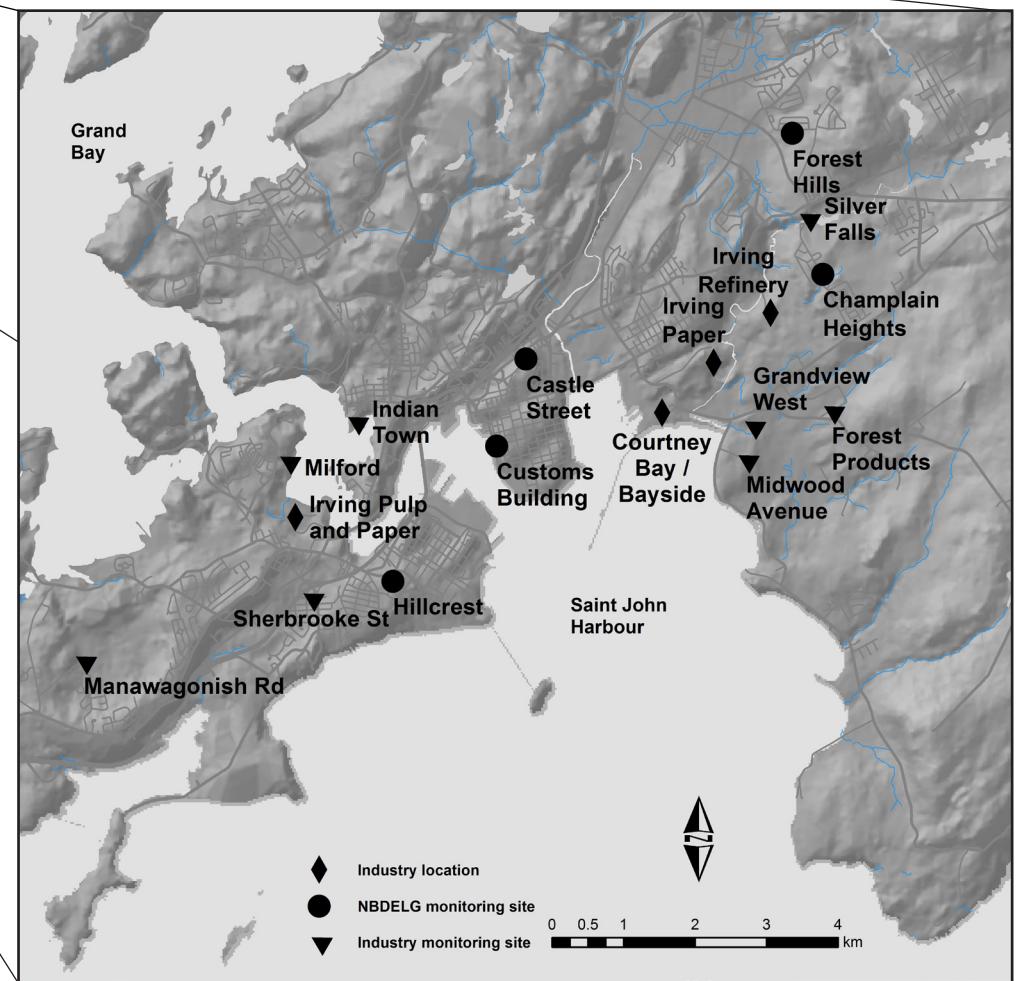
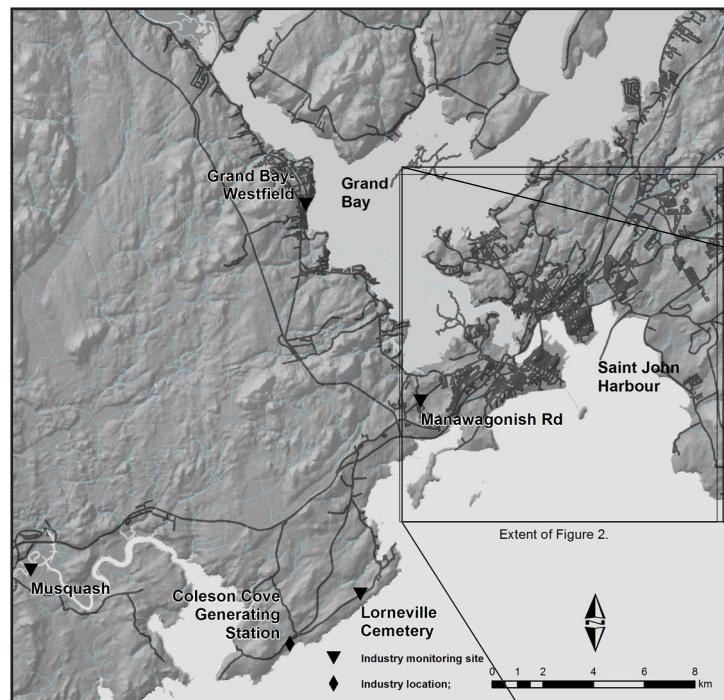
PART III: INDUSTRY-OPERATED NETWORKS - Arbec Forest Products, Miramichi- Total Suspended Particulate



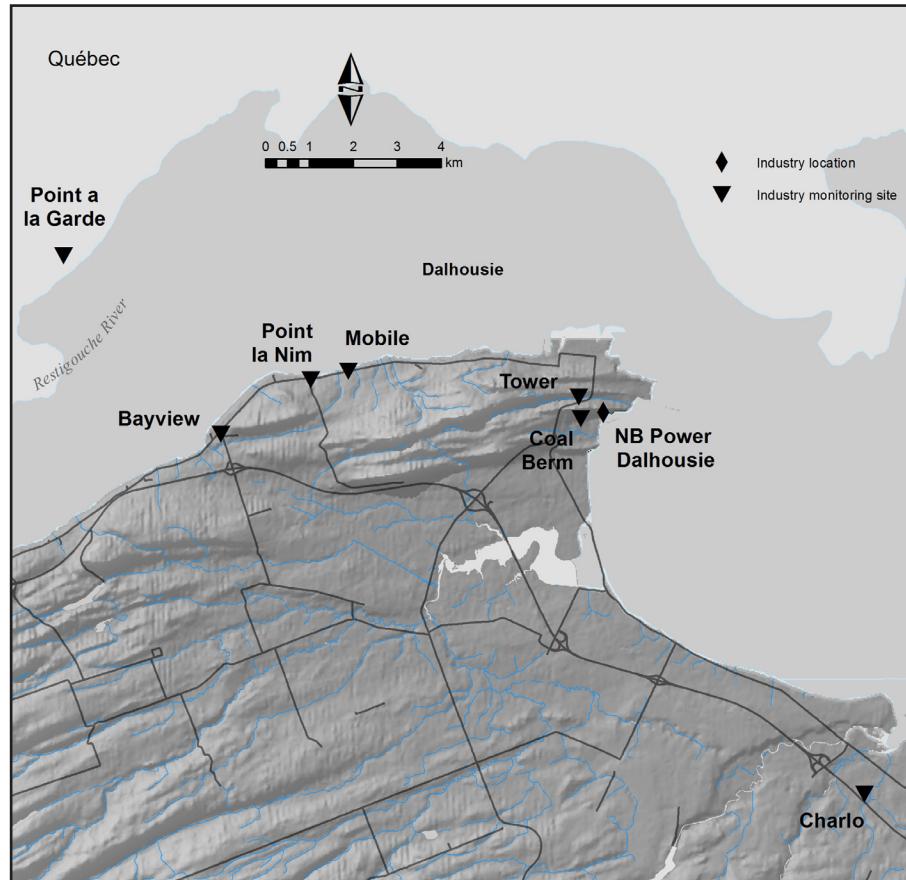
PART IV:
DETAILED STATION LOCATION MAPS

PART IV: DETAILED STATION LOCATION MAPS - Saint John Region

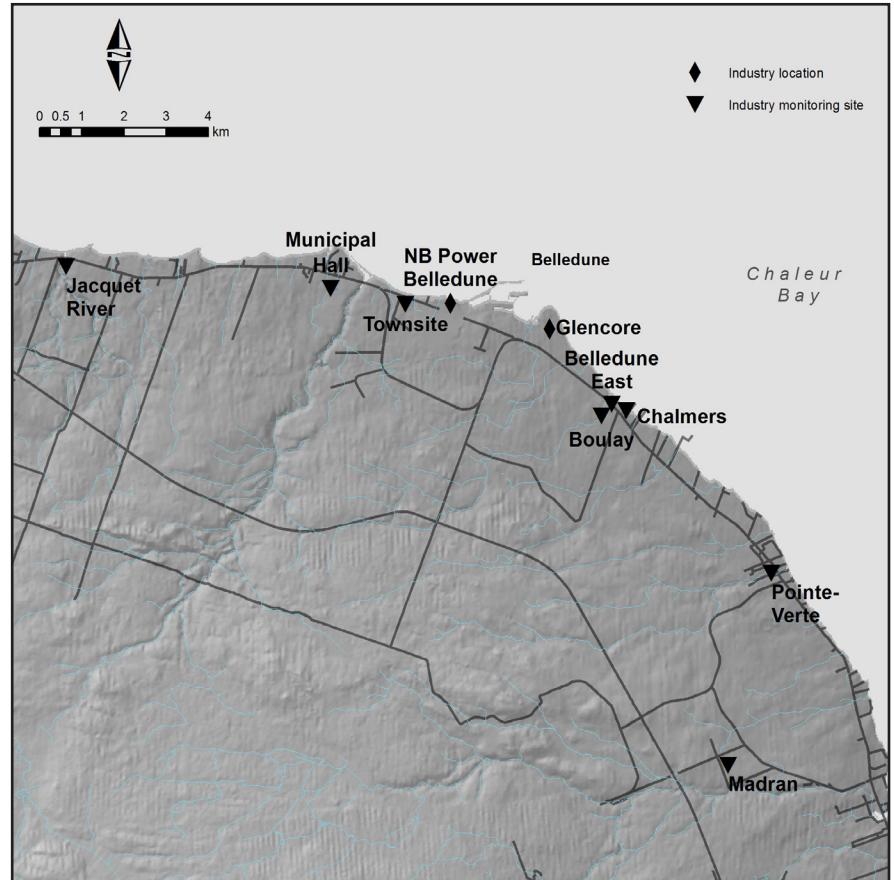
Grand Bay/Musquash/Saint John Area



PART IV: DETAILED STATION LOCATION MAPS - Dalhousie and Belledune

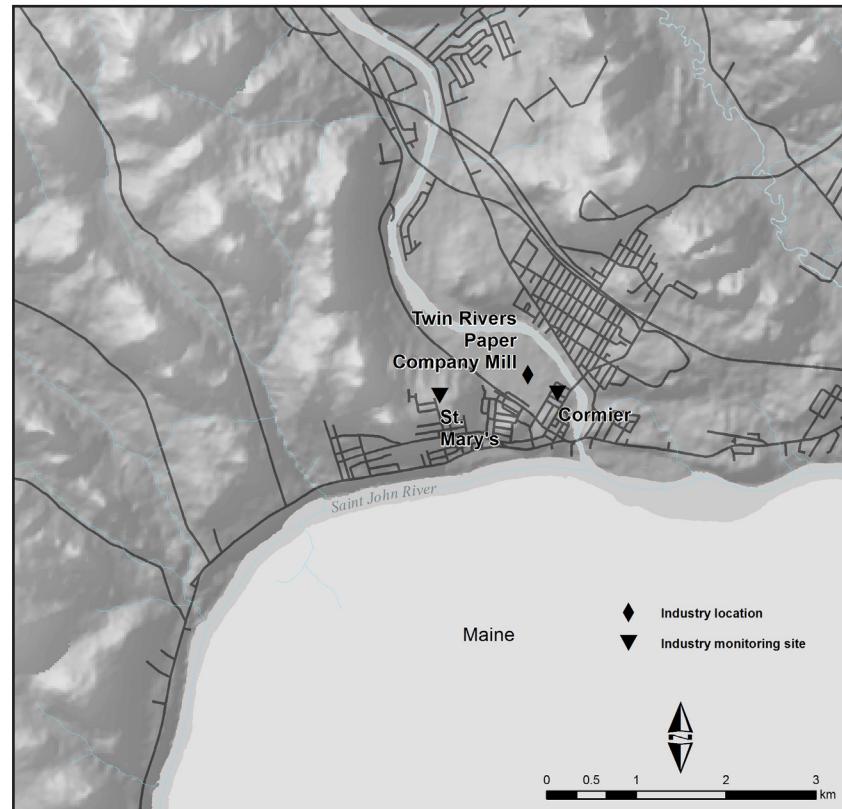


Dalhousie Area

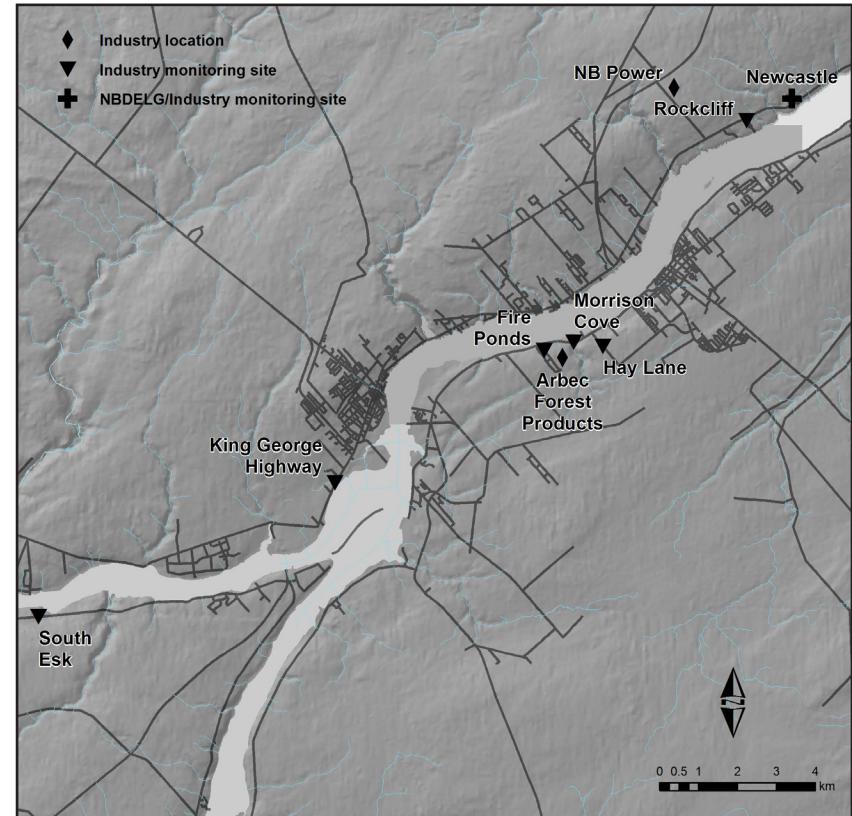


Belledune Area

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



Edmundston Area



Lower Newcastle