
AIR QUALITY
MONITORING RESULTS

Supplementary Data 2022

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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 2022" report, which is available electronically via the DELG website:

www.gnb.ca/environment

The information, graphics, and tables presented in this document are intended to illustratively summarize the data collected via New Brunswick's air quality monitoring networks in 2022. This information is provided without context or interpretation. Interpretation and background information related to key contaminants and datasets can be found in the "Air Quality Monitoring Results 2022" report. For background information about other air contaminants please refer to the following resource:

[Government of Canada - Toxic Substances List](#)

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 Air and Water Sciences Branch, Department of Environment and Local Government (DELG) at elg/egl-info@gnb.ca with any comments.

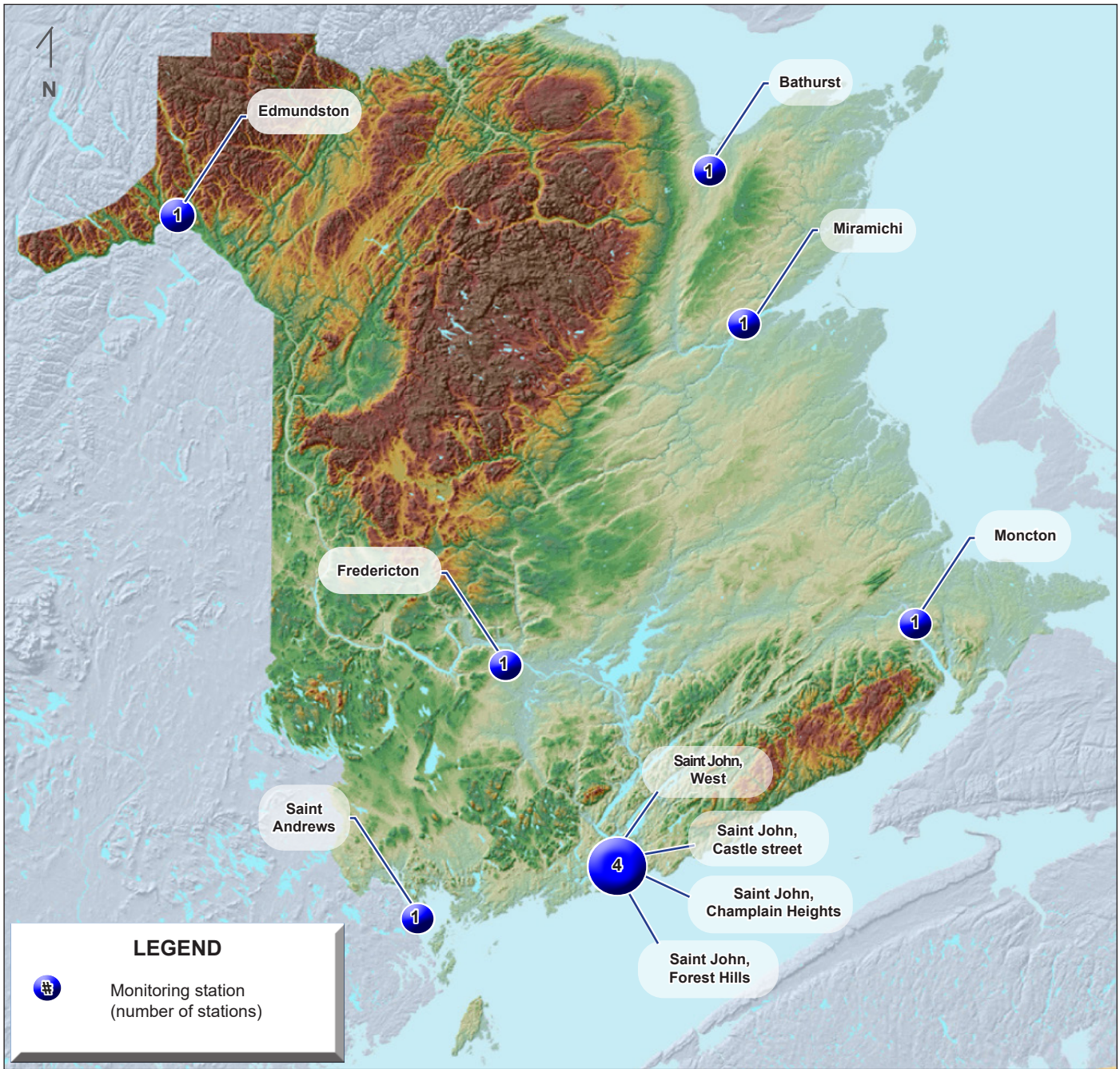
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List of Acronyms and Abbreviations

CO	Carbon Monoxide
eq/ha/yr	Equivalents (molar equivalent acidity) per hectare per year
PM _{2.5}	Fine Particulate Matter (less than 2.5 microns)
H ₂ S	Hydrogen Sulphide
kg/ha/yr	Kilograms per hectare per year
Met	Meteorology (Wind Speed, Wind Direction, Temperature, Relative Humidity, Barometric pressure)
µg/m ³	Micrograms per cubic meter
meq/L	Milliequivalents (molar equivalent acidity) per litre
mg/L	Milligrams per litre
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
O ₃	Ozone
ppb	Parts per billion
ppm	Parts per million
SO ₂	Sulphur Dioxide
TRS	Total Reduced Sulphur
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
W	Wind speed and direction

PART I:
THE PROVINCIAL AIR QUALITY MONITORING NETWORK:
STATIONS OPERATED BY THE PROVINCE



*See next page for detailed station monitoring information

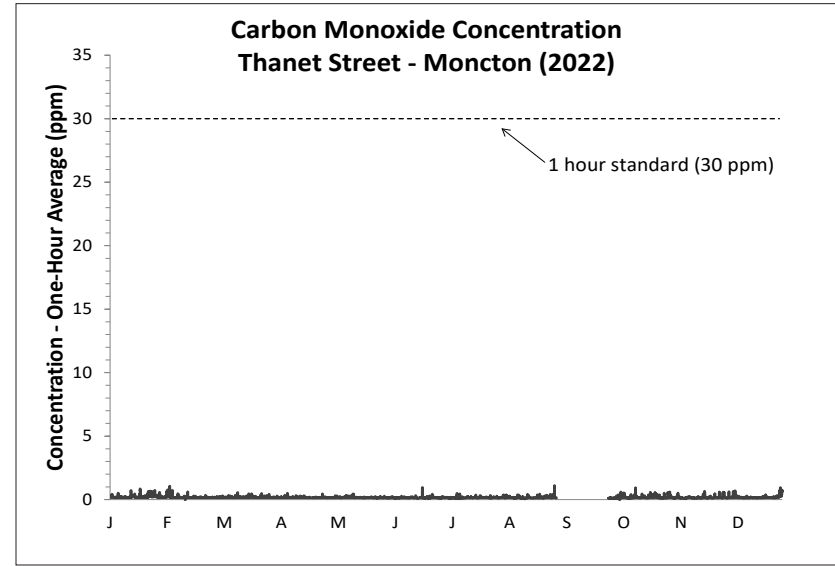
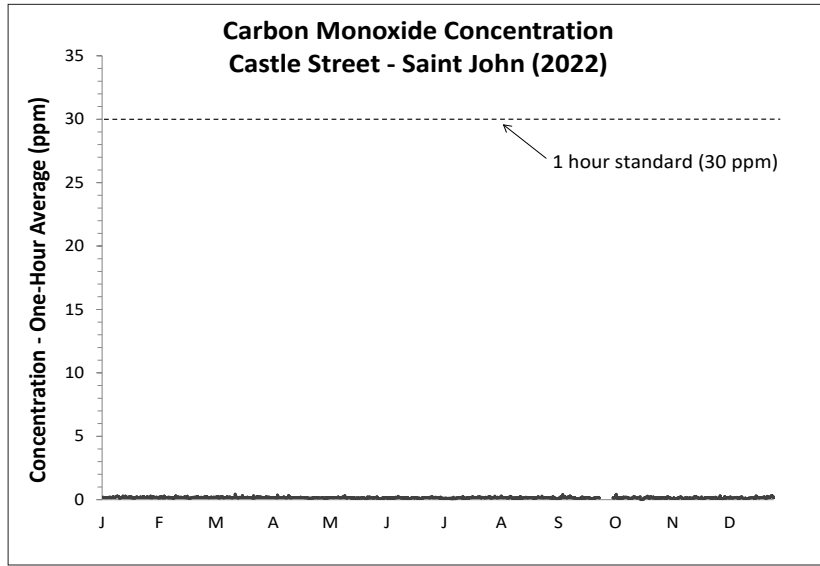
Network Information- New Brunswick Air Quality Monitoring Network, Stations Operated by the Province

Station	Location	Monitored Parameters
Bathurst	1255 Rough Waters Drive, Bathurst	Meteorology, NO ₂ , O ₃ , PM _{2.5}
Edmundston	27 Rice Street, Edmundston	Meteorology, NO ₂ , O ₃ , PM _{2.5} , SO ₂
Fredericton	486 Needham Street, Fredericton	Meteorology, NO ₂ , O ₃ , PM _{2.5}
Miramichi	15 Gretna Green Drive (Gretna Green School), Miramichi	Meteorology, NO ₂ , O ₃ , PM _{2.5}
Moncton	5 Thanet Street, Moncton	CO, NO ₂ , O ₃ , PM _{2.5}
Saint Andrews	Huntsman Marine Entrance, Saint Andrews	NO ₂ , O ₃ , PM _{2.5} , VOC
Saint John- Castle Street	8 Castle Street, Saint John	CO, Meteorology, NO ₂ , O ₃ , PM _{2.5} , SO ₂
Saint John-Champlain Heights Elementary School*	111 Champlain Drive, Saint John	VOC
Saint John- Forest Hills*	Mountain Road, Saint John	Meteorology, NO ₂ , O ₃ , PM _{2.5} , VOC
Saint John- West Side	476 Lancaster Avenue, Saint John	NO ₂ , O ₃ , PM _{2.5} , SO ₂ , TRS

*Station co-operated by GNB and Irving Oil Ltd.

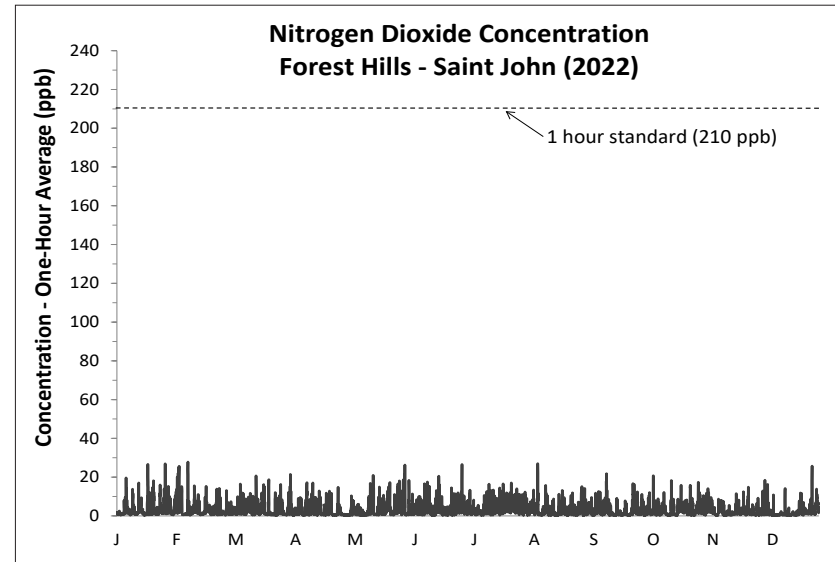
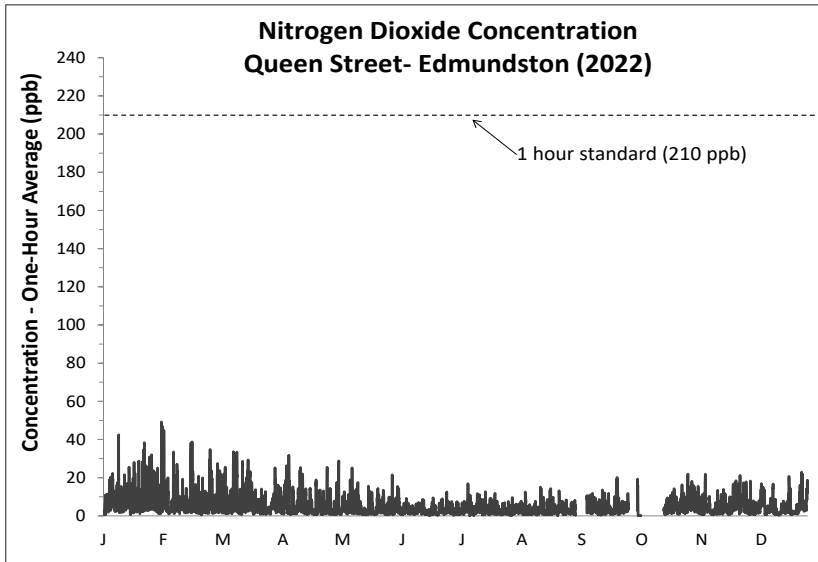
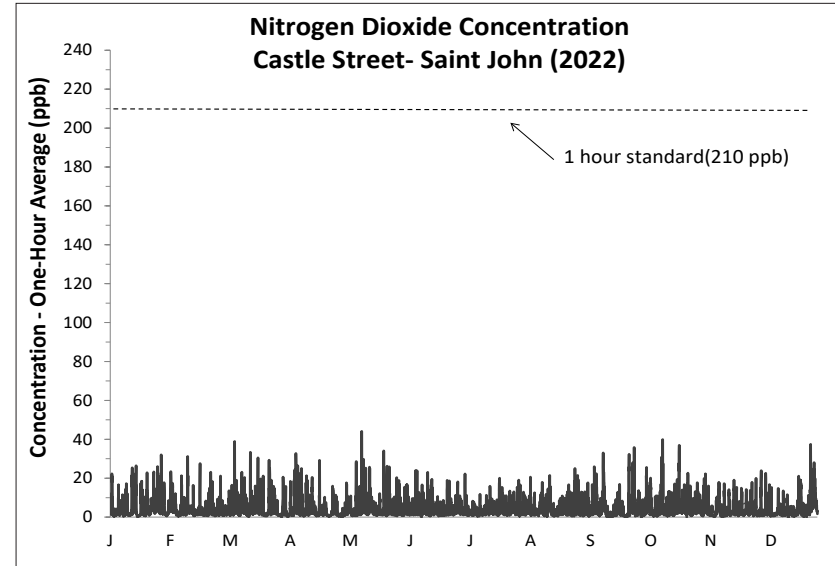
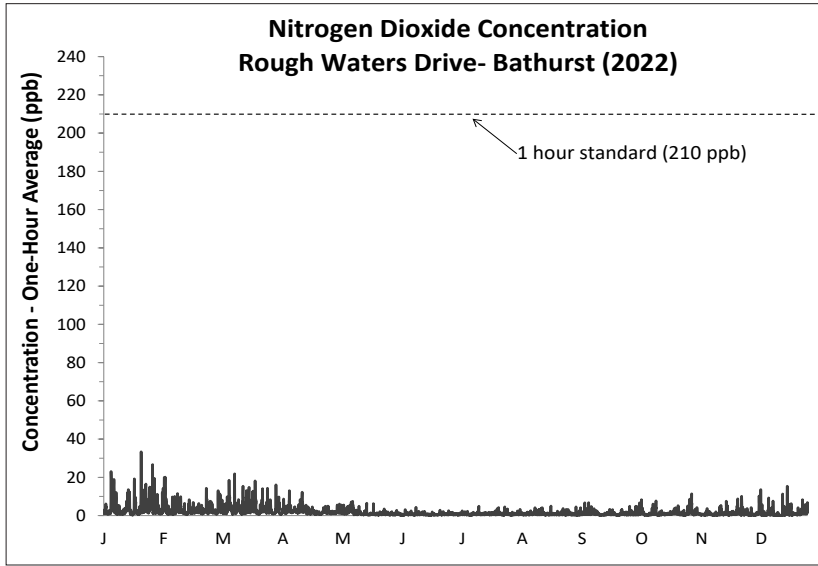
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Carbon Monoxide



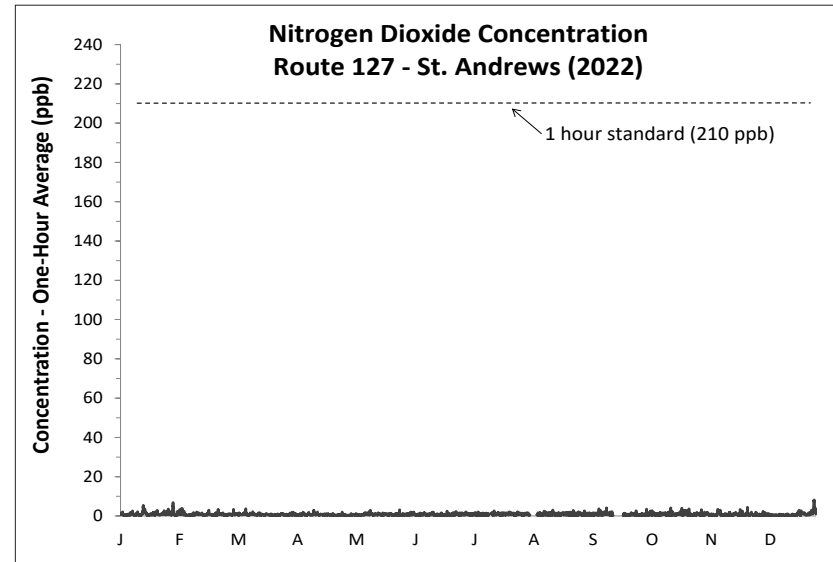
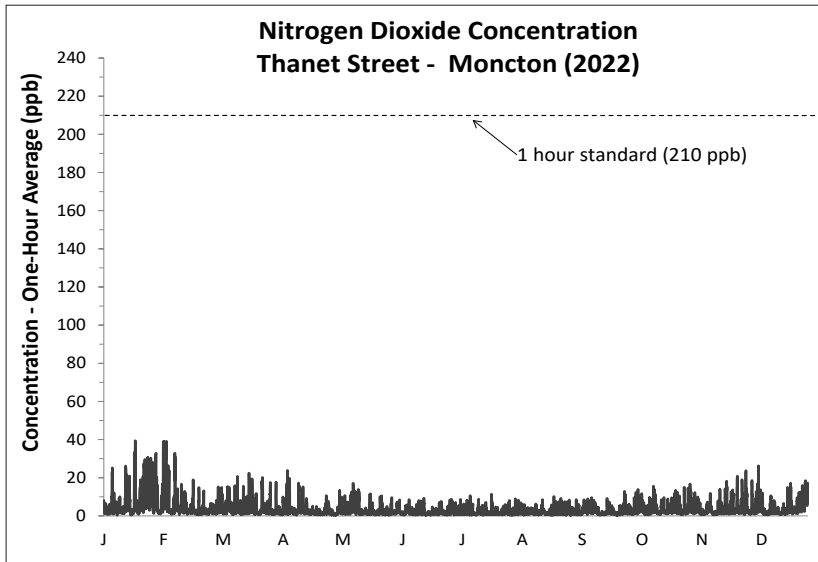
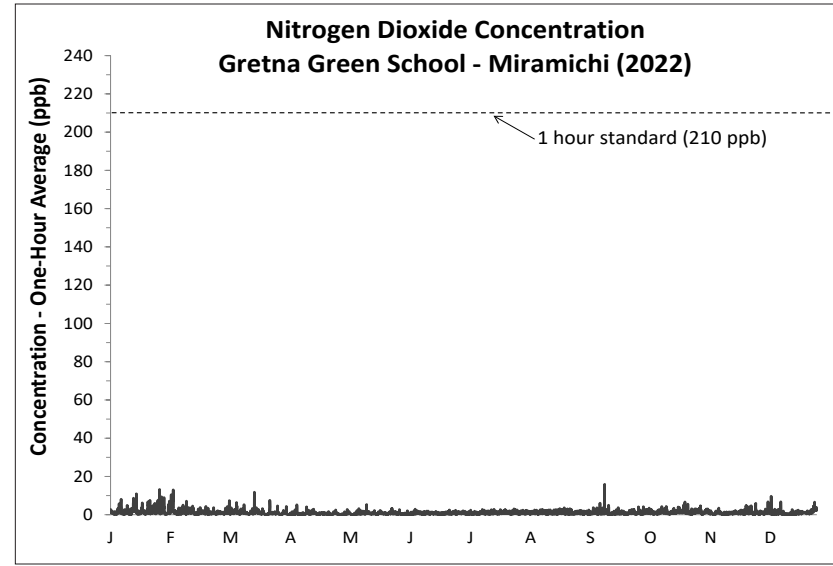
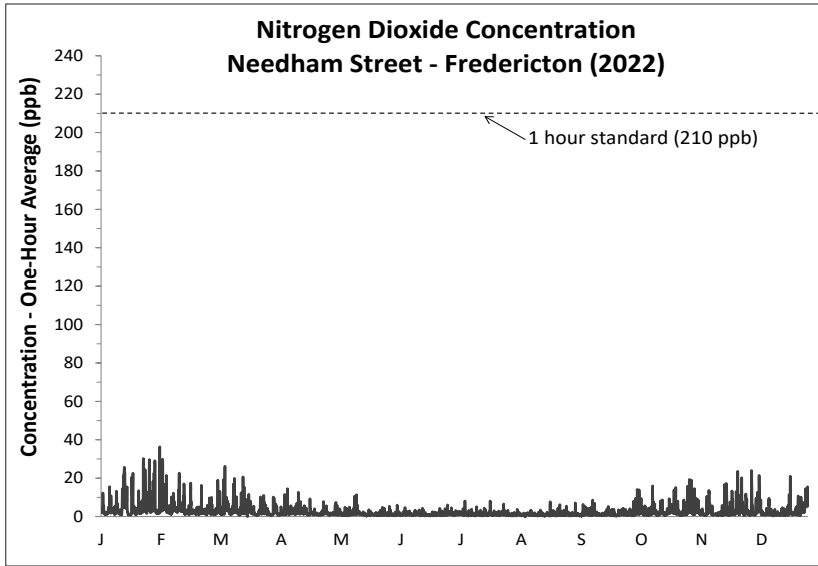
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Nitrogen Dioxide



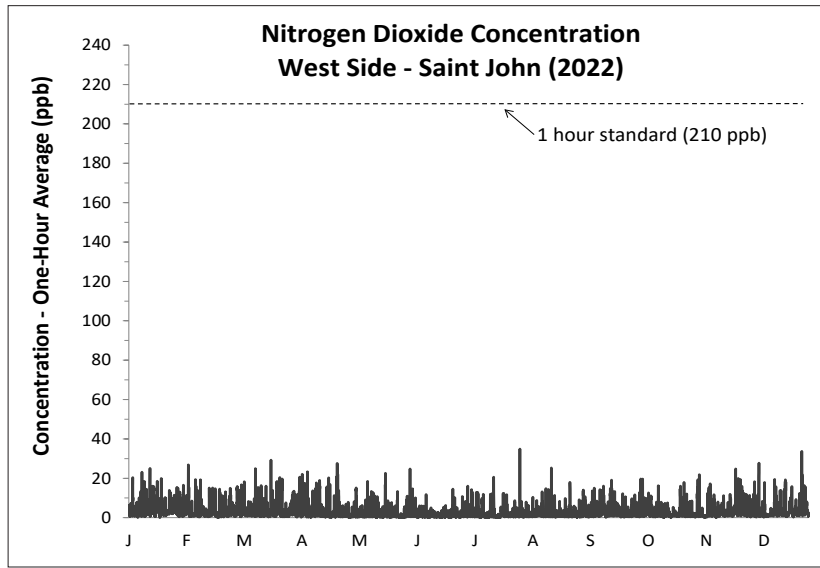
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Nitrogen Dioxide



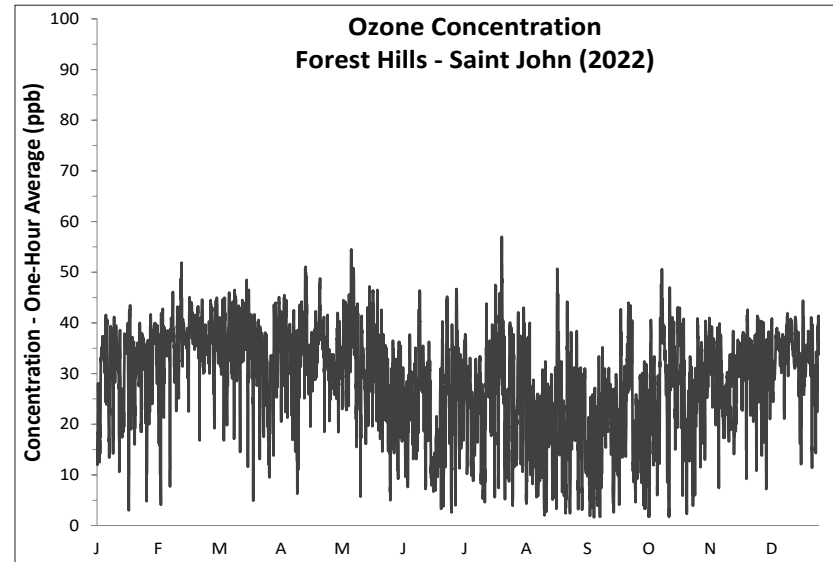
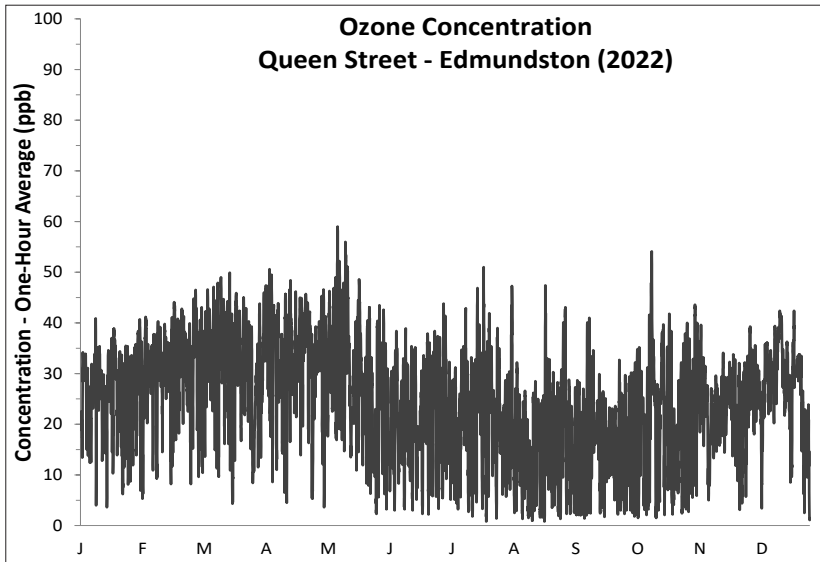
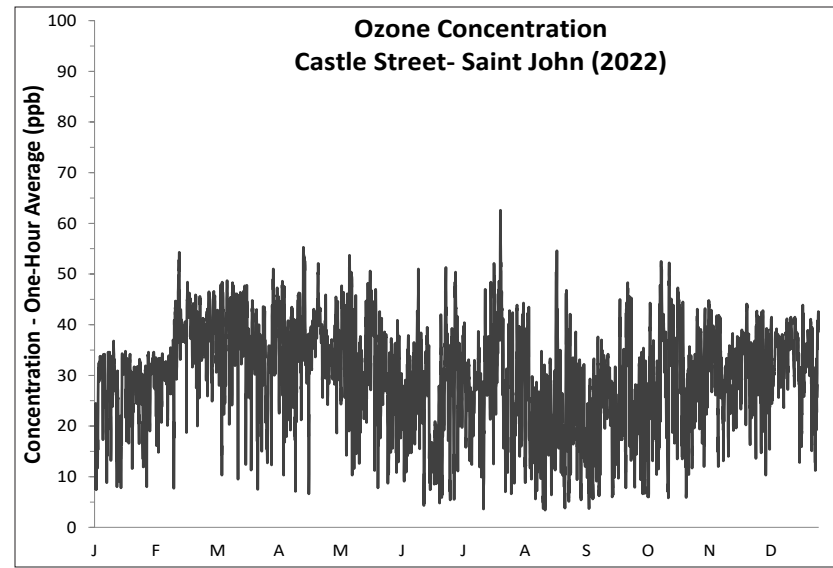
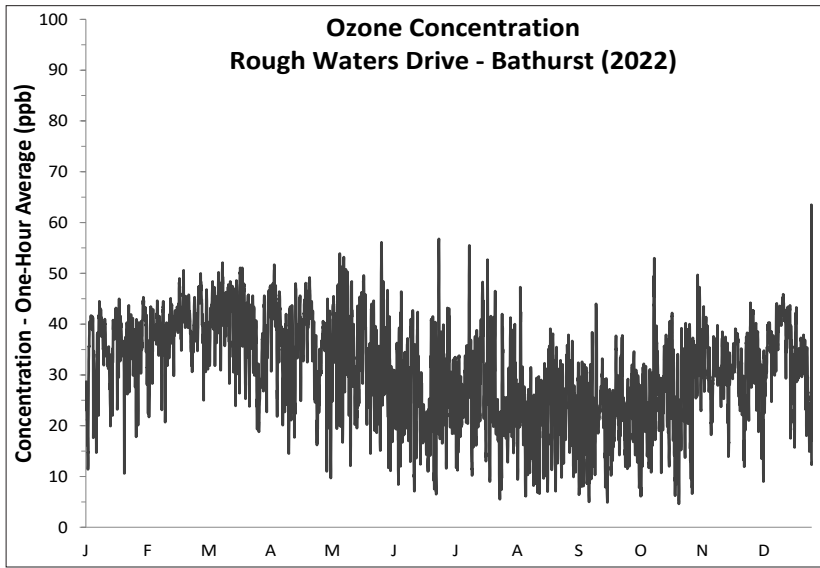
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Nitrogen Dioxide



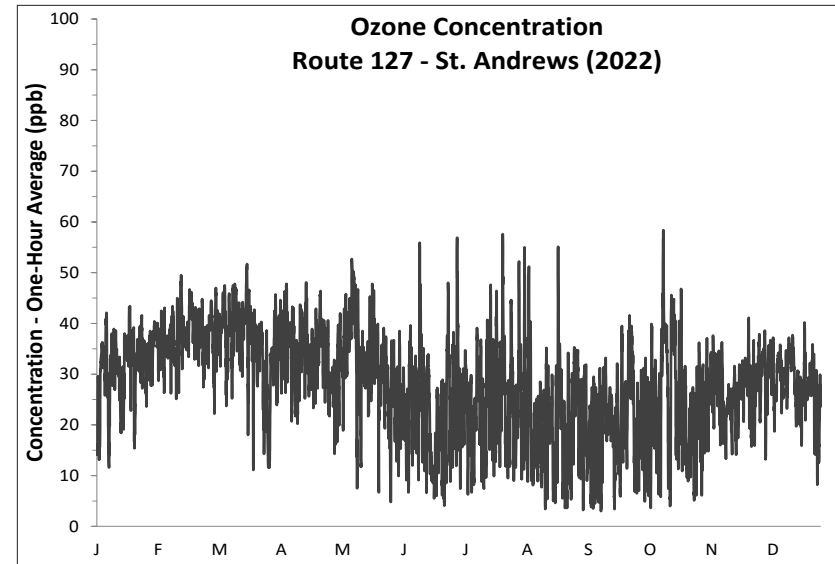
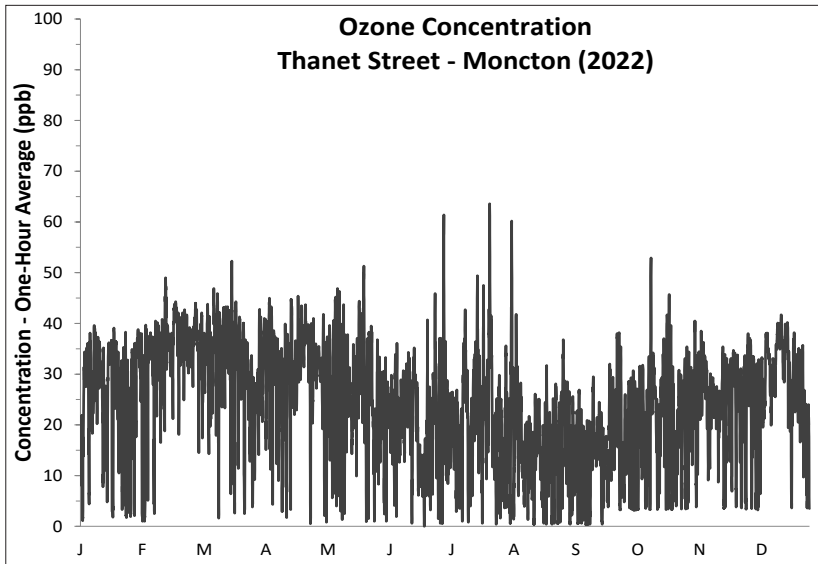
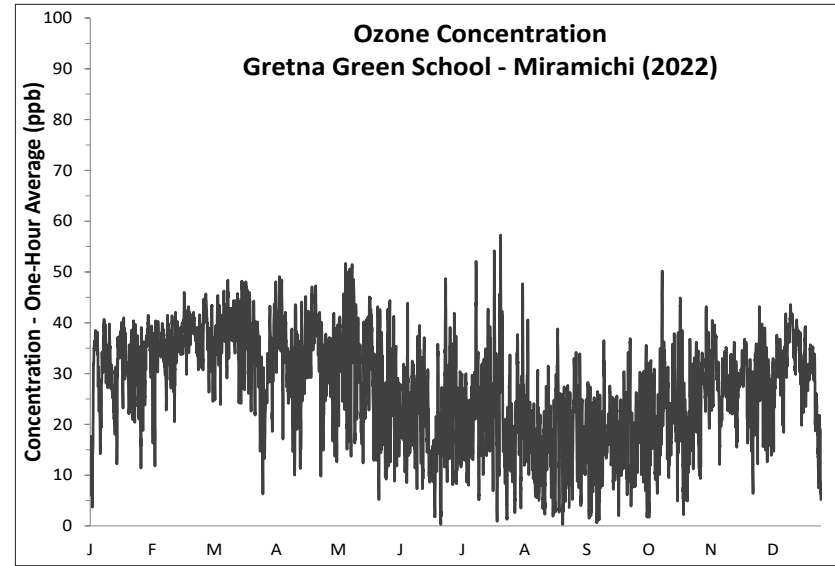
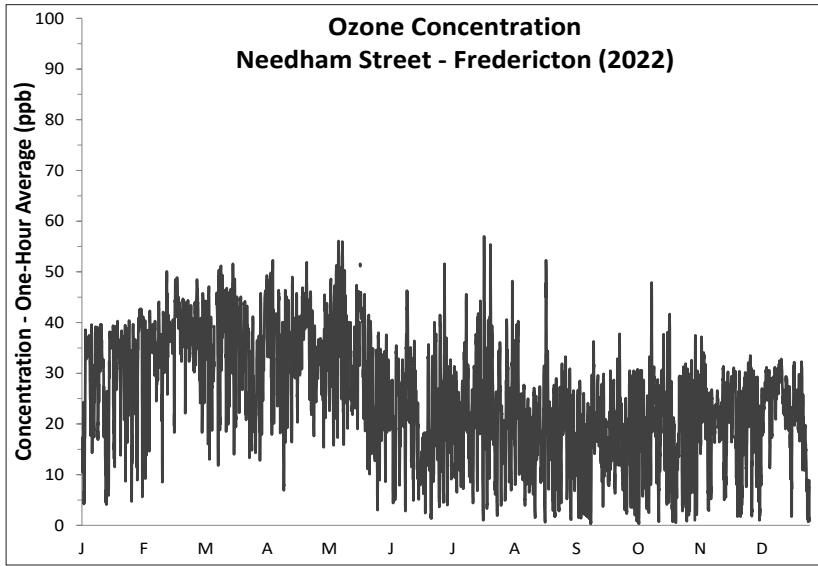
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Ozone



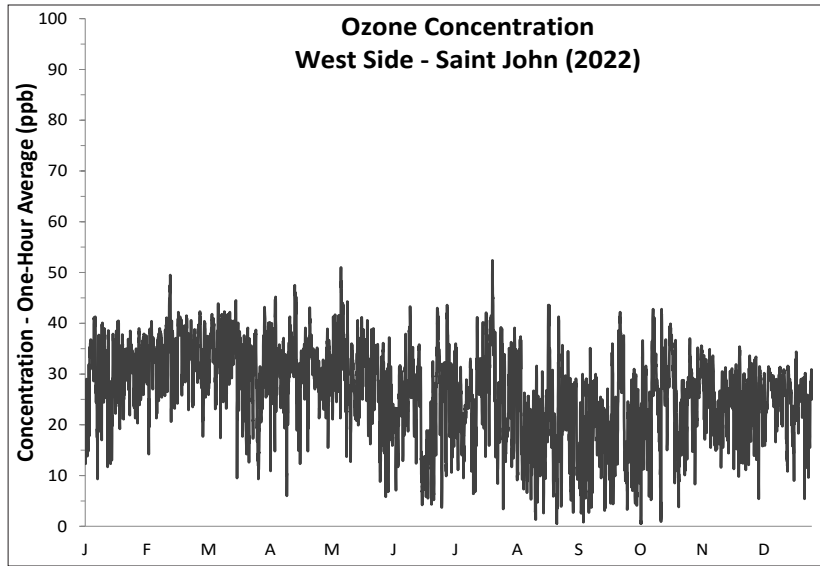
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Ozone



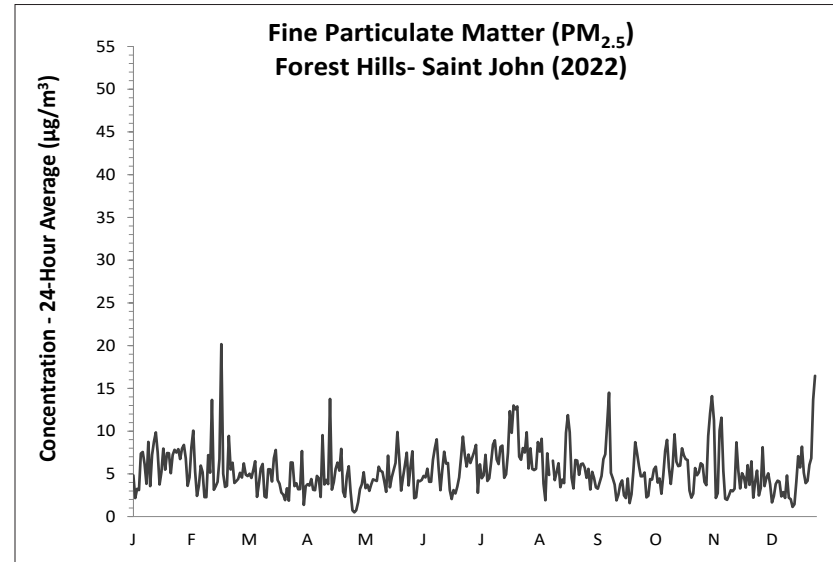
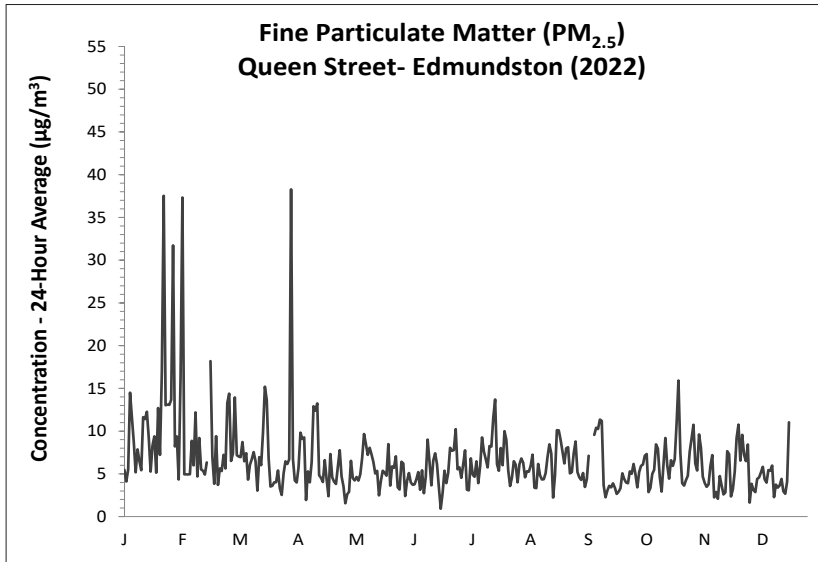
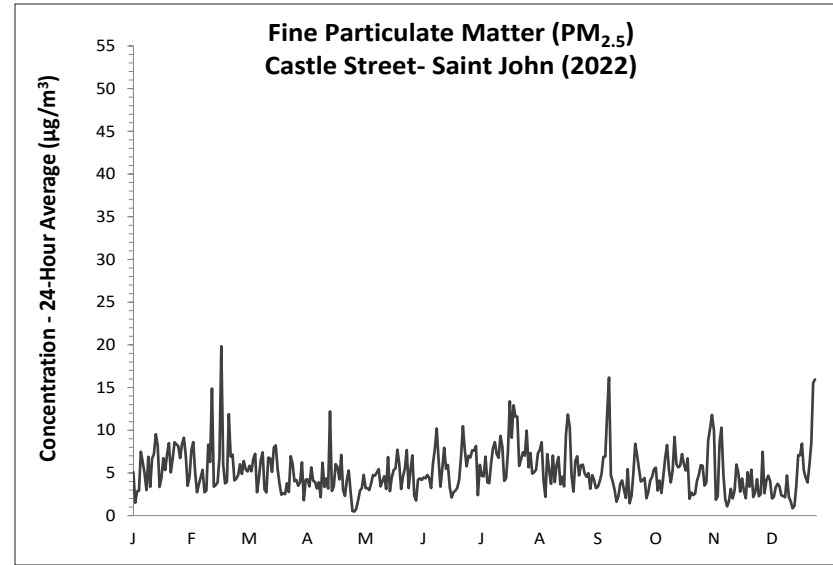
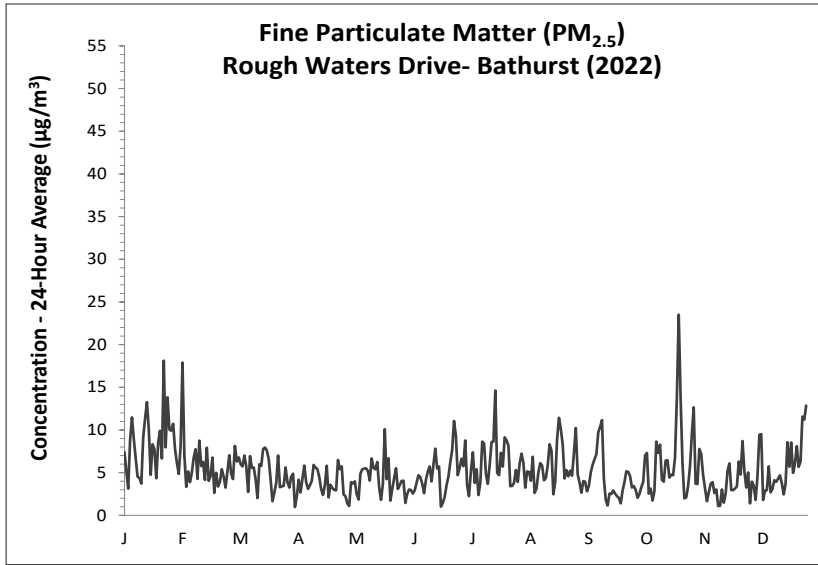
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Ozone



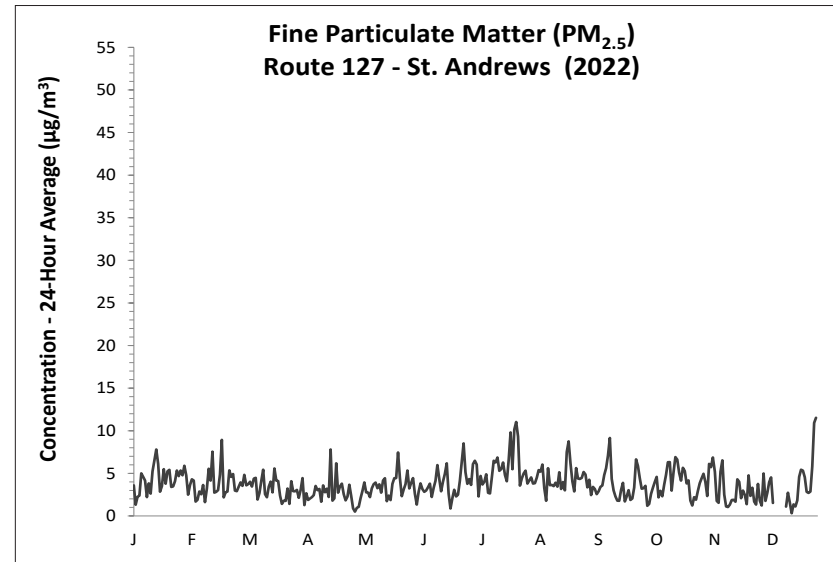
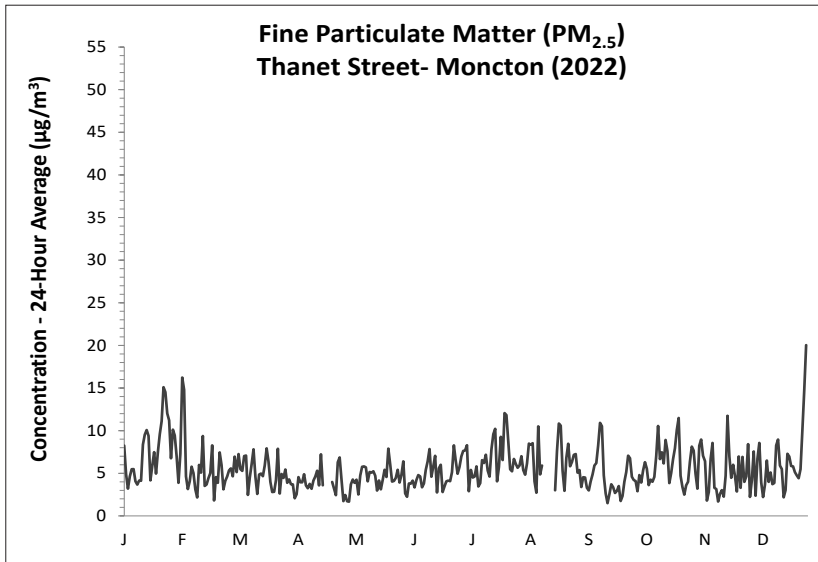
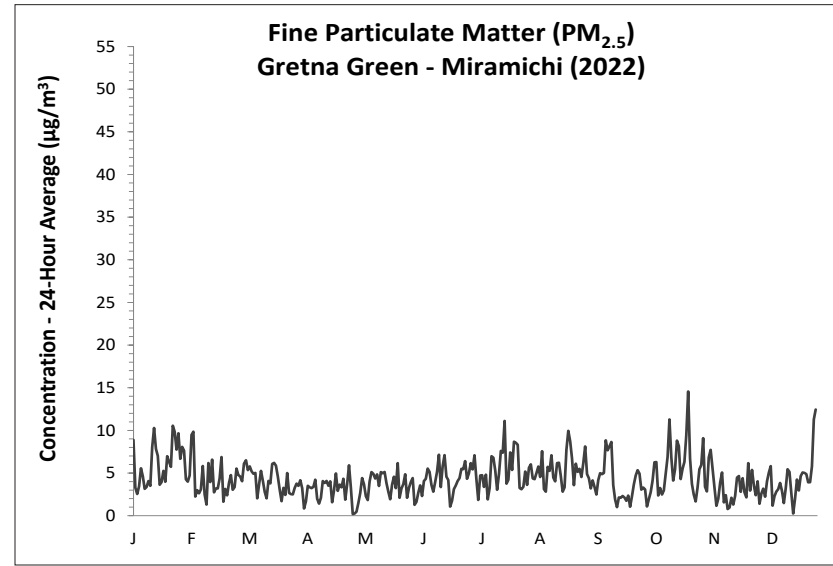
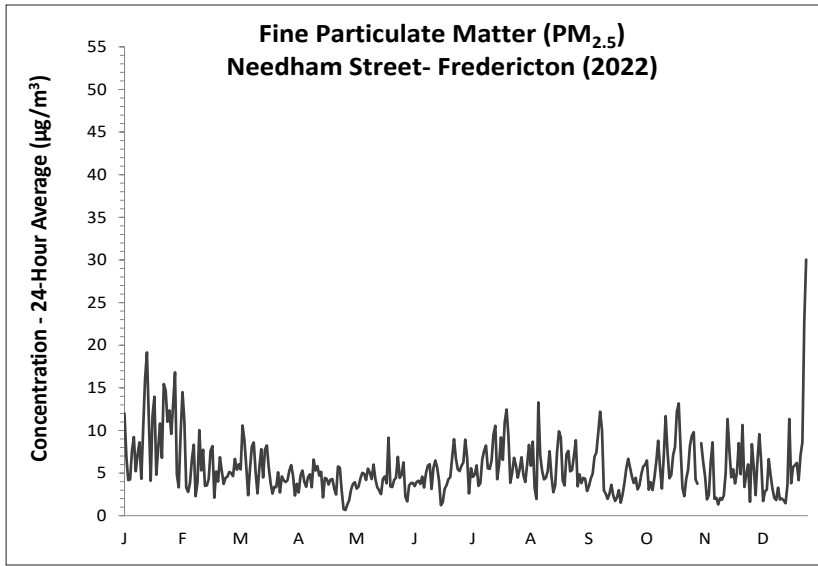
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Fine Particulate Matter



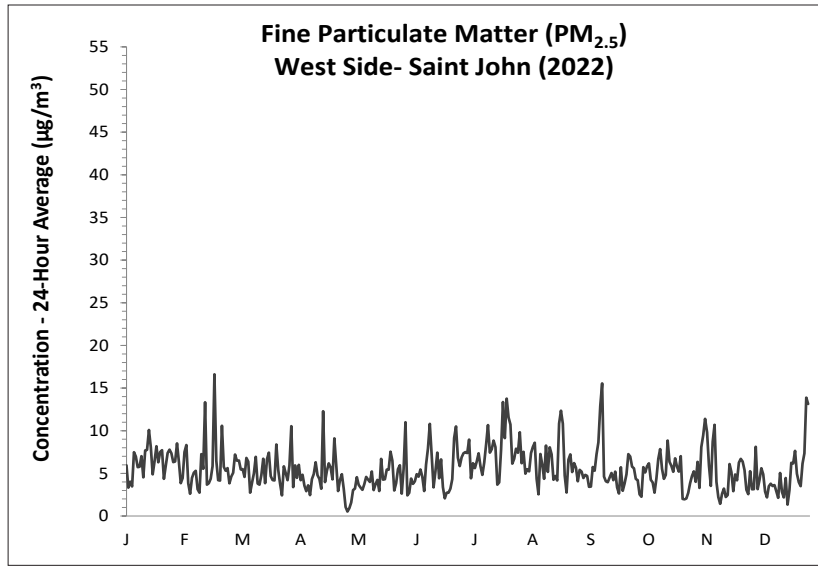
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Fine Particulate Matter



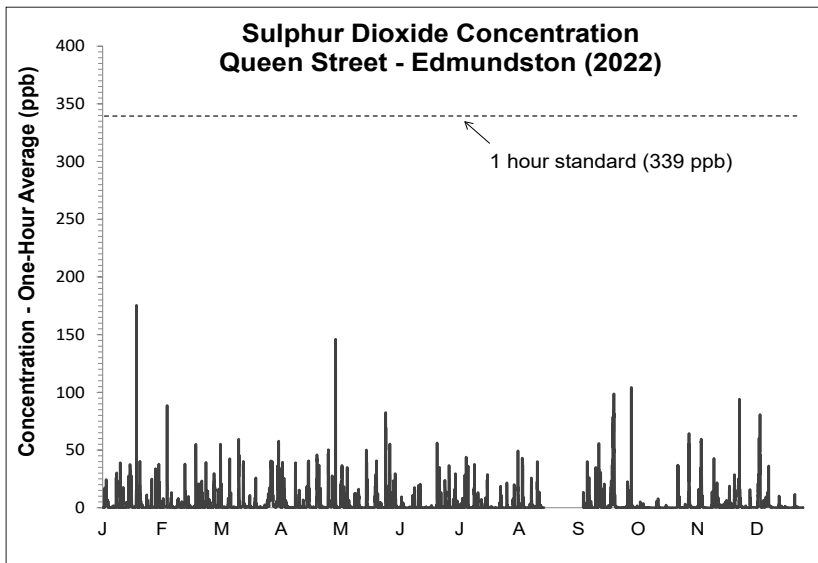
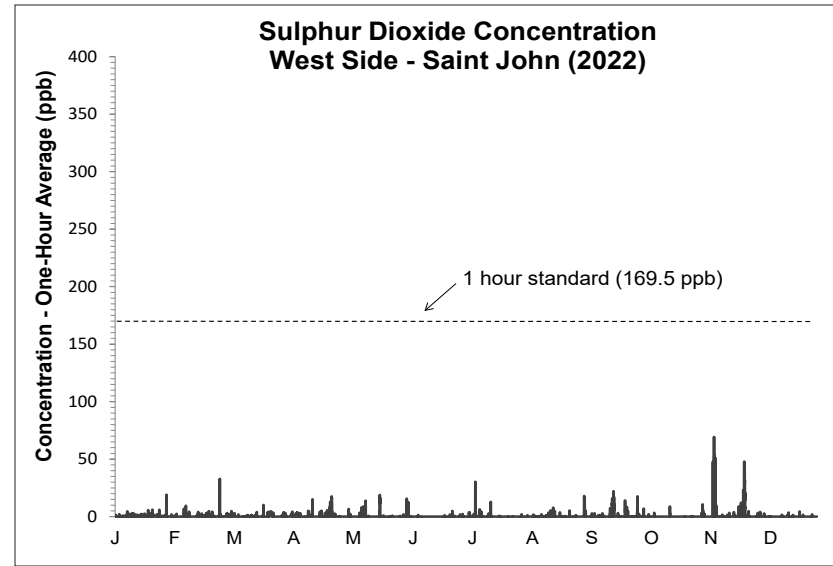
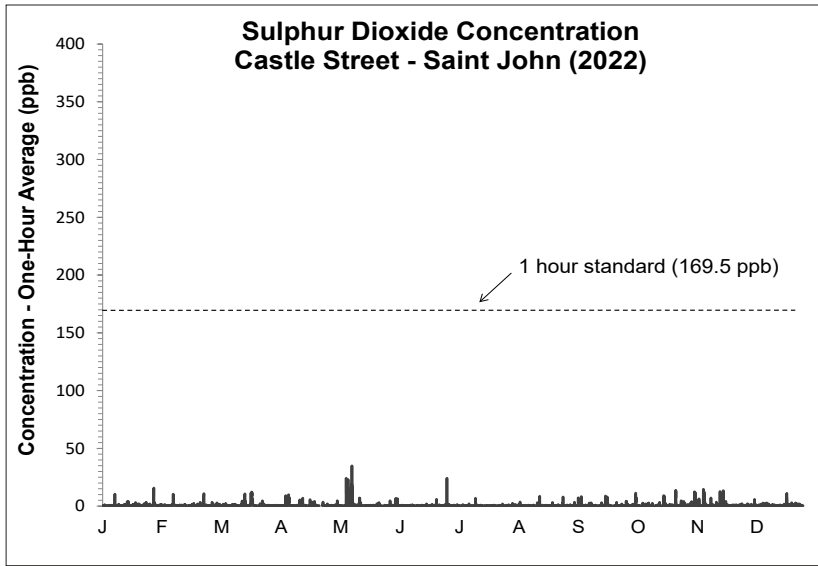
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Fine Particulate Matter



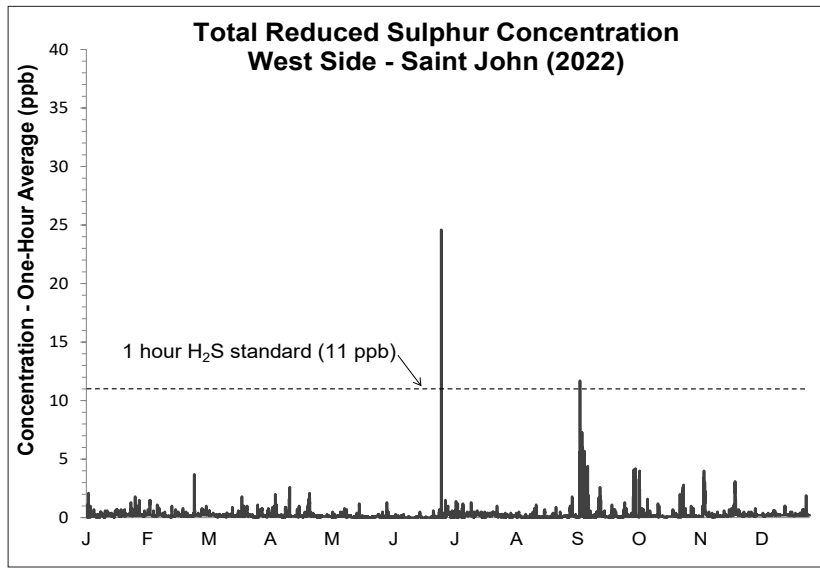
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Sulphur Dioxide



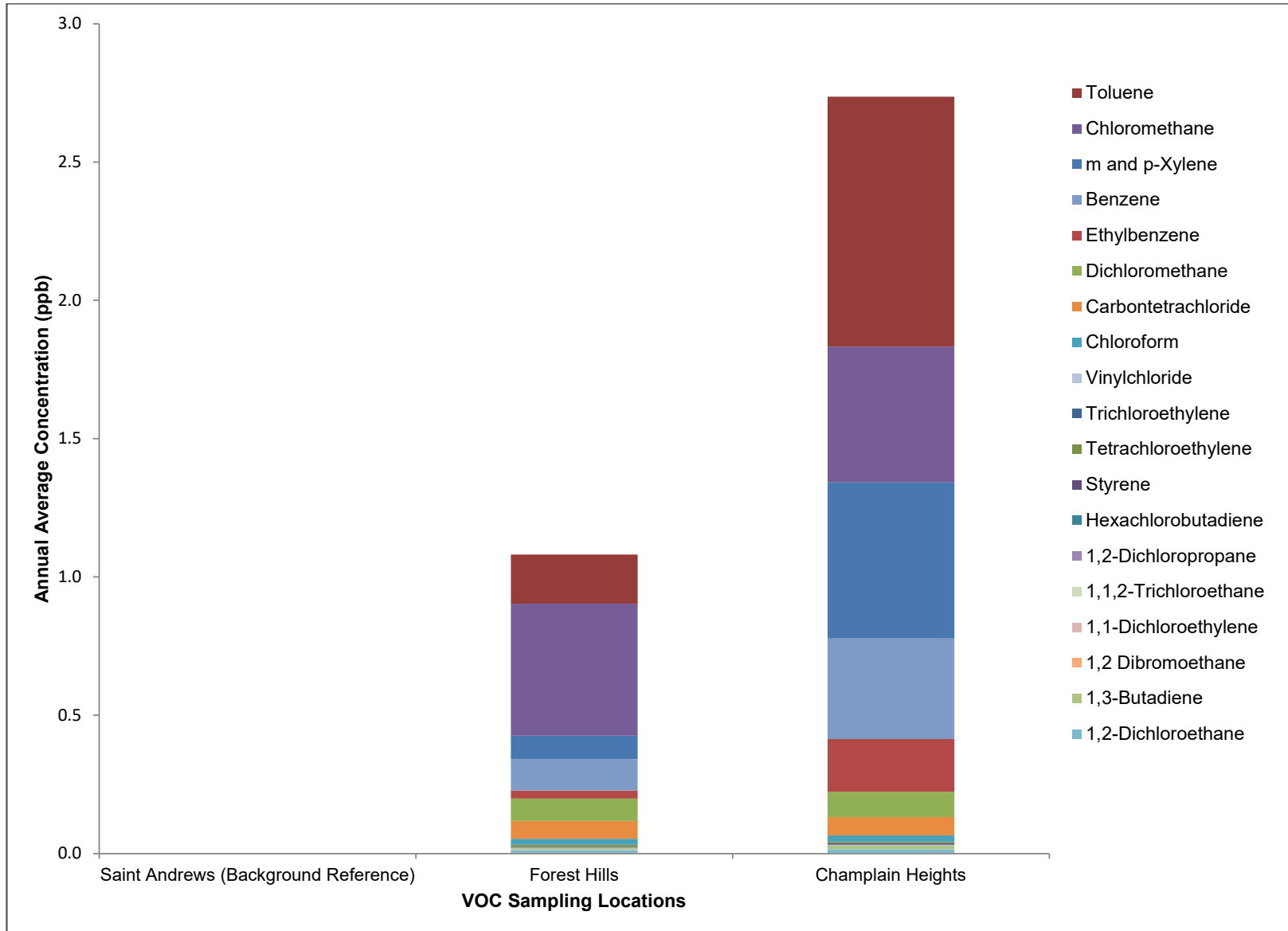
PART I: STATIONS OPERATED BY THE PROVINCE - Continuous Air Quality Monitoring Results

Total Reduced Sulphur (H₂S)



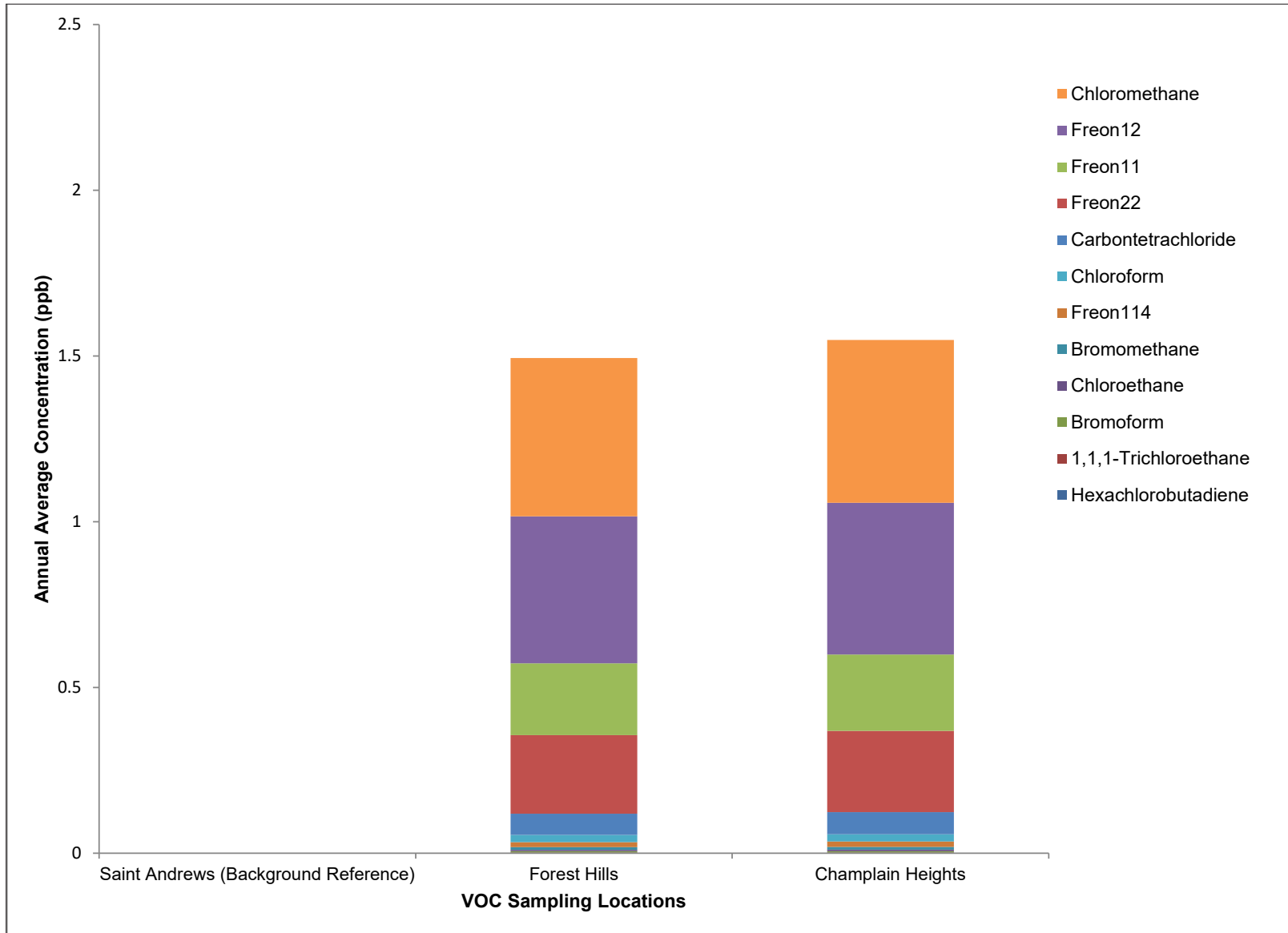
PART I: STATIONS OPERATED BY THE PROVINCE - Volatile Organic Compounds, Saint John Region

Air Toxics - 2022 Annual Average Concentration Range Chart



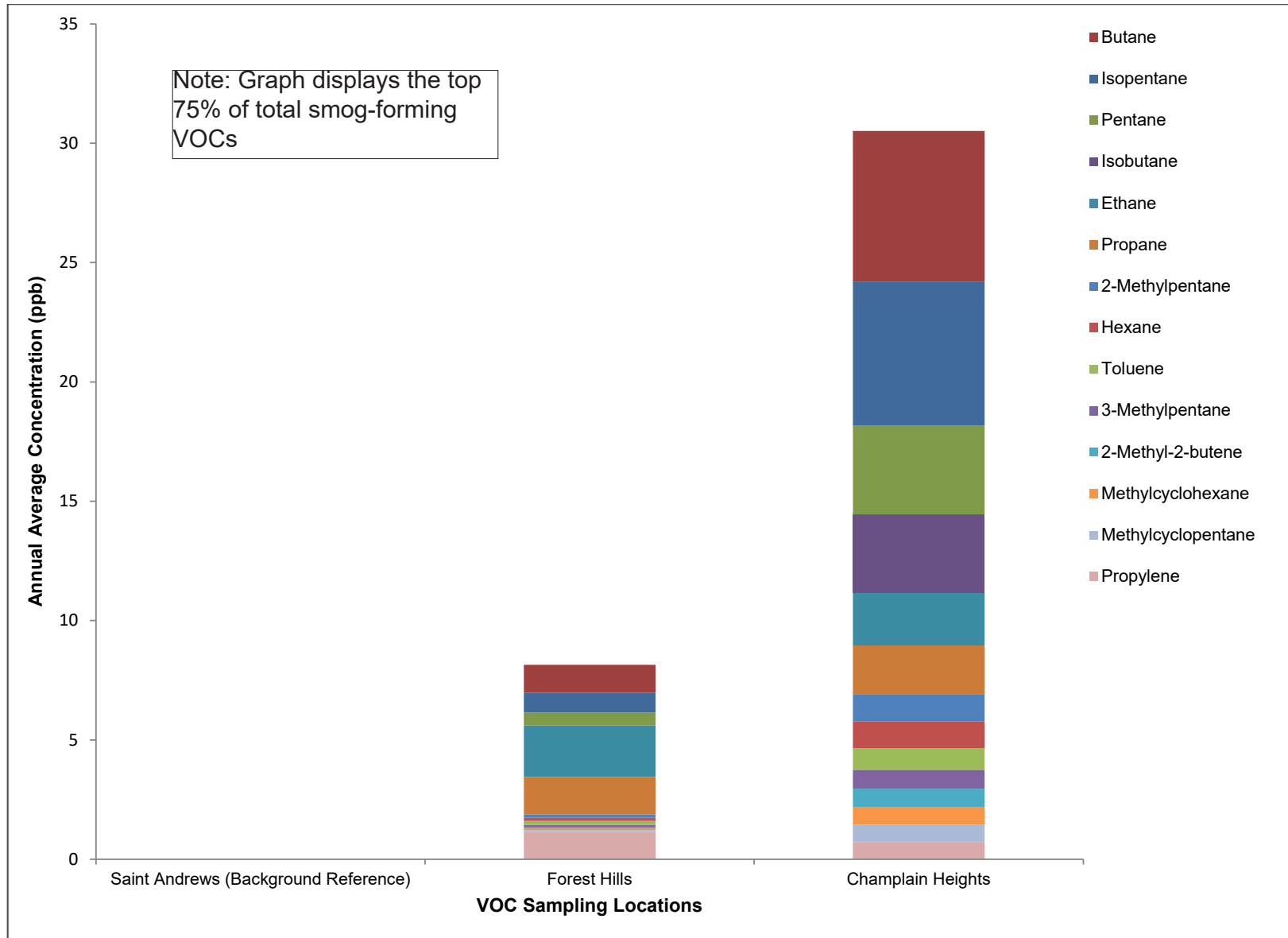
PART I: STATIONS OPERATED BY THE PROVINCE - Volatile Organic Compounds, Saint John Region

Ozone Depleting Substances - 2022 Annual Average Concentration Range Chart



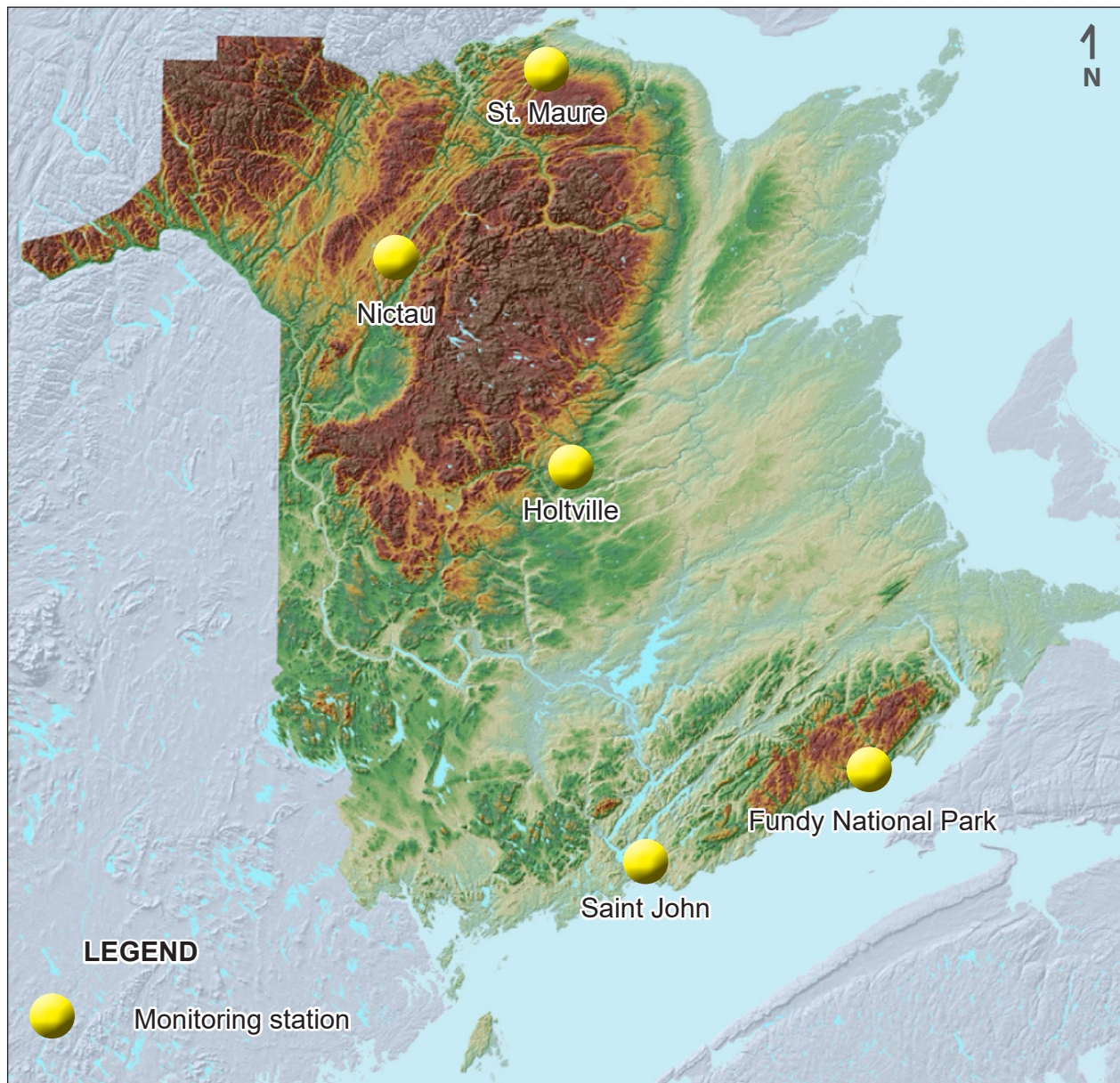
PART I: STATIONS OPERATED BY THE PROVINCE - Volatile Organic Compounds, Saint John Region

Smog-Forming VOCs - 2022 Annual Average Concentration Range Chart



PART II:
ACID PRECIPITATION MONITORING NETWORK

2022 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, 2013-2022

Site	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
St. Maure	121.30	140.76	86.68	95.41	85.79*	108.07	104.44	63.16	97.79	72.85
Robertville	124.20	168.35	85.95	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nictau	108.13	119.96	80.73	71.17	81.29	59.98**	64.82	55.49	62.25	73.60
Trout Brook	100.78	116.05	65.07	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Holtville	127.23	126.63	78.33	73.59	99.39	117.31	89.33	63.54	68.18	91.86
Harcourt	99.92	120.67	74.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a
South Oromocto Lake	154.73	150.02	107.51	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pennfield	265.32	223.61	179.91	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lakewood Heights	193.66	164.38	144.65	173.21	134.98	203.97	219.52	155.00	145.12	202.80
Fundy	249.13	200.13	143.40	126.30	122.62	206.17	198.28	--	95.08	205.28

*41 weeks of data
 **42 weeks of data
 -- insufficient data
 n/a station closed

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

Annual Sulphate Wet Deposition (kg/ha/yr) at New Brunswick Monitoring Sites, 2013-2022

Site	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
St. Maure	5.06	5.92	3.60	3.97	3.58*	4.56	4.18	2.46	3.99	2.71
Robertville	5.17	7.13	3.51	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nictau	4.25	4.65	3.02	2.59	3.07	2.26**	2.40	2.06	2.22	2.57
Trout Brook	4.01	4.71	2.46	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Holtville	5.02	5.00	2.92	2.79	3.86	4.43	3.33	2.42	2.51	3.45
Harcourt	3.92	4.82	2.77	n/a	n/a	n/a	n/a	n/a	n/a	n/a
South Oromocto Lake	6.24	5.96	4.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pennfield	11.28	9.31	7.30	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lakewood Heights	8.20	8.12	5.98	7.28	5.63	8.68	9.34	6.64	6.04	8.57
Fundy	10.64	8.21	5.82	5.14	5.09	8.52	8.31	--	3.68	8.61

*41 weeks of data

**42 weeks of data

-- insufficient data

n/a station closed

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

Annual Nitrate Wet Deposition (kg/ha/yr) at New Brunswick Monitoring Sites, 2013-2022

Site	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
St. Maure	0.99	1.09	0.72	0.80	0.70*	0.81	1.08	0.74	0.91	1.02
Robertville	1.03	1.17	0.79	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nictau	1.23	1.44	1.11	1.07	1.08	0.80**	0.92	0.78	0.99	1.25
Trout Brook	1.07	1.11	0.86	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Holtville	1.41	1.40	1.08	0.97	1.19	1.56	1.24	0.81	0.98	1.25
Harcourt	1.14	1.26	1.01	n/a	n/a	n/a	n/a	n/a	n/a	n/a
South Oromocto Lake	1.54	1.61	1.51	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pennfield	1.89	1.85	1.74	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lakewood Heights	1.42	1.57	1.25	1.34	1.10	1.44	1.56	1.04	1.21	1.51
Fundy	1.71	1.81	1.39	1.20	1.03	1.79	1.57	--	1.14	1.61

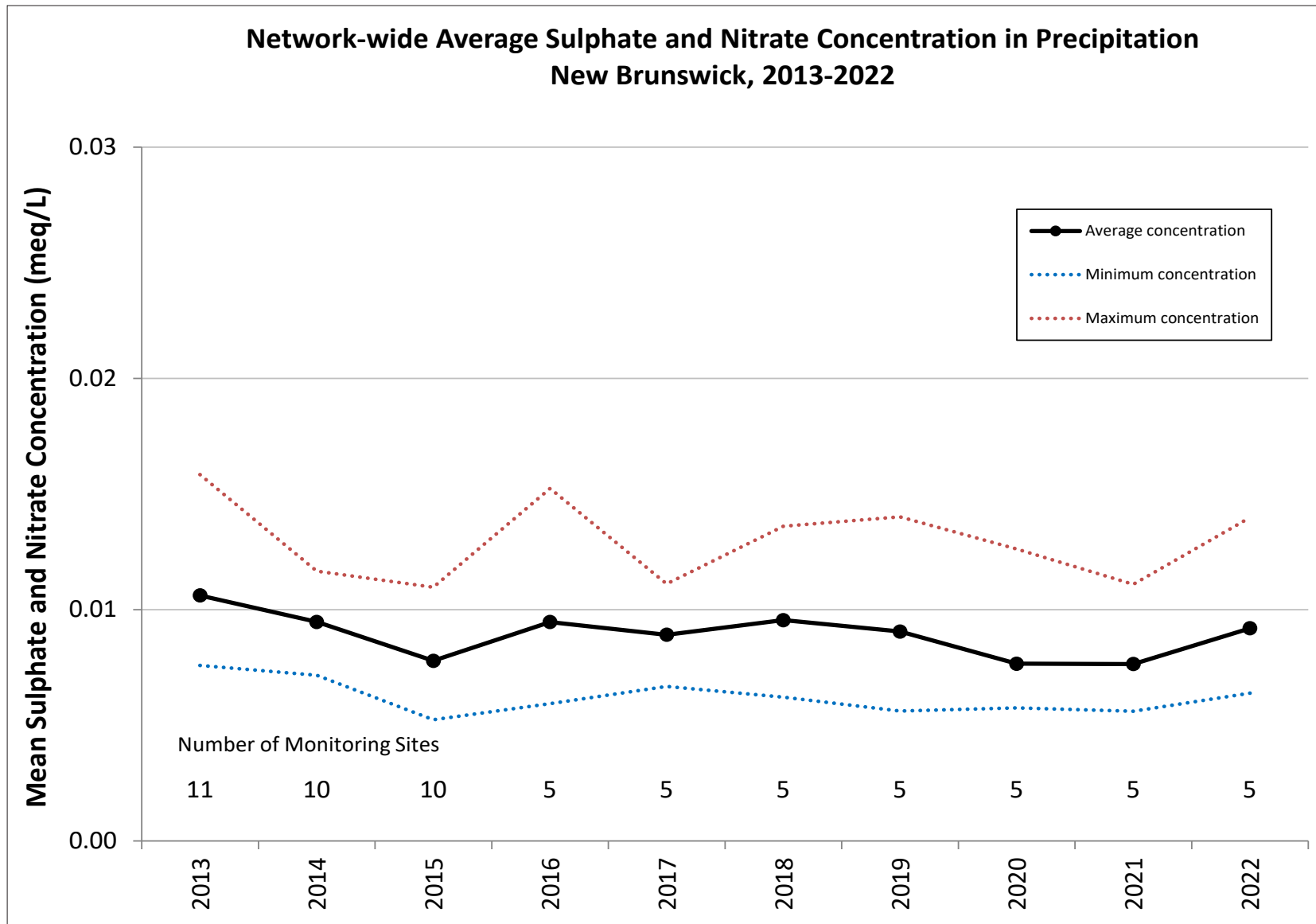
*41 weeks of data

**42 weeks of data

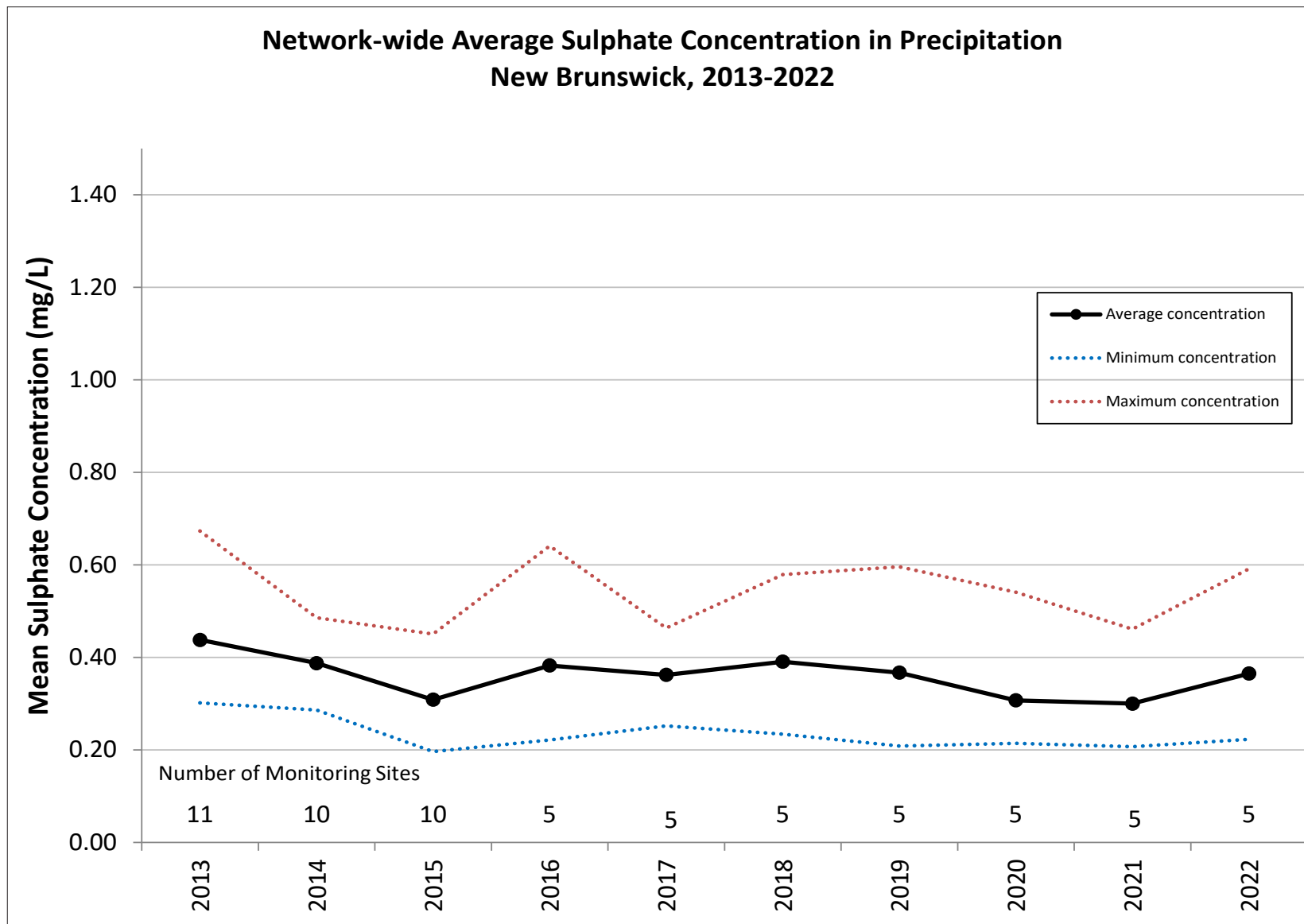
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n/a station closed

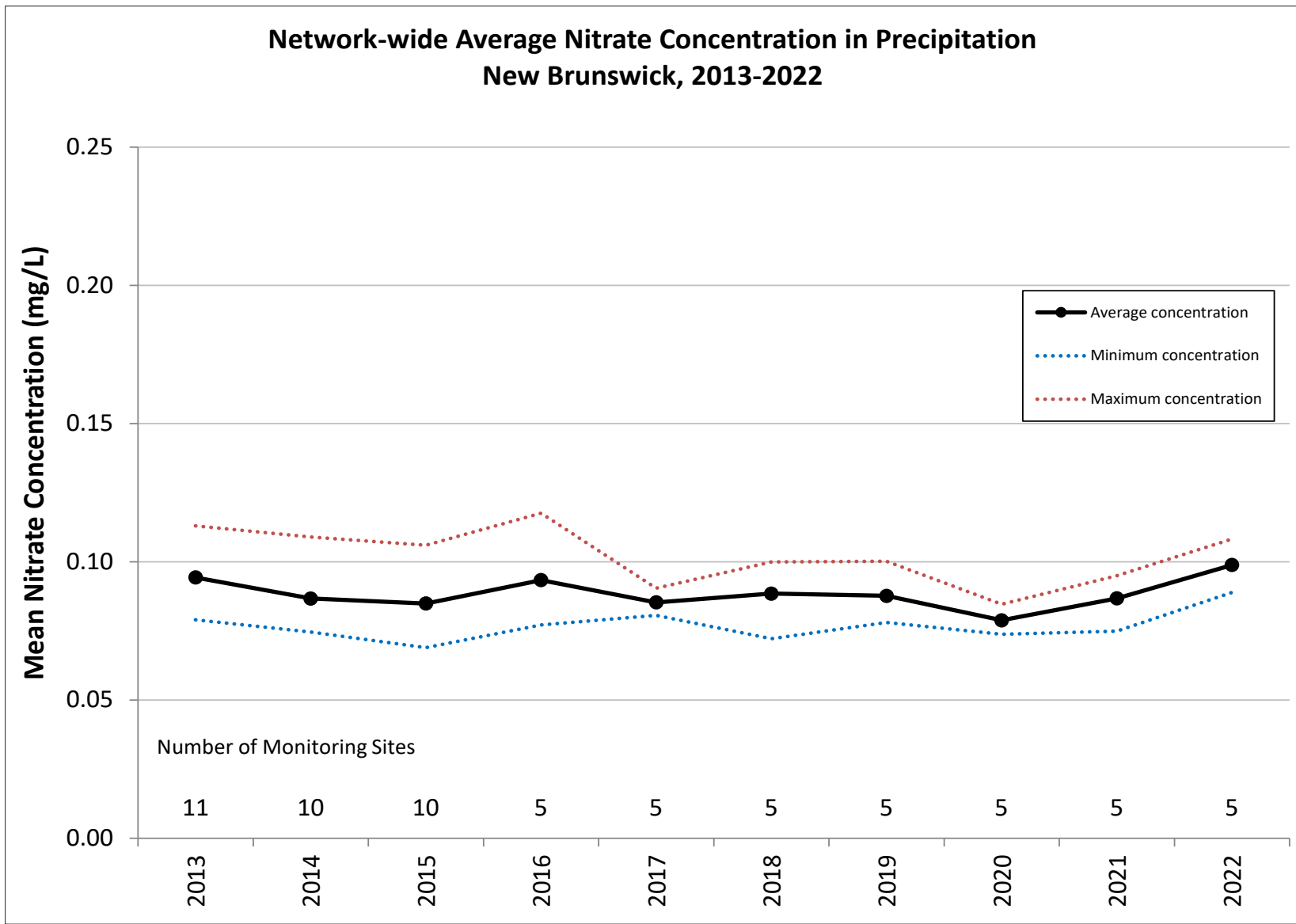
PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends



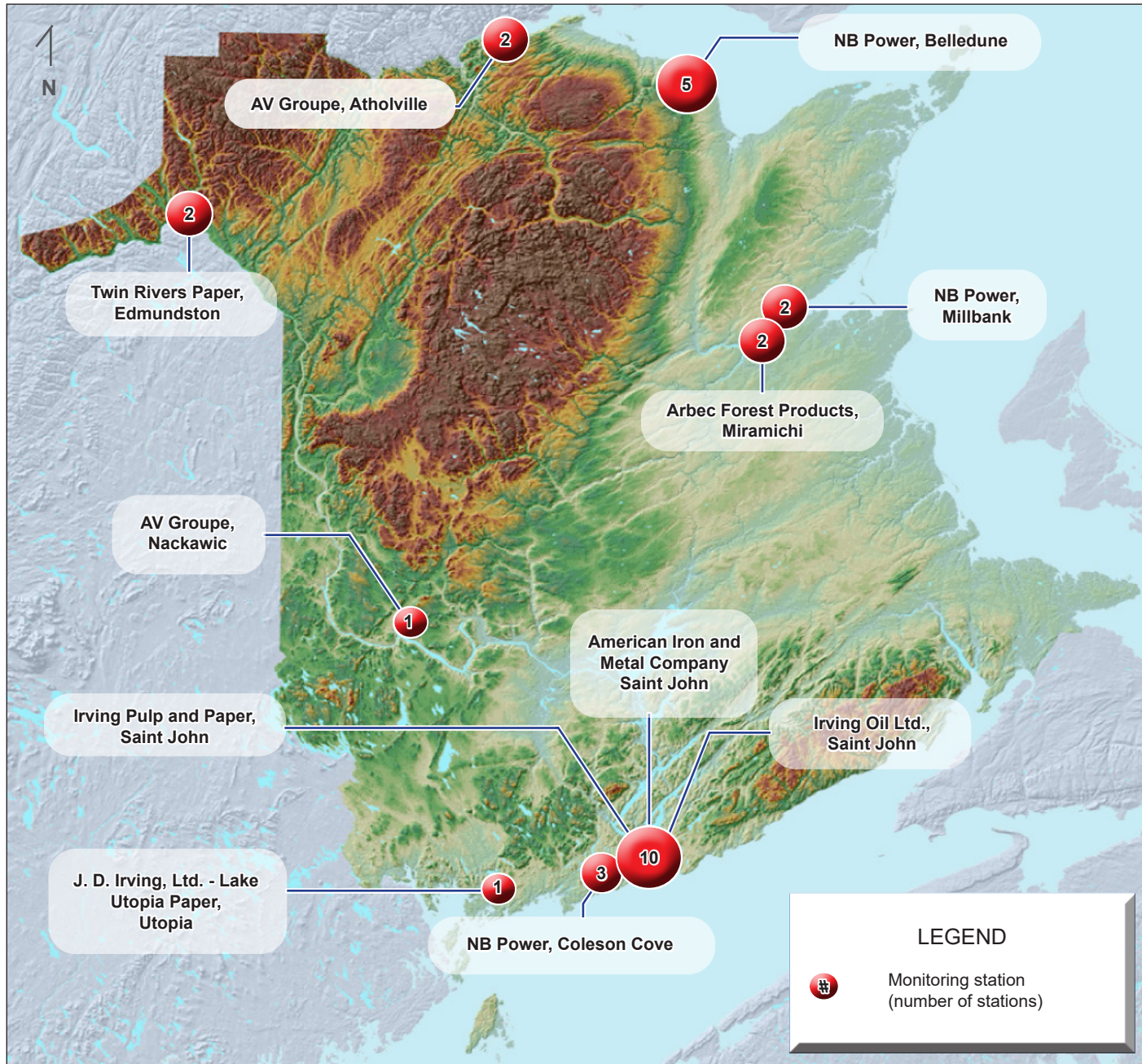
PART II: ACID PRECIPITATION MONITORING NETWORK - Network-wide Annual Mean Sulphate and Nitrate Concentration Trends



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



PART III:
THE PROVINCIAL AIR QUALITY MONITORING NETWORK:
STATIONS OPERATED BY INDUSTRY

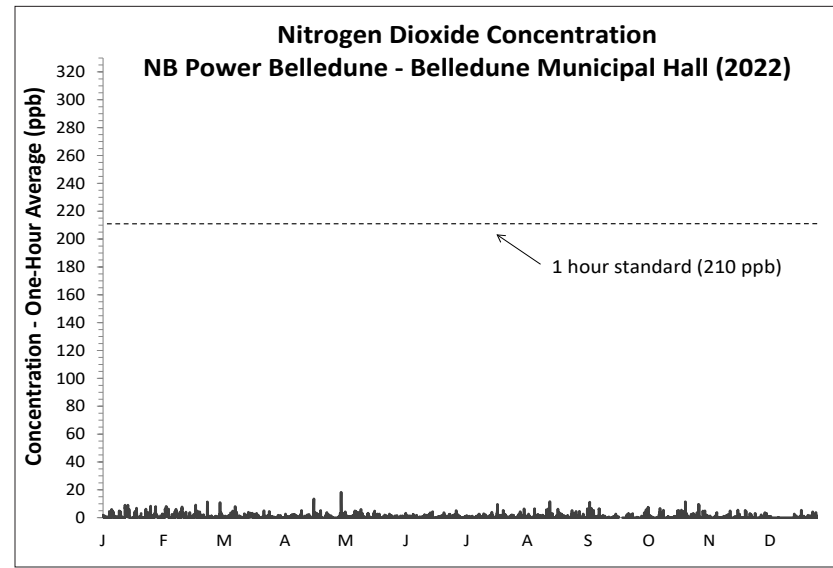
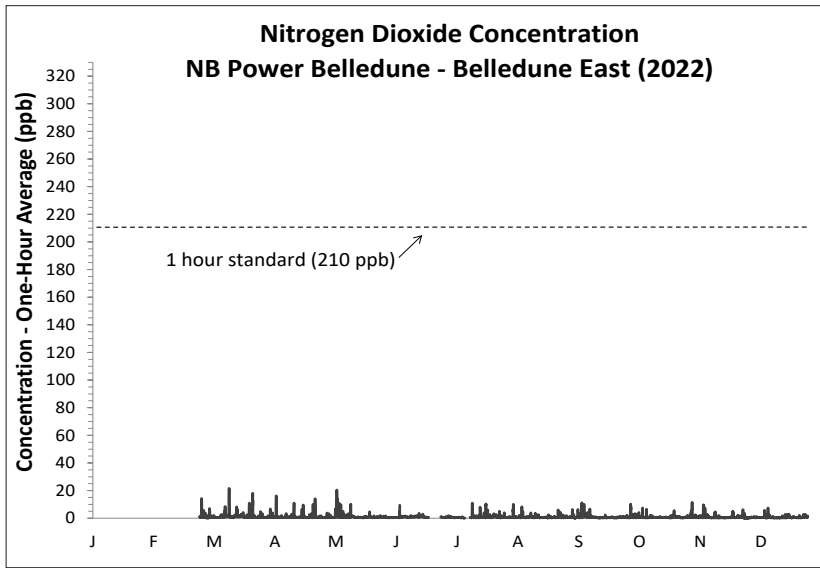


*See next page for detailed station information

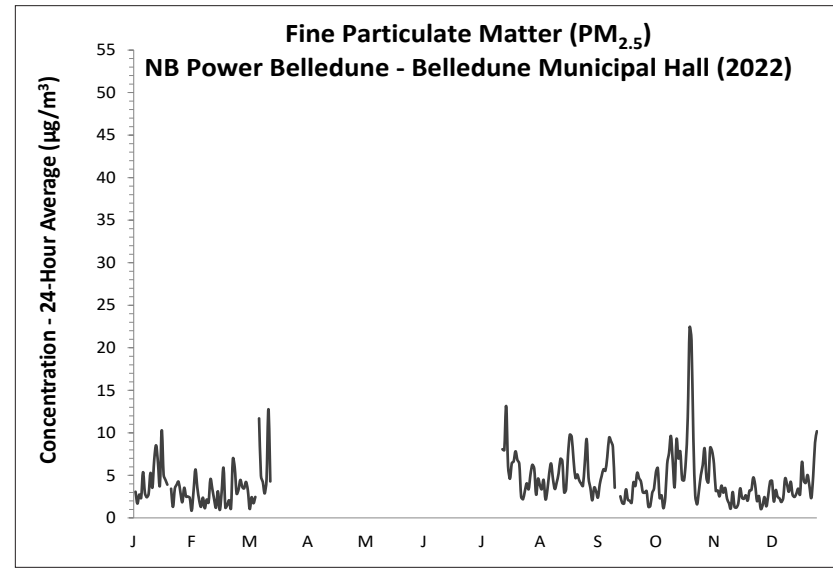
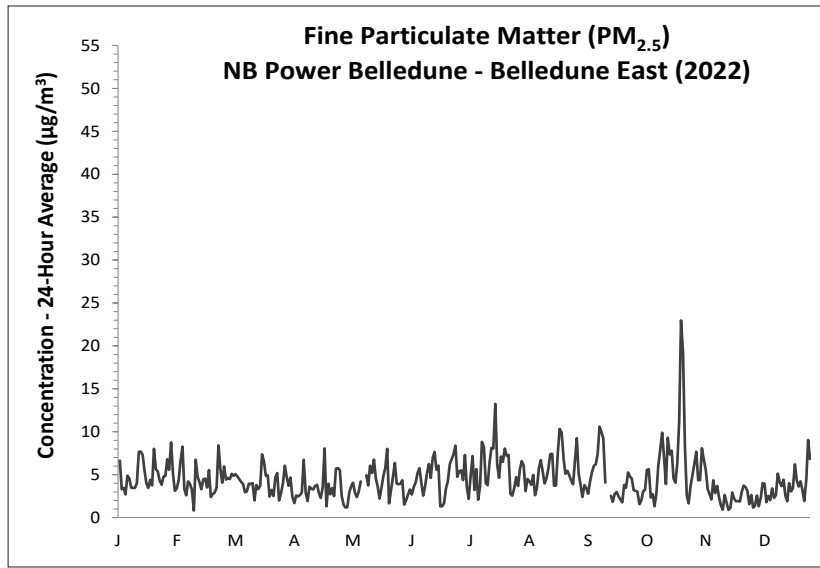
Station Operator	Station Name	Location	Monitored Parameters
American Iron and Metal Company	Saint John Street	56 St John Street, Saint John	PM _{2.5}
Arbec Forest Products	Fire Ponds	Water Street, Miramichi	PM _{2.5} , TSP
	Hay Lane	Hay Lane, Miramichi	PM _{2.5} , TSP
AV Groupe, Atholville	Beauvista	Beauvista Drive, Atholville	SO ₂
	Boom Road	9 Comeau Avenue, Atholville	SO ₂
AV Groupe, Nackawic	Caverhill Site	10720 Route 610, Nackawic	PM _{2.5} , SO ₂ , TRS
J.D. Irving Ltd- Lake Utopia Paper	Utopia Site	600 Route 785, Lake Utopia	SO ₂
Irving Oil Ltd	Champlain Heights Elementary School*	111 Champlain Drive, Saint John	PM _{2.5} , SO ₂ , TRS
	Expansion Avenue	96 Expansion Avenue, Saint John	SO ₂
	Forest Hills*	Mountain Road, Saint John	SO ₂ , TRS
	Grandview West	730 Bayside Drive, Saint John	SO ₂ , NO ₂
	Midwood	140 Midwood Drive, Saint John	SO ₂ , TRS, W
	Silver Falls	21 Champlain Drive, Saint John	SO ₂
Irving Pulp and Paper	Bridge Street	Bridge Street, Saint John	TRS
	Milford	Milford Road, Saint John	TRS
	Sherbrook	Sherbrook Street, Saint John	TRS
NB Power, Belledune	Belledune East	201 Main Street, Belledune	PM _{2.5} , SO ₂ , NO ₂
	Jacquet River	Highway 11, Belledune	SO ₂
	Madran	Lagacy Road, Belledune	SO ₂
	Municipal Hall	2330 Main Street, Belledune	PM _{2.5} , SO ₂ , NO ₂
	Pointe-Verte	91 du Ruisseau Road, Belledune	SO ₂
NB Power, Coleson Cove	Lorneville	2700 Lorneville Road, Lorneville	PM _{2.5} , SO ₂
	Manawagonish Road	1874 Manawagonish Road, Saint John	PM _{2.5} , SO ₂
	Musquash	35 Malcom Meehan Road, Musquash	SO ₂
NB Power, Millbank	Lower Newcastle	55 Highway 11, Miramichi	SO ₂ , NO ₂
	Rockcliff	Black Eagle Street, Miramichi	SO ₂ , NO ₂ , TSP
Twin River Paper Company	Rice Street	27 Rice Street, Edmundston	PM _{2.5} , SO ₂
	St Mary's	72 Marmen Ave, Edmundston	SO ₂

*Station co-operated by GNB and Irving Oil Ltd.

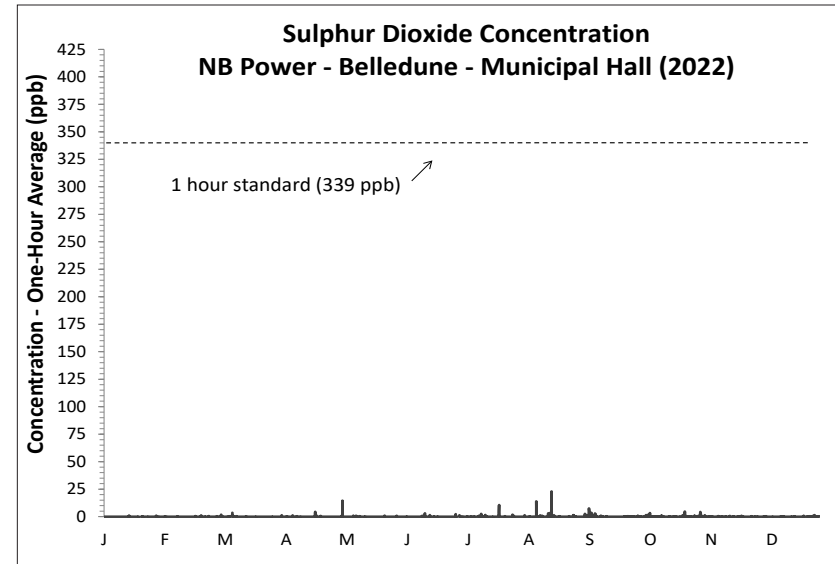
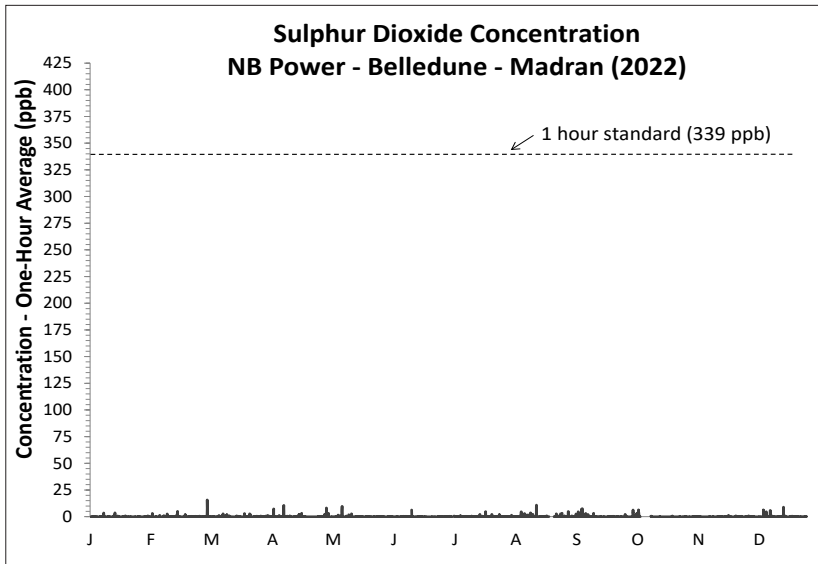
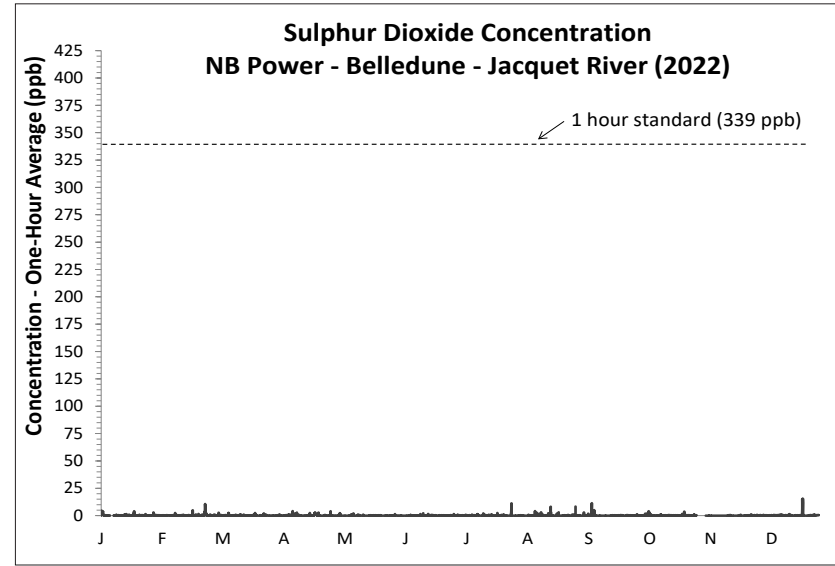
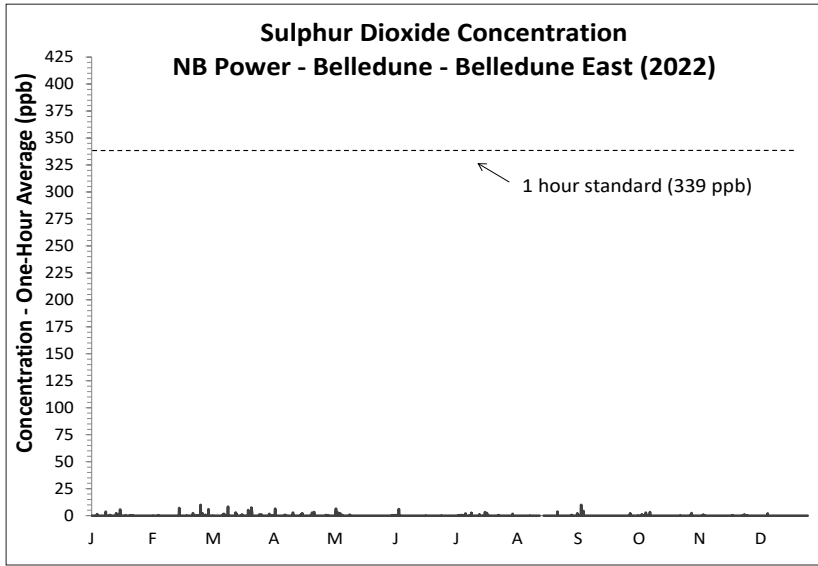
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Belledune - Nitrogen Dioxide



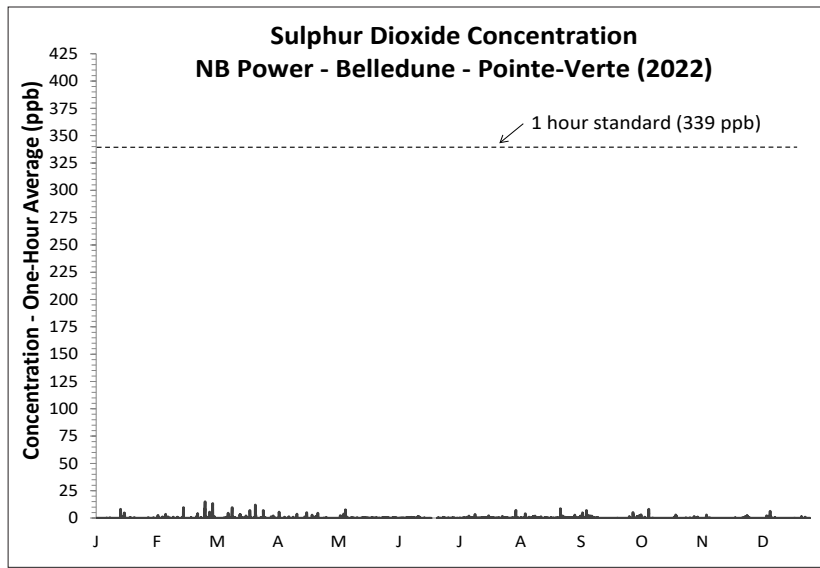
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Belledune - Fine Particulate Matter



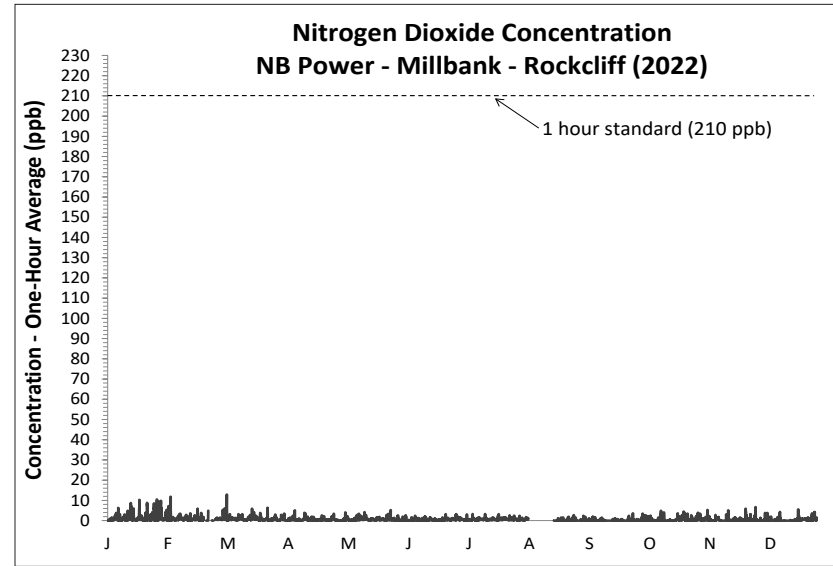
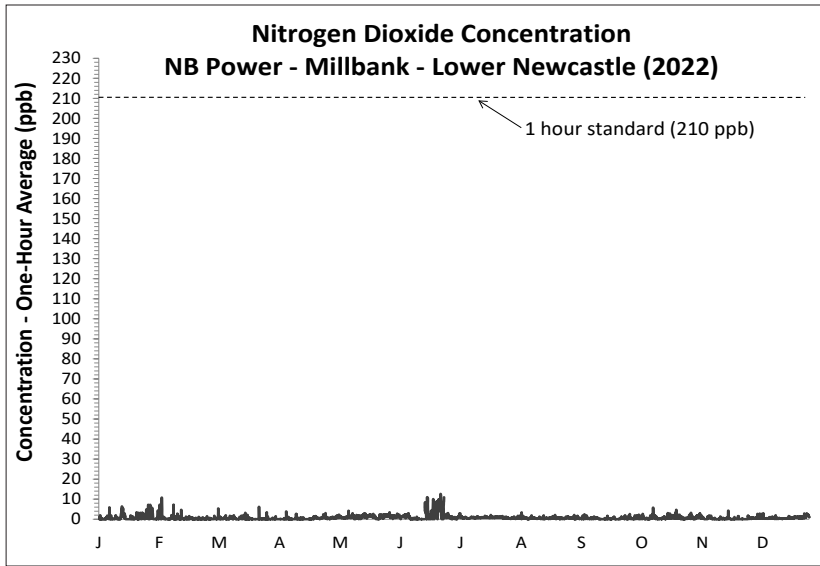
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Belledune - Sulphur Dioxide



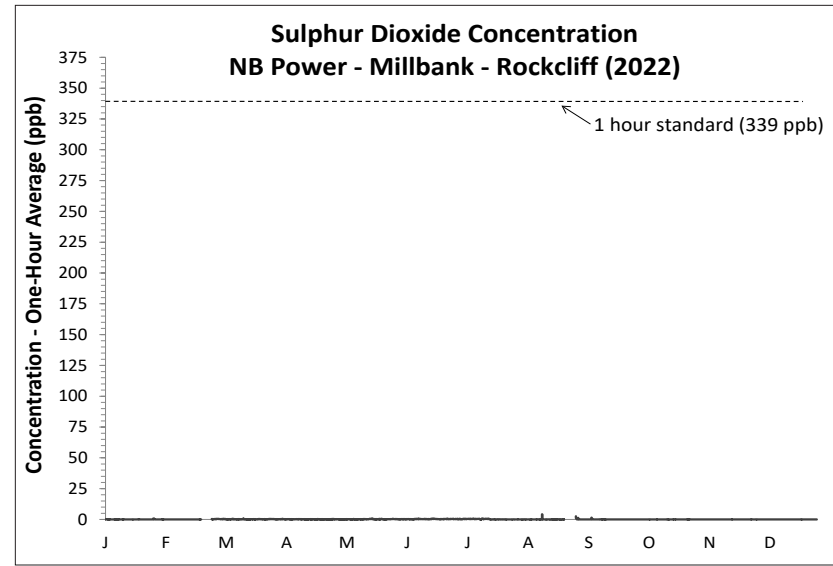
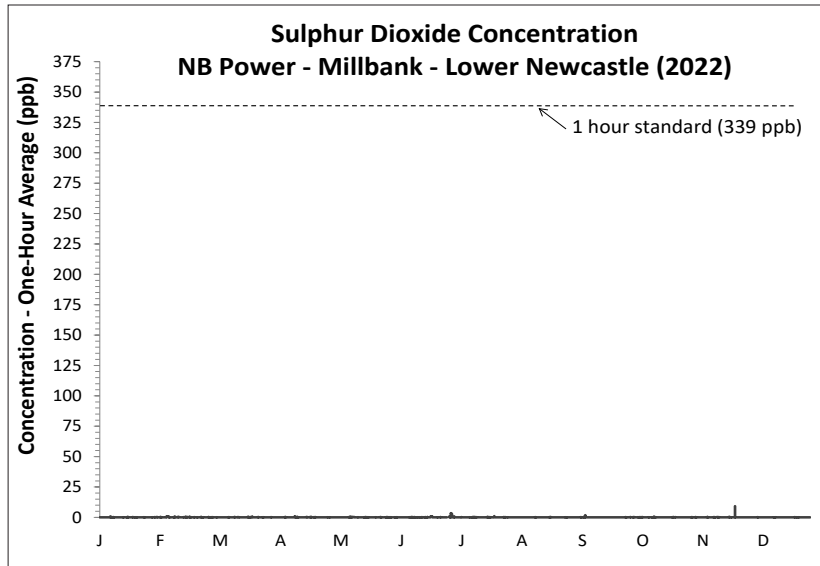
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Belledune - Sulphur Dioxide



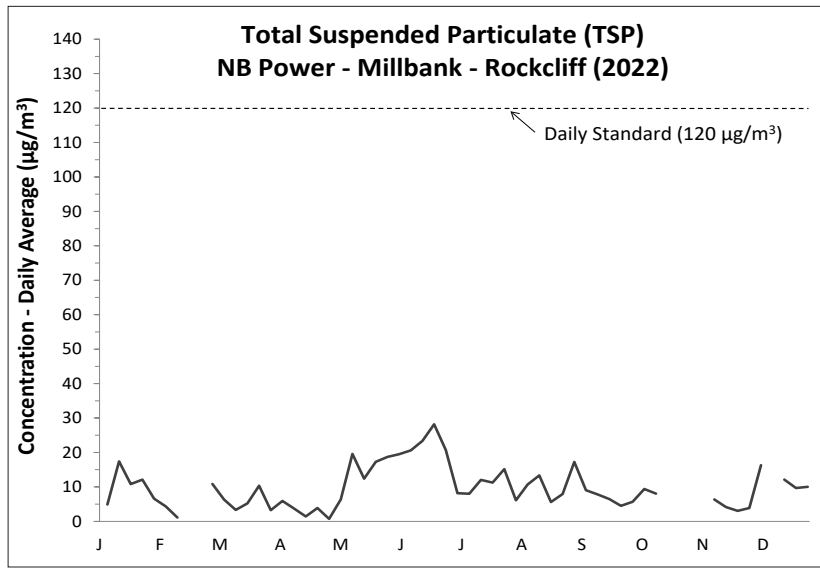
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Nitrogen Dioxide



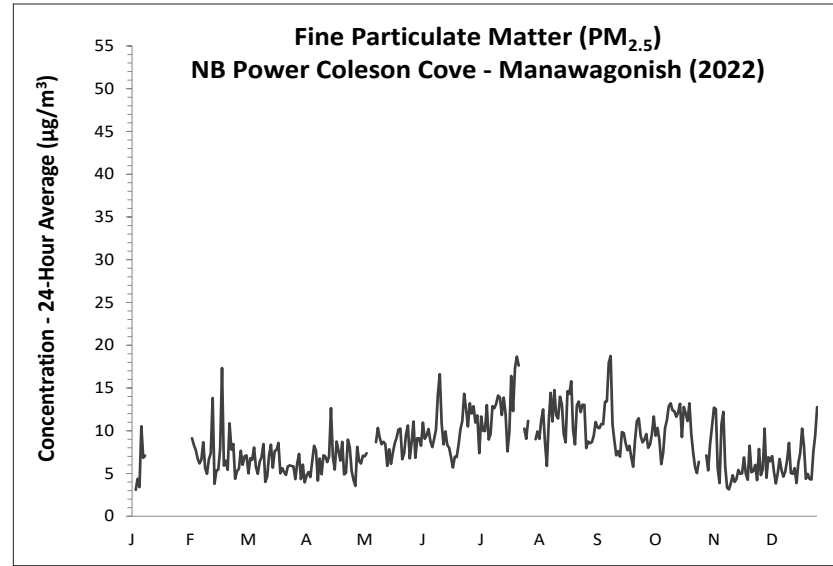
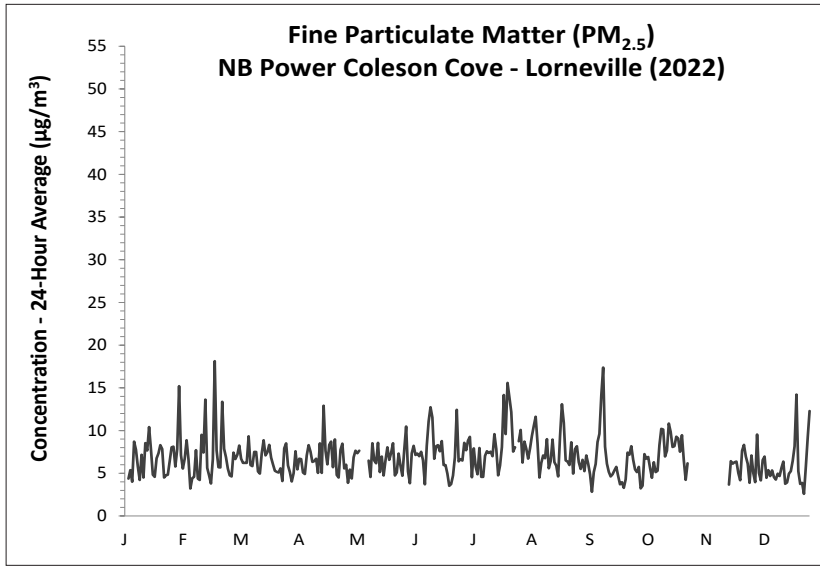
PART III: INDUSTRY-OPERATED NETWORKS - NB Power, Millbank - Sulphur Dioxide



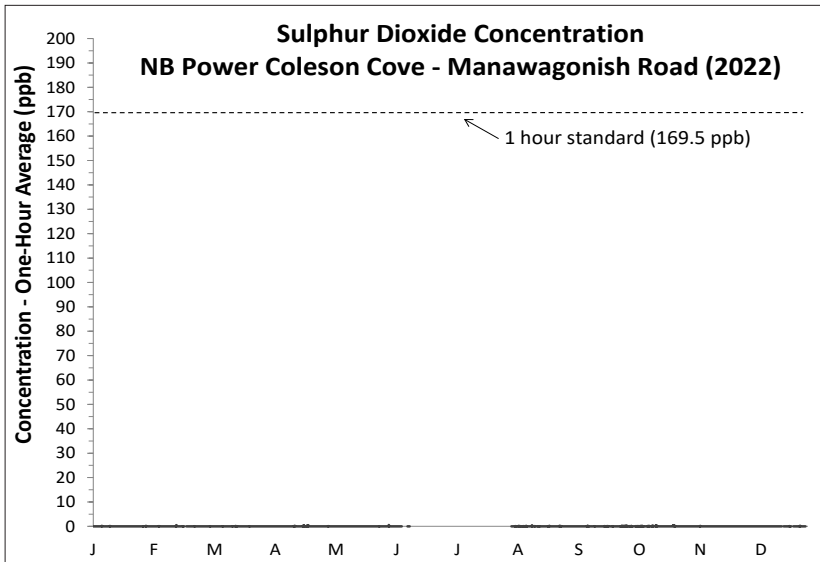
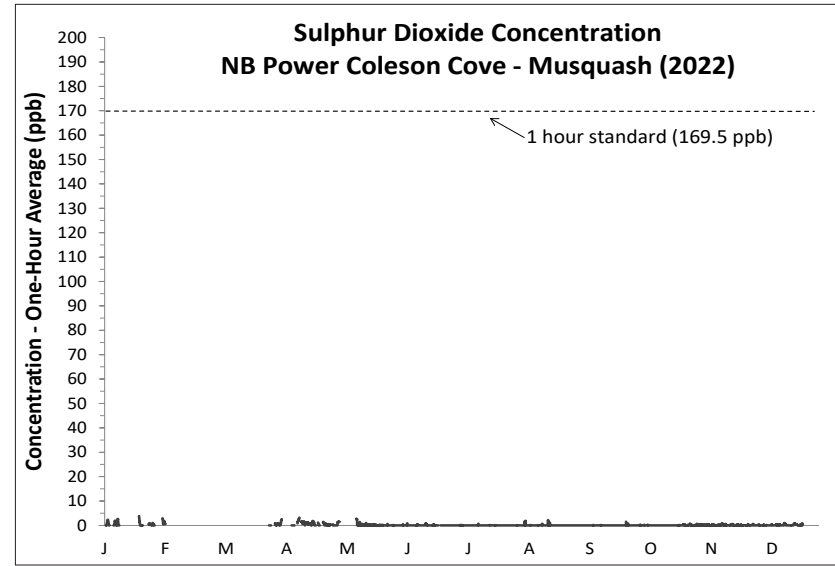
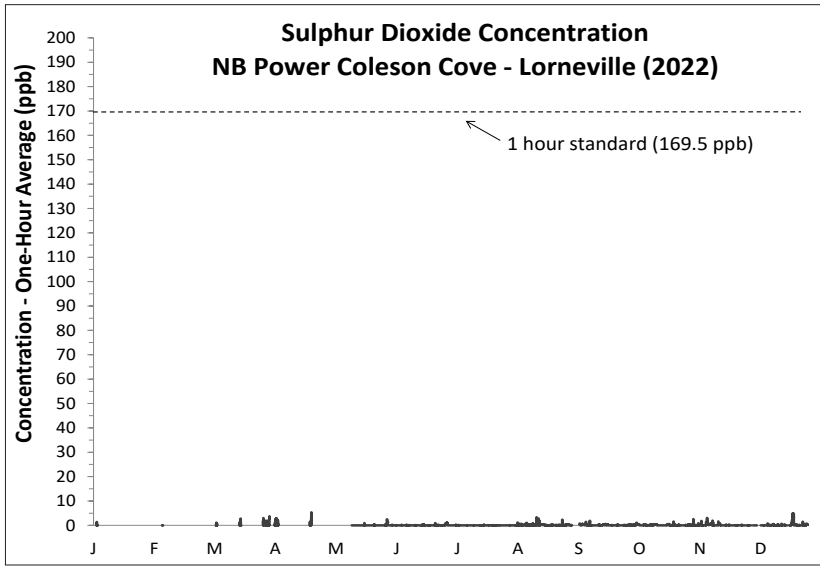
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Millbank - Total Suspended Particulate



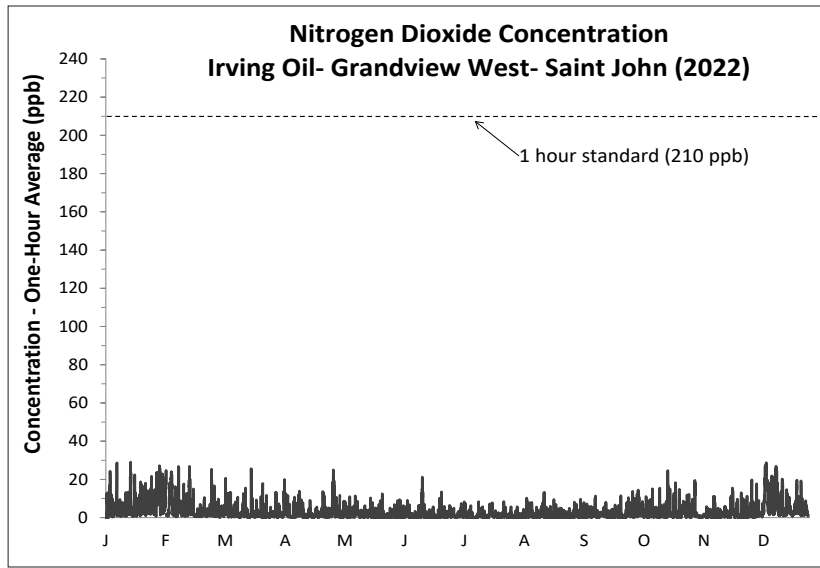
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Coleson Cove - Fine Particulate Matter



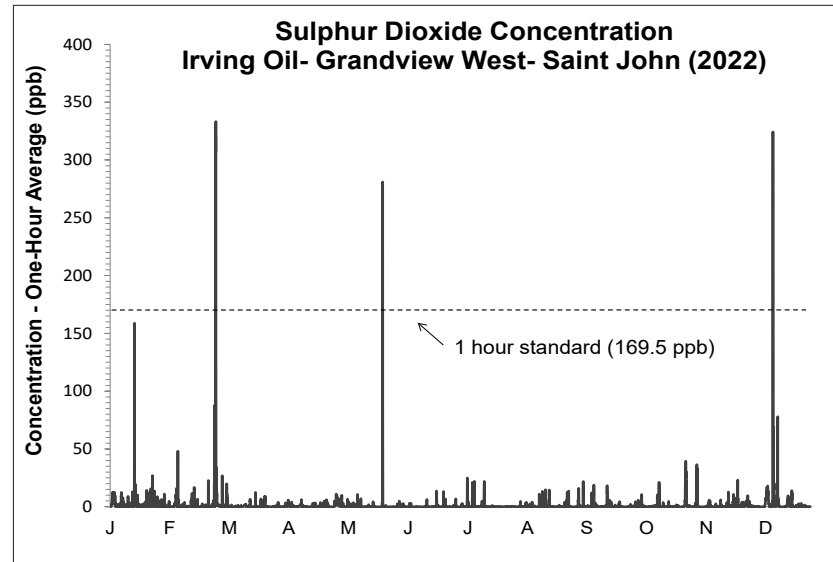
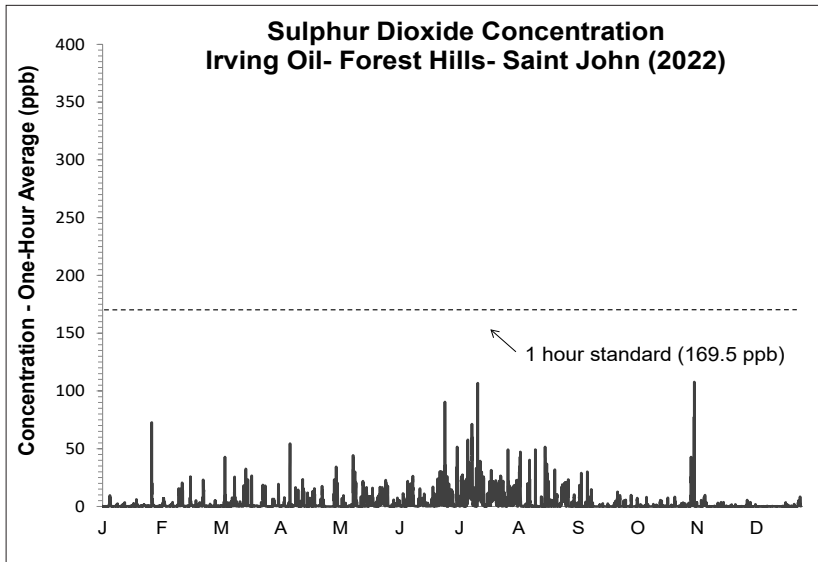
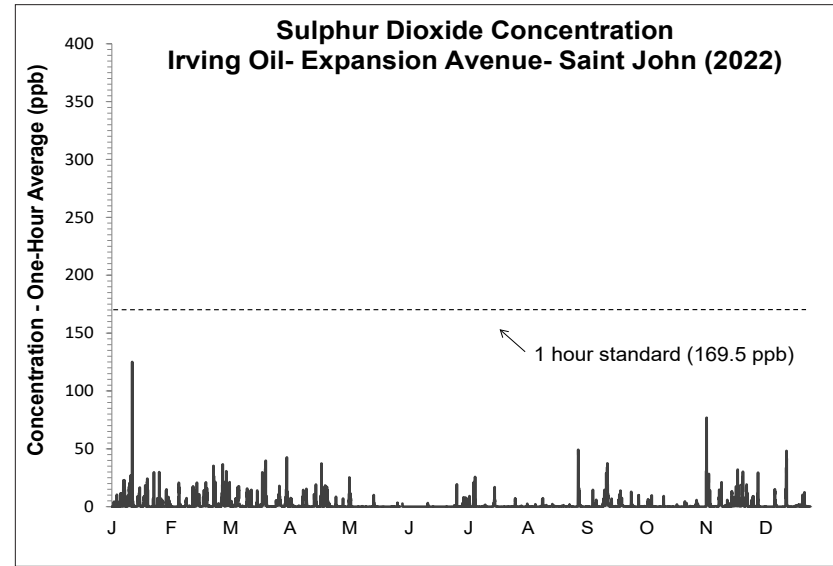
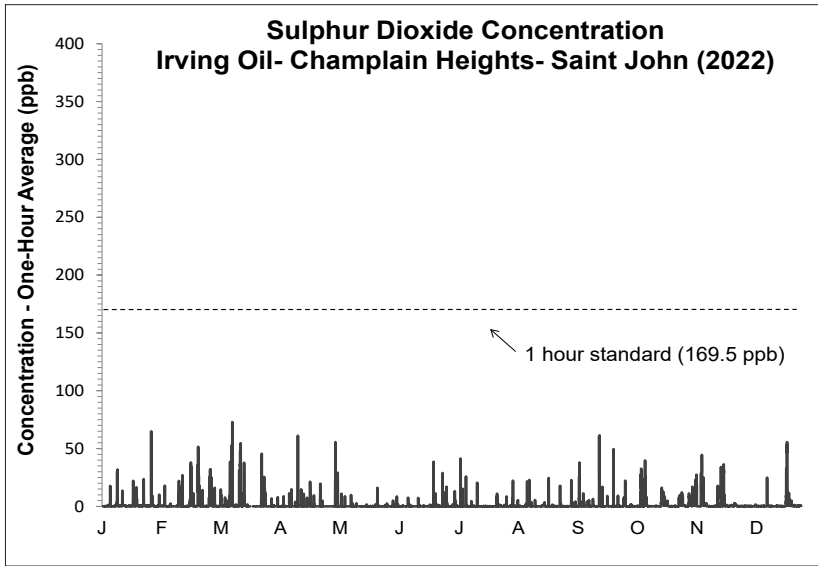
PART III: STATIONS OPERATED BY INDUSTRY - NB Power, Coleson Cove - Sulphur Dioxide



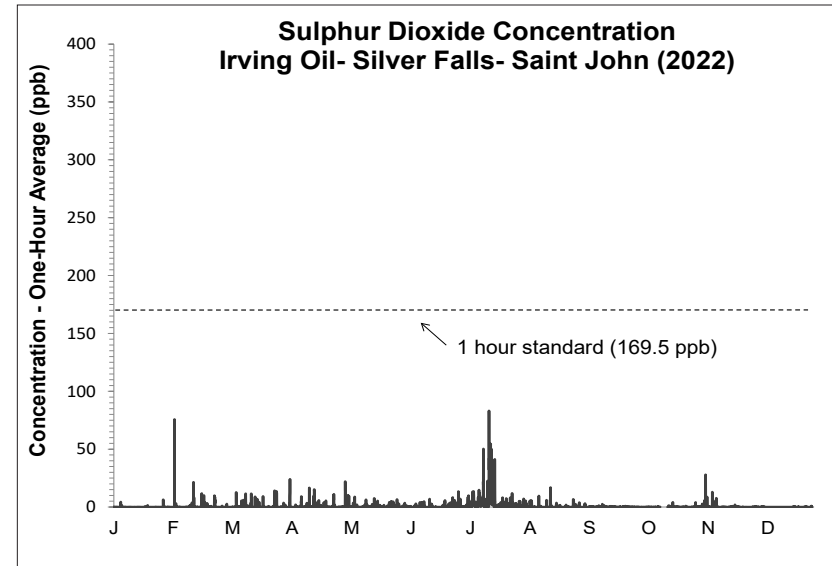
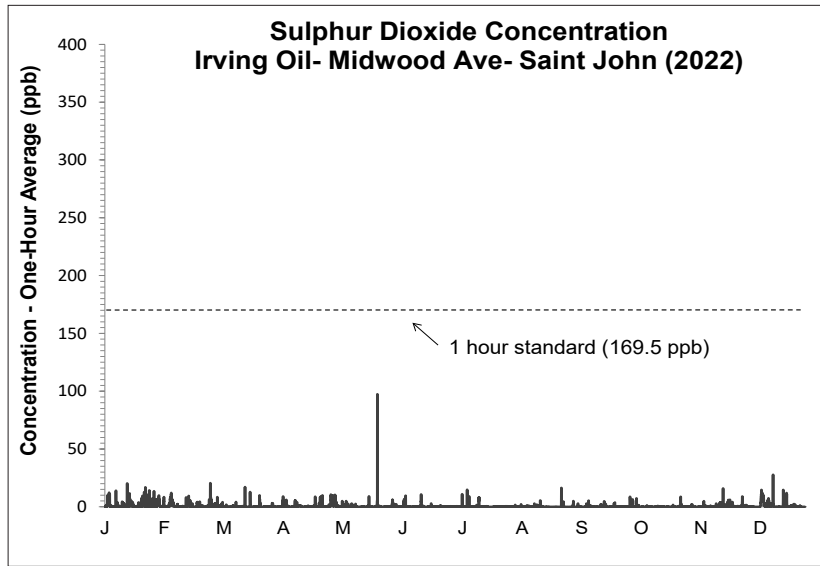
PART III: STATIONS OPERATED BY INDUSTRY - Irving Oil Ltd., Saint John - Nitrogen Dioxide



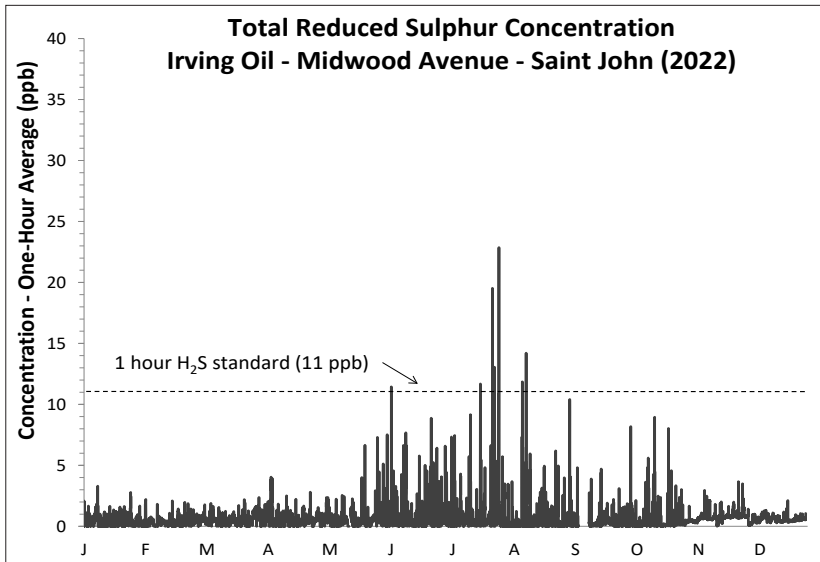
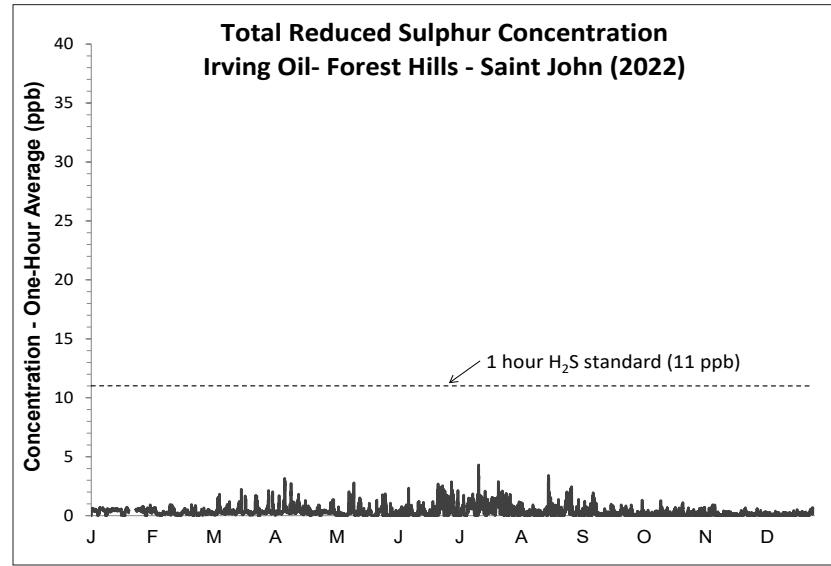
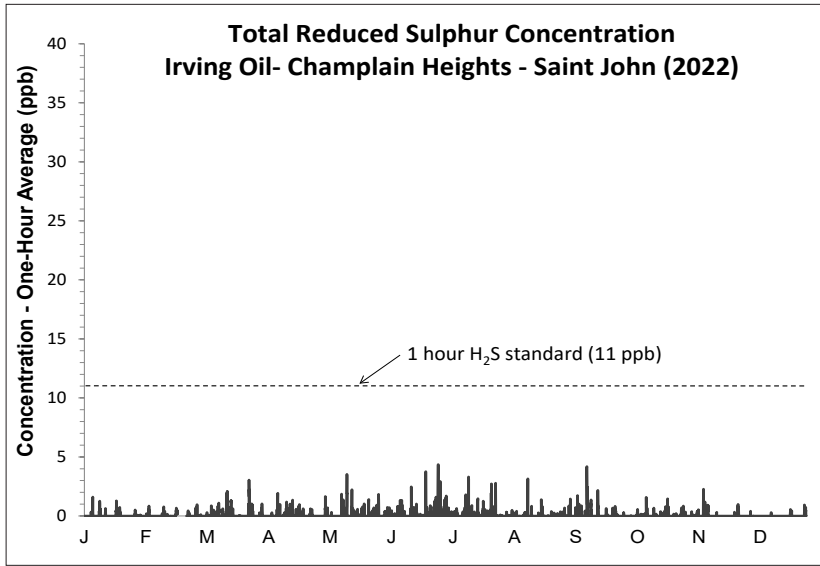
PART III: STATIONS OPERATED BY INDUSTRY - Irving Oil Ltd., Saint John - Sulphur Dioxide



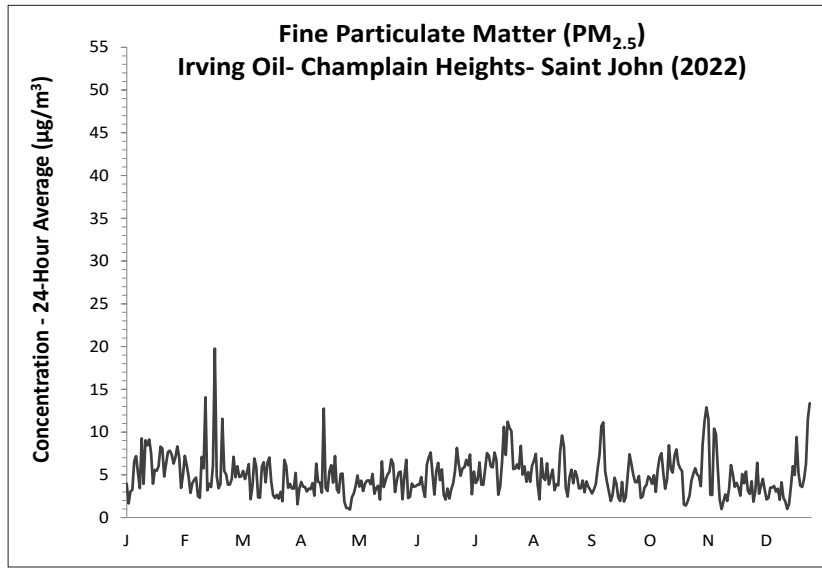
PART III: STATIONS OPERATED BY INDUSTRY - Irving Oil Ltd., Saint John - Sulphur Dioxide



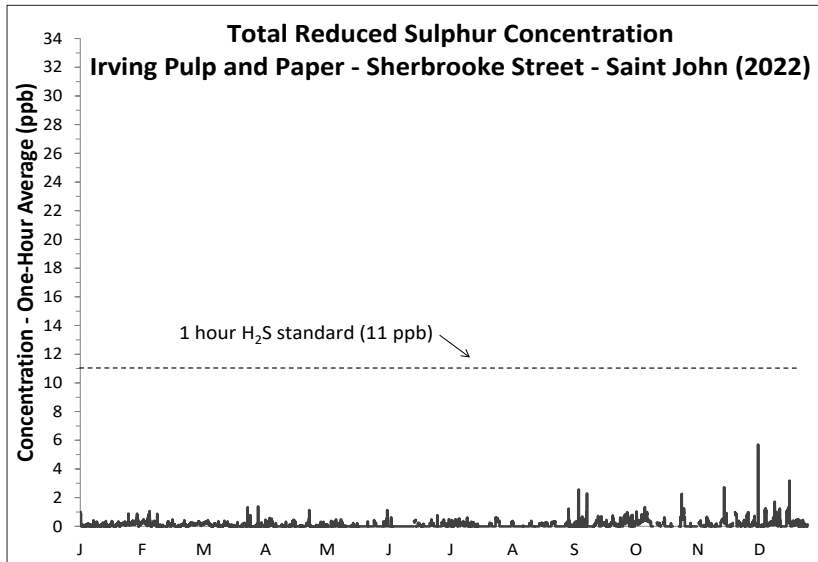
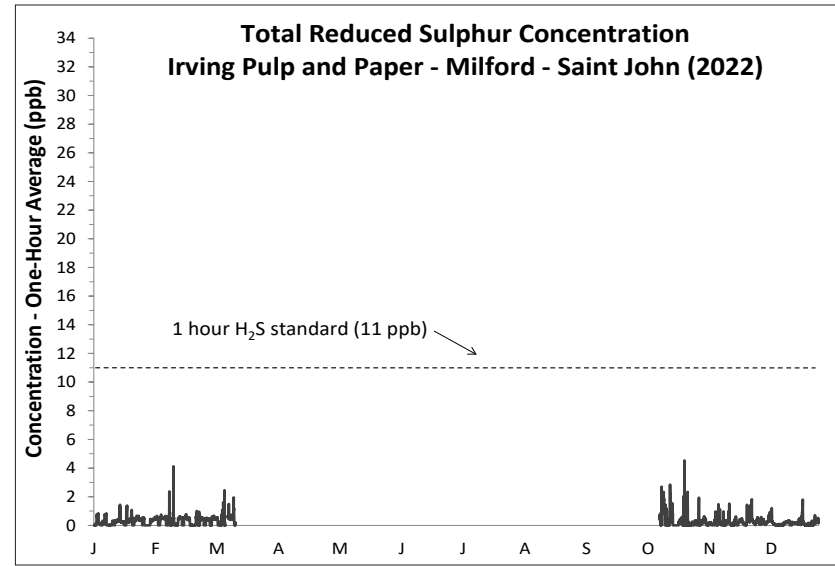
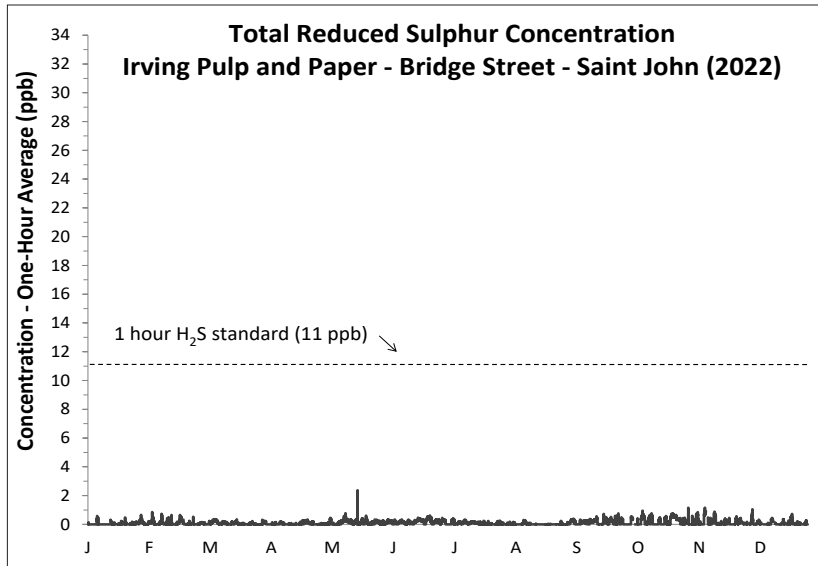
PART III: STATIONS OPERATED BY INDUSTRY - Irving Oil Ltd., Saint John - Total Reduced Sulphur (H₂S)



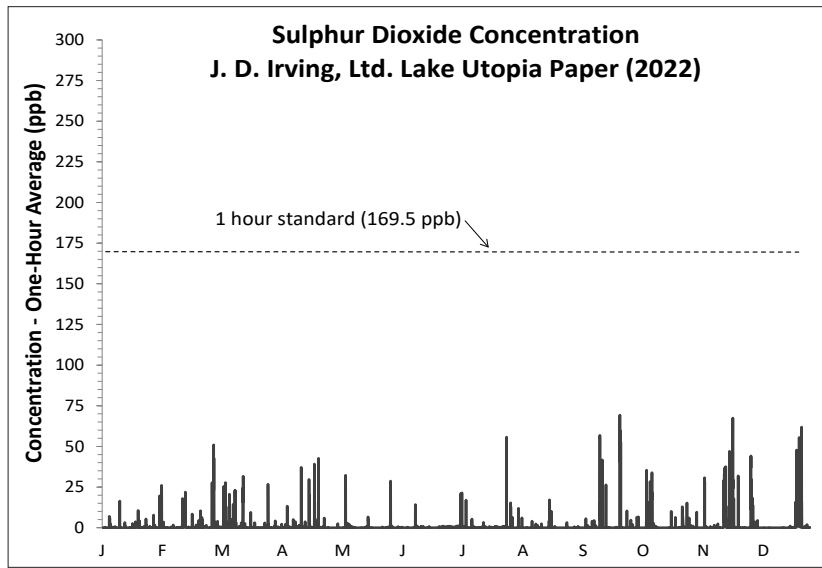
PART III: STATIONS OPERATED BY INDUSTRY - Irving Oil Ltd., Saint John - Fine Particulate Matter



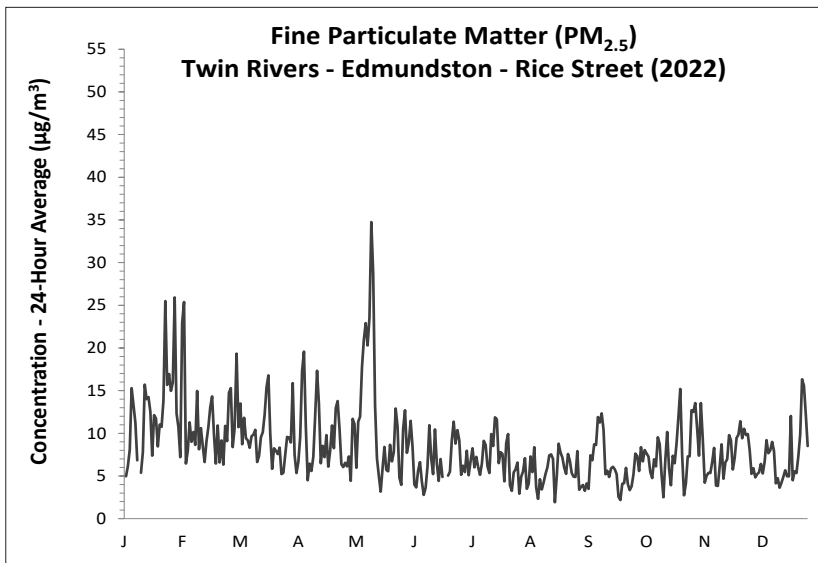
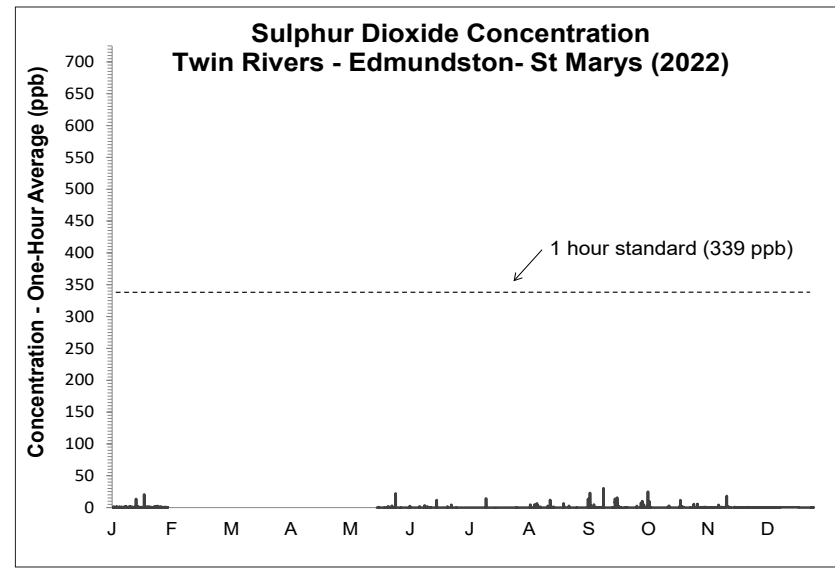
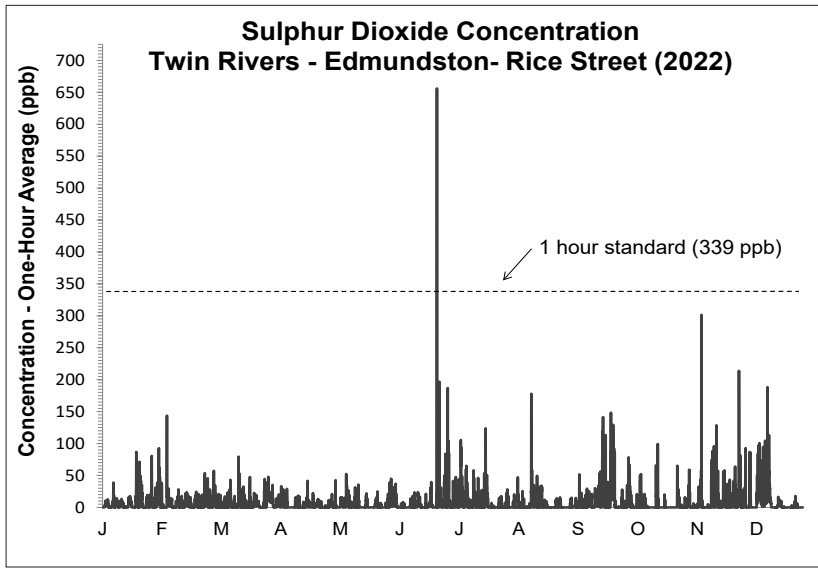
PART III: STATIONS OPERATED BY INDUSTRY - Irving Pulp and Paper, Saint John - Total Reduced Sulphur (H₂S)



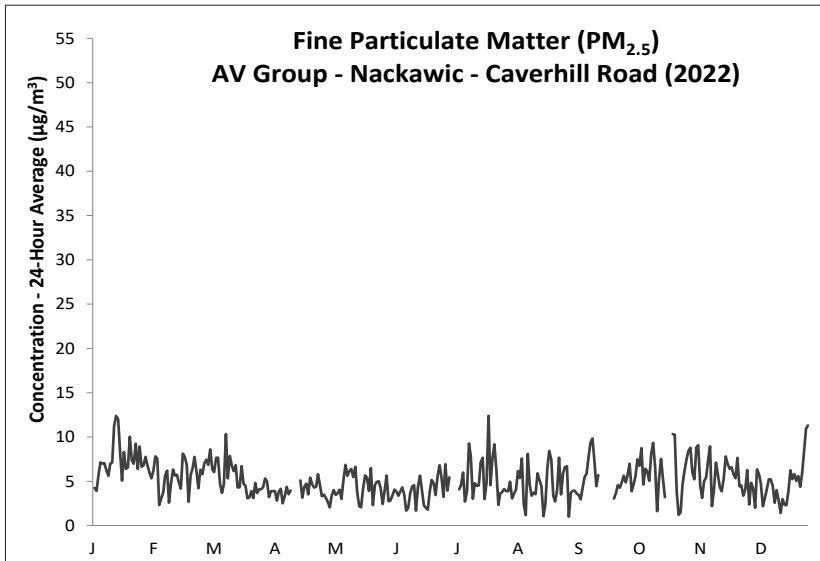
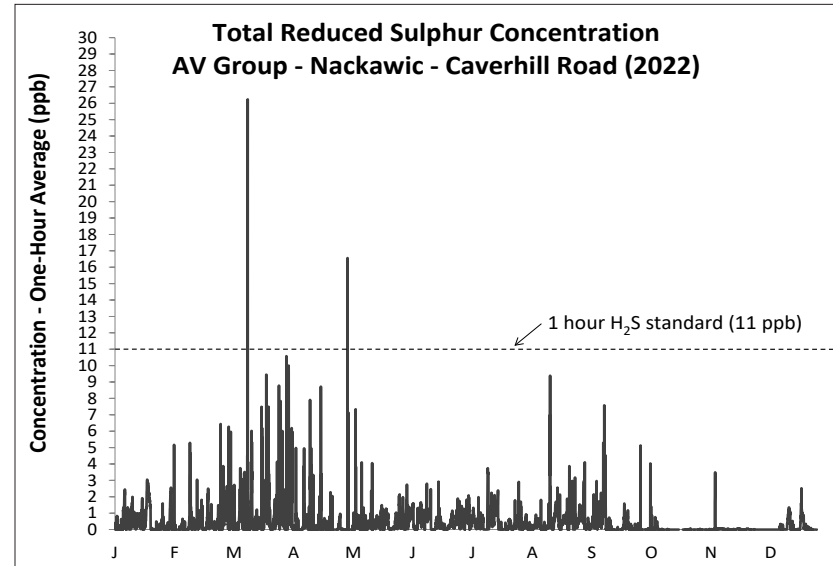
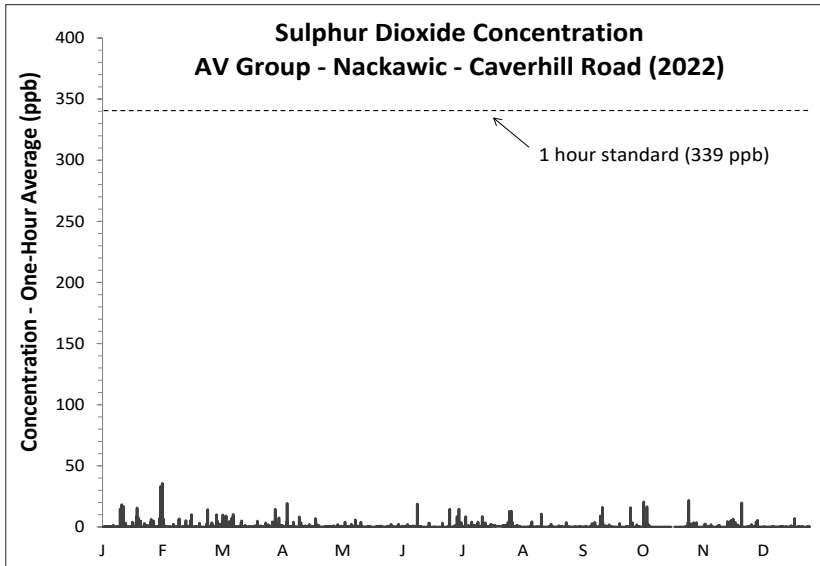
PART III: STATIONS OPERATED BY INDUSTRY - J. D. Irving, Ltd. Lake Utopia Paper - Sulphur Dioxide



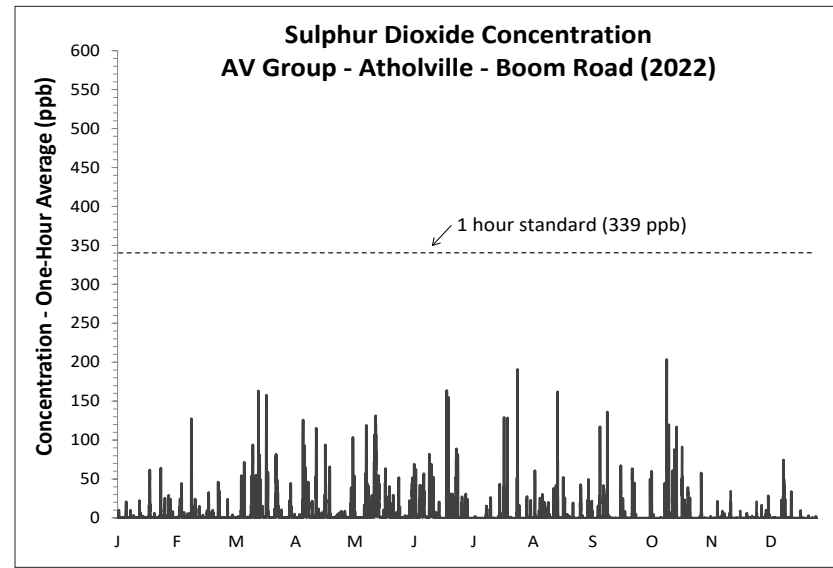
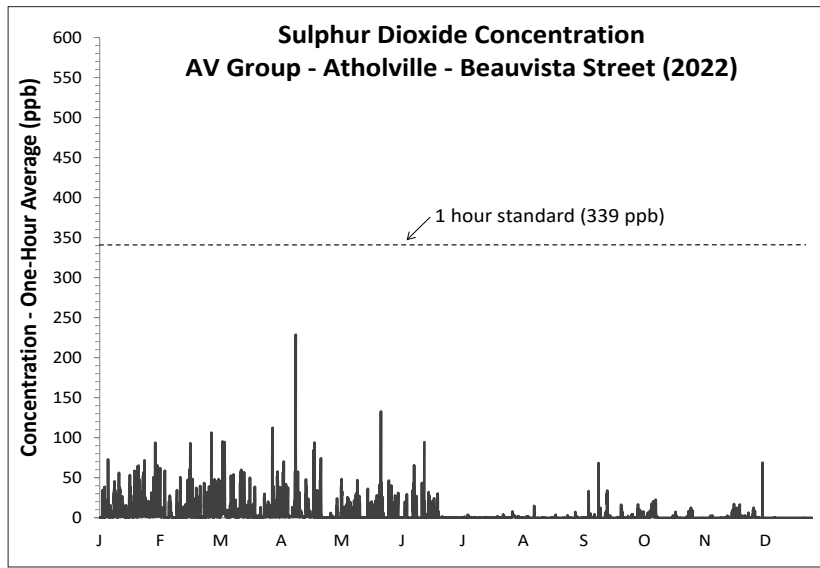
PART III: STATIONS OPERATED BY INDUSTRY - Twin Rivers Paper Company, Edmundston - All Parameters



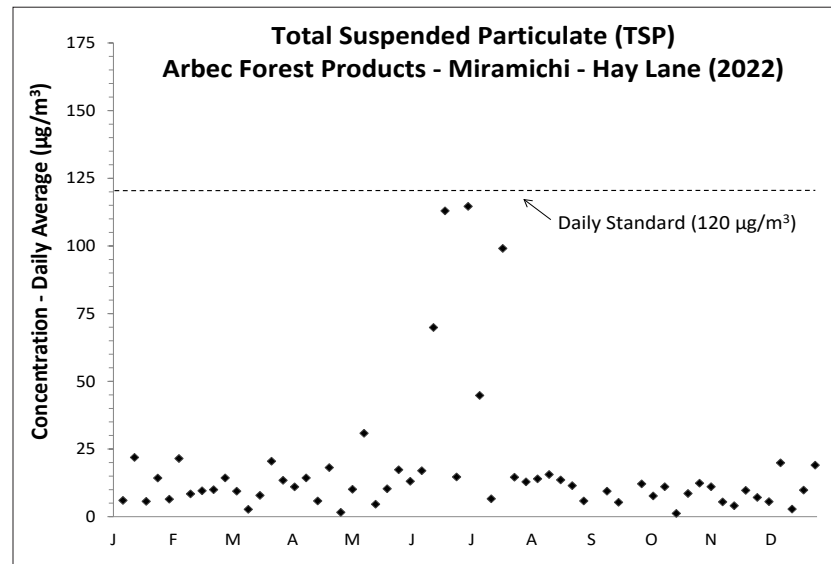
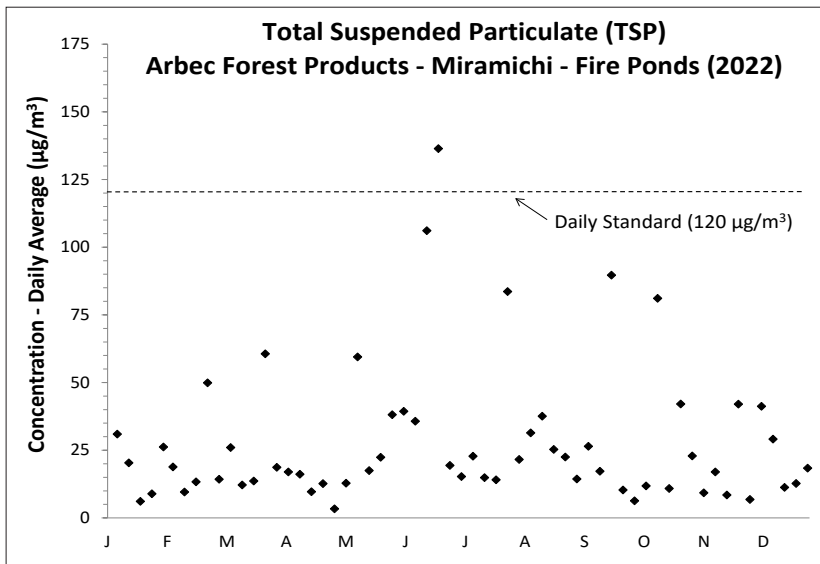
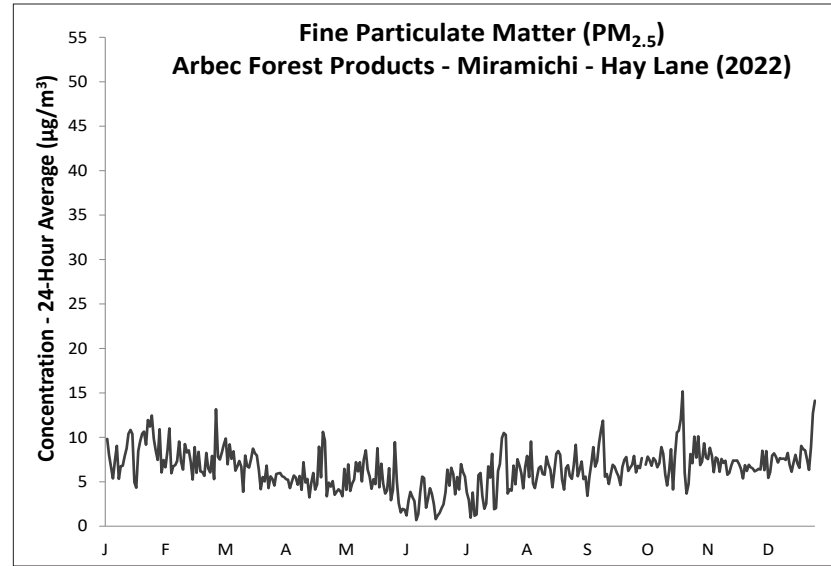
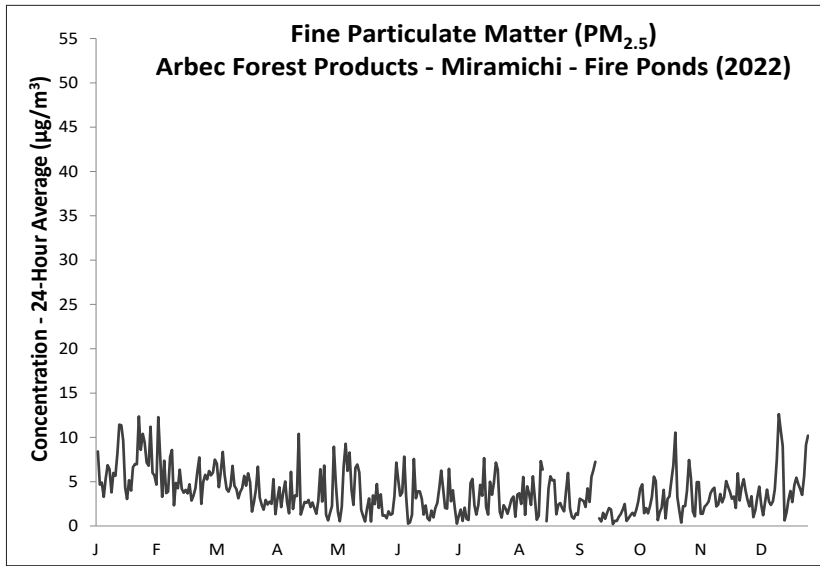
PART III: STATIONS OPERATED BY INDUSTRY - AV Group - Nackawic - All Parameters



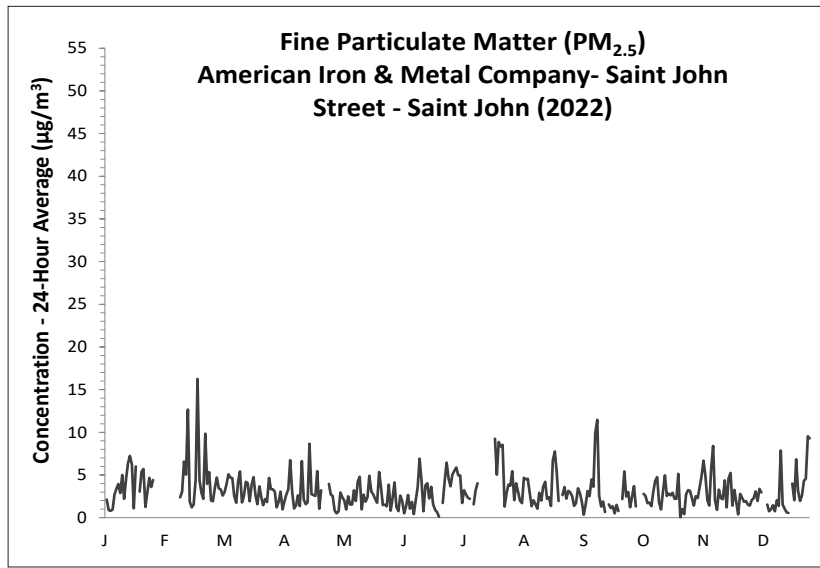
PART III: STATIONS OPERATED BY INDUSTRY - AV Group - Atholville - Sulphur Dioxide



PART III: STATIONS OPERATED BY INDUSTRY - Arbec Forest Products, Miramichi- All Parameters



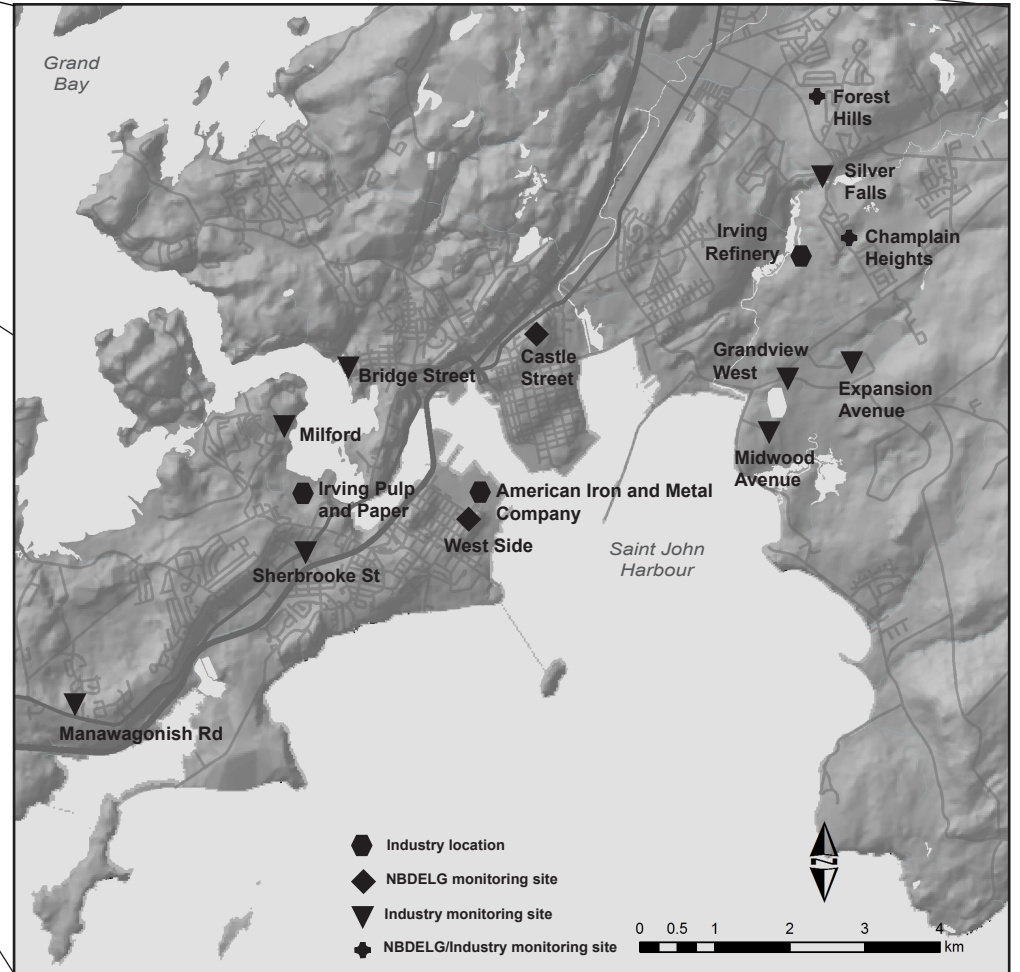
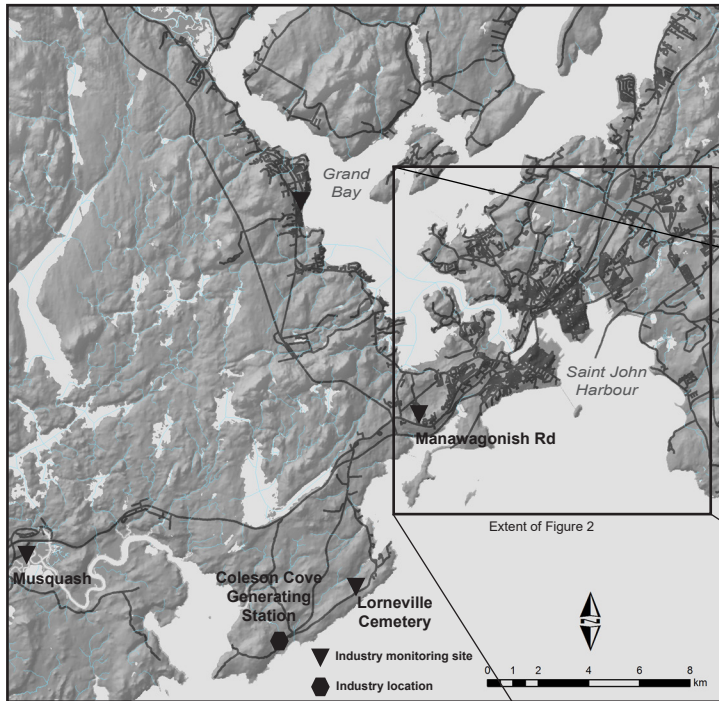
PART III: STATIONS OPERATED BY INDUSTRY - American Iron & Metal Company- Saint John - Fine Particulate Matter



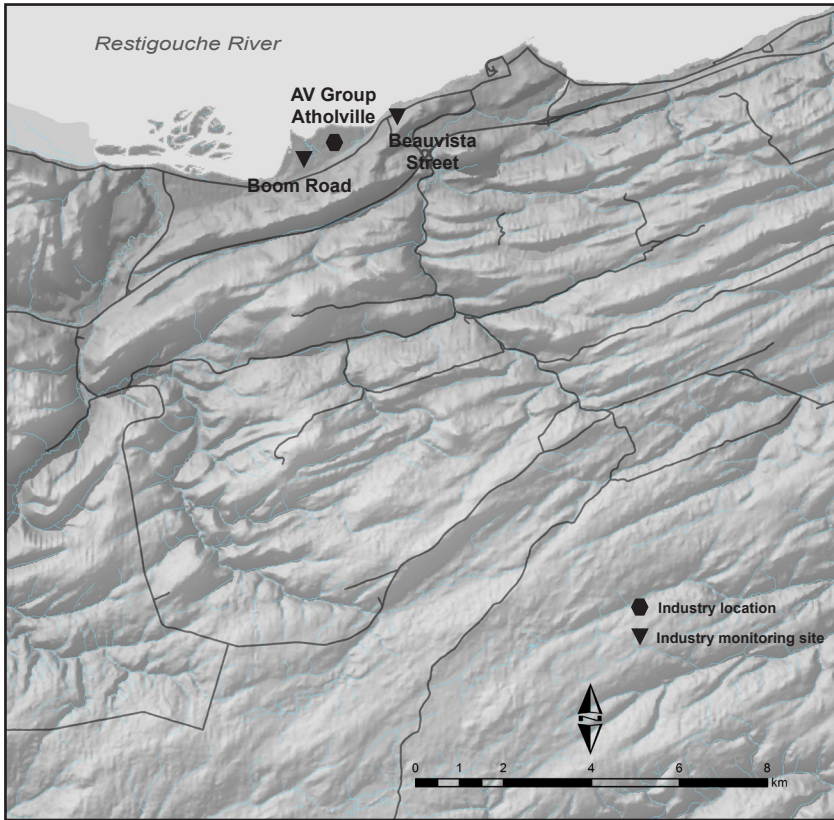
PART IV:
DETAILED STATION LOCATION MAPS

PART IV: DETAILED STATION LOCATION MAPS - Saint John Region

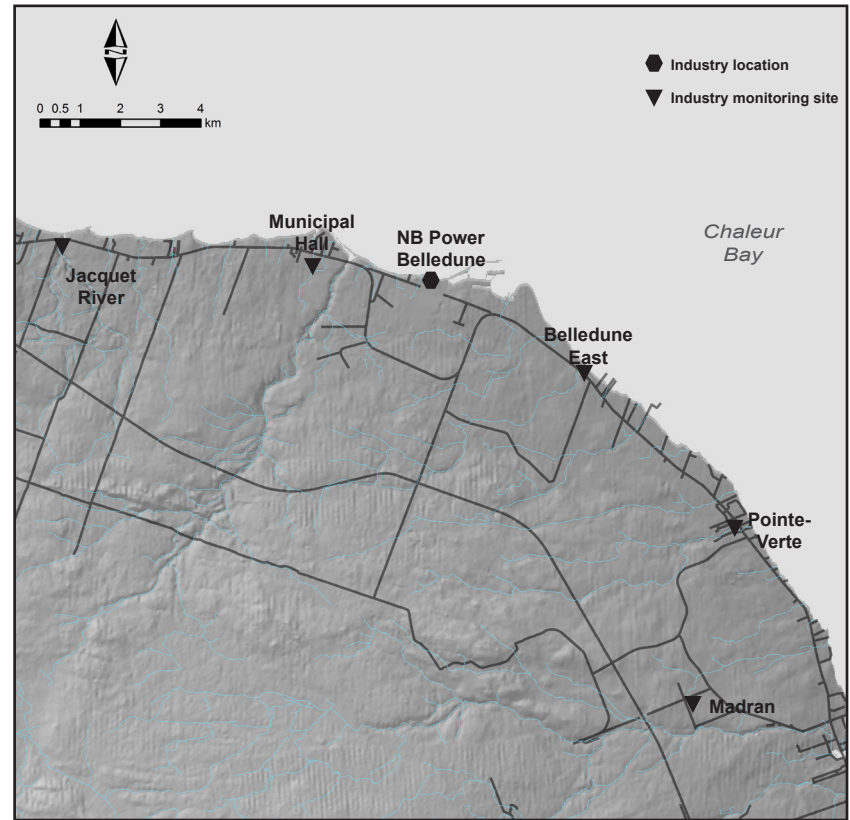
Grand Bay/Musquash/Saint John Area



PART IV: DETAILED STATION LOCATION MAPS - Atholville and Belledune

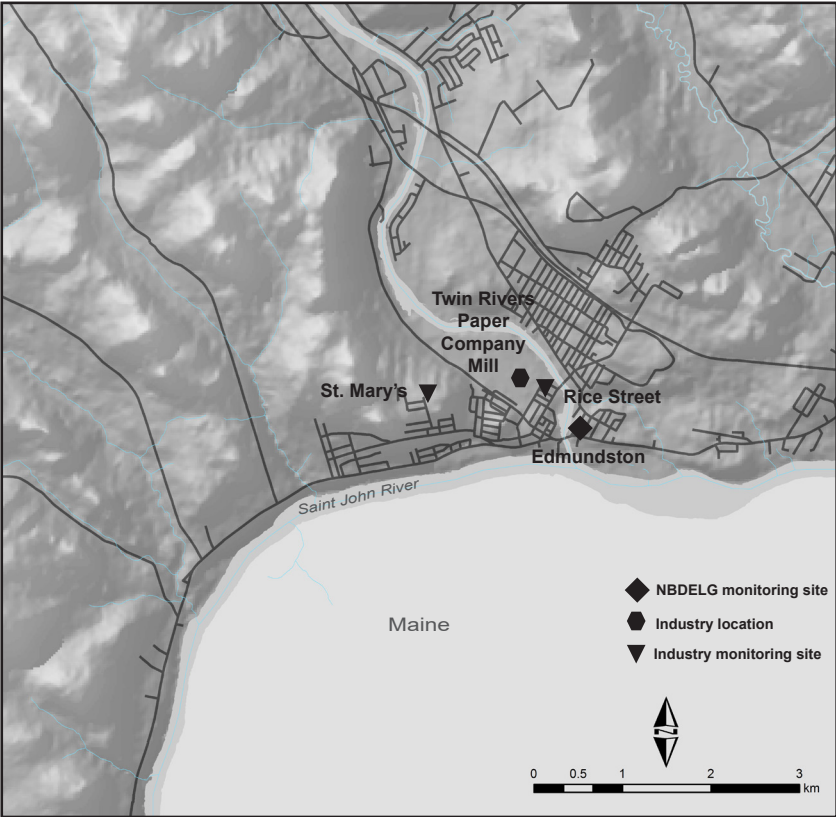


Atholville Area

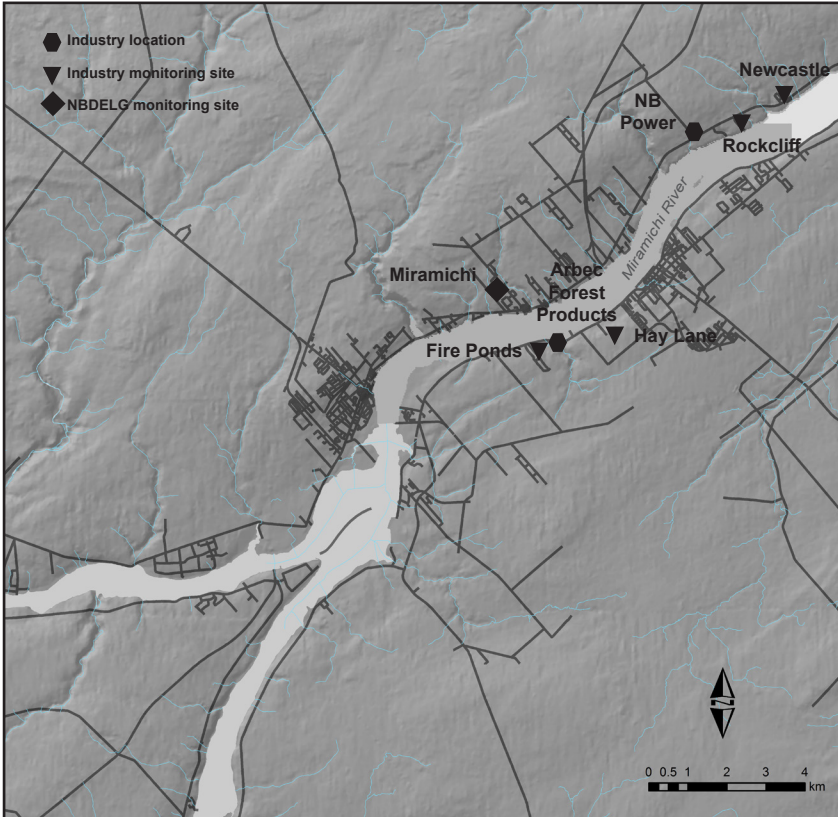


Belledune Area

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



Edmundston Area



Lower Newcastle