

City of Kawartha Lakes - Investigative Upstream Monitoring Report for Janetville, Sucker, and Stoney Creek

2025



**KAWARTHA
CONSERVATION**

Discover • Protect • Restore

About Kawartha Conservation

Who we are

We are a watershed-based organization that uses planning, stewardship, science, and conservation lands management to protect and sustain outstanding water quality and quantity supported by healthy landscapes.

Why is watershed management important?

Abundant, clean water is the lifeblood of the Kawarthas. It is essential for our quality of life, health, and continued prosperity. It supplies our drinking water, maintains property values, sustains an agricultural industry, and contributes to a tourism-based economy that relies on recreational boating, fishing, and swimming. Our programs and services promote an integrated watershed approach that balance human, environmental, and economic needs.

The community we support

We focus our programs and services within the natural boundaries of the Kawartha watershed, which extend from Lake Scugog in the southwest and Pigeon Lake in the east, to Balsam Lake in the northwest and Crystal Lake in the northeast – a total of 2,563 square kilometers.

Our history and governance

In 1979, we were established by our municipal partners under the *Ontario Conservation Authorities Act*.

The natural boundaries of our watershed overlap the six municipalities that govern Kawartha Conservation through representation on our Board of Directors. Our municipal partners include the City of Kawartha Lakes, Region of Durham, Township of Scugog, Township of Brock, Municipality of Clarington, Municipality of Trent Lakes, and Township of Cavan Monaghan.



Acknowledgements

We would like to acknowledge that many Indigenous Nations have longstanding relationships, both historic and modern, with the territories upon which we are located.

Today, this area is home to many Indigenous peoples from across Turtle Island. We acknowledge that our watershed forms a part of the treaty and traditional territory of the south-eastern Anishinaabeg.

It is on these ancestral and Treaty lands that we live and work. To honour this legacy, we commit to being stewards of the natural environment and undertake to have a relationship of respect with our Treaty partners.

The region of Kawartha Lakes was referred to as Gau-wautae-gummauh, a glistening body of water, inanishinaabemowin. We are thankful to have an opportunity to work with Indigenous Peoples in the continued stewardship and care of this beautiful region.

This plan was written by Tanner Liang, Water Quality Specialist. Others that have contributed to this project include:

Nathan Rajevski, Watershed Resource Technician	Kawartha Conservation
Nancy Aspden, Director, Integrated Watershed Management	Kawartha Conservation
Korey Hayes, GIS Specialist	Kawartha Conservation
Anita Caven, Marketing and Communications Assistant	Kawartha Conservation
Matthew Wilson, Assistant Watershed Resource Technician	Kawartha Conservation
Rob Stavinga, Fmr. Watershed Resource Technician	Kawartha Conservation
Olivia Vaughan, Fmr. Environmental Field Technician	Kawartha Conservation
Theodor Sterescu, Fmr. Environmental Field Technician	Kawartha Conservation
Mareike Peveril, Fmr. Environmental Field Technician	Kawartha Conservation
Iryna Shulyarenko, Hydrometric Specialist	Ministry of Natural Resources
Dr. Catherine Eimers, Professor and Associate Director	Trent University
Jenifer Fedak	Trent University
Joseph Gentile	Trent University
Laura McNeill	Trent University
Laurean Handley	Trent University
Ravi Tiwari	Trent University

Funding for this project was provided by the City of Kawartha Lakes

This report may be cited as:

Kawartha Conservation. 2025. City of Kawartha Lakes - Investigative Upstream Monitoring Report for Janetville, Sucker, and Stoney Creek. Kawartha Conservation, Lindsay, Ontario. pp 51+ appendices

Executive Summary

From 2022 to 2024, Kawartha Conservation and Trent University monitored fifteen (15) sites across Janetville, Stoney, Sucker Creek, with opportunistic monitoring on Fleetwood and Jennings creeks within the City of Kawartha Lakes. Agriculture was the dominate form of land cover within the monitoring area which drove higher levels of nutrients (phosphorus and nitrate) and exceedances of provincial objectives and federal guidelines in streams. Sites of concern (SC1, SC-3 and ST-5) were identified to have smaller watersheds $<12 \text{ km}^2$, and a higher percentage ($>70\%$) of agricultural land cover. The seasonal trend of dissolved oxygen was the opposite of water temperature (higher during spring and fall, and lower during the summer). Chloride trends were driven by the lack of rain and groundwater inputs. Phosphorus peaked in September associated with the growing season, and high nitrate levels were associated with the spring melt. Remedial, stewardship, and water quality management actions should aim to reduce nutrient enriched runoff.

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Abbreviations

%	Percentage
%CV	Percent coefficient of variation
*	Asterisk
~	Approximate
<	Less-than
≤	Less-than or approximate
=	Equal
>	Greater-than
°C	Degree Celsius
µS/cm	Microsiemens per centimeter
Cl	Chloride
Cond	Conductivity
CV%	Coefficient of variation
DO	Dissolved oxygen
et al.	And others
Km	Kilometer
Med	Median
Mg	Magnesium
mg/L	Milligrams per liter
<i>n</i>	Sample size
NO₃	Nitrate
NTU	Nephelometric Turbidity unit
PWQO	Provincial Water Quality Objectives
Temp	Temperature
TN	Total Nitrogen
TP	Total phosphorus
TSS	Total suspended solids
µg/L	Micrograms per liter



Introductions

Project Background

Kawartha Conservation developed Lake Management Plans (LMPs) to 1) characterize the hydrology, water quality, and aquatic biology of the watershed, and 2) provide recommendations to enhance or maintain good ecological conditions (Kawartha Conservation, 2014). Through the LMPs, tributaries of concerns were identified which were further investigated through the City of Kawartha Lakes – Investigative Upstream Program where multiple sites were monitored for 3 years and were assessed to identify localized hotspots of elevated contaminant input.

In 2023 Kawartha Conservation published the Jennings, McLaren, and Reforestation Creek Water Quality Report highlighting hot spots in those streams (Kawartha Conservation, 2023). To continue the program, Kawartha Conservation changed their focus to Janetville, Sucker, and Stoney Creek. This report aims to identify hotspots of elevated contaminant input for Janetville, Sucker, and Stoney creek. Opportunistic monitoring occurred for Fleetwood and Jennings Creek therefore was also incorporated in this report.

Methods

Study Area

Monitored creeks (Janetville, Sucker, Stoney Creek, Fleetwood and Jennings) are all within the City of Kawartha Lakes boundary of the Williams Treaties in southcentral Ontario (**Figure 1**). The Williams Treaties is signed by Michi Saagiig Nation or Mississauga's of Curve Lake First Nation, Hiawatha First Nation, and Mississauga's of Scugog Island First Nation. First Nations communities still utilize the area for living, recreation, ceremony and harvesting purposes.

Prior to contact, the forest composition was dominated by Sugar maple (*Acer saccharum*), Black maple (*Acer nigrum*), Beech (*Fagus grandifolia*), Ironwood (*Ostrya virginiana*), Basswood (*Tilia americana*) on well-drained soil, while lowlands were dominated by Elderberry (*Sambucus spp.*), American Elm (*Ulmus americana*), Ash (*Fraxinus spp.*; *americana* and/or *nigra*), soft maple (*Acer saccharinum*) and White cedar (*Thuja occidentalis*) (Carr, 1968).

Fleetwood and Janetville Creeks originate from the geologically unique Oak Ridges Moraine to the south. These creeks are generally characterized as cool-coldwater creeks since they are predominantly influenced from groundwater input, have higher natural cover, and greater slope (Kawartha Conservation, 2017). Oppositely, Jennings, Sucker Creek, and Stoney Creek are characterized as warmer-water creeks that are more heavily influenced by surface water inputs



and are located on flatter topography. Historically, Jennings and Sucker Creek are known to have numerous suckers (*Catostomus spp.*) (Carr, 1968).

Janetville, Stoney, Sucker, and Jennings Creek drain into the larger Scugog River, which flows north and ultimately provides drinking water to over 10,000 residents in the town of Lindsay (City of Kawartha Lakes, 2024; **Figure 1**). Fleetwood Creek flows into the Pigeon River which eventually discharges into the Pigeon Lake. Unlike Lindsay, the town of Omemee (located on the Pigeon River) does not get its drinking water from the surface intake.

Sites located on Janetville, Sucker, and Stoney have not been previously monitored through Kawartha Conservation's Lake Management Plans (Kawartha Conservation, 2014) or the Provincial Water Quality Monitoring Network. Opportunistic sampling conducted by Trent University occurred on Fleetwood Creek (1 site) and Jennings Creek (2 sites) in 2022 (**Figure 1**).

Water Quality

Water quality monitoring at each site occurred from 2022 to 2024 and were generally sampled during the ice-free period of April – November. At each site, the grab method was used to collect surface water samples by triple-rinsing the sampling container with the targeted water. The container was then submerged to a depth of 0.15-0.3 m below the water's surface and capped underwater.

Field parameters such as Water Temperature (Temp., °C), pH, Conductivity (Cond., µS/cm), Dissolved Oxygen (DO, mg/L), and Turbidity (Turb, NTU) were all directly measured in the field using a water quality meter (Hanna HI98194 or YSI ProDSS). Samples were stored at temperatures below 4°C during transport and storage. Samples were then sent to Trent University for chemical analysis, including Total Dissolved Solids (TDS), Total Carbon (TC), Total Organic Carbon (TOC), Total Inorganic Carbon (TIC), Total Nitrogen (TN), Nitrate-N (NO₃-N), Fluoride (F), Chloride (Cl), Bromide (Br), Phosphate (PO₄-P), Sulphate (SO₄), Total Phosphorus (TP), and Total Dissolved Phosphorus (TDP).

Water temperature loggers (HOBO Pendant MX Water Temperature) were deployed to sites in Janetville, Sucker (just SC-1), and Stoney Creek. While conductivity and temperature loggers (HOBO U24 Conductivity) were deployed to SC-2 and SC-3 (**Figure 1**).



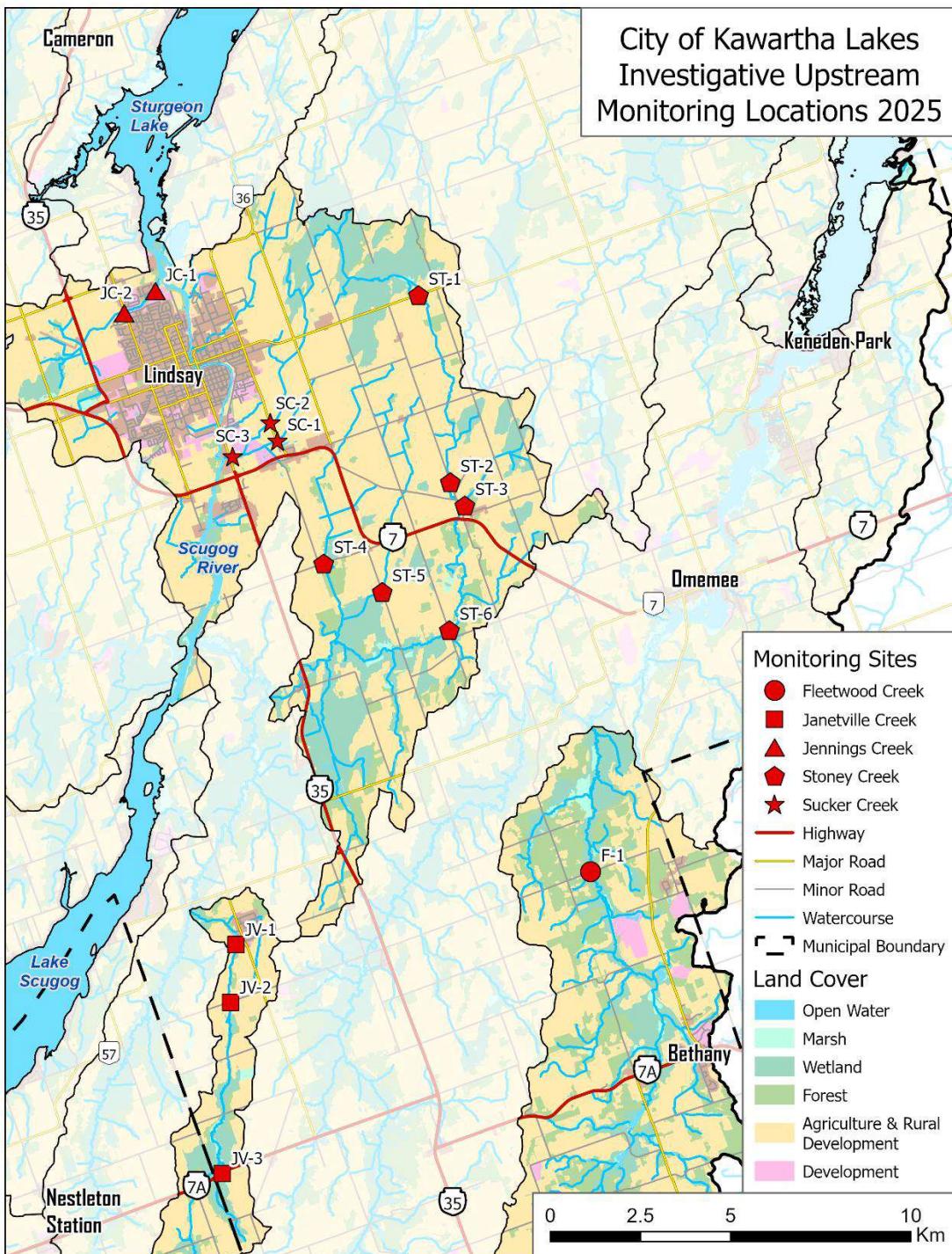


Figure 1. Map of the core monitoring locations at Jenetville Creek ($n = 3$), Sucker Creek ($n = 3$), and Stoney Creek ($n = 6$), and at opportunistic locations (Fleetwood Creek, $n = 1$ and Jennings Creek, $n = 2$). General land cover is shown: water = blue, agriculture = yellow, natural = greens, and development = red.



Data Analysis

Additional data sources were integrated into this project, encompassing:

- Climatic Data was obtained through Kawartha Conservation's precipitation network (Ken Reid Conservation Area).
- Catchment characteristics, obtained through the Southern Ontario Land Resource Information System (SOLRIS) via the Ontario Watershed Information Tool (OWIT) (Government of Ontario, 2015).
- Landcover was determined through satellite imagery (2023) digitization following the Ecological Land Classification for Southern Ontario (Lee *et al.*, 1998).

All data analysis was conducted using the statistical software R (R Core Team, 2021). The calculation of the Percent Coefficient of Variation (%CV) for pH followed that of Canchola *et al.*, (2017). Visual representations of the individual parameters are presented in the form of boxplots.

Determination of high flows (HF) and low/normal flows (LF) categories were done by plotting sampling dates against the hydrograph of Mariposa Creek (Water Survey of Canada Station No. 02HG001), which had similar land cover characteristics (Agriculture = 76.1%, development = 3.6%, natural = 20.3%; **Table 1**) to the monitoring sites and was ≈ 20 km from the furthest site.

Water quality results were compared to the following objectives and guidelines.

Parameter	Value
Dissolved Oxygen	6.5 mg/L for early life stages 5.5 mg/L for other life stages (CCME, 1999) Temperature dependent (PWQO, MOEE, 1994)
pH	< 6.5 and > 8.5 (PWQO, MOEE, 1994)
Turbidity	8 NTU increase background (CCME, 2002) Background = 2.25 (Maude and Maio, 1996)
Phosphorus	0.03 mg/L for rivers and stream (PWQO, MOEE, 1994)
Nitrate	13.0 mg/L (CCME, 2012)
Chloride	120 mg/L long-term (CCME, 2011)
Total Suspended Solids	25 mg/L increase background (CCME, 2002) Background = 3.5 mg/L (Culp <i>et al.</i> , 2013; Kawartha Conservation, 2023)

The CCME Water Quality Index (WQI) (CCME, 2017) was used to provide a convenient mean to summarize all water quality results. The WQI assesses the overall health of the site based on the number of parameters (such as those outlined above) that fail to meet guidelines, the frequency of the failure, and the total number of observations that fail to meet the guideline. The WQI digested the results and is able to assign the site to different categories based on the final score. The TN to



TP (Total Phosphorus) ratios, were computed as TN / TP (by weight). Raw data can be found in **Appendix A** (Land use) and **B** (Water Quality).

Results and Discussion

Land use

All monitored watershed were dominated by agricultural land cover (range = 40.1-96.6%, mean = 71.5%) followed by natural land cover with little development (**Table 1**); SC1 (Sucker Creek) had the highest agricultural cover (96.6%), while the opportunistic monitoring sites located on Fleetwood Creek (F-1) was found to have the highest natural cover (45.1%), and JC-2 (Jennings Creek) had the highest development cover (13.8%) (**Table 1**).

Table 1. Site location (latitude and longitude), identification code, and site description of the fifteen monitoring sites. General land cover information, as a percentage (%) of the watershed, and watershed size (km²) for each monitoring location are shown. Land cover information was obtained through the MNRF'S Ontario Watershed Information Tool (Government of Ontario, 2015).

Watercourse	SID	Site Description	Latitude	Longitude	(km ²) Watershed	Percentage of watershed (%)		
						Development	Agricultural	Natural
Janetville Creek	JV-1	Pigeon Creek Rd	44.2125	-78.7277	18.6	5.6	64.0	30.4
	JV-2	Fleetwood Rd	44.1981	-78.7301	17.3	5.1	63.2	31.7
	JV-3	Hwy 7A	44.1554	-78.7346	3.0	4.3	62.2	33.5
Sucker Creek	SC-1	Hwy 36 - South	44.3379	-78.7084	2.7	4.9	87.8	7.3
	SC-2	Hwy 36 - North	44.3425	-78.7107	5.7	5.6	69.4	25.0
	SC-3	Lindsay St South	44.3343	-78.7241	11.2	12.8	68.5	18.7
Stoney Creek	ST-1	Pigeon Lake Rd	44.3734	-78.6579	12.4	4.3	36.7	59.0
	ST-2	Settlers Rd	44.3265	-78.6487	20.1	4.8	54.0	41.2
	ST-3	Settler Rd	44.3205	-78.6439	4.7	3.9	70.4	25.7
	ST-4	River Rd. E	44.3071	-78.6935	10.6	7.6	80.5	11.9
	ST-5	Hillhead Rd	44.2996	-78.6734	7.8	4.6	88.7	6.7
	ST-6	On Post Rd	44.2896	-78.6505	35.3	5.7	58.9	35.4
Fleetwood Creek	F-1	Fleetwood Rd	44.2281	-78.6039	55.0	8.4	37.2	54.4
Jennings Creek	JC-1	Williams St.	44.3764	-78.7494	15.2	24.5	61.5	14.0
	JC-2	Angeline St.	44.3711	-78.7605	15.2	22.0	63.9	14.1

Water Quality

A total of 15 sites were monitored for this iteration of the City of Kawartha Lakes - Investigative Upstream Monitoring. These sites are located within Jenetville Creek ($n = 3$), Sucker Creek ($n = 3$), and Stoney Creek ($n = 6$) watersheds, and at opportunistic locations within the Fleetwood Creek, (n



= 1) and Jennings Creek ($n = 2$) watersheds (**Figure 1**). Sites on Fleetwood and Jennings Creek were only monitored for one season in 2022. Overall, 518 samples were collected from 2022 to 2024.

Water Quality Index

The CCME Water Quality Index was used to compile all water quality assessments into a digestible format. Water quality results of pH, turbidity, dissolved oxygen, chloride, nitrate, and total phosphorus was used to compare against the Provincial Water Quality Objective and/or the Canadian Water Quality Guideline for the protection of aquatic life.

Generally, most sites had a WQI score below 64 which indicates *marginal* water quality that is frequently impaired and often depart from desirable levels (CCME, 2017). Higher scores were obtained for the site on Fleetwood, with the highest at 80.4 indicating good water quality (**Table 2**) where water quality rarely departs from desirable levels (CCME, 2017). The lowest score was found for Sucker Creek (SC-1 at 36.1 and SC-3 at 37.1), Stoney (ST-2 at 39.4) which are considered to have poor water quality (**Table 2**). Drivers of low scores were nutrient based – Nitrate and Phosphorus exceedances, followed by failure to meet dissolved oxygen thresholds.

Table 2. Water Quality Index (WQI) scores and category per monitoring site. Exceedance percentages are also shown by parameter and site.

Site	Score	Category	pH	Turbidity	Dissolved Oxygen	Chloride	Nitrate	Phosphorus
F-1	80.6	GOOD	0	8.3	0	0	0	20
JC-1	59	MARGINAL	0	50	16.7	58.3	0	16.7
JC-2	59.5	MARGINAL	0	16.7	8.3	75	0	20
JV-1	48.4	MARGINAL	9.7	22.6	7.4	0	44.4	58.1
JV-2	56.6	MARGINAL	9.4	14.7	0	0	42.9	50
JV-3	59.7	MARGINAL	7.1	0	23.8	0	3.1	59.4
SC-1	36.1	POOR	12.5	17.1	27.6	3.8	73.1	76
SC-2	54.7	MARGINAL	0	45.5	18.8	0	51.9	57.7
SC-3	37.1	POOR	5.3	48.8	42.4	6.9	37.9	68
ST-1	39.4	POOR	8.2	4.3	43.2	3.8	17	42
ST-2	49.1	MARGINAL	13.3	23.3	19.4	0	25.5	41.7
ST-3	57.3	MARGINAL	0	8.7	12.5	0	48.3	58.6
ST-4	48.7	MARGINAL	0	13	12.5	7.1	42.9	40.7
ST-5	54.1	MARGINAL	0	21.7	13.3	0	53.8	60
ST-6	48.5	MARGINAL	6.8	19.6	21.1	0	20.8	56



Table 3. Summary statistics: count, mean, median (med), and coefficient of variation percentage (CV%) of selective water quality parameters per monitoring site. NA = Not Available.

Site	Stat	°C		µS/cm	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
		Temp.	pH	Cond.	Turbidity	Dissolved Oxygen	Total Dissolved Solids	Fluoride	Chloride	Bromide	Nitrate	Phosphate	Sulphate	Total Carbon	Total Organic Carbon	Total Inorganic Carbon	Total Nitrogen	Total Phosphorus	
SC-1	Count	32	30	31	26	29	10	25	25	23	25	22	24	26	25	26	26	25	
	Mean	14	8.1	711.3	4.5	8.4	505.8	0.3	37.1	0.3	32.6	0.3	28.4	71.2	12.1	59.2	6.5	71.6	
	Med	15.5	8.1	698	2.6	9	445.5	0.1	30.5	0	25.9	0.1	26.3	70.9	9	62.3	5.7	57.8	
	CV%	36.2	7.8	29.8	121.5	38	23.5	270.1	65.2	244.8	86.6	259.8	38.3	15.9	115.1	27.8	67.8	73.3	
SC-2	Count	20	21	20	22	22	11	27	27	19	27	17	26	27	27	27	27	26	
	Mean	33.7	4.4	14.2	226.6	27.3	14.8	256.7	51.2	322.5	80	134.8	35.1	17.2	45.1	30	56.2	84.3	
	Med	15.5	8	574	17.8	9.3	411.6	0.4	21.6	0.1	16.9	0	24.2	78.7	25.1	53.6	4.2	44.9	
	CV%	15.9	95	573.5	9.1	9.2	415	0.1	18.3	0	13.6	0	23.8	75.8	24	52.3	4	34.3	
SC-3	Count	40	38	39	36	41	12	29	29	23	29	22	28	29	29	29	29	25	
	Mean	31.5	6.1	32.2	103	39.1	39.5	249.2	99.8	379.2	101.5	284.2	37.3	16.1	49.8	27.3	69.1	72.5	
	Med	14.3	8.1	714.7	13.1	8.2	481.3	0.3	61.6	0.1	14.1	0.1	22.6	77.7	21.2	56.5	3.5	50.9	
	CV%	15.3	163	685	8.8	9	489	0.1	43.6	0	9.5	0	21.4	77.1	19	54.8	2.9	39.5	
JV-1	Count	31	31	28	30	32	13	36	36	30	36	28	36	36	36	35	36	31	
	Mean	30.6	6.8	15.7	177.2	17.5	111.4	59.1	36.5	85.2	64.6	132.3	44.7	17.4	62.7	23	49.6	90	
	Med	14.5	8.3	529.9	11.9	9.7	177.1	0.1	19.5	0	11.8	0.1	13.4	64.3	14.5	51.4	2.7	48.2	
	CV%	15.1	208	526	3.5	9.7	13.5	0.1	19.3	0	9.9	0	12.3	63.8	12.9	51.2	2.4	34.9	
JV-2	Count	34	32	31	31	35	0	28	28	26	28	26	28	28	27	28	28	28	
	Mean	31	5.5	16.4	307.2	12.8	NA	50.7	28.6	76.3	71.6	99.7	49.6	21.8	54.4	15.5	55.3	141.8	
	Med	13.1	8.1	533.3	15.4	10.2	NA	0.1	18.7	0	14.5	0.1	14.8	65.6	12.7	55.7	3.1	48.7	
	CV%	14.8	138	526	1.7	9.8	NA	0.1	17.5	0	11.9	0	13.3	65.9	11	56.4	2.7	29.6	
JV-3	Count	32	28	30	21	33	0	32	32	29	32	32	32	32	32	32	32	32	
	Mean	35.9	7.3	29	288.1	25.9	NA	38.2	59.1	86.8	273.5	78.5	62.5	21.6	46.3	14.4	112.9	75.4	
	Med	14	7.7	487.6	0.3	9.1	NA	0.1	14	0	1.3	0.1	11.2	67.3	12.9	57.2	0.7	49	
	CV%	13.3	204	472.4	0.1	9.5	NA	0.1	13	0	0.1	0.1	10.3	67.4	12.9	59	0.5	37.1	

Table 3 continue.

Site	Stat	°C		µS/cm	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
		Temp.	pH	Cond.	Turbidity	Dissolved Oxygen	Total Dissolved Solids	Fluoride	Chloride	Bromide	Nitrate	Phosphate	Sulphate	Total Carbon	Total Organic Carbon	Total Inorganic Carbon	Total Nitrogen	Total Phosphorus			
ST-1	Count	45	49	43	40	47	12	53	53	47	53	42	53	53	53	53	53	53	53	50	
	Mean	30.9	8.9	52.4	512.8	48.8	16.4	120	128.2	178.7	249.8	238.6	164.6	26.7	46.2	30.7	156.2	86.8			
	Med	15.4	7.8	459.1	8.5	7.7	259.4	0.1	26.1	0	6.9	0.1	8	65.5	27.8	42.1	2.3	33.8			
	CV%	17.3	343	358.4	1.4	9	253	0.1	14.6	0	0.1	0	1.3	69.5	29.8	41.9	1.1	27.1			
ST-2	Count	42	45	41	42	45	9	51	51	45	51	40	50	51	51	51	51	51	51	48	
	Mean	31.6	8	31.5	96.1	32.6	8.2	268.6	40.1	296.1	139.5	109.8	60.6	23.2	34.6	19.1	96.3	88.4			
	Med	15.7	8	546.1	6	9.3	354.6	0.2	21.1	0.1	15	0.1	21.7	66.1	21.4	50	3.6	38.5			
	CV%	16.6	282	506	3.3	9.5	364	0.1	18.3	0	7.5	0	19.3	68.2	22.1	49.5	2.3	26			
ST-3	Count	22	21	21	21	24	0	29	29	27	29	26	29	29	29	29	29	29	29	29	
	Mean	32.3	3.9	22.6	133.5	24.6	NA	57.7	40.3	194.5	104.9	93.7	39.4	20.5	33.4	16.6	75.6	86.1			
	Med	13.6	7.7	667.4	5.2	9.9	NA	0.1	23	0.1	16.4	0	40.7	78.1	14.8	66.1	3.8	47.7			
	CV%	15.5	77.6	645	2	9.7	NA	0.1	23.5	0	12.3	0	39.8	81.8	14.4	65	3.1	40.8			
ST-4	Count	22	20	21	22	24	0	28	28	27	28	26	28	28	28	28	28	28	28	27	
	Mean	31.5	2.5	23	93.6	29.9	NA	55.7	52.6	186.1	134.3	96.8	30.8	20.8	31.7	18	105	93.6			
	Med	13.1	7.7	809.6	4.6	9.4	NA	0.1	65	0.1	18	0	25.5	83.4	12.5	73.1	4	36.1			
	CV%	14.2	47.1	785	2.6	9.8	NA	0.1	53.8	0	9	0	24.1	86.1	12.9	73.5	2.9	23.1			
ST-5	Count	20	18	20	19	22	0	26	26	26	26	26	26	26	25	26	26	26	25	25	
	Mean	29.2	2.3	31.2	142.2	30.8	NA	29.9	22.5	85.4	129.3	93.8	27.4	21.8	46.6	20.5	110.1	82.6			
	Med	13.5	7.8	741.4	7.3	10.2	NA	0.1	44.6	0	28.6	0	25.5	80.9	8.9	72.8	5.6	42			
	CV%	14.2	42.9	746	3.3	10	NA	0.1	44.8	0	21.1	0	26.2	80.5	8.6	71.1	4.3	37.2			
ST-6	Count	44	44	43	43	47	11	53	53	46	53	46	52	53	53	53	53	53	50		
	Mean	30.1	7.2	27.7	173.9	33.6	11.1	266.9	33.7	311.2	170.4	285.9	45.4	21.4	47.7	22.8	115.9	81.7			
	Med	15.4	7.9	606.7	7.7	9.1	394.5	0.3	26.9	0.2	12.8	0.2	22.7	70.7	20.6	54.6	3.1	48.3			
	CV%	16.1	214	574	4.6	9.5	390	0.1	24.9	0	4.2	0.1	20.8	71.7	20.3	56.7	1.8	39.1			

Table 3. continue

Site	Stat	°C	μS/cm	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	μg/L
		Temp.	pH	Cond.	Turbidity	Dissolved Oxygen	Total Dissolved Solids	Fluoride	Chloride	Bromide	Nitrate	Phosphate	Sulphate	Total Carbon	Total Organic Carbon	Total Inorganic Carbon	Total Nitrogen	Total Phosphorus		
ST-5	Count	20	18	20	19	22	0	26	26	26	26	26	26	25	26	26	26	26	25	
	Mean	29.2	2.3	31.2	142.2	30.8	NA	29.9	22.5	85.4	129.3	93.8	27.4	21.8	46.6	20.5	110.1	82.6		
	Med	13.5	7.8	741.4	7.3	10.2	NA	0.1	44.6	0	28.6	0	25.5	80.9	8.9	72.8	5.6	42		
	CV%	14.2	42.9	746	3.3	10	NA	0.1	44.8	0	21.1	0	26.2	80.5	8.6	71.1	4.3	37.2		
ST-6	Count	44	44	43	43	47	11	53	53	46	53	46	52	53	53	53	53	53	50	
	Mean	30.1	7.2	27.7	173.9	33.6	11.1	266.9	33.7	311.2	170.4	285.9	45.4	21.4	47.7	22.8	115.9	81.7		
	Med	15.4	7.9	606.7	7.7	9.1	394.5	0.3	26.9	0.2	12.8	0.2	22.7	70.7	20.6	54.6	3.1	48.3		
	CV%	16.1	214	574	4.6	9.5	390	0.1	24.9	0	4.2	0.1	20.8	71.7	20.3	56.7	1.8	39.1		
Stoney	Count	195	197	189	187	209	32	240	240	218	240	206	238	240	239	240	240	240	229	
	Mean	31.3	7.1	37.1	322.7	35.4	21.4	271.9	79.6	347.7	157.9	331.6	68.6	24.4	54.4	29.4	114.4	86.7		
	Med	14.8	7.8	602.8	6.8	9.1	332.6	0.2	31.4	0.1	14.7	0.1	22	72	19.4	56.4	3.5	40.9		
	CV%	15.6	205	575	3	9.6	351.5	0.1	23.8	0	5.8	0	21.9	72.8	18.1	55.7	1.9	28.9		
Sucker	Count	95	91	93	88	99	33	82	82	66	82	62	79	82	81	82	82	76		
	Mean	33.6	6.5	30.3	194.9	34.7	29.7	259.5	104.6	314.6	100.6	311.1	38	16.8	66.2	28.2	72.4	78.8		
	Med	14.4	8.1	683.2	11.1	8.7	465.5	0.3	40.6	0.2	20.9	0.2	25	76	19.6	56.4	4.7	55.7		
	CV%	15.5	181	639	6.5	9.1	440	0.1	30.4	0	15.2	0	24.7	73.5	18.8	56.1	4	42.2		
Janetville	Count	24	24	24	24	24	24	24	24	21	24	1	21	24	24	24	24	22		
	Mean	32.5	7.2	21	331.2	19.3	111.4	49.5	42.7	83.2	103.3	104.2	52.2	20.1	55.8	18.4	77.6	103.4		
	Med	13.9	8.1	516.8	9.3	9.7	177.1	0.1	17.4	0	9.1	0.1	13.1	65.7	13.4	54.6	2.1	48.7		
	CV%	224	8	502	1.1	9.7	13.5	0.1	16.6	0	6.5	0	12.4	66	12.8	55	1.8	34.3		
Jennings	Count	24	24	24	24	24	24	24	24	21	24	1	21	24	24	24	24	22		
	Mean	22.3	4.1	24.6	57.6	17.6	25.2	175.2	32.3	123.9	61.6	#VALUE!	50	24.9	85.5	41.5	50.2	55.5		
	Med	15.9	7.9	880	9.7	8.3	617.2	0.3	144.6	0.1	3.4	0.1	19.4	53.5	18	35.4	1.5	22.7		
	CV%	86.7	7.9	880.5	9	9.2	595.5	0.1	150.1	0	2.8	0.1	16.9	57.1	13.6	36.9	1.4	22.6		

Table 3. Continue

Site	Stat	°C		µS/cm	mg/L	NTU	mg/L Total Dissolved Solids	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
		Temp.	pH	Cond.	Turbidity	Dissolved Oxygen		Fluoride	Chloride	Bromide	Nitrate	Phosphate	Sulphate	Total Carbon	Total Organic Carbon	Total Inorganic Carbon	Total Nitrogen	Total Phosphorus			
F-1	Count	12	10	12	12	12	12	12	12	0	12	0	12	12	12	12	12	12	12	12	10
	Mean	26.4	2.2	9.4	137	12.9	8.3	137.6	17.7	NA	50.1	NA	29.3	5.6	83.9	32.4	17.6	75.8			
	Med	19.1	8.2	400.2	2.3	8.9	283.3	0.1	6.3	NA	0.4	NA	11.8	46.6	12.6	34	0.3	17.3			
	CV%	20.7	42.3	390	1.4	8.6	276.5	0	6.5	NA	0.4	NA	12	46.8	10.4	35.5	0.3	14.7			
JC-1	Count	12	12	12	12	12	12	12	12	10	12	1	10	12	12	12	12	12	12	12	12
	Mean	22.8	4.4	27.8	29.4	19.2	28.3	173.9	36.8	134.2	66.5	NA	55.7	27.2	86.8	43.3	58.1	44.2			
	Med	16.4	7.8	832.2	10.5	7.5	591	0.4	140.2	0.2	2.8	0.1	18.6	51.1	17.9	33.2	1.4	23.2			
	CV%	16.9	92.5	778	9.8	7.1	552	0.1	130.6	0	2.7	0.1	15.5	47.8	12.3	33.3	1.3	23.9			
JC-2	Count	12	12	12	12	12	12	12	12	11	12	0	11	12	12	12	12	12	12	12	10
	Mean	22.3	3.5	21.3	83	10.9	22.5	146	29	115.6	55.1	NA	47.3	23	88.1	40.7	44.1	70.3			
	Med	15.5	8	927.8	8.9	9.2	643.3	0.2	149.1	0.1	4	NA	20.2	55.8	18.2	37.6	1.6	22			
	CV%	16.2	72.3	967.5	7.1	9.4	670.5	0.1	159.5	0	4.2	NA	18.8	59.3	15.3	41	1.7	18.9			
Stoney	Count	195	197	189	187	209	32	240	240	218	240	206	238	240	239	240	240	240	240	229	
	Mean	31.3	7.1	37.1	322.7	35.4	21.4	271.9	79.6	347.7	157.9	331.6	68.6	24.4	54.4	29.4	114.4	86.7			
	Med	14.8	7.8	602.8	6.8	9.1	332.6	0.2	31.4	0.1	14.7	0.1	22	72	19.4	56.4	3.5	40.9			
	CV%	15.6	205	575	3	9.6	351.5	0.1	23.8	0	5.8	0	21.9	72.8	18.1	55.7	1.9	28.9			
Sucker	Count	95	91	93	88	99	33	82	82	66	82	62	79	82	81	82	82	82	82	76	
	Mean	33.6	6.5	30.3	194.9	34.7	29.7	259.5	104.6	314.6	100.6	311.1	38	16.8	66.2	28.2	72.4	78.8			
	Med	14.4	8.1	683.2	11.1	8.7	465.5	0.3	40.6	0.2	20.9	0.2	25	76	19.6	56.4	4.7	55.7			
	CV%	15.5	181	639	6.5	9.1	440	0.1	30.4	0	15.2	0	24.7	73.5	18.8	56.1	4	42.2			

Table 3. Continue

Site	Stat	°C		µS/cm	mg/L	NTU	mg/L Total Dissolved Solids	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L
		Temp.	pH	Cond.	Turbidity	Dissolved Oxygen		Fluoride	Chloride	Bromide	Nitrate	Phosphate	Sulphate	Total Carbon	Total Organic Carbon	Total Inorganic Carbon	Total Nitrogen	Total Phosphorus		
Janetville	Count	24	24	24	24	24	24	24	24	21	24	1	21	24	24	24	24	24	22	
	Mean	32.5	7.2	21	331.2	19.3	111.4	49.5	42.7	83.2	103.3	104.2	52.2	20.1	55.8	18.4	77.6	103.4		
	Med	13.9	8.1	516.8	9.3	9.7	177.1	0.1	17.4	0	9.1	0.1	13.1	65.7	13.4	54.6	2.1	48.7		
	CV%	224	8	502	1.1	9.7	13.5	0.1	16.6	0	6.5	0	12.4	66	12.8	55	1.8	34.3		
Jennings	Count	24	24	24	24	24	24	24	24	21	24	1	21	24	24	24	24	22		
	Mean	22.3	4.1	24.6	57.6	17.6	25.2	175.2	32.3	123.9	61.6	#VALUE!	50	24.9	85.5	41.5	50.2	55.5		
	Med	15.9	7.9	880	9.7	8.3	617.2	0.3	144.6	0.1	3.4	0.1	19.4	53.5	18	35.4	1.5	22.7		
	CV%	86.7	7.9	880.5	9	9.2	595.5	0.1	150.1	0	2.8	0.1	16.9	57.1	13.6	36.9	1.4	22.6		

Water Temperature and Dissolved Oxygen

Water temperature of streams can be governed by shade, groundwater influence, flow rate, air temperature, and depth. For example, faster flowing water in a shaded environment tends to be colder than stagnant water in an open area.

Continuous water temperature collected from 2023 to 2024 at Janetville, Sucker, and Stoney Creek indicate that water rarely reaches 25°C (**Figure 2**) during the monitoring period. Within Janetville, the middle site (JV-2) was found to be the coldest of the three (**Figure 1, 2**). Site JV-1 was downstream of an online pond and JV-3 was downstream of a wetland, where both features lack any overhead shade which allows for the stagnation of water and for water to be warmed by sunlight. Wetland supports other ecosystems services and are needed as opposed to online ponds that do not provide as much ecosystem services.

Site SC-1 is distinct when compared to the other three sites as it is generally cooler, rarely warmer than 20°C (note daily median value), suggesting stronger groundwater influence as there is a lack of natural cover (0.7%; **Figure 2, Table 1**). For sites within Stoney Creek, ST-2 and ST-6 are found to be much warmer than the other sites (**Figure 2**). These two sites do not have any unique land cover percentages (**Table 1**), so it is estimated that flows are reduced at these sites to allow for warmer temperatures.

The temperature of the water affects its ability to hold dissolved oxygen. Where colder water can hold more dissolved oxygen than warmer water. Most measurements of dissolved oxygen were found to be within the Canadian Water Quality Guidelines (**Table 2**) which has a more conservative threshold than the Provincial Water Quality Objectives. Overall, 19.1% ($n = 67$) of all dissolved oxygen measurements fail to meet the 6.0 or 6.5 mg/L Canadian Water Quality Guidelines. Sites with higher failure rates were ST-1 and SC-3, 43.2% and 42.4%, respectively (**Table 2**). The rest of the monitoring sites had failed percentages below 30% (**Table 2**). All streams showed a seasonal pattern where higher dissolved oxygen is found during the spring and fall months while lower dissolved oxygen levels are found during the summer period (**Figure 2**). When streams are colder during the spring and fall, they can hold more oxygen when compared to warmer conditions.

The lack of dissolved oxygen can inhibit fish movement (dead zones) and extract phosphorus from the stream sediment which can amplify algae blooms. This is of concern within the Stoney Creek sites as dissolved oxygen levels were observed to be < 5 mg/L. Generally, sublethal effects of low dissolved oxygen can occur at 5.83 mg/L for some fish species (Tang *et al.*, 2020). While phosphorus release from sediment occurs ~1-2 mg/L (US EPA, 2015).



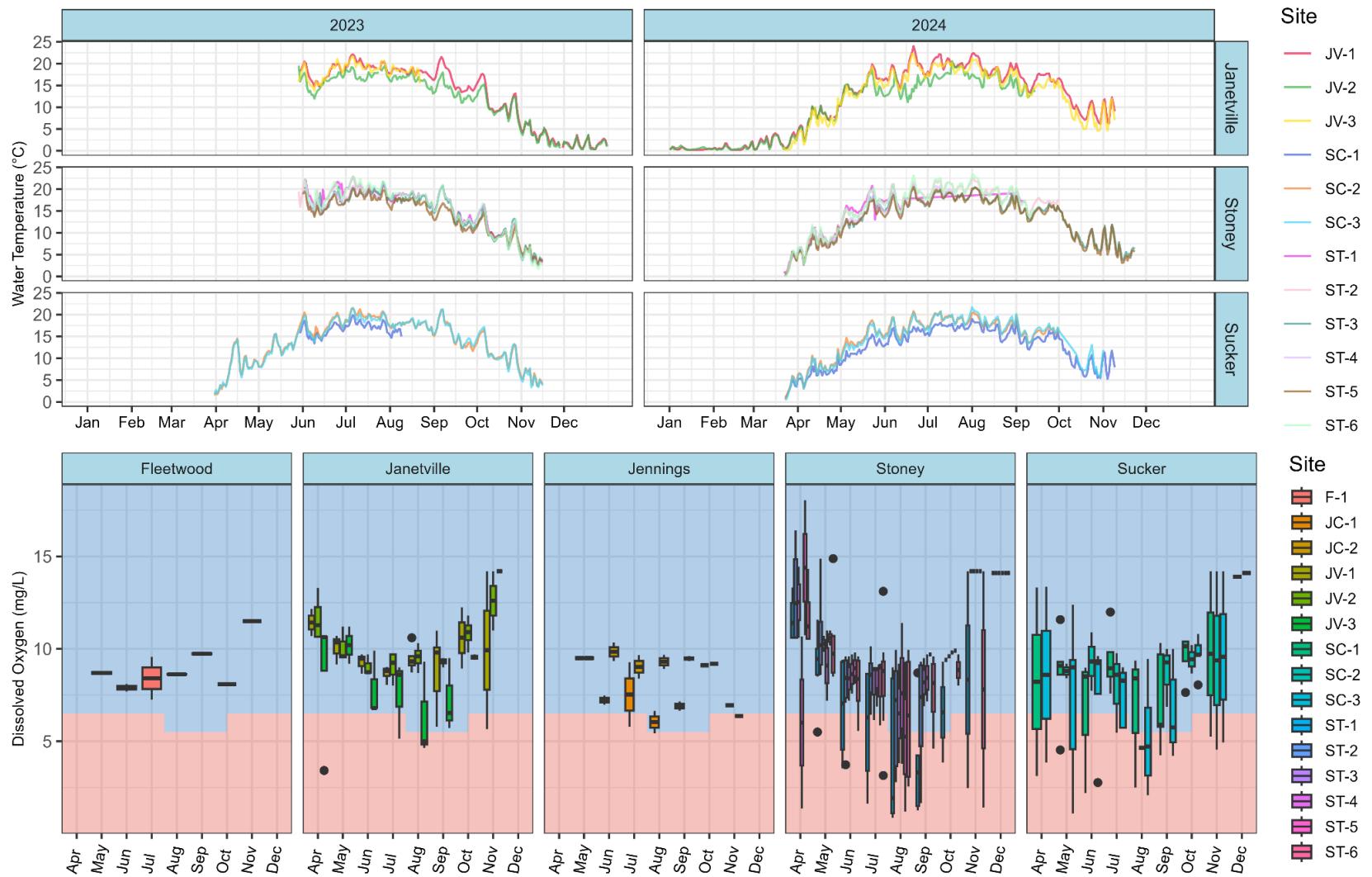


Figure 2. Daily median water temperature by month and creek for 2023 and 2024 (top). Variation of dissolved oxygen across the sites by month (bottom) for 2022, 2023, and 2024. Shade areas show area that are above and below the Canadian Water Quality Guideline for dissolved oxygen.

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pH

Due to the underlaying geology of the study area (limestone bedrock), it was expected that much of the stream's pH were more alkaline than acidic. When compared to the Provincial Water Quality Objectives, exceedances (10.7%, $n = 44$; **Table 2**) were mostly due to higher pH (more alkaline) values. No significant concerns of pH were identified.

Conductivity and Chloride

Water conductivity is a measurement of the water to conduct electricity. This can be seen as a proxy for the amount of dissolved salts in the water. Salts derived from chloride, nitrates, phosphates, sulphates, aluminum and calcium compounds can influence conductivity readings. Elevated levels of chloride and nitrates are common signals of human activities, i.e., winter salt, fertilizer usage. Although humans have used winter salt for many decades, freshwater organisms such as freshwater fish, amphibians, and insects have not evolved to withstand high amounts of salt.

Higher conductivity readings were found at Jennings Creek sites (median: JC-1 = 832 $\mu\text{S}/\text{cm}$, JC-2 = 927 $\mu\text{S}/\text{cm}$; **Table 3**) which is of expected as these sites were found within the urban area of Lindsay - higher salt application rate. However, agricultural dominated watersheds can also have higher conductivity readings through fertilizers and exposed soils in field, i.e., Stoney Creek agricultural cover range = 40.1-92.3% (median = 575 $\mu\text{S}/\text{cm}$, mean = 616 $\mu\text{S}/\text{cm}$), Sucker Creek agricultural cover range = 76.4-96.6% (median = 639 $\mu\text{S}/\text{cm}$, mean = 683 $\mu\text{S}/\text{cm}$) (**Table 3**). Lower conductivity readings were found at ST-1 (median = 358 $\mu\text{S}/\text{cm}$, mean = 459 $\mu\text{S}/\text{cm}$) and F-1 (median = 390 $\mu\text{S}/\text{cm}$, mean = 400 $\mu\text{S}/\text{cm}$) which also had higher natural cover (ST-1 = 56.5% and F-1 = 45.1%) (**Table 1, 3**).

Chloride levels across all creeks were generally below the long-term threshold of 120 mg/L (CCME, 2011) except for sites in Jennings Creeks (**Table 2**), where much of the results were higher than the Canadian Water Quality Guidelines of 120 mg/L (CCME, 2011). Median chloride concentrations were (from highest to lowest): Jennings (150.1 mg/L), Sucker (30 mg/L), Stoney 23.8 mg/L), Janetville (16.6 mg/L), and Fleetwood creek (6.5 mg/L) (**Table 3, Figure 3**). Median chloride levels for all creeks (except for Jennings) are within the natural ranges found across Canada i.e., 10-30 mg/L (McNeely *et al.*, 1979; Evans and Frick, 2001). Seasonal chloride patterns were not found for Fleetwood and Stoney whereas seasonal higher chloride results were found for Janetville, Sucker, and Jennings for the month of September (**Figure 4**) where higher chloride was found. This may be driven by reduced flow and an increase in contaminated groundwater input.



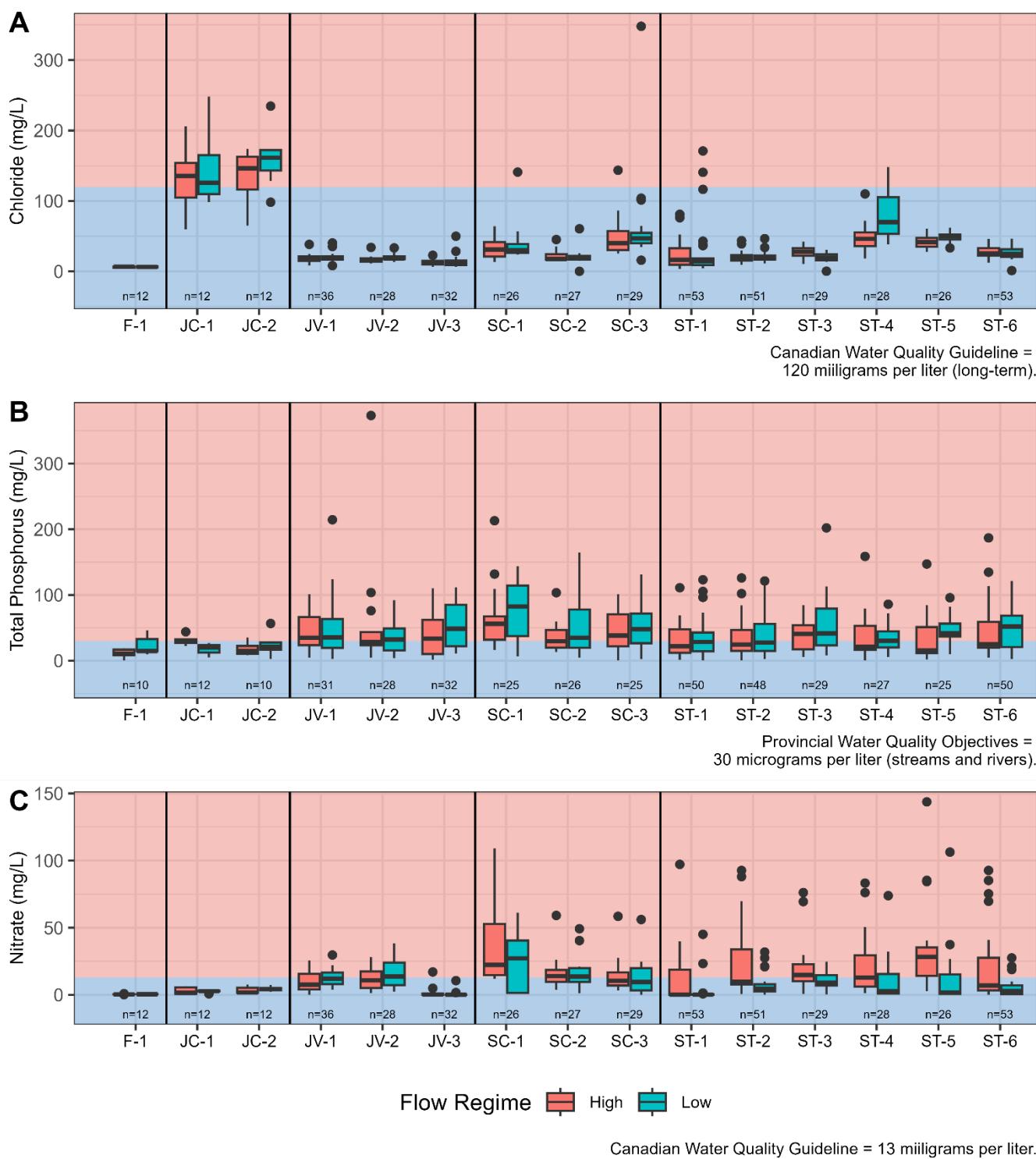


Figure 3. Variation of selective water quality parameters (A = chloride, B = total phosphorus, and C = nitrate) per site and by flow regime (high flow vs low flow). Shade areas depict areas that are above and below the Provincial Water Quality Objectives or Canadian Water Quality Guidelines.



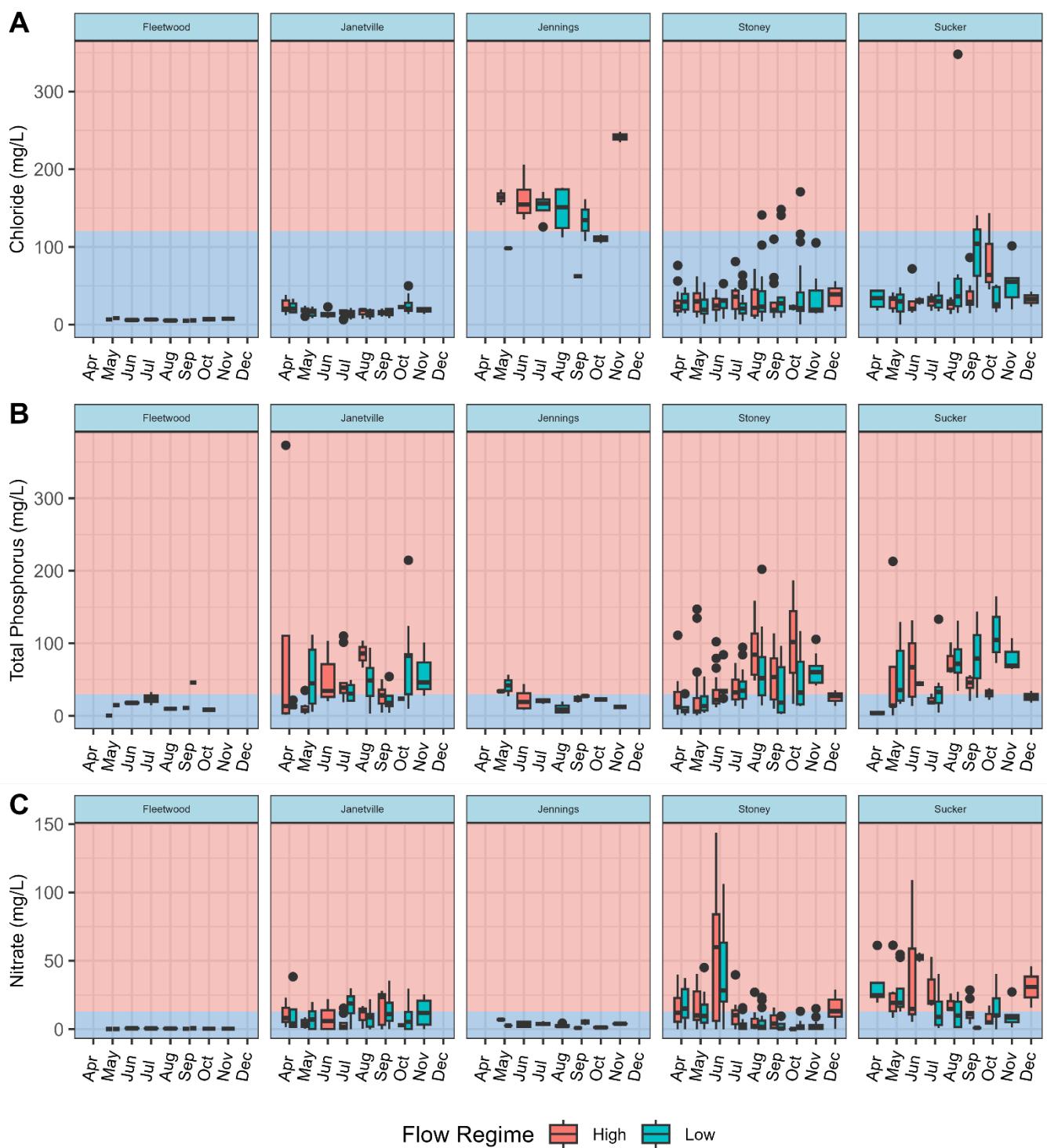


Figure 4. Variation of selective water quality parameters (A = chloride, B = total phosphorus, and C = nitrate) by month and flow regime (high flow vs low flow). Shade areas depict areas that are above and below the Provincial Water Quality Objectives or Canadian Water Quality Guidelines.



Phosphorus

Phosphorus is an essential nutrient for plants which are the foundation for food webs. However, when too much phosphorus is put into the ecosystem, it can cause rapid eutrophication where it can lead to a loss of fish, habitat, and drinking water. To control the rapid expansion of algae, the Provincial Water Quality Objectives for phosphorus is set at 30 µg/L for streams and rivers (MOEE, 1994).

Productivity classifications generally put all streams within the meso-eutrophic to eutrophic class, suggesting higher nutrient levels and a more productive system (CCME, 2004). When compared against the Provincial Water Quality Objectives, 51.4% ($n = 220$) of all samples ($n = 422$) were found to exceed the Provincial Water Quality Objectives. Higher exceedance percentage was found for Sucker Creek (SC-1 = 76% and SC-3 = 68%) while lower values were found for Jennings Creek (JC-1 = 16.7%, and JC-2 = 20%) and Fleetwood (F-1=20%) (**Table 2, Figure 3**). Interestingly, phosphorus exceedance percentage at JC-2 was much lower than that found by Kawartha Conservation (2024-rural extension, and 2025 – stormwater), about 77%-80%. This discrepancy may reflect the lower sample size for this report as Kawartha Conservation (2024, 2025) were sampling every other week and during storm events (2024: $n = 63$, 2025: $n = 33$). Seasonally, total phosphorus levels trended with the growing season and usually peaked in September and were generally lowest during the spring and fall (**Figure 4**) and may represent export of excess phosphorus from agricultural soils to nearby streams (Staden *et al.*, 2022). Higher levels of phosphorus in streams have been linked to agriculture land cover across Ontario (Chan *et al.*, 2024), where excess phosphorus from prolonged human activities (intensive pasture, fertilizer, etc) has stored phosphorus in soils (Staden *et al.*, 2022), which enriches stormwater runoff from agricultural fields during precipitation events. Thus, remedial, stewardship, and management should aim to reduce nutrient rich runoff.

Nitrate

Following phosphorus, nitrogen is the secondary limiting nutrient for plants in aquatic system and can contribute to rapid eutrophication. Elevated levels of nitrate in water can cause low levels of dissolved oxygen and can be toxic to humans and animals, thus for the protection of aquatic life, the threshold is set at 13.0 mg/L.

Nitrate was found to be the dominated form of nitrogen across these streams. Nitrate levels across all creeks varied from low exceedance to high exceedances (0-73.1%; **Table 2, Figure 3**). For all samples ($n = 454$), there was a 32.2% exceedance percentage with higher exceedances found for SC-1 (73.1%), ST-5 (53.8%), and SC-2 (51.9%), while lower percentages were to be found for F-1 (0%), JC-1 (0%), and JC-2 (0%), and JV-3 (3.1) (**Table 2, Figure 3**). Similarly to phosphorus failure rates, those found for sites on Jennings Creek may not be accurate as measurements by



Kawartha Conservation (2024, 2025) indicate higher failure rates due to increased sample size and sampling during high runoff periods (precipitation events). Seasonal trends involve higher levels in the spring during the spring melt, and lower values in the summer period where there is less water flow (**Figure 4**). Chen *et al.* (2024) found that increases in nitrate were associated with the intensification of agriculture through the practice of growing row crops owing from fertilizer use, which is present in these watersheds.

Turbidity

Turbidity refers to how much light is scattered in the water from small particles or dyes. Generally, it refers to the murkiness of the water where poorer water quality is associated with high murkiness due to eroded banks, effluent discharge, rapid eutrophication, and other environmental disasters. Turbidity thresholds are determined through the Canadian Water Quality Guideline for the Protection of Aquatic Life (CCME, 2002) and is set at 8 NTU plus background. Background levels of turbidity and total suspended solids were set at 2.25 NTU (Maude and Maio, 1996)

Of the 362 turbidity measurements, 20.6% exceeded the Canadian Water Quality Guideline and were generally isolated to JC-1, SC-2 and SC-3 (**Table 2**). These watersheds are used for agriculture (row crops) with exposed soils and have recently begun their transformation to development with even more exposed soils. Both activities (row crops without cover crops) and construction generally have exposed soils that lead to sediment laden runoff which flows into the creeks. Other sites across Stoney, Janetville, and Fleetwood Creek had lower exceedance (<25%) suggesting better water clarity (**Table 2**).

Nutrient Limitation

Because nitrogen and phosphorus are essential for plant growth, identifying which is limiting is key to prevent uncontrolled algae bloom. Generally, Total Nitrogen (TN): Total Phosphorus (TP) ratios (by weight) below 20 suggest the system is nitrogen limited while ratios greater than 50 suggest phosphorus limitation (Guildford and Hecky, 2000).

In our calculations, we found that all median ratios (range = 31-278) indicate phosphorus limitations. These results recommend that remedial and stewardship should generally focus on improving phosphorus sources while at site specific areas focus on nitrate and phosphorus sources.

Drivers of Water Quality

Water quality assessments are complex as it involves multiple parameters along with external information such as landcover and weather. Through a Principal Component Analysis Biplot (PCA Biplot) we are able to look at general trends across sites and parameters (and their contribution factor) (**Figure 4**).



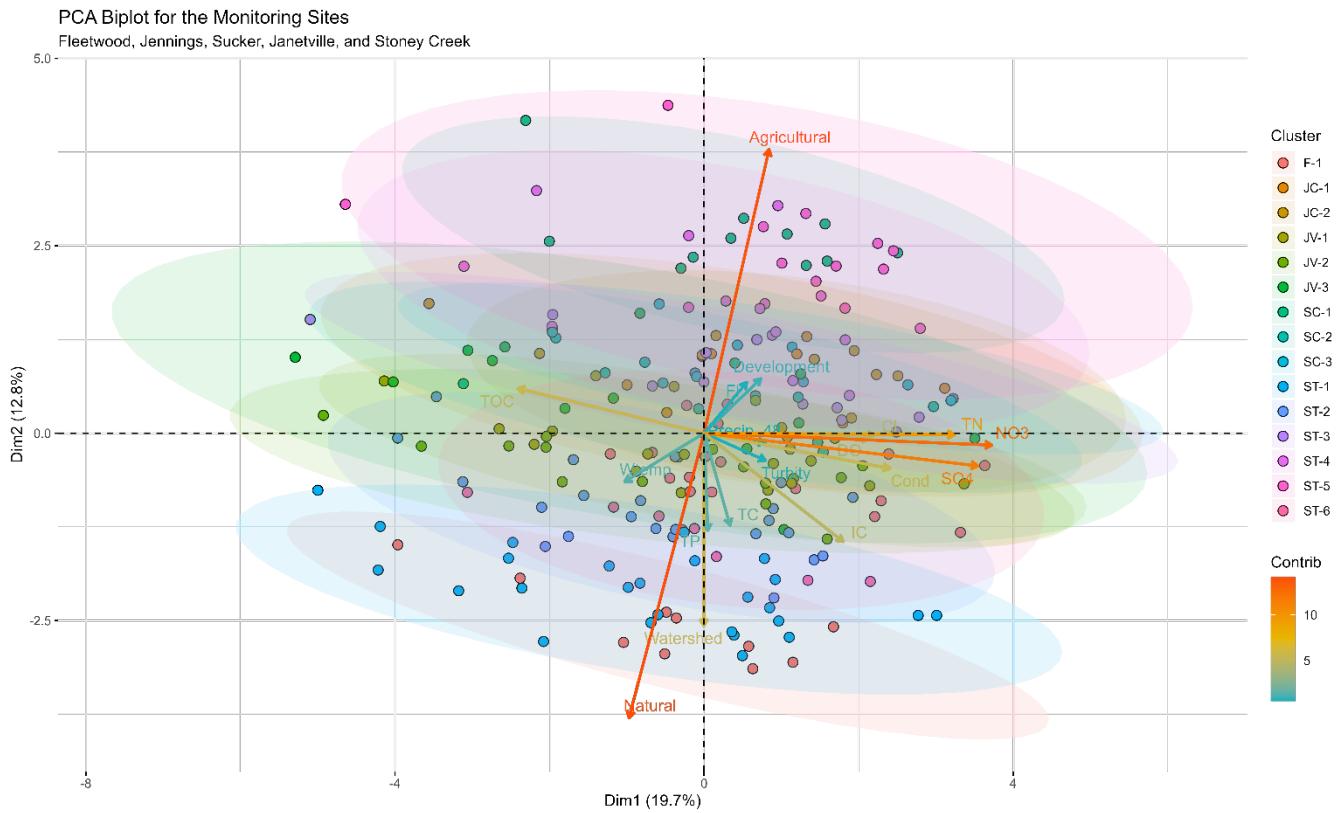


Figure 5. Principal Component Analysis (PCA) Biplot of selective water quality, land use, and precipitation parameters and monitoring sites. Depicted ellipses are 95% confidence level.

A total of 246 samples (across all sites), precipitation (48 hr. total), and land cover were used in the PCA analysis. The resulting biplot was able to explain 32.5% of the variation within the dataset, with dimension 1 having 19.7% variation (eigenvalue of 3.55) and dimension 2 having 12.8% variation (eigenvalue of 2.31).

Dimension 1 was dominated by natural cover (natural land cover, water temperature and carbon in water) – fertilizer (sulphate and nitrate) gradient while dimension 2 was dominated by a development signal (agriculture and development land cover). Suggesting that landcover (source of elevated levels) are great drivers of water quality in these monitoring sites. Overlap of the ellipses suggest that sites monitored share similar water quality characteristics and possibly share the same anthropogenic pressures.



Conclusion

In collaboration with Trent University, the City of Kawartha Lakes – Investigative Upstream Monitoring program, monitored twelve core sites across Janetville, Sucker, and Stoney Creek between the period of 2022 to 2024. Three sites located on Jennings and Fleetwood were opportunistically monitored in 2022 only by Trent University.

Monitoring results generally depict an agricultural dominated landscape (mean agricultural cover = 71.6%) with higher nutrient (nitrate and phosphorus) input and exceedances. Elevated levels of phosphorus and nitrates were the main cause of marginal water quality scores (<64) across monitoring sites. Median total phosphorus and nitrate levels were highest in Sucker (phosphorus = 42.2 µg/L, nitrate = 26 mg/L), followed by Janetville (phosphorus = 34.3 µg/L, nitrate = 6.5 mg/L), Stoney (phosphorus = 23.7 µg/L, nitrate = 5.8 mg/L), Jennings (phosphorus = 22.6 µg/L, nitrate = 3.4 mg/L), and Fleetwood (phosphorus = 14.7 µg/L, nitrate = 0.4 mg/L). Chloride levels across the monitoring sites were generally found to be within natural ranges except for those in Jennings Creek (median = 150.1 mg/L).

Amongst sites of concerns, SC-1 had 73.1% exceedance of the nitrate guideline, 76% of phosphorus threshold, and failed to meet dissolved oxygen requirements 27.6% of the time. This is followed by SC-3 (nitrate = 37.9%, phosphorus = 68%, dissolved oxygen = 42.4%), and ST-5 (nitrate = 53.8%, phosphorus = 60%). These sites share higher agriculture cover (range = 73.5-96.6%) and are relatively smaller watersheds (range = 2.2 – 9.7 km²). Remedial actions should focus on reducing agricultural runoff (where soils hold legacy excess phosphorus) from SC-1, SC-3, and ST-5.



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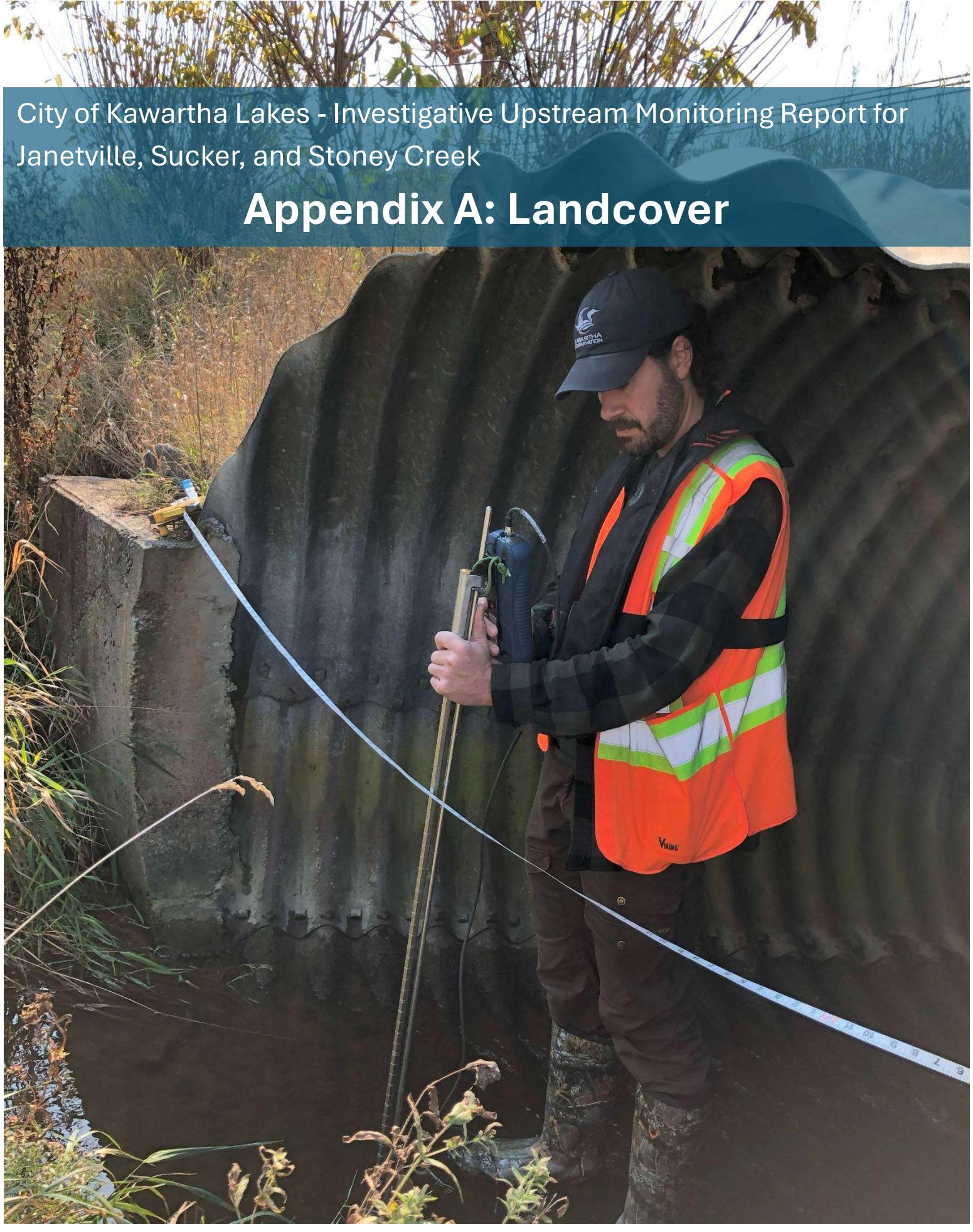
277 Kenrei Road, Lindsay ON K9V 4R1

T: 705.328.2271 F: 705.328.2286

GenInfo@KawarthaConservation.com

KawarthaConservation.com





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Appendix A: Landcover

Table A1. Ecological Lands Classifications for each monitored watershed and their area in hectares.

Classification	F-1	JC-1	JC-2	JV-1	JV-2	JV-3	SC-1	SC-2	SC-3	ST-1	ST-2	ST-3	ST-4	ST-5	ST-6
Active Aggregate	85.3	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Coniferous Forest	431.2	12.2	4.9	88	72.1	3.2	0	1.6	2.8	35.3	44	19.1	4.5	0	124.3
Coniferous Swamp	425.4	12.9	12.9	171.7	171.6	64.5	0	17	17	213.8	218.2	0	0	7.7	229.5
Cultural Meadow	182.5	36.7	36.4	7.8	7.7	2.3	3.2	10.9	38.8	9.4	11.7	7.1	57.3	8.6	63.8
Cultural Plantation	184.1	3.8	3.8	2.4	2.4	0	0	0	0	0	0	0	0	0	4.7
Cultural Savannah	68.3	0.1	0.1	4.2	3.7	3.7	16.5	0	27.8	4.1	4.3	1.4	3.9	0	5.8
Cultural Thicket	195.6	10	10	3	3	0	0	21.7	21.8	3.5	7.1	1	14.4	2.2	11.6
Cultural Woodland	134.1	17.7	17.5	3.8	3.8	0	0	0	1.1	0.4	1.3	2.3	0	11.6	12.8
Deciduous Forest	563	0	0	49.1	47.9	9.8	0	0.6	5	7.1	25.7	0	0.9	0.9	42.8
Deciduous Swamp	40.5	12.3	12.3	35.2	35.2	2.9	0	0	0	25	46.8	32.8	8.5	0	110.5
Floating Submerged Aquatic	1.8	0	0	0	0	0	0	0	0	6.7	6.7	0	0	0	6.7
Intensive Agriculture	1711.1	811.4	807.8	1161.8	1073.1	184.1	237.7	389.1	721.4	435.5	1032.3	302.7	770.4	671.4	1944.8
Manicured Open Space	47.8	36.5	36.5	0	0	0	0	1	49.8	0	0	0	7.5	0	0
Meadow Marsh	23.8	6.7	6.7	15.6	15.6	5.8	0	0	0	0.1	0.1	0	0	0	2.5
Mixed Forest	409.6	6.8	6.8	6.9	6.9	0.8	0	6.2	9.8	16.6	20.5	0	24.2	14.7	85.8
Mixed Shallow Aquatic	8	0	0	0	0	0	0	0	0	1.2	1.2	0	0	0	6.3
Mixed Swamp	144.4	52.1	52.1	103	103	0	0	41.6	41.6	119.7	149.3	42.2	11.2	6.6	223
Non-Intensive Agriculture	338.7	165.3	163.2	29.2	21.6	1.5	0.5	3.5	43.7	20.7	55.9	26.2	82.2	20.5	136.9
Open Sand Barren	2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Open Water	22.9	0.9	0.9	1.3	0.8	0	0	0.1	2.5	0.4	0.4	0.6	0	0	3
Road	76.2	51.5	47.6	26	23.7	3.2	3.8	8	21	16.4	28.8	7.8	19.1	13.7	57.2
Rural Development	170.2	62.3	62.3	77.1	64	9.6	9.6	17.9	67.2	37	68.7	10.5	53	22.2	132.7
Shallow Marsh	35.1	17.8	17.8	21.8	21.8	1.3	0	0	0	0.2	0.2	0	0	0	9.4
Submerged Shallow Aquatic	9.1	2.1	0	0	0	0	0	0.4	0.4	0	0	0	0	0.1	0
Treed Swamp	114.7	30.7	30.2	53	53	5.7	0	41.2	41.2	289	289	13.1	1.5	0	321.8
Urban Development	75	236.8	187.8	0.9	0	0	0	4.7	4.7	0	0	0	0	0	0

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Appendix B: Water Quality Data



Table B.1. Raw water quality results.

	D.D	D.D	YYYY-MM-DD		°C		µS/cm	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L
Site	Latitude	Longitude	Date	Time	Temp.	pH	Cond.	Turbidity	Dissolved Oxygen	Total Dissolved Solids	Total Suspended Solids	Fluoride	Chloride	Nitrite	Bromide	Nitrate	Phosphate	Sulphate	Total Carbon	Dissolved Organic Carbon	Dissolved Inorganic Carbon	Total Nitrogen	Total Phosphorus	Total Dissolved Phosphorus
F-1	44.22804	-78.60443	2022-05-13	18:25	21.5	8.42	373	1.51	0	265	n/a	0.001	8.296	0.093	n/a	0.146	n/a	11.058	52.26	2.09	50.17	0.29	14.69	n/a
JC-1	44.3711	-78.76063	2022-05-13	10:30	16.8	8.41	776	9.18	0	553	n/a	0.231	98.362	n/a	0.503	2.664	n/a	9.154	65.79	6.34	59.44	2.057	26.86	n/a
JC-2	44.37648	-78.74936	2022-05-13	12:00	17	8.63	842	4.07	0	594	n/a	0.208	98.188	0.456	0.303	2.475	n/a	9.214	68.14	5.84	62.3	2.133	56.62	n/a
SC-1	44.3379	-78.7084	2022-05-13	14:00	21.6	8.68	593	2.03	0	421	n/a	0.256	29.961	1.649	2.216	29.736	n/a	18.907	64.66	0.89	63.77	7.752	19.31	n/a
SC-2	44.3425	-78.7107	2022-05-13	14:35	23.1	8.82	437	3.86	0	309	n/a	0.318	0.095	3.531	n/a	13.616	n/a	16.133	80.1	27.78	52.32	4.255	16.37	n/a
SC-3	44.3343	-78.7241	2022-05-13	13:00	19	8.65	533	13	0	386	n/a	0.306	34.335	3.493	n/a	12.88	n/a	17.881	77.83	18.08	59.75	3.766	20.99	n/a
ST-1	44.3734	-78.6579	2022-05-13	15:35	22.3	7.79	289	0.49	0	206	n/a	0.122	11.101	1.447	n/a	0.566	n/a	8.241	67.62	28.84	38.79	1.051	13.43	n/a
ST-2	44.3265	-78.6487	2022-05-13	16:25	21.7	8.36	415	2.66	0	294	n/a	0.019	13.848	0.717	n/a	5.932	n/a	16.823	72.16	23.35	48.81	2.513	33.58	n/a
ST-6	44.2896	-78.6505	2022-05-13	17:30	21.9	8.5	512	1.87	0	361	n/a	0.313	1.119	3.7	n/a	4.774	n/a	19.596	80.44	18.57	61.86	1.699	20.57	n/a
F-1	44.22804	-78.60443	2022-05-26	16:40	19.9	8.47	379	3.06	0	270	n/a	0.108	6.677	0.863	n/a	0.111	n/a	5.759	47.04	10.71	36.32	0.294	0.29	n/a
JC-1	44.3711	-78.76063	2022-05-26	10:00	16.4	8.37	839	8.9	0	597	n/a	0.056	153.947	n/a	0.026	6.411	n/a	14.598	65.84	20.91	44.93	1.799	32.56	n/a
JC-2	44.37648	-78.74936	2022-05-26	10:40	15.7	8.52	926	4.98	0	657	n/a	0.052	173.763	0.02	0.038	7.593	n/a	18.762	64.35	18.52	45.83	1.966	35.21	n/a
SC-1	44.3379	-78.7084	2022-05-26	12:40	17.4	8.98	606	1.92	0	430	n/a	0.052	35.938	n/a	0.021	12.175	0.165	21.367	61.62	15.93	45.69	2.904	67.47	n/a
SC-2	44.3425	-78.7107	2022-05-26	13:10	18.1	8.46	510	4.59	0	362	n/a	0.053	16.996	0.137	n/a	15.977	n/a	22.964	69.1	30.02	39.07	4.018	13.49	n/a
SC-3	44.3343	-78.7241	2022-05-26	11:35	16.6	8.62	568	14.8	0	401	n/a	0.055	41.408	n/a	0.011	8.377	n/a	19.629	65.14	24.08	41.05	2.33	n/a	n/a
ST-1	44.3734	-78.6579	2022-05-26	13:55	19.5	7.94	309	1.07	0	220	n/a	0.048	8.973	n/a	0.014	0.227	n/a	0.784	61.78	33.41	28.37	0.87	9.97	n/a
ST-2	44.3265	-78.6487	2022-05-26	14:45	20	8.15	509	2.93	0	364	n/a	0.057	17.011	n/a	0.027	7.451	n/a	36.482	67.31	28.99	38.32	2.28	5.87	n/a
ST-6	44.2896	-78.6505	2022-05-26	16:00	20.6	8.84	585	2.27	0	414	n/a	0.063	30.969	n/a	0.035	0.694	n/a	26.608	75	27.54	47.45	0.903	6.16	n/a
F-1	44.22804	-78.60443	2022-06-07	14:35	16.3	0	410	12	7.7	286	n/a	0.05	4.95	0.43	n/a	0.32	n/a	11.29	44.98	11.97	33.01	0.353	18.71	n/a
JC-1	44.3711	-78.76063	2022-06-07	09:20	16.3	7.53	1166	12.5	6.98	837	n/a	0.07	206.14	0.35	0.04	1.46	n/a	n/a	60.11	19.72	40.39	1.48	26.96	n/a
JC-2	44.37648	-78.74936	2022-06-07	09:55	16	8.16	1010	30	10.34	717	n/a	0.07	162.8	0.3	0.03	1.73	n/a	n/a	55.71	17.27	38.44	1.408	11.13	n/a
SC-1	44.3379	-78.7084	2022-06-07	11:10	15.5	8.1	615	3.33	8.5	436	n/a	0.06	18.82	0.59	n/a	12.04	0.05	n/a	61.05	15.54	45.52	5.822	57.77	n/a
SC-2	44.3425	-78.7107	2022-06-07	11:34	15.5	7.84	563	6.48	7.74	399	n/a	0.07	16.94	0.38	n/a	10.13	n/a	n/a	60.68	23.29	37.39	4.217	26.14	n/a
SC-3	44.3343	-78.7241	2022-06-07	10:35	15.8	7.9	710	52.2	9.3	503	n/a	0.07	71.8	0.4	n/a	5.39	n/a	n/a	56.01	19.84	36.16	2.713	89.41	n/a
ST-1	44.3734	-78.6579	2022-06-07	12:10	15.7	7.29	358	1.3	4.35	255	n/a	0.07	3.64	0.35	n/a	0.03	n/a	1.27	62.16	34.26	27.91	0.973	15.13	n/a
ST-2	44.3265	-78.6487	2022-06-07	13:00	16.1	0	541	5.29	3.73	383	n/a	0.07	12.56	0.64	n/a	5.3	n/a	n/a	64.14	24.21	39.93	2.764	17.33	n/a
ST-6	44.2896	-78.6505	2022-06-07	13:45	16.3	0	613	3.44	6.87	435	n/a	0.09	17.36	0.51	0.03	0.42	n/a	n/a	73.18	26.38	46.8	0.999	32.46	n/a
F-1	44.22804	-78.60443	2022-06-24	14:30	24.3	0	372	2.04	0	266	n/a	0.48	6.95	2.31	n/a	0.88	n/a	11.96	43.12	10.45	32.67	0.33	16.97	n/a
JC-1	44.3711	-78.76063	2022-06-24	09:00	18.3	7.65	919	8.69	7.48	661	n/a	1.41	135.52	1.09	0.48	5.6	n/a	n/a	67.3	20.56	46.74	3.077	43.96	n/a

SC-2	44.3425	-78.7107	2022-07-21	11:25	21.2	7.78	529	6.03	5.47	373	n/a	0.065	16.875	0.252	n/a	9.019	n/a	29.222	71.09	30.42	40.36	2.63	17.95	11.67
SC-3	44.3343	-78.7241	2022-07-21	10:30	21.1	7.91	637	24.7	5.71	447	n/a	0.073	55.329	0.038	0.013	2.974	0.084	27.701	67.56	25.42	41.83	1.411	39.5	n/a
ST-1	44.3734	-78.6579	2022-07-21	11:50	21	7.04	316	0.5	1.62	222	n/a	0.063	5.179	0.1	0.022	0.082	n/a	0.367	71.38	39.3	31.77	1.085	21.24	n/a
ST-2	44.3265	-78.6487	2022-07-21	12:35	22.6	7.71	515	2.52	6.79	368	n/a	0.067	22.266	0.395	0.059	4.503	n/a	20.272	63.16	19.42	43.43	1.588	29.02	n/a
ST-6	44.2896	-78.6505	2022-07-21	13:05	23.1	7.6	511	9.36	3.15	363	n/a	0.077	22.681	0.173	0.071	0.167	0.143	11.191	65.87	22.77	42.79	0.871	64.03	n/a
F-1	44.22804	-78.60443	2022-08-04	14:10	22.9	7.91	383	1.46	8.65	274	n/a	0.044	4.843	n/a	0.361	n/a	5.13	43.48	8.7	34.34	0.288	9.63	n/a	
JC-1	44.3711	-78.76063	2022-08-04	09:15	19.8	7.41	970	8.13	5.43	694	n/a	0.125	176.182	0.388	0.343	2.311	n/a	8.294	45.28	12.46	32.38	1.299	12.24	n/a
JC-2	44.37648	-78.74936	2022-08-04	09:40	17.8	7.77	1117	2.78	8.92	792	n/a	0.087	173.442	n/a	0.085	4.396	n/a	10.724	58.51	15.04	43.03	1.984	2.88	n/a
JV-1	44.21253	-78.72769	2022-08-04	13:40	17.6	8.16	543	1.04	8.72	387	n/a	0.119	8.092	n/a	9.587	n/a	5.84	57.95	12.52	44.99	4.026	17.44	n/a	
JV-2	44.1981	-78.7301	2022-08-04	13:40	17.6	8.16	543	1.04	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-1	44.3379	-78.7084	2022-08-04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-2	44.3425	-78.7107	2022-08-04	11:15	21.1	7.72	595	6.14	4.65	425	n/a	0.145	14.971	0.931	0.901	2.464	n/a	13.929	77.75	27.04	50.27	1.513	34.36	32.8
SC-3	44.3343	-78.7241	2022-08-04	10:40	20.3	7.45	717	40.6	3.5	509	n/a	0.506	64.798	1.381	1.653	1.163	1.997	10.291	75.64	27.98	47.22	1.095	58.31	27.6
ST-1	44.3734	-78.6579	2022-08-04	11:50	20.1	7.05	348	0.69	0.86	251	n/a	0.05	4.209	0.403	0.523	0.284	0.764	0.831	73.96	41.27	32.26	1.127	42.95	n/a
ST-2	44.3265	-78.6487	2022-08-04	12:30	21.3	7.45	461	1.38	5.65	326	n/a	0.121	12.856	1.314	n/a	0.923	n/a	4.624	63.39	23.91	39.05	0.996	45.3	n/a
ST-6	44.2896	-78.6505	2022-08-04	13:00	21.4	7.45	495	10.8	2.93	351	n/a	0.269	20.531	n/a	2.388	0.653	1.833	3.939	68.8	24.98	43.37	1.065	59.36	n/a
F-1	44.22804	-78.60443	2022-08-12	14:10	21.4	8.15	393	1.4	8.6	280	n/a	0.039	5.776	n/a	0.605	n/a	13.629	45.15	10.29	35.2	0.281	n/a	n/a	
JC-1	44.3711	-78.76063	2022-08-12	09:05	17.5	7.8	612	10.5	6.64	433	n/a	0.107	112.11	n/a	0.022	0.72	0.147	22.038	36.58	12.19	24.72	0.551	5.04	n/a
JC-2	44.37648	-78.74936	2022-08-12	09:50	16.4	7.96	707	6.91	9.68	492	n/a	0.094	128.536	n/a	0.037	2.254	n/a	24.573	40.46	12.06	28.74	0.787	19.68	n/a
JV-1	44.21253	-78.72769	2022-08-12	13:15	15.4	8.13	550	1.33	9.32	390	n/a	0.029	11.373	0.017	0.016	21.932	0.082	17.967	57.45	12.95	44.84	4.496	2.88	n/a
JV-2	44.1981	-78.7301	2022-08-12	10:15	14.8	7.87	526	0.25	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
JV-2	44.1981	-78.7301	2022-08-12	13:15	15.4	8.13	550	1.33	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-1	44.3379	-78.7084	2022-08-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-2	44.3425	-78.7107	2022-08-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-3	44.3343	-78.7241	2022-08-12	10:30	17.1	7.37	1450	42.6	2.08	1.04	n/a	0.116	347.953	0.261	0.082	0.785	0.167	2.951	77.12	22.79	54.67	2.36	63.6	9.55
ST-1	44.3734	-78.6579	2022-08-12	11:30	17.5	7.34	371	1.4	1.93	263	n/a	0.045	6.697	n/a	0.024	0.041	n/a	0.31	75.14	41.31	34.18	1.113	14.23	n/a
ST-2	44.3265	-78.6487	2022-08-12	11:55	19.6	7.47	500	3.76	2.79	354	n/a	0.04	33.875	n/a	0.098	0.046	n/a	8.622	61.95	22.89	39.39	0.724	22.16	n/a
ST-6	44.2896	-78.6505	2022-08-12	12:45	18.3	7.68	477	12.6	3.5	338	n/a	0.043	21.31	n/a	0.068	0.16	0.133	11.068	64.02	21.66	42.7	1.104	80.89	n/a
F-1	44.22804	-78.60443	2022-09-05	15:23	18.8	8.09	390	0.94	9.67	276	n/a	0.042	5.41	0.01	n/a	0.603	n/a	13.067	48.11	11	37.11	0.245	45.83	n/a
JC-1	44.3711	-78.76063	2022-09-05	09:55	16.6	7.81	707	13.6	6.66	502	n/a	0.062	107.503	0.015	0.028	3.001	n/a	28.586	46.9	11.54	35.36	0.977	25.26	n/a
JC-2	44.37648	-78.74936	2022-09-05	10:40	14.9	7.84	963	10.1	9.35	684	n/a	0.014	161.382	n/a	0.052	7.443	n/a	30.7	63.22	15.6	47.62	1.911	29.24	n/a
JV-1	44.21253	-78.72769	2022-09-05	14:39	17	8.26	529	84.3	10.08	369	n/a	0.043	13.301	0.016	0.023	8.074	n/a	7.63	72.25	23.84	48.41			

SC-3	44.3343	-78.7241	2022-10-14	11:55	8.3	7.88	1184	11.4	8.05	806	n/a	0.078	143.596	n/a	n/a	3.262	n/a	38.985	64.69	10.76	54.2	1.084	38.14	13.98	
ST-1	44.3734	-78.6579	2022-10-14	13:50	8.8	7.48	518	2.42	3.84	356	n/a	0.045	18.314	n/a	0.029	0.071	n/a	2.618	75.58	37.11	38.73	0.944	16.53	n/a	
ST-2	44.3265	-78.6487	2022-10-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-6	44.2896	-78.6505	2022-10-14	14:45	8.8	7.77	656	91.2	8.01	452	n/a	0.037	25.934	n/a	n/a	0.1	n/a	25.404	69.31	25.36	44.2	1.82	186.88	n/a	
F-1	44.22804	-78.60443	2022-11-12	14:00	9.2	8.22	421	0.79	11.5	298	n/a	0.046	7.524	n/a	n/a	0.406	n/a	16.322	47.66	45.32	2.34	0.203	n/a	n/a	
JC-1	44.3711	-78.76063	2022-11-12	08:55	8.2	7.38	1294	17.1	6.95	914	n/a	0.146	248.109	n/a	0.038	3.763	n/a	41.685	68.25	64.93	3.31	1.27	12.17	n/a	
JC-2	44.37648	-78.74936	2022-11-12	09:30	8	7.91	1271	9.17	6.37	896	n/a	0.131	234.637	n/a	0.049	4.214	n/a	41.158	70.75	67.51	3.24	1.368	n/a	n/a	
JV-1	44.21253	-78.72769	2022-11-12	01:15	9.1	8.2	500	83.2	5.66	13.5	n/a	0.053	17.978	n/a	n/a	4.424	n/a	8.797	58.74	55.91	2.84	1.3	n/a	n/a	
JV-2	44.1981	-78.7301	2022-11-12	01:15	9.1	8.2	500	83.2	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-1	44.3379	-78.7084	2022-11-12	10:45	8.7	8.14	833	4	5.25	594	n/a	0.058	29.141	0.009	0.008	1.382	n/a	41.049	73.36	70.27	3.09	2.134	n/a	n/a	
SC-2	44.3425	-78.7107	2022-11-12	11:10	9.4	7.94	626	14	4.55	440	n/a	0.063	60.48	n/a	n/a	8.061	0.127	48.261	73.63	69.88	3.75	2.077	n/a	n/a	
SC-3	44.3343	-78.7241	2022-11-12	10:15	8.9	7.84	870	13.8	4.94	617	n/a	0.062	101.319	0.02	0.017	4.167	n/a	36.055	70.5	67.15	3.35	1.417	n/a	n/a	
ST-1	44.3734	-78.6579	2022-11-12	11:40	8.2	7.52	402	2.3	2.47	285	n/a	0.065	14.983	n/a	0.028	0.085	n/a	1.291	70.33	67.79	2.55	0.907	n/a	n/a	
ST-2	44.3265	-78.6487	2022-11-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-6	44.2896	-78.6505	2022-11-12	12:45	8.7	7.65	640	18.7	1.42	454	n/a	0.045	24.943	0.009	0.03	0.097	0.152	19.881	73.66	69.07	4.59	0.615	n/a	n/a	
JV-1	44.21253	-78.72769	2023-04-04	09:30	2.7	8	369	1.07	12.16	n/a	n/a	0.091	38.301	0.033	0.015	23.122	0.004	27.201	36.05	7.78	28.27	1.426	n/a	n/a	
JV-2	44.1981	-78.7301	2023-04-04	10:11	2.3	7.78	353	0.42	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
JV-3	44.15549	-78.73461	2023-04-04	11:08	1.5	7.6	399	0.17	10.61	n/a	n/a	0.059	17.272	0.006	0.014	4.906	0.047	15.642	40.73	7.51	33.22	2.162	3.85	n/a	n/a
JV-3	44.15549	-78.73461	2023-04-04	09:41	17.8	7.37	463.6	-0.49	3.42	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-1	44.3379	-78.7084	2023-04-04	12:29	6.3	8.15	571	0.77	13.31	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-3	44.3343	-78.7241	2023-04-04	12:53	5.5	8.17	474.8	3.63	13.35	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ST-1	44.3734	-78.6579	2023-04-04	12:29	6.3	8.2	571	0.77	13.31	n/a	n/a	0.088	38.816	0.03	0.016	39.85	0.031	22.828	51.83	8.35	43.48	5.996	9.04	n/a	n/a
ST-2	44.3265	-78.6487	2023-04-04	12:05	4.8	8	386	1.4	14.33	n/a	n/a	0.081	21.852	0.023	0.029	14.85	0.008	42.605	44.08	15.18	28.9	3.532	n/a	n/a	
ST-6	44.2896	-78.6505	2023-04-04	12:05	4.8	8	386	1.4	14.33	n/a	n/a	0.081	21.852	0.023	0.029	14.85	0.008	42.605	44.08	15.18	28.9	3.532	n/a	n/a	
ST-1	44.3734	-78.6579	2023-04-05	09:51	1.8	7.3	233	0	12.21	n/a	n/a	0.069	16.596	0.022	0.011	23.448	0.002	8.225	33.37	13.23	20.14	0.633	n/a	n/a	
ST-2	44.3265	-78.6487	2023-04-05	11:10	2.2	7.8	310	19.48	16.41	n/a	n/a	0.119	14.099	0.003	0.008	23.442	0.006	9.714	36.95	12.79	24.16	1.611	47.97	n/a	n/a
ST-3	44.32059	-78.64389	2023-04-05	11:25	3.5	7.6	494	1.5	14.45	n/a	n/a	0.049	10.606	0.003	0.01	0.652	0.01	7.088	56.88	17.87	39.01	3.306	22.02	n/a	n/a
ST-4	44.30711	-78.69351	2023-04-05	11:57	3.5	7.9	565	2.62	1.36	n/a	n/a	0.058	18.378	0.002	0.018	5.928	0.082	15.543	54.01	12.69	41.32	4.592	16.4	n/a	n/a
ST-5	44.2996	-78.67345	2023-04-05	13:08	3.5	8	580	7.6	18.04	n/a	n/a	0.076	42.369	0.025	0.012	30.066	0.039	18.933	49.71	8.29	41.42	7.097	12.07	n/a	n/a
JV-2	44.1981	-78.7301	2023-04-08	13:08	7.2	8.5	428	0	n/a	n/a	n/a	0.069	34.022	0.009	0.012	17.605	0.167	19.288	36.19	8.8	27.39	1.121	22.88	n/a	n/a
ST-6	44.2896	-78.6505	2023-04-08	13:08	7.2	8.5	428	0	n/a	n/a	n/a	0.065	12.554	0.042	0.016	10.732	0.04	21.154	40.66	13.68	26.98	1.709	6.01	n/a	n/a
JV-1	44.21253	-78.72769	2023-04-30	11:12	10.2	9.85	549	3.46	n/a	n/a	n/a	0.062	22.571	0.001	0.005	6.426	0.006	13.505	40.09	11.63	51.73				

ST-4	44.30711	-78.69351	2023-05-17	12:33	9.7	0	837	8.67	0	n/a	n/a	0.095	49.196	0.11	0.036	18.406	0.014	30.773	71.26	15.7	55.57	4.412	3.04	n/a
ST-5	44.2996	-78.67345	2023-05-17	12:02	9.9	0	813	4.6	0	n/a	n/a	0.087	41.765	0.051	0.033	29.085	0.017	27.143	67.86	12.15	55.72	6.339	5.54	n/a
ST-6	44.2896	-78.6505	2023-05-17	14:55	14.3	9.81	622	4.57	0	n/a	n/a	0.075	38.954	0.023	0.014	31.853	0.022	23.863	69.01	22.81	46.21	5.389	4.71	n/a
ST-6	44.2896	-78.6505	2023-05-17	11:48	10.9	0	646	4.14	0	n/a	n/a	0.074	25.999	0.04	0.038	5.678	0.042	23.481	71.74	22.48	49.27	2.01	8.53	n/a
JV-1	44.21253	-78.72769	2023-05-29	11:01	15.1	8.29	489.2	0.8	10.34	n/a	n/a	0.061	17.534	0.023	0.016	8.101	0.01	11.181	61.37	11.69	49.68	2.031	6.86	n/a
JV-2	44.1981	-78.7301	2023-05-29	12:07	15.4	8.14	488.1	0	9.6	n/a	n/a	0.066	15.898	0.012	0.006	6.777	0.01	9.683	63.63	10.87	52.76	1.795	5.47	n/a
JV-3	44.15549	-78.73461	2023-05-29	13:11	21.4	7.51	469.8	0	9.19	n/a	n/a	0.073	8.212	0.002	0.004	0.015	0.035	13.838	62.64	8.63	54.01	0.283	13.49	n/a
SC-1	44.3379	-78.7084	2023-05-29	13:52	18.3	8.28	690	11.58	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-1	44.3379	-78.7084	2023-05-29	13:52	18.3	8.28	690	-0.78	11.58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-3	44.3343	-78.7241	2023-05-29	14:14	19	8.25	574	14.88	1.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-3	44.3343	-78.7241	2023-05-29	14:58	18.9	8.39	635	2.4	12.38	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ST-1	44.3734	-78.6579	2023-05-29	13:52	18.3	8.28	690	0	11.58	n/a	n/a	0.079	37.531	0.067	0.017	45.053	0.013	35.347	61.71	5.91	55.8	9.114	6.17	n/a
ST-1	44.3734	-78.6579	2023-05-29	13:30	20.9	7.42	327.1	0	5.5	n/a	n/a	0.073	12.943	0.001	0.008	0.04	0.026	0.656	61.83	26.42	35.41	0.862	7.56	n/a
ST-2	44.3265	-78.6487	2023-05-29	12:46	19.5	8.31	412.6	1	11.88	n/a	n/a	0.066	15.882	0.053	0.017	6.104	0.13	11.661	62.18	22.08	40.1	2.026	4.07	n/a
ST-2	44.3265	-78.6487	2023-05-29	14:14	19	8.25	574	1.1	14.88	n/a	n/a	0.07	19.153	0.036	0.007	27.498	0.007	30.456	69.24	17.68	51.56	6.001	5.82	n/a
ST-3	44.32059	-78.64389	2023-05-29	n/a	16	7.64	615	0	9.83	n/a	n/a	0.082	23.697	0.292	0.05	9.664	n/a	41.317	79.46	14.74	64.72	2.672	9.66	n/a
ST-4	44.30711	-78.69351	2023-05-29	09:51	14.1	7.78	712	0	7.2	n/a	n/a	0.095	45.745	0.182	0.017	14.902	0.01	27.721	77.45	10.77	66.68	3.616	7.21	n/a
ST-6	44.2896	-78.6505	2023-05-29	14:14	19	8.25	574	1.1	14.88	n/a	n/a	0.07	19.153	0.036	0.007	27.498	0.007	30.456	69.24	17.68	51.56	6.001	5.82	n/a
ST-6	44.2896	-78.6505	2023-05-29	11:12	17	7.97	505	0.4	8.78	n/a	n/a	0.072	23.357	0.043	0.023	3.613	0.03	17.432	69.83	20.27	49.56	1.505	11.75	n/a
ST-5	44.2996	-78.67345	2023-05-30	10:37	14.1	7.94	706	0	10.18	n/a	n/a	0.092	40.246	0.079	0.012	27.528	0.002	29.423	70.57	6.9	63.67	6.042	1.98	n/a
JV-1	44.21253	-78.72769	2023-06-14	10:36	14.7	9.58	502	17.9	0	n/a	n/a	0.068	14.497	0.005	0.011	5.383	0.009	11.373	61.48	13.8	47.69	1.656	n/a	n/a
JV-2	44.1981	-78.7301	2023-06-14	09:33	14.5	9.28	497	7.53	0	n/a	n/a	0.064	13.863	0.003	0.011	2.147	0.011	8.496	64.71	15.27	49.43	1.061	26.63	n/a
JV-3	44.15549	-78.73461	2023-06-14	08:58	13.7	0	481	0.49	0	n/a	n/a	0.079	9.523	0.002	0.014	0.103	0.043	12.536	64.16	12.65	51.51	0.478	20.11	n/a
SC-1	44.3379	-78.7084	2023-06-14	14:45	15.5	9.44	852	0	2.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-3	44.3343	-78.7241	2023-06-14	15:00	15.1	9.28	804	0	2.77	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-1	44.3734	-78.6579	2023-06-14	13:17	16.4	8.55	325	1.05	0	n/a	n/a	0.085	10.453	0.001	0.01	0.112	0.028	0.887	65.54	29.18	36.36	1.075	20.46	n/a
ST-1	44.3734	-78.6579	2023-06-14	14:45	15.5	9.44	852	2.2	0	n/a	n/a	0.104	36.217	0.118	0.029	97.146	0.039	36.091	65.32	3	62.32	16.46	20.8	n/a
ST-2	44.3265	-78.6487	2023-06-14	12:53	15.2	9.34	715	3.32	0	n/a	n/a	0.106	22.644	0.133	0.02	50.344	0.011	42.771	65.78	10.54	55.25	9.703	14.28	n/a
ST-2	44.3265	-78.6487	2023-06-14	15:00	15.1	9.28	804	2.77	0	n/a	n/a	0.094	24.464	0.173	0.017	92.62	0.017	43.47	68.27	8.43	59.84	15.56	17.02	n/a
ST-3	44.32059	-78.64389	2023-06-14	12:39	15.1	0	859	0	n/a	n/a	n/a	0.114	39.03	0.146	0.05	69.414	0.013	37.427	73.22	8.87	64.35	12.69	15.65	n/a
ST-4	44.30711	-78.69351	2023-06-14	11:50	14.7	0	864	1.6	0	n/a	n/a	0.118	36.173	0.061	0.027	83.2	0.007	28.794	72.85	5.86	66.99	14.97	15.31	n/a
ST-5	44.2996	-78.67345	2023-06-14	11:22	14.1	0	851	15.1	0	n/a	n/a	0.118	33.175	0.032</										

ST-2	44.3265	-78.6487	2023-07-13	13:02	20.8	7.67	786	23.24	0	n/a	n/a	0.059	20.051	0.185	0.049	8.623	0.2	16.721	59.97	12.48	47.5	2.592	59.11	n/a
ST-3	44.32059	-78.64389	2023-07-13	12:33	19	7.85	896	28.5	0	n/a	n/a	0.055	12.097	0.276	0.027	10.221	n/a	25.875	63.12	8.07	55.06	2.913	48.45	n/a
ST-4	44.30711	-78.69351	2023-07-13	11:38	18.9	7.54	1137	2.62	0	n/a	n/a	0.066	47.324	0.61	0.027	1.283	n/a	17.063	82.15	9.88	72.28	1.016	22.48	n/a
ST-5	44.2996	-78.67345	2023-07-13	12:12	18.7	7.76	1047	0	n/a	n/a	n/a	0.062	47.324	0.585	0.07	3.719	0.119	20.692	70.31	5.68	64.64	1.4	49.79	n/a
ST-6	44.2896	-78.6505	2023-07-13	14:01	20.5	7.99	1140	13.4	0	n/a	n/a	1.487	43.672	1.037	n/a	39.725	0.058	53.102	68.45	5.14	63.32	7.93	25.14	n/a
ST-6	44.2896	-78.6505	2023-07-13	11:18	19.6	8.03	955	7.49	0	n/a	n/a	0.065	22.527	0.41	0.041	1.999	0.198	21.734	72.66	9.49	63.18	1.209	56.78	n/a
JV-1	44.21253	-78.72769	2023-07-24	13:20	18.7	8.36	479.5	2.63	9.01	n/a	n/a	0.053	14.362	0.189	0.011	4.206	0.027	5.802	66.11	15.96	50.15	1.516	31.49	n/a
JV-2	44.1981	-78.7301	2023-07-24	11:47	16.2	7.97	518	2.75	8.01	n/a	n/a	0.055	14.741	0.198	0.03	4.641	0.035	5.307	67.22	13.77	53.45	1.529	29.17	n/a
JV-3	44.15549	-78.73461	2023-07-24	14:18	19.7	7.4	477.6	0.01	5.14	n/a	n/a	0.057	6.272	n/a	n/a	0.103	0.122	3.469	69.62	14.12	55.5	0.483	40.77	n/a
SC-1	44.3379	-78.7084	2023-07-24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-3	44.3343	-78.7241	2023-07-24	11:09	17.9	7.65	916	7.69	5.73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-2	44.3265	-78.6487	2023-07-24	12:17	21	7.86	639	2.64	9.82	n/a	n/a	0.055	43.672	0.572	0.022	10.405	0.019	35.723	67.09	9.81	57.28	2.706	22.54	n/a
ST-6	44.2896	-78.6505	2023-07-24	12:17	21	7.86	639	2.64	9.82	n/a	n/a	0.055	43.672	0.572	0.022	10.405	0.019	35.723	67.09	9.81	57.28	2.706	22.54	n/a
ST-1	44.3734	-78.6579	2023-07-25	09:25	17.6	7.21	335.7	0.09	3.18	n/a	n/a	0.06	19.289	0.098	0.016	0.1	0.115	0.245	69.52	29.15	40.37	1.218	29.5	n/a
ST-2	44.3265	-78.6487	2023-07-25	10:07	17.6	7.57	480.9	1.66	6.44	n/a	n/a	0.062	19.289	0.312	0.074	6.198	0.177	12.129	62.79	14.34	48.45	2.169	40.44	n/a
ST-3	44.32059	-78.64389	2023-07-25	10:30	17.4	7.75	587	4.7	6.14	n/a	n/a	0.055	13.657	0.506	0.017	7.52	0.081	37.139	68.41	7.83	60.58	2.149	94.46	n/a
ST-4	44.30711	-78.69351	2023-07-25	13:41	18.5	7.7	741.1	0.62	6.88	n/a	n/a	0.088	38.24	0.674	0.026	15.666	0.058	22.352	73.22	9.56	63.66	3.753	22.21	n/a
ST-5	44.2996	-78.67345	2023-07-25	14:12	18	7.71	741	1.4	5.86	n/a	n/a	0.062	50.569	0.62	0.06	0.524	0.157	7.654	77.31	8.1	69.21	0.841	39.77	n/a
ST-6	44.2896	-78.6505	2023-07-25	13:11	19	7.62	543	2.97	6.1	n/a	n/a	0.063	27.339	0.471	n/a	0.284	0.502	17.186	68.95	11.94	57.01	0.827	45.74	n/a
JV-1	44.21253	-78.72769	2023-08-12	10:48	17.9	7.11	704	24.75	0	n/a	n/a	0.01	14.831	n/a	0.023	4.595	0.008	6.116	71.9	16.85	55.05	1.657	49.15	n/a
JV-2	44.1981	-78.7301	2023-08-12	10:21	16.8	8.18	722	3.6	0	n/a	n/a	0.04	13.563	0.112	n/a	2.414	0.1	3.617	76.95	18.8	58.15	1.268	47.63	n/a
JV-3	44.15549	-78.73461	2023-08-12	09:42	17	7.04	701	0.32	0	n/a	1.2	0.033	11.466	0.109	0.028	0.069	0.051	5.344	77.57	14.63	62.94	0.524	49.15	n/a
SC-3	44.3343	-78.7241	2023-08-12	13:37	0	8.96	1013	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-1	44.3734	-78.6579	2023-08-12	12:58	18.8	7	672	2.5	0	n/a	n/a	0.033	42.912	n/a	0.111	0.11	n/a	0.54	75.04	32.54	42.5	1.057	28.27	n/a
ST-2	44.3265	-78.6487	2023-08-12	12:41	19.7	7.88	727	5.99	0	n/a	n/a	0.023	16.171	0.301	0.028	5.003	0.004	9.9	76.95	20.96	55.99	2.081	28.39	n/a
ST-2	44.3265	-78.6487	2023-08-12	13:37	0	8.96	1013	2.49	0	n/a	n/a	0.008	22.995	0.271	0.062	9.935	n/a	20.073	101.43	30.08	71.35	3.106	121.35	n/a
ST-3	44.32059	-78.64389	2023-08-12	12:28	17.3	7.09	1088	6.9	0	n/a	n/a	0.012	22.792	0.565	0.118	8.971	0.023	39.801	88.35	9.63	78.72	2.425	41.55	n/a
ST-4	44.30711	-78.69351	2023-08-12	12:01	8	7.96	1384	5.4	0	n/a	n/a	0.007	102.35	n/a	0.499	0.644	n/a	22.475	104.73	10.02	94.71	0.782	19.51	n/a
ST-5	44.2996	-78.67345	2023-08-12	11:47	17.1	8.02	1276	10.2	0	n/a	n/a	0	49.289	n/a	0.107	0.985	n/a	20.359	101.93	5.1	96.83	0.759	51.81	n/a
ST-6	44.2896	-78.6505	2023-08-12	11:15	17.1	7.08	1022	4.65	0	n/a	n/a	0.606	33.363	n/a	0.012	1.785	n/a	20.808	93.5	15.79	77.71	1.255	57.51	n/a
ST-6	44.2896	-78.6505	2023-08-12	13:37	0	8.96	1013	2.49	0	n/a	n/a	0.008	22.995	0.271	0.062	9.935	n/a	20.073	101.43	30.08	71.35	3.106	121.35	n/a
SC-1	44.3379	-78.7084	2023-08-14</td																					

ST-3	44.32059	-78.64389	2023-09-22	11:52	11.1	7.59	572	8.4	6.89	n/a	n/a	0.076	14.953	0.062	0.019	4.463	0.098	52.135	70.99	12.25	58.74	1.438	21.51	n/a	
ST-4	44.30711	-78.69351	2023-09-22	12:43	12.5	7.6	967	3.3	7.16	n/a	n/a	0.112	148.161	0.034	0.025	0.137	0.033	48.778	90.97	15.82	75.15	0.618	8.21	n/a	
ST-6	44.2896	-78.6505	2023-09-22	10:40	11.6	7.8	700	2	9.04	n/a	n/a	0.059	30.895	0.018	0.023	9.517	0.037	46.8	87.44	20.87	66.57	2.594	2.51	n/a	
ST-6	44.2896	-78.6505	2023-09-22	12:23	13.2	7.59	566	12.7	4.6	n/a	n/a	0.058	36.177	0.003	0.057	0.456	0.079	13.726	85.8	16.36	69.44	0.876	49.25	n/a	
JV-1	44.21253	-78.72769	2023-10-06	16:18	n/a	8.33	n/a	n/a	n/a	n/a	n/a	0.126	21.442	n/a	n/a	13.085	n/a	18.579	52.22	7.64	59.86	3.678	26.22	n/a	
JV-2	44.1981	-78.7301	2023-10-06	16:27	n/a	8.07	n/a	n/a	n/a	n/a	n/a	0.137	17.698	n/a	n/a	6.824	n/a	11.76	55.79	10.47	66.26	2.176	9.88	n/a	
JV-3	44.15549	-78.73461	2023-10-06	16:45	n/a	7.64	n/a	n/a	n/a	n/a	n/a	0.2	0.237	28.473	n/a	n/a	0.141	0.145	10.741	43.88	19.23	63.11	0.686	29.64	n/a
SC-1	44.3379	-78.7084	2023-10-06	14:44	7.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-3	44.3343	-78.7241	2023-10-06	14:56	7.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-1	44.3734	-78.6579	2023-10-06	15:09	n/a	7.39	n/a	n/a	n/a	n/a	n/a	0.101	14.604	n/a	0.193	0.152	0.155	1.593	13.37	32.27	45.64	1.216	28.5	n/a	
ST-1	44.3734	-78.6579	2023-10-06	14:44	n/a	7.72	n/a	n/a	n/a	n/a	n/a	0.335	170.938	n/a	n/a	0.73	n/a	26.373	22.72	12.92	35.64	1.485	31.92	n/a	
ST-2	44.3265	-78.6487	2023-10-06	14:56	n/a	7.79	n/a	n/a	n/a	n/a	n/a	0.136	17.572	n/a	n/a	0.969	0.075	20.696	26.75	33.93	60.68	1.73	15.58	n/a	
ST-2	44.3265	-78.6487	2023-10-06	15:20	n/a	7.4	n/a	n/a	n/a	n/a	n/a	0.617	21.017	n/a	0.228	2.251	0.222	12.667	37.77	16.78	54.55	1.48	21.28	n/a	
ST-3	44.32059	-78.64389	2023-10-06	15:32	n/a	7.54	n/a	n/a	n/a	n/a	n/a	0.069	0.245	n/a	n/a	0.368	n/a	63.037	45.54	12.73	58.27	1.151	113	n/a	
ST-6	44.2896	-78.6505	2023-10-06	14:56	n/a	7.79	n/a	n/a	n/a	n/a	n/a	0.136	17.572	n/a	n/a	0.969	0.075	20.696	26.75	33.93	60.68	1.73	15.58	n/a	
ST-6	44.2896	-78.6505	2023-10-06	15:58	n/a	7.47	n/a	n/a	n/a	n/a	n/a	0.027	41.335	n/a	n/a	0.25	0.131	12.155	54.68	13.09	67.77	1.122	82.84	n/a	
JV-1	44.21253	-78.72769	2023-10-09	08:18	10.6	8.2	n/a	n/a	n/a	n/a	n/a	0.063	35.274	n/a	n/a	3.871	n/a	14.293	46.62	11.93	58.55	1.914	123.88	n/a	
JV-2	44.1981	-78.7301	2023-10-09	08:04	9.4	7.99	n/a	n/a	n/a	n/a	n/a	0.066	26.493	n/a	n/a	3.118	n/a	10.631	44.99	15.34	60.33	1.403	30.02	n/a	
JV-3	44.15549	-78.73461	2023-10-09	07:41	9.1	7.57	n/a	n/a	n/a	n/a	n/a	0.4	0.073	20.889	n/a	n/a	0.121	0.159	8.743	48.55	15.61	64.16	0.523	26.98	n/a
JV-3	44.15549	-78.73461	2023-10-09	07:41	7.6	9.1	n/a	0.4	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-1	44.3379	-78.7084	2023-10-09	10:05	7.9	9.5	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
SC-3	44.3343	-78.7241	2023-10-09	09:53	7.7	10.3	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ST-1	44.3734	-78.6579	2023-10-09	09:40	10.8	7.27	n/a	0	n/a	n/a	n/a	0.059	17.397	n/a	n/a	0.167	n/a	2.487	16.8	29.83	46.63	1.145	14.06	n/a	
ST-1	44.3734	-78.6579	2023-10-09	10:05	9.5	7.87	n/a	0	n/a	n/a	n/a	0.177	116.423	n/a	n/a	1.391	0.224	50.748	50.74	8.79	59.53	0.911	31.16	n/a	
ST-2	44.3265	-78.6487	2023-10-09	09:53	10.3	7.74	n/a	n/a	n/a	n/a	n/a	0.169	31.546	n/a	n/a	6.107	n/a	26.914	41.21	23.19	64.4	2.379	13.3	n/a	
ST-2	44.3265	-78.6487	2023-10-09	09:26	9.6	7.48	n/a	n/a	n/a	n/a	n/a	0.027	22.172	n/a	0.086	2.244	n/a	13.434	35	18.47	53.47	1.489	14.44	n/a	
ST-3	44.32059	-78.64389	2023-10-09	09:18	8.9	7.68	n/a	0	n/a	n/a	n/a	0.011	19.486	n/a	n/a	0.742	n/a	98.569	46.66	11.14	57.8	0.992	22.8	n/a	
ST-4	44.30711	-78.69351	2023-10-09	09:04	9.7	7.62	n/a	n/a	n/a	n/a	n/a	0.073	76.137	n/a	n/a	0.203	n/a	42.173	43.54	18.6	62.14	1.196	37.62	n/a	
ST-6	44.2896	-78.6505	2023-10-09	09:53	10.3	7.74	n/a	n/a	n/a	n/a	n/a	0.169	31.546	n/a	n/a	6.107	n/a	26.914	41.21	23.19	64.4	2.379	13.3	n/a	
ST-6	44.2896	-78.6505	2023-10-09	08:43	9.8	7.47	n/a	n/a	n/a	n/a	n/a	0.048	31.341	n/a	0.034	0.258	0.053	16.943	61	7.92	68.92	0.788	44.08	n/a	
JV-1	44.21253	-78.72769	2024-04-24	09:30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.105	25.115	0.014	0.001	6.438	0.02	15.515	52.83	3.25	49.58	1.308	12.3	n/a	
JV-2	44.1981	-78.7301	2024-04-24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.069	33.346	0.006	0.061	38.353	0.024	34.451	50.38	0	51.98	6.622	21.58	n/a	
JV-3	44.15549	-78.73461	2024-04-24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.119	15.633	0.001	0.007	1.636	0.033	23.37	47.32	1.74</td					

JV-2	44.1981	-78.7301	2024-05-13	n/a	12.1	7.9	n/a	2.56	0	n/a	n/a	0.086	22.284	0.01	0.011	20.011	0.001	15.29	61.91	7.12	54.8	3.494	27.38	n/a
JV-3	44.15549	-78.73461	2024-05-13	n/a	12.8	7.74	n/a	0.48	0	n/a	n/a	0.107	13.193	0.006	0.009	0.06	0.067	14.854	59	5.94	53.05	0.381	34.92	n/a
SC-1	44.3379	-78.7084	2024-05-13	n/a	9.2	8.32	n/a	4.56	0	n/a	n/a	0.082	38.684	0.041	0.025	52.506	0.069	28.594	63.45	0.92	62.53	8.168	43.62	n/a
SC-2	44.3425	-78.7107	2024-05-13	n/a	9.8	7.96	n/a	7.91	0	n/a	n/a	0.111	14.918	0.004	0.013	16.326	0.021	13.902	71.01	22.99	48.02	3.574	35.5	n/a
SC-3	44.3343	-78.7241	2024-05-13	n/a	9.7	8.16	n/a	7	0	n/a	n/a	0.11	39.655	0.008	0.008	19.156	0.002	18.144	72.46	17.65	54.81	3.801	32.02	n/a
ST-1	44.3734	-78.6579	2024-05-13	n/a	10.1	7.54	n/a	1.07	0	n/a	n/a	0.095	14.149	0.012	0.016	0.06	0.024	0.742	62.27	24.38	37.89	0.879	18.68	n/a
ST-2	44.3265	-78.6487	2024-05-13	n/a	7.8	8.03	n/a	3.15	0	n/a	n/a	0.116	18.298	0.014	0.03	9.919	0.016	25.233	68.13	19.71	48.42	2.355	26.8	n/a
ST-3	44.32059	-78.64389	2024-05-13	n/a	8.2	8.32	n/a	5.88	0	n/a	n/a	0.093	30.6	0.009	0.045	17.915	0.005	47.882	81.83	16.49	65.34	3.612	23.9	n/a
ST-4	44.30711	-78.69351	2024-05-13	n/a	10.8	7.82	n/a	2.29	0	n/a	n/a	0.094	54.581	0.004	0.006	16.552	0.005	31.47	82.55	11.25	71.29	3.382	37.82	n/a
ST-5	44.2996	-78.67345	2024-05-13	n/a	12.1	7.76	n/a	10.34	0	n/a	n/a	0.092	48.439	0.003	0.01	26.794	0.025	27.694	73.48	4.55	68.92	4.68	37.24	n/a
ST-6	44.2896	-78.6505	2024-05-13	n/a	9.6	7.83	n/a	6.15	0	n/a	n/a	0.107	32.157	0.006	0.034	7.971	0.055	26.974	75	15.44	59.57	2.081	54.07	n/a
JV-1	44.21253	-78.72769	2024-05-22	12:38	20.6	8.25	527	6.85	9.15	0.01	n/a	0.097	19.646	0.008	0.011	14.671	0.015	14.505	69.41	11.72	57.68	3.166	87.79	n/a
JV-2	44.1981	-78.7301	2024-05-22	11:08	15.9	7.84	527	4.01	0	n/a	n/a	0.094	17.268	0.006	0.015	15.352	0.064	13.497	69.44	9.93	59.51	3.247	92.22	n/a
JV-3	44.15549	-78.73461	2024-05-22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.109	10.873	0.001	0.01	0.151	0.131	7.243	76.65	12.85	63.79	0.399	111.71	n/a
JV-3	44.15549	-78.73461	2024-05-22	10:45	18.8	7.47	486.4	-0.41	5.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-1	44.3379	-78.7084	2024-05-22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.091	23.737	0.043	0.024	54.696	0.087	27.252	68.94	3.59	65.35	9.304	108.17	n/a
SC-2	44.3425	-78.7107	2024-05-22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.097	16.978	0.008	0.006	17.786	0.014	14.802	83.13	27.48	55.64	4.374	89.57	n/a
SC-3	44.3343	-78.7241	2024-05-22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.101	47.983	0.009	0.013	20.418	0.019	18.111	78.72	17.74	60.98	4.44	129.43	n/a
ST-1	44.3734	-78.6579	2024-05-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.076	14.891	0.004	0.023	0.018	0.009	1.17	75.22	31.84	43.39	0.918	60.33	n/a
ST-2	44.3265	-78.6487	2024-05-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.098	16.701	0.08	0.026	10.077	0.039	25.874	72.57	23.44	49.13	2.767	43.5	n/a
ST-3	44.32059	-78.64389	2024-05-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.097	26.997	0.034	0.053	13.5	0.027	35.662	87.64	20.11	67.53	3.333	40.84	n/a
ST-4	44.30711	-78.69351	2024-05-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.106	62.126	n/a	0.015	10.953	0.032	23.713	88.57	13.79	74.78	2.73	54.13	n/a
ST-5	44.2996	-78.67345	2024-05-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.098	53.541	n/a	0.018	24.569	0.03	27.685	80.43	7.09	73.34	4.861	147.15	n/a
ST-6	44.2896	-78.6505	2024-05-28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.104	46.129	0.024	0.052	6.844	0.089	28.02	89.1	19.38	69.72	2.242	134.75	n/a
SC-2	44.3425	-78.7107	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.111	25.65	0.256	0.008	49.194	0.119	21.913	75.82	19.36	56.46	9.547	40.84	n/a
SC-3	44.3343	-78.7241	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.102	35.241	0.042	0.004	56.065	0.148	21.701	71.54	13.86	57.68	10.535	47.93	n/a
ST-1	44.3734	-78.6579	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.068	7.476	0.002	0.048	0.004	0.012	1.273	79.13	35.5	43.64	1.066	34.64	n/a
ST-2	44.3265	-78.6487	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.098	18.281	0.232	0.016	31.852	0.073	26.003	78.43	22.95	55.48	6.795	24.01	n/a
ST-3	44.32059	-78.64389	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.091	30.516	0.196	0.023	24.728	0.016	21.684	94.58	26.38	68.2	5.943	31.1	n/a
ST-4	44.30711	-78.69351	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.105	52.747	0.453	0.142	73.853	0.02	23.657	83.61	17.2	66.41	13.645	33.75	n/a
ST-5	44.2996	-78.67345	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.092	33.293	0.361	0.017	106.291	0.031	25.344	82.46	12.34	70.12	18.245	36.41	n/a
ST-6	44.2896	-78.6505	2024-06-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.102	31.422	0.377	0.034	18.775	0.146	24.555						

ST-4	44.30711	-78.69351	2024-07-21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.116	26.196	0.049	0.012	13.841	n/a	30.077	91.46	12.13	79.33	3.176	18.9	n/a
ST-5	44.2996	-78.67345	2024-07-21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.109	41.597	0.037	0.02	17.689	0.001	25.793	98.18	11.28	86.9	3.977	13.6	n/a
ST-6	44.2896	-78.6505	2024-07-21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.093	24.112	0.005	0.058	6.39	0.002	16.961	90.27	25.01	65.26	2.177	22.6	n/a
JV-1	44.21253	-78.72769	2024-07-29	n/a	19.8	8.17	573	0.96	0	n/a	n/a	0.068	21.329	0.007	0.028	22.014	0.088	17.562	73.76	13.56	60.19	4.503	39.95	n/a
JV-2	44.1981	-78.7301	2024-07-29	n/a	15.5	7.87	568	0.01	0	n/a	n/a	0.066	16.331	0.019	0.017	29.831	0.082	20.091	69.07	8.8	60.27	5.523	49.7	n/a
JV-3	44.15549	-78.73461	2024-07-29	n/a	21.3	7.3	490.1	-0.01	0	n/a	n/a	0.078	6.351	0.014	0.029	0.052	0.159	1.663	84.63	18.93	65.7	0.55	20.46	n/a
SC-1	44.3379	-78.7084	2024-07-29	n/a	18.4	8.13	744	0.81	0	n/a	n/a	0.071	29.97	0.047	0.018	40.397	0.08	26.478	83.47	6.72	76.75	7.229	7.18	n/a
SC-2	44.3425	-78.7107	2024-07-29	n/a	21.1	8.09	674	2.37	0	n/a	n/a	0.081	22.035	0.052	0.007	20.396	0.005	30.711	95.6	24.03	71.57	4.756	4.52	n/a
SC-3	44.3343	-78.7241	2024-07-29	n/a	19.2	8.16	710	6.5	0	n/a	n/a	0.085	37.322	0.035	0.001	20.18	0.017	27.755	89.37	16.83	72.54	4.51	32.87	n/a
ST-1	44.3734	-78.6579	2024-07-29	n/a	22	7.24	357.9	0.99	0	n/a	n/a	0.063	8.809	0.023	0.063	0.065	0.002	0.249	84.64	37.23	47.41	1.206	47.93	n/a
ST-2	44.3265	-78.6487	2024-07-29	n/a	21.9	7.76	436.3	5.59	0	n/a	n/a	0.063	11.297	0.015	0.035	3.352	0.1	8.067	83	32.74	50.26	1.718	24.01	n/a
ST-3	44.32059	-78.64389	2024-07-29	n/a	18.8	7.57	720	2.01	0	n/a	n/a	0.068	26.314	0.069	0.027	14.36	0.016	35.642	97.34	18.56	78.78	3.696	84.25	n/a
ST-4	44.30711	-78.69351	2024-07-29	n/a	18.8	7.64	649	6.71	0	n/a	n/a	0.072	63.592	0.087	0.048	2.742	0.039	16.519	103	15.7	87.28	1.187	23.12	n/a
ST-5	44.2996	-78.67345	2024-07-29	n/a	17.9	7.62	813	0.74	0	n/a	n/a	0.073	53.452	0.034	0.031	1.77	0.073	23.965	102	12.54	89.45	0.908	9.83	n/a
ST-6	44.2896	-78.6505	2024-07-29	n/a	20	7.62	523	8.46	0	n/a	n/a	0.082	18.676	0.024	0.042	2.834	0.167	12.227	89.06	29.1	59.96	1.614	21.35	n/a
JV-1	44.21253	-78.72769	2024-08-17	n/a	n/a	n/a	n/a	4.23	0	n/a	n/a	0.171	19.842	0.034	0.048	8.719	0.198	7.846	77.36	19.57	57.79	2.244	93.99	n/a
JV-2	44.1981	-78.7301	2024-08-17	n/a	n/a	n/a	n/a	1.69	0	n/a	n/a	0.164	18.451	0.044	0.047	8.498	0.218	7.099	78.35	19.85	58.49	2.18	65.65	n/a
JV-3	44.15549	-78.73461	2024-08-17	n/a	n/a	n/a	n/a	0.84	0	n/a	n/a	0.078	6.478	0.016	0.046	0.002	0.202	1.792	85.13	20.59	64.54	0.533	75.39	n/a
SC-1	44.3379	-78.7084	2024-08-17	n/a	n/a	n/a	n/a	0.65	0	n/a	n/a	0.163	31.188	0.003	0.041	27.24	0.062	25.574	88.46	8.36	80.1	5.547	95.77	n/a
SC-2	44.3425	-78.7107	2024-08-17	n/a	n/a	n/a	n/a	11	0	n/a	n/a	0.172	21.13	0.015	0.012	20.928	0.001	27.196	96.18	22.4	73.78	4.786	79.82	n/a
SC-3	44.3343	-78.7241	2024-08-17	n/a	n/a	n/a	n/a	18.3	0	n/a	n/a	0.143	41.36	0.064	0.023	17.446	0.017	27.138	93.85	18.86	75	4.006	131.2	n/a
ST-1	44.3734	-78.6579	2024-08-17	n/a	n/a	n/a	n/a	5.6	0	n/a	n/a	0.296	12.713	0.013	0.054	0.081	0.015	0.637	79.82	36.72	43.1	1.121	123.23	n/a
ST-2	44.3265	-78.6487	2024-08-17	n/a	n/a	n/a	n/a	20.1	0	n/a	n/a	0.989	17.742	0.009	0.188	3.754	0.007	12.461	81.84	32.31	49.53	1.681	113.48	n/a
ST-3	44.32059	-78.64389	2024-08-17	n/a	n/a	n/a	n/a	10	0	n/a	n/a	0.217	24.897	0.025	0.085	15.85	0.015	39.042	92.22	14.4	77.82	3.653	202.08	n/a
ST-4	44.30711	-78.69351	2024-08-17	n/a	n/a	n/a	n/a	15.35	0	n/a	n/a	0.35	55.341	0.128	0.054	1.601	0.036	17.08	103.1	13.18	89.94	0.839	71.85	n/a
ST-5	44.2996	-78.67345	2024-08-17	n/a	n/a	n/a	n/a	40.45	0	n/a	n/a	0.156	36.166	0.047	0.024	3.704	0.026	26.578	100.6	9.7	90.89	1.121	61.22	n/a
ST-6	44.2896	-78.6505	2024-08-17	n/a	n/a	n/a	n/a	8.16	0	n/a	n/a	0.229	17.288	0.021	0.058	3.048	0.242	15.055	86.36	30.03	56.33	1.573	81.59	n/a
JV-1	44.21253	-78.72769	2024-08-19	10:14	14.9	8.13	523	1.62	9.6	0.03	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JV-2	44.1981	-78.7301	2024-08-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.247	18.877	0.047	0.035	16.966	0.177	12.099	74.36	15.37	58.99	3.572	103.74	n/a
JV-3	44.15549	-78.73461	2024-08-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.103	7.616	0.019	0.034	0.261	0.246	3.067	83.05	17.52	65.53	0.455	86.02	n/a
SC-1	44.3379	-78.7084	2024-08-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.14	13.552	0.037	0.123	14.759	0.078	23.557	97.76	29.3	68.46	3.76	63.87	n/a
SC-2	44.3425	-78.7107	2024-08-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.368	35.255	0.027	0.038	26.107	0.121							

JV-3	44.15549	-78.73461	2024-09-25	09:41	16.9	7.4	646	3.3	5.72	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-1	44.3379	-78.7084	2024-09-25	13:20	15.6	7.42	615	4.8	5.79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-3	44.3343	-78.7241	2024-09-25	12:00	15.5	7.5	751	4.17	4.73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ST-1	44.3734	-78.6579	2024-09-25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	72.98	31.1	41.88	0.975	37.4	n/a
ST-2	44.3265	-78.6487	2024-09-25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	81.2	25.69	55.51	2.953	84.1	n/a
ST-3	44.32059	-78.64389	2024-09-25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	85.47	16.01	69.47	2.806	58.9	n/a
ST-4	44.30711	-78.69351	2024-09-25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	93.29	17.47	75.83	2.476	79.5	n/a
ST-5	44.2996	-78.67345	2024-09-25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	90.3	12.27	78.03	1.554	78.5	n/a
ST-6	44.2896	-78.6505	2024-09-25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	84.25	24.45	59.8	1.724	76.7	n/a
JV-1	44.21253	-78.72769	2024-09-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	67.55	7.14	60.41	5.281	50.5	n/a
JV-2	44.1981	-78.7301	2024-09-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	68.06	6.4	61.66	5.166	28.1	n/a
JV-3	44.15549	-78.73461	2024-09-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	70.25	11.19	59.07	0.336	39.3	n/a
SC-1	44.3379	-78.7084	2024-09-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	75.82	3.45	72.37	5.829	56.1	n/a
SC-2	44.3425	-78.7107	2024-09-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	103.4	31.45	72	2.77	45.9	n/a
SC-3	44.3343	-78.7241	2024-09-27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	101.6	28.16	73.39	2.746	38.4	n/a
JV-1	44.21253	-78.72769	2024-10-06	09:10	8.4	8.5	558	3.5	12.24	0.18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JV-2	44.1981	-78.7301	2024-10-06	n/a	15	7.59	553	258.5	0	n/a	n/a	0.095	19.85	n/a	0.038	11.06	0.029	19.808	110.5	33.05	77.4	3.264	89.57	n/a
JV-3	44.15549	-78.73461	2024-10-06	n/a	16.6	7.45	446	0.59	0	n/a	n/a	0.09	49.9	n/a	0.032	10.547	0.024	21.685	98.01	23.42	74.59	2.905	82.48	n/a
SC-1	44.3379	-78.7084	2024-10-06	n/a	14.6	8.05	878	26.5	0	n/a	n/a	0.056	26.098	n/a	0.016	20.423	0.013	17.312	72.58	12.39	60.19	4.406	104.63	n/a
SC-2	44.3425	-78.7107	2024-10-06	n/a	13.2	8.02	559	196	0	n/a	n/a	0.054	24.019	n/a	0.024	40.385	0.023	31.801	64.17	4.84	59.33	7.8	72.73	n/a
SC-3	44.3343	-78.7241	2024-10-06	n/a	13.2	8.11	636	13.1	0	n/a	n/a	0.079	15.862	n/a	0.023	0.005	0.133	4.779	87.13	18.97	68.16	0.45	87.79	n/a
ST-1	44.3734	-78.6579	2024-10-06	n/a	17.4	7.42	308	4.29	0	n/a	n/a	0.07	15.144	n/a	0.052	0.033	0.018	0.295	81.23	33.03	48.2	1.052	70.96	n/a
ST-2	44.3265	-78.6487	2024-10-06	n/a	16.6	7.92	389	15.25	0	n/a	n/a	0.076	14.64	n/a	0.04	5.456	0.031	9.945	81.17	27.87	53.3	1.974	115.26	n/a
ST-3	44.32059	-78.64389	2024-10-06	n/a	15.8	7.67	590	1.75	0	n/a	n/a	0.088	20.757	n/a	0.03	13.084	0.011	44.963	90.07	11.69	78.38	3.066	74.5	n/a
ST-4	44.30711	-78.69351	2024-10-06	n/a	15	7.85	713	7.3	0	n/a	n/a	0.083	106.53	n/a	0.038	2.793	0.107	19.752	106.5	13.17	93.28	1.045	62.1	n/a
ST-5	44.2996	-78.67345	2024-10-06	n/a	14.3	7.85	693	21.35	0	n/a	n/a	0.083	50.599	n/a	0.041	2.608	0.115	25.119	106.9	11.91	94.98	0.902	95.77	n/a
ST-6	44.2896	-78.6505	2024-10-06	n/a	15.3	7.89	451	5.3	0	n/a	n/a	0.076	20.3	n/a	0.042	5.082	0.04	14.795	82.68	26.89	55.8	1.868	117.03	n/a
JV-1	44.21253	-78.72769	2024-10-11	n/a	14	8.52	479	6.3	0	n/a	n/a	0.079	40.392	n/a	0.054	29.657	0.044	27.06	86.76	7.26	79.5	5.983	214.48	n/a
JV-2	44.1981	-78.7301	2024-10-11	10:08	7.1	7.94	566	1.01	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JV-3	44.15549	-78.73461	2024-10-11	10:44	6.3	7.75	482.4	0.05	9.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-1	44.3379	-78.7084	2024-10-11	14:56	18.4	8.13	744	0.81	10.39	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-1	44.3379	-78.7084	2024-10-11	12:46	8.3	8.26	781	4.05	10.82	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SC-3	44.3343	-78.7241	2024-10-11	11:28	7.8	8.08	685	6	10.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JV-1	44.21253	-78.72769	2024-10-31	09:19	10.3	8.23	550	0.5	10.61	0.04	n/a	0.066	18.896	0.003	0.017	21.658	0.005	19.41	62.78	3.13	59.65	4.108	n/a	n/a
JV-2	44.1981	-78.7301	2024-10-31	09:50	10.8	7.95	554	0.3	0	n/a	n/a	0.07	17.925	0.003	0.014	19.259	0.022	17.032	66.5	5				

ST-4	44.30711	-78.69351	2024-11-10	n/a	0	7.71	862	6.76	0	n/a	n/a	0.088	105.379	0.029	0.029	5.402	0.006	23.127	93.31	7.52	85.79	1.676	0.08	n/a
ST-5	44.2996	-78.67345	2024-11-10	n/a	0	7.81	769	30.05	0	n/a	n/a	0.092	50.077	0.01	0.028	0.874	0.091	35.209	91.62	3.01	88.6	0.645	0.04	n/a
ST-6	44.2896	-78.6505	2024-11-10	n/a	0	7.87	449	13.95	0	n/a	n/a	0.081	20.539	0.006	0.033	2.828	0.01	9.416	72.8	20.84	51.96	1.384	0.06	n/a
SC-1	44.3379	-78.7084	2024-12-01	n/a	0.5	8.03	818	0	n/a	n/a	n/a	0.091	42.378	0.034	0.005	46.023	0.012	33.077	70.83	6.57	64.26	9.648	18.02	n/a
SC-2	44.3425	-78.7107	2024-12-01	n/a	0	8.09	598	0	n/a	n/a	n/a	0.093	22.967	0.015	0.028	15.699	0.005	26.809	84.62	20.79	63.82	3.535	34.32	n/a
ST-1	44.3734	-78.6579	2024-12-01	n/a	0	8.25	355	0	n/a	n/a	n/a	0.072	17.582	0.004	0.04	0.141	0.004	1.022	62.85	25.55	37.3	0.862	35.18	n/a
ST-2	44.3265	-78.6487	2024-12-01	n/a	0	7.7	462	0	n/a	n/a	n/a	0.073	20.027	0.009	0.035	8.95	0.005	21.645	69.47	21.69	47.78	2.336	28.31	n/a
ST-3	44.32059	-78.64389	2024-12-01	n/a	0	8.5	744	0	n/a	n/a	n/a	0.084	42.212	0.009	0.024	23.177	0.015	50.75	89.38	12.52	76.86	4.843	13.73	n/a
ST-4	44.30711	-78.69351	2024-12-01	n/a	0	7.67	785	0	n/a	n/a	n/a	0.073	56.027	0.064	0.022	16.591	0.012	37.585	93.81	13.49	80.32	3.566	18.88	n/a
ST-5	44.2996	-78.67345	2024-12-01	n/a	0	7.9	832	0	n/a	n/a	n/a	0.092	48.269	0.057	0.017	29.074	0.007	41.448	80.49	8.48	72.02	6.206	26.17	n/a
ST-6	44.2896	-78.6505	2024-12-01	n/a	0	7.84	599	0	n/a	n/a	n/a	0.076	35.575	0.015	0.043	9.678	0.002	29.262	77.7	19.23	58.48	2.336	31.75	n/a