The Township of McGarry Water and Wastewater Systems Quarterly Operations Report

April 1 to June 30, 2025

SUBMITTED BY

Ontario Clean Water Agency
15 Government Road East
Kirkland Lake, ON P2N 3J5

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Prepared by the Ontario Clean Water Agency

Ontario Clean Water Agency
Agence Ontarienne Des Eaux
Northeastern Ontario Region

MCGARRY WATER & WASTEWATER SYSTEMS QUARTERLY OPERATIONS REPORT

Prepared By: The Ontario Clean Water Agency | Prepared for: The Township of McGarry

SYSTEM OVERVIEW | January 01 to March 31, 2025

HIGHLIGHTS

Virginiatown-Kearns Drinking Water System

- Looking at the Langelier Index, which is an indicator of corrosivity, through jar testing which will guide process changes at the plant. We have recommended they install a corrosion control system in order to reduce the negative impacts to infrastructure. Adjusting the pH of the water could save the township a significant amount of money and time in water main repairs and replacement.
- Internal system electronic communication issues have been causing false flow rate values for source water wells at the Pump-house. Distorted data is displaying values above the Permit to Take Water limitations. This issues is believed to be caused by power fluctuations from a Hydro-Transformer failure that occurred on December 31st, 2024. Ministry and town foreman has been made aware system error, and troubleshooting and corrective actions underway.

McGarry Wastewater Treatment Lagoon

- Leakages and cracks around control gates in-between lagoon cells and outfall chamber are causing short-circuits effecting laboratory results on effluent quality. Corrective maintenance is planned and scheduled in coordination with township workers/supervisors.
- Active On-Going Bypass event (SAC#: 1-H8WX98) placed into effect by the MECP regarding the Leakages into outfall chamber effecting effluent results. Active Bypass status will remain in effect until repairs are completed and documentation is provided to MECP local inspector Janet Colbourne.

CAPITAL PLAN PROGRESS

The list of approved capital expenditures for 2025 was provided by the Township. Approved items are in the planning stages if not already underway.

Status of capital work for this quarter of 2025 is captured in Appendix A

INCIDENTS

Virginiatown DWS:

No Incidents to report for this quarter.

McGarry Lagoon:

April 2025 ECA Effluent Exceedance (SAC#: 1-O6NJ85): Total Ammonia Nitrogen Average Monthly Loading 6.94 kg/d (Limit: 5.7 kg/d), Total Phosphorous Loading 0.870 kg/d (Limit: 0.6 kg/d), due to on-going bypass event.

COMPLAINTS

No complaints were documented this quarter.

CALL-OUT SUMMARY

Number of Call-outs this Quarter:	0
Total Call-outs to Date (2025):	0
Annual Call-out Allowance:	8
Details of the Call-outs:	Refer to Appendix B for a call-out summary, if applicable

Note: Not all call backs are billed to the Owner; depends on the nature of the call.

REGULATORY

Inspections

- There were no inspections during this quarter.

Quality & Environmental Management System (QEMS)

- No Internal or External audits were performed during this quarter.

Sampling, Testing and Monitoring

- Refer to Appendix B for Quarterly Data Summaries.

Reporting

- Second quarter ECA exceedances for the McGarry Lagoon were reported to all required parties in accordance to legislative requirements.

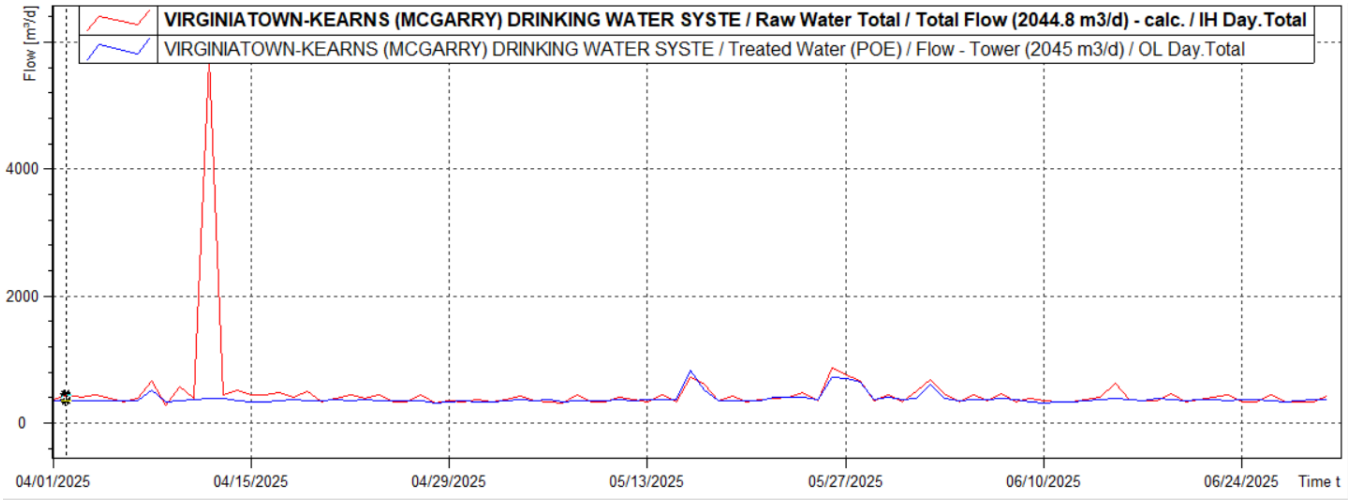
FLOW SUMMARIES

Virginiatown-Kearns Water Treatment Plant (Tower Flows)

	Total Raw Flows (m^3)	**Total Treated Flows** (m^3)	**Average Daily Treated Flow** (m^3/d)	**Maximum Treated Flow** (m^3/d)
April	17650	10725	357	518
May	13340	12819	413	831
June	11964	11031	367.7	605
Compliance	-	-	-	2,045

Raw Flow verses Treated Flow

April 1 to June 30, 2025

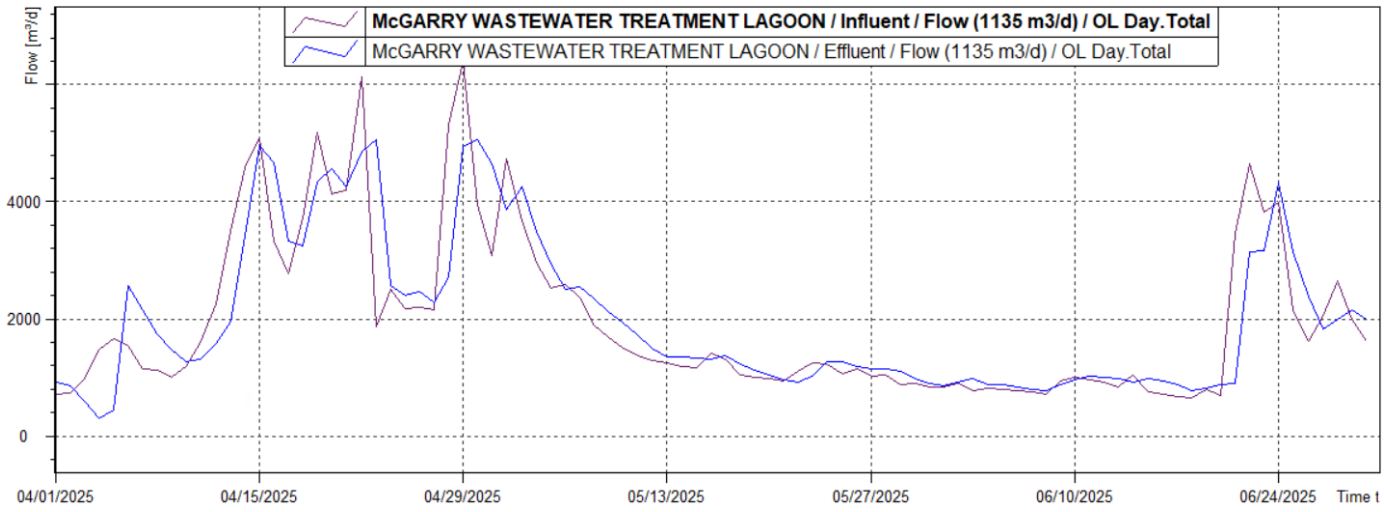


McGarry Lagoon

Year	Total Effluent Flow (m^3)	Total Influent Flow (m^3)	Maximum Influent Flow (m^3/d)	Average Daily Influent Flow (m^3/d)
April	82,317	84,646	6,409	2,821
May	55,966	50,423	4,724	1,626
June	43,075	44,364	4,642	1,478
Compliance	-	-	-	1,135

Influent Flow verses Effluent Flow

April 1 to June 30, 2025



Health and Safety

- All safety equipment at the plant was checked monthly to ensure that they are in good working order.

- Health and Safety Training/Sessions completed this quarter include:

  ✓ Contractor Safety

  ✓ SDS Review

  ✓ Annual Grating Inspections

APPENDIX A

Capital Plan Progress

Capital Plan Progress Update (based on information kept on file by Eric Nielson, Regional Hub Manager)

Project Number	Project Name	Maximo WO#	Capital Letter	Estimated Completion Date	Billing Date	Quotation	Billed Revenue
MCGARN5085-25ZZ	hypo pump spare parts kit	4381451	yes	April		$800	
	new well gauge for well #1		yes			$400	
	DWQMS third party audit		yes			$2,500	
	wellhouse genset replacement		yes			$70,000	
	spare chemical injectors		yes			$1,200	
	chemical transfer pump		yes			$4,000	
	silent check valve replacement		yes			$5,000	
	VFD drive for well#1		yes			$10,000	
	genset servicing		yes			$800	
	well #1 inspection		yes			$20,000	
	CLI items		yes			$5,000	
	membranes and electrolyte for analyzers		yes			$1,000	

	fire extinguisher maintenance		yes			$200	
	lagoon LS electrical upgrades		yes			$7,500	
	lagoon flow meter replacement		yes			$8,000	
	sludge testing at lagoon		yes			$600	
	air relief valve		yes			$1,500	
	diffuser repairs		yes			$4,000	
	spare pump for PS		yes			$35,000	
	lifting device inspections		yes			$500	
	chemical pump spare parts		yes			$600	
	Alum transfer pump		yes			$4,500	

APPENDIX B

Call Out Summary (None-To-Report)

APPENDIX C

Quarterly Data Summaries

VIRGINIATOWN-KEARNS (McGarry) **DRINKING WATER SYSTEM**

Quarterly Data Report

Q1: April 1 to June 30, 2025

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Virginiatown-Kearns Drinking Water System		April	May	June	Compliance
Flows					
Total Raw Flow - Max. Daily Volume	m^3/d	5752	862	682	Max. = 2044.8
Well 1 Flow - Maximum Daily Volume	m^3/d	655	855	636	Max. = 2044.8
Well 1 Flow - Maximum Flow Rate	L/min	4000	1890	2115	Max. = 1420[6]
Well 2 Flow - Maximum Daily Volume	m^3/d	5120	119	293	Max. = 1500[6]
Well 2 Flow - Maximum Flow Rate	L/min	1801	1721	1741	Max. = 1105
Tower Flow - Maximum Daily Volume	m^3/d	518	831	605	Max. = 2045
Raw Water					
Well 1 Total Coliforms - Maximum	c/100mL	0	0	0	N/A
Well 1 *E.coli* - Maximum	c/100mL	0	0	0	N/A
Well 2 Total Coliforms - Maximum	c/100mL	0	0	0	N/A
Well 2 *E.coli* - Maximum	c/100mL	0	0	0	N/A
Well 1 Turbidity - Maximum	NTU	0.36	0.31	0.52	N/A
Well 2 Turbidity - Maximum	NTU	0.84	0.75	0.79	N/A
Treated Water					
Free Chlorine Residual - Minimum	mg/L	1.06	1.20	0.98	Min. = 0.10 (CT)[1]
Total Coliforms - Maximum	c/100mL	0	0	0	Max. = 0
E. coli - Maximum	c/100mL	0	0	0	Max. = 0
Nitrate	mg/L	0.07	-	-	Max. = 10
Nitrite	mg/L	<0.01	-	-	Max. = 1
Distribution Water					
Free Chlorine Residual - Minimum	mg/L	0.87	1.09	0.97	Min. = 0.05
Total Coliforms - Maximum	c/100mL	0	0	0	Max. = 0
E. coli - Maximum	c/100mL	0	0	0	Max. = 0
Trihalomethanes (THMs)	µg/L	3.0	-	-	N/A
Running average	ug/L	3.2	-	-	Max. = 100 µg/L[2]
Haloacetic Acids (HAAs)	µg/L	8	-	-	N/A

VIRGINIATOWN-KEARNS (McGarry) DRINKING WATER SYSTEM

Quarterly Data Report

Q1: April 1 to June 30, 2025

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Virginiatown-Kearns Drinking Water System		April	May	June	Compliance
Running average	ug/L	10	-	-	Max. = 80 µg/L [3]
Lead – Maximum	µg/L	2025/26	-	-	Max. = 10 µg/L [4]
Alkalinity - Maximum	mg/L	69	-	-	N/A [5]

Notes:

1 CT is the concentration of chlorine in the water times the time of contact that the chlorine has with the water. It is used to demonstrate the level of disinfection treatment in the water. CT calculations are performed for the Virginiatown-Kearns water plant if the free chlorine residual level drops below 0.10 mg/L to ensure primary disinfection is achieved. Primary disinfection was achieved this quarter.

2 Maximum Allowable Concentration (MAC) for Trihalomethanes (THMs) = 100 ug/L (Four Quarter Running Average).

3 Maximum Allowable Concentration (MAC) for Haloacetic Acids (HAAs) = 80 ug/L (Four Quarter Running Average).

4 Lead testing required every 3 years.

5 Alkalinity testing required twice per year. Sampling is done in March/April and September/October of each year.

6 Internal system electronic communication issues have been causing false flow rate values for source water wells at the Pump-house. Distorted data is displaying values above the Permit to Take Water limitations. This issue is believed to be caused by power fluctuations from, a Hydro-Transformer failure that occurred on December 31st, 2024. Ministry and Town-foreman has been made aware system error, and troubleshooting and corrective actions underway. Well #1 and Well #2 show normal flow rates when data is not effected by electronic distortion.

McGARRY WASTEWATER SYSTEM
Quarterly Data Report
Q1: April 1 to June 30, 2025

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

McGarry Waste Water System		April	May	June	Compliance
Flows					
Influent – Average Daily Flow	m^3/d	2821	1626	1478.80	Average = 1135
Influent – Maximum Daily Flow	m^3/d	6409	4724	4642	N/A
Effluent – Average Daily Flow	m^3/d	2743.9	1805	1435.8	Average = 1135
Effluent – Maximum Daily Flow	m^3/d	5064	4645	4328	N/A
Influent					
BOD_5 – Average	mg/L	9.50	8.90	17	N/A
Total Kjeldahl Nitrogen (TKN) – Average	mg/L	1.30	1.50	1.60	N/A
Total Phosphorus (TP) – Average	mg/L	0.23	0.19	0.50	N/A
Total Suspended Solids (TSS) – Average	mg/L	20	2.30	11.30	N/A
Effluent					
$cBOD_5$ – Average	mg/L	4.75	3.60	3.50	Monthly Average = 25
$cBOD_5$ Loading	kg/d	8.48	6.51	4.67	Monthly Average = 28.4
TSS – Average	mg/L	8.16	6.32	3.91	Monthly Average = 25
TSS Loading	kg/d	14.82	12.77	5.14	Monthly Average = 28.4
TP – Average	mg/L	0.32	0.17	0.17	Monthly Average = 0.5
TP Loading	kg/d	0.53	0.35	0.21	Monthly Average = 0.6
Total Ammonia Nitrogen (TAN) – Average	mg/L	2.53	0.11	1.14	Monthly Average = 5
TAN Loading	kg/d	3.37	0.21	1.59	Monthly Average = 5.7