The Township of McGarry Water and Wastewater Systems Quarterly Operations Report

July 1 to September 30, 2025

SUBMITTED BY

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

November 06, 2025, Rev. 0

Prepared by the Ontario Clean Water Agency

SYSTEM OVERVIEW

July 01 to September 30, 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 causing short-circuits effecting laboratory results on effluent quality. Corrective maintenance was planned and completed 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 got completed and documentation being 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:

July 15, 2025 AWQI #168998 : Loss of Pressure There was a leaking connection to be repaired but the watermain is to be shutoff to complete the repair. Loss of service to 12 homes due to loss of Pressure. Samples taken and resolved on July 18, 2025.

McGarry Lagoon:

No events held this quarter.

COMPLAINTS

No complaints were documented this quarter.

CALL-OUT SUMMARY

Number of Call-outs this Quarter:	4
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)

- Internal Audit was conducted on September 26th, 2025.

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.

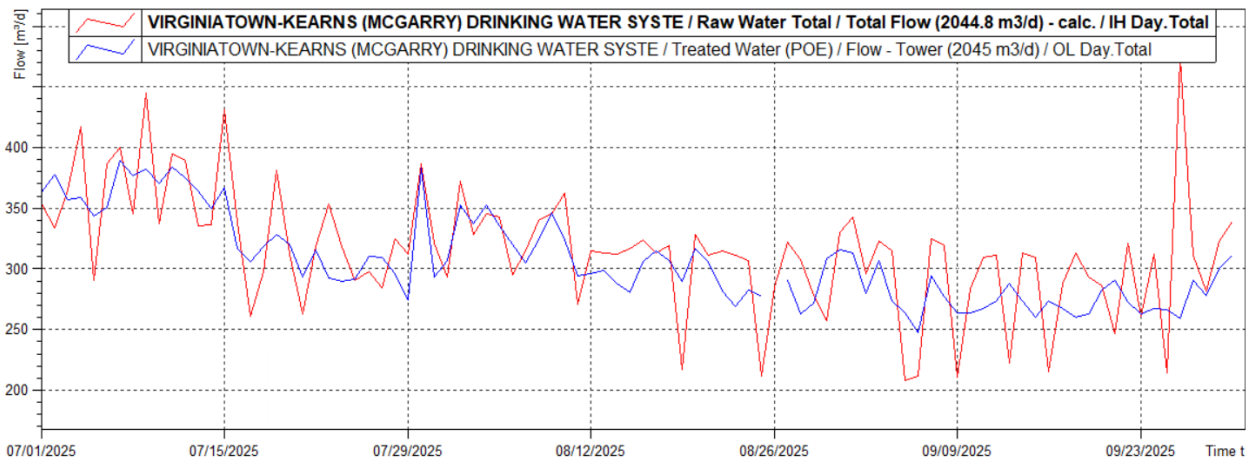
FLOW SUMMARIES

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)
July	10620	10446	337	390
August	9603	9159	305	353
September	8778	8290	276	313
Compliance	-	-	-	2,045

Raw Flow verses Treated Flow

July 1 to September 30, 2025

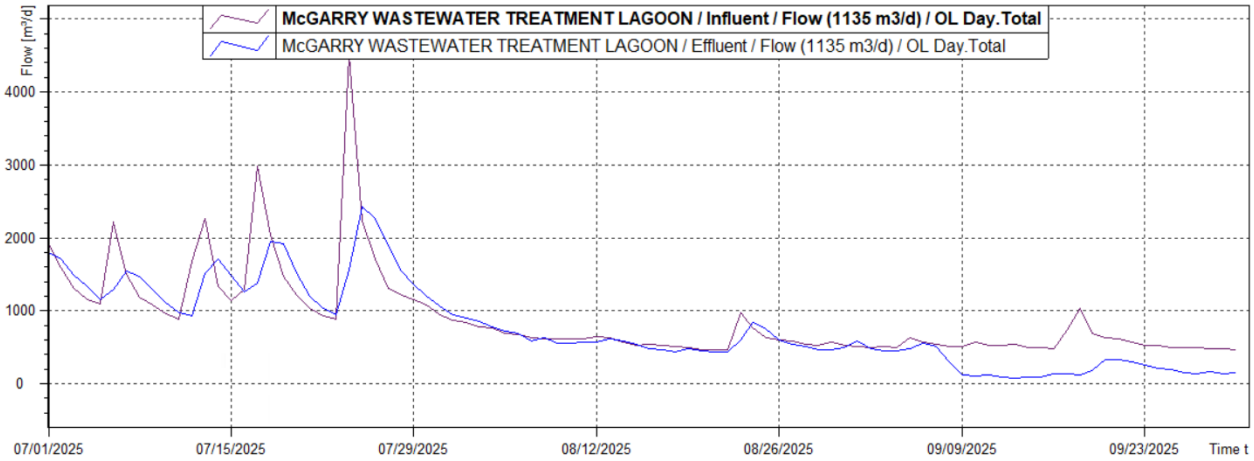


McGarry Lagoon

Year	Total Effluent Flow (m^3)	Total Influent Flow (m^3)	Maximum Influent Flow (m^3/d)	Average Daily Influent Flow (m^3/d)
July	45364	47331	4519	1527
August	18619	19323	971	623
September	7489	16717	1037	557
Compliance	-	-	-	1,135

Influent Flow verses Effluent Flow

July 1 to September 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:

  - ✓ Annual Grating Inspection
  - ✓ Working Alone-OK Alone App
  - ✓ OCWAs OHS Management System

APPENDIX A

Capital Plan Progress

Capital Plan Progress Update (based on information kept on file by Patti O'Handley, 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

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

4659706: Low Tower Residual - Hypo Pump PLC Lockout

Asset:
Location: 5085-WTTW-F 5085, McGarry WTP Tower, Facility

Page Time:	07/05/2025 12:01 AM
Arrive time:	07/05/2025 05:45 AM
Leave time:	07/05/2025 09:20 AM
Finish Time:	
Report Date:	7/5/25
Reported By:	Kodiak Jolivet
Supervisor:	

Site:	OCWASITE
Priority:	5
Work Type:	CALL
Status:	APPR
Classification	COMPLIANCE
GL Account:	MCGARY5085-21OM

Actual Labor

Task ID	Craft	Labor	Regular Hours	Premium Hours
	OPERATOR	Steven Gerl	00:00	02:00
	PCT	Kodiak Jolivet	00:00	06:00
	INSTTECH	Marc Doyon	00:00	04:00

Log

Date	Created By	Description
7/6/25	Kodiak Jolivet	Initial Call

@00:01 Recieved a Tower chlorine alarm. Texted Mark Brown about alarm. @00:02 Mark Brown responded and stated he would check out well house. @12:03 Earlier on June 4th, 2025, notified Mark Brown about chlorine residual dropping on Wonderware slowly and approaching alarm Set point of 0.50 ppm at approximately 05:40 when doing Wonderware review checks. @01:21 Mark Brown discovered hypo pumps do not activate with when well pumps turns on, issue on going since 06/30/25 based on Wonderware trends and issue not caught until now. Trouble shooting for hypo pumps failed. Well pumps will be kept off now that last run/fill cycle of tower has been done. Will drain tower feed line in the morning with townships staff in the morning and reprime line with fresh chlorinated water. Residual in tower approximately 0.48 ppm and should hold without concern for the remainder on the night

7/6/25	Kodiak Jolivet	Site-Visit

@05:10 off to Vtown. @05:45 Arrived at Water Tower, waiting on township personnel to discuss operational plan. @05:53 Plan is to introduce hypo into tower manually super prime feed line manually at pump-house. @08:02 approximately 8 L of Hypo added at mid section of tower with well pump# 1 added more water to mix, hypo volumes of 500 ml added periodically to avoid slug overload and manually hypo feed for mixture. 8L is approximately half of what was not fed into feed line over last several runs. This was done to ensure residual leaving tower does not drop below 0.30 ppm. @08:26 Residual reading 0.87 ppm on tower monitor. @08:46 Free chlorine analyzer now more stable (OL: 0.98 ppm, HH: 0.80 ppm) calibrated to 0.80 ppm. Tower residual fluctuating around 0.79 ppm circle chart does have alarm spike, note was made on chart to clarifying why sudden spike. @08:50 Well

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

4659706: Low Tower Residual - Hypo Pump PLC Lockout

Log

Date	Created By	Description
pumps offline and in hand/off to avoid usage and minimal hypo usage. Town operator was handling pumps. @09:15 Cheminis Lodge residual check (F: 0.82 ppm).		
7/6/25	Kodiak Jolivet	Follow-Up
Performed Wonderware site check once notification of issue with hypo-pumps was resolved by instrumentation member from New Liskeard Team and will monitor remotely periodically to ensure no further issues arise. Confirmed while hypo-pumps not in full use there is evidence of hypo introduction into feed line through syphon effect of running well pumps as hypo tank was lowering through each run cycle, just enough to keep residual at a slow and steady decline.		

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

4661410: ENG Low Treated Chlorine - Plant Lockout

Asset:
Location: 5085-WTMG-F 5085, McGarry WTP Pump House, Facility

Page Time:	07/13/2025 02:28 AM
Arrive time:	07/13/2025 03:35 AM
Leave time:	07/13/2025 04:20 AM
Finish Time:	
Report Date:	7/13/25
Reported By:	Kodiak Jolivet
Supervisor:	

Site:	OCWASITE
Priority:	5
Work Type:	CALL
Status:	APPR
Classification	COMPLIANCE
GL Account:	MCGARY5085-21OM

Log

Date	Created By	Description
7/13/25	Kodiak Jolivet	Free Chlorine Plant Lockout

@02:28 Received Treated chlorine alarm. @03:25 Arrived at WTP. Clearwells at 0.86m. @03:29 reviewed trends and treated chlorine dropped notably quick. Possible air lock in hypo-line due to air bubble. Increased hypo speed From 16 to 17 due to lower hypo tank level of 870 L. No more hypo drums in WTP at present. Will start plant and clear air and monitor process. @03:35 Call for water made. @03:41 hypo line cleared on 4 inch air bubble, possible cause of chlorine residual drop. @04:13 Free chlorine analyzer (OL: 1.84 ppm, HH: 1.78 ppm) within 5% and residual on the slow trend downward. @04:16 clearwell now 0.88m. @04:17 ensured alarm Dialer was reset.

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

4762925: PLC and Panel Pump House - Hypo Pump Issue

Asset:
Location: 5085-WTMG-F 5085, McGarry WTP Pump House, Facility

Page Time:	09/20/2025 12:11 PM
Arrive time:	09/20/2025 12:15 PM
Leave time:	09/20/2025 01:00 PM
Finish Time:	10/10/2025 08:06 AM
Report Date:	9/20/25
Reported By:	Kodiak Jolivet
Supervisor:	

Site:	OCWASITE
Priority:	5
Work Type:	CALL
Status:	COMP
Classification	COMPLIANCE
GL Account:	MCGARY5085-21OM

Actual Labor

Task ID	Craft	Labor	Regular Hours	Premium Hours
	PCT	Kodiak Jolivet	00:00	02:00
	INSTTECH	Marc Doyon	00:00	04:00

Log

Date	Created By	Description
9/22/25	Marc Doyon	
Received a call from Kodiak to assist Mark on Saturday Sept 20th, town worker, to troubleshoot why the chem pumps would not run in auto. Called Mark and explained to him how to reset the PLC onsite. Once PLC was reset I confirmed with Mark that the pumps were now running in auto rectifying the issue. I also mentioned that he should verify the injection point to make sure chlorine line was not plugged and to prime his pumps. He said he could take care of that.		
9/20/25	Kodiak Jolivet	Remote Assistance - Contact Coordination
Assisting town foreman with Hypo-Pumps and making phone calls to get assistance through OCWA contacts.		

APPENDIX C

Quarterly Data Summaries

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

Quarterly Data Report

Q1: July 1 to September 30, 2025

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Virginiatown-Kearns Drinking Water System		July	August	September	Compliance
Flows					
Total Raw Flow - Max. Daily Volume	m^3/d	445	372	474	Max. = 2044.8
Well 1 Flow - Maximum Daily Volume	m^3/d	445	372	474	Max. = 2044.8
Well 1 Flow - Maximum Flow Rate	L/min	2021	1594	1753	Max. = 1420[6]
Well 2 Flow - Maximum Daily Volume	m^3/d	120	108	119	Max. = 1500[6]
Well 2 Flow - Maximum Flow Rate	L/min	1817	1334	1417	Max. = 1105
Tower Flow - Maximum Daily Volume	m^3/d	389	353	313	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	1.02	0.28	N/A
Well 2 Turbidity - Maximum	NTU	1.03	1.81	0.54	N/A
Treated Water					
Free Chlorine Residual - Minimum	mg/L	0.47	0	0.51	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	0.20	-	-	Max. = 10
Nitrite	mg/L	<0.01	-	-	Max. = 1
Distribution Water					
Free Chlorine Residual - Minimum	mg/L	0.40	0.48	0.30	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	4.30	-	-	N/A
Running average	ug/L	3.3	-	-	Max. = 100 µg/L[2]
Haloacetic Acids (HAAs)	µg/L	9	-	-	N/A

VIRGINIATOWN-KEARNS (McGarry) DRINKING WATER SYSTEM

Quarterly Data Report

Q1: July 1 to September 30, 2025

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Virginiatown-Kearns Drinking Water System		July	August	September	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	-	-	-	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: July 1 to September 30, 2025

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

McGarry Waste Water System		July	August	September	Compliance
Flows					
Influent – Average Daily Flow	m^3/d	1526	623	557	Average = 1135
Influent – Maximum Daily Flow	m^3/d	4519	971	1037	N/A
Effluent – Average Daily Flow	m^3/d	1463	600	250	Average = 1135
Effluent – Maximum Daily Flow	m^3/d	2431	952	586	N/A
Influent					
BOD_5 – Average	mg/L	3.50	4.30	<6.00	N/A
Total Kjeldahl Nitrogen (TKN) – Average	mg/L	1.60	6.10	3.30	N/A
Total Phosphorus (TP) – Average	mg/L	0.52	0.29	0.26	N/A
Total Suspended Solids (TSS) – Average	mg/L	5.00	7.00	23.00	N/A
Effluent					
$cBOD_5$ – Average	mg/L	<2.90	2.25	8.00	Monthly Average = 25
$cBOD_5$ Loading	kg/d	<3.64	1.21	1.13	Monthly Average = 28.4
TSS – Average	mg/L	11.15	8.38	23	Monthly Average = 25
TSS Loading	kg/d	13.52	4.22	3.69	Monthly Average = 28.4
TP – Average	mg/L	0.31	0.46	0.42	Monthly Average = 0.5
TP Loading	kg/d	2	0.99	0.45	Monthly Average = 0.6
Total Ammonia Nitrogen (TAN) – Average	mg/L	2.09	2.66	0.94	Monthly Average = 5
TAN Loading	kg/d	13.82	5.71	0.85	Monthly Average = 5.7