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 | July 1 to September 30, 2024

REVISED

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 same the township a significant amount of money and time in water main repairs and replacement. OCWA is compiling information to provide to the Township

McGarry Wastewater Treatment Lagoon

- No significant issues

CAPITAL PLAN PROGRESS

The list of approved capital expenditures for 2024 was provided by the Township. Approved items are in the planning stages if not already underway.

Status of capital work for this quarter of 2024 is captured in Appendix A

INCIDENTS

Virginiatown DWS:

July 31	PTTW exceedance of 1105 L/min for 18 minutes upon startup of well 2
September 23	AWQI 166 405 – LOP during valve installation
September 26	AWQI 166445 – Watermain break necessitated no pressure for three houses

McGarry Lagoon:

September 2024 The effluent exceeded the average total phosphorus concentration limit of 0.5 mg/L having a monthly average concentration of 0.577 mg/L.

COMPLAINTS

No complaints were documented this quarter.

CALL-OUT SUMMARY

Number of Call-outs this Quarter:	0
Total Call-outs to Date (2024):	4
Annual Call-out Allowance:	8
Details of the Call-outs:	Refer to Appendix 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 regulatory inspections during the quarter

Quality & Environmental Management System (QEMS)

- A surveillance audit was conducted by Intertek on August 27

Sampling, Testing and Monitoring

- Refer to Appendix B for Quarterly Data Summaries.

Reporting

- No reporting was required this quarter.

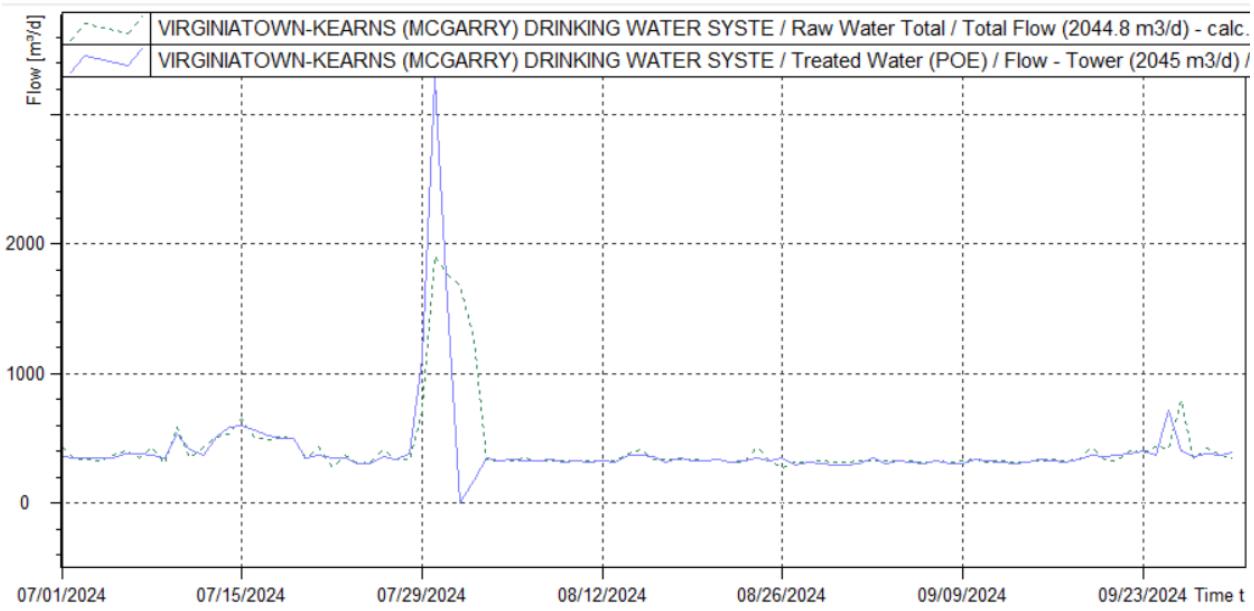
FLOW SUMMARIES

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	15,870	17,347	556	3,277
August	12,631	9,694	313	368
September	10,854	10,622	354	711
Compliance	-	-	-	2,045

Raw Flow verses Treated Flow

July 1 to September 30, 2024

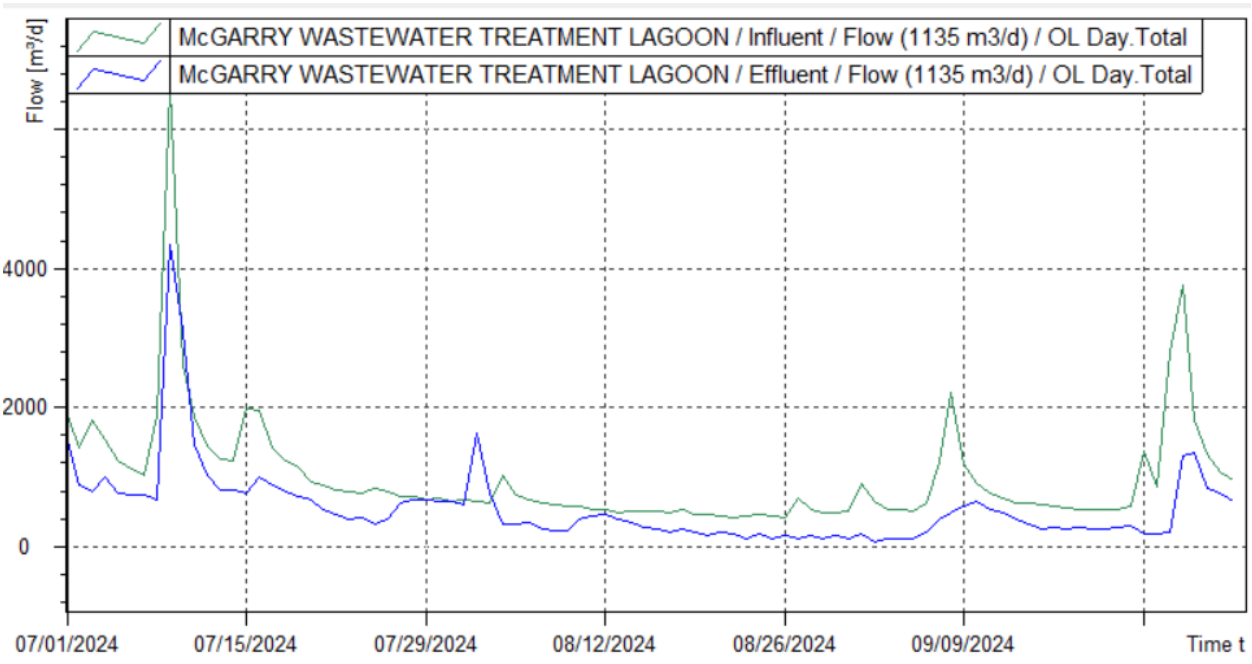


McGarry Lagoon

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	29,346	43,893	6,610	1,416
August	9,733	17,030	1,020	549
September	12,280	30,385	3,766	1,013
Compliance	-	-	-	1,135

Influent Flow verses Effluent Flow

July 1 to September 30, 2024



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 review of safety data sheets
  - Psychosocial hazards
  - OCWA's STOP program

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	Client PO#	Maximo WO#	Capital Letter	Estimated Completion	Billing Date	Quotation	Billed Revenue
MCGARN5085-23ZZ	capital work					26-Feb-24		$309
MCGARN5085-23ZZ	capital work					30-May-24		$1,590
MCGARN1022-23ZZ	capital work					26-Feb-24		$17,940
MCGARN5085-23ZZ	non-routine sampling 2023		3204689			30-May-24		$4,423
MCGARN5085-24ZZ	tower pumphouse comm failure		3761705	no		30-May-24		$1,960
MCGARN1022-23ZZ	pro-mag flow meter		3526924	yes		30-May-24		$1,766
MCGARN1022-23ZZ	rebuild jockey pump and keep as spare		3575875	yes		30-May-24	$22,000	$16,544
MCGARN5085-24ZZ	replace chlorine analyzer		3952868	yes		11-Sep-24	$12,000	$9,795
MCGARN1022-24ZZ	soft start for lagoon effluent pump		3806922	yes		11-Sep-24	$1,100	$1,087
MCGARN1022-24ZZ	card for Kearns PS starter		3764998	yes		11-Sep-24	$4,100	$3,271
MCGARN5085-24ZZ	water main break 28th street		3847867	no	March	11-Sep-24	$800	$751
MCGARN5085-24ZZ	water main break March 29		3851777	no	March	11-Sep-24	$1,100	$3,487
MCGARN5085-24ZF	lifting device inspections		3901441	yes	April	11-Sep-24	$700	$700
MCGARN5085-24ZZ	genset maintenance		3949735	yes	June	11-Sep-24	$2,000	$2,306
MCGARN5085-24ZZ	additional sampling		3802562	no		01-Oct-24	$500	$2,035
	replace backflow preventer at wellhouse			yes			$2,500	
	corrosion control system			yes			$25,000	
	genset maintenance (all)			yes			$3,000	
	third party DWQMS audit			yes			$1,300	
	silent check valve replacement			yes			$1,500	
	Tower inspection			yes			$15,000	
	replace flow meter at lagoon			yes			$8,000	
	sludge depth testing at lagoon			yes			$600	
	new pump at Kearns pump station			yes			$35,000	
	repair diffusers as required			yes			$4,000	

Project Number	Project Name	Client PO#	Maximo WO#	Capital Letter	Estimated Completion	Billing Date	Quotation	Billed Revenue
	air relief valve for wells			yes			$1,500	
	membranes and electrolyte at tower analyzer			yes			$600	
	hypo pump spare parts kit			yes			$2,000	
	blower replacement lagoon			yes			$12,000	
	new well gauge for well#1			yes			$400	
MCGARN5085-24ZZ	sampling for Pederson project		4144850	no			$5,600	
MCGARN1022-24ZF	Godwin pump mobilize for flooding		3904407	no			$3,600	
	VFD for well #1			yes			$10,000	
	fire extinguisher checks (all)			yes			$200	

APPENDIX B

Quarterly Data Summaries

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

Quarterly Data Report

Q3: July 1 to September 30, 2024

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	1,903	1,684	789	Max. = 2044.8
Well 1 Flow - Maximum Daily Volume	m^3/d	1,903	1,271	789	Max. = 2044.8
Well 1 Flow - Maximum Flow Rate	L/min	1,410	1,393	1,467	Max. = 1420
Well 2 Flow - Maximum Daily Volume	m^3/d	579	539	121	Max. = 1500
Well 2 Flow - Maximum Flow Rate	L/min	1,341	1,100	1,097	Max. = 1105
Tower Flow - Maximum Daily Volume	m^3/d	3,277	368	789	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	0.16	0.15	0.29	N/A
Well 2 Turbidity - Maximum	NTU	0.52	0.72	0.84	N/A
Treated Water					
Free Chlorine Residual - Minimum	mg/L	0.73	0.80	0.90	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	<0.05	-	-	Max. = 10
Nitrite	mg/L	<0.05	-	-	Max. = 1
Distribution Water					
Free Chlorine Residual - Minimum	mg/L	0.71	0.63	0.21	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	3.8	-	-	N/A
Running average	ug/L	3.2	-	-	Max. = 100 µg/L [2]
Haloacetic Acids (HAAs)	µg/L	9	-	-	N/A

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Quarterly Data Report

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Ontario Clean Water Agency
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Virginiatown-Kearns Drinking Water System		July	August	September	Compliance
Running average	ug/L	8	-	-	Max. = 80 µg/L [3]
Lead – Maximum	µg/L	2025/26	-	-	Max. = 10 µg/L[4]
Alkalinity - Maximum	mg/L	n/a	-	-	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.

McGARRY WASTEWATER SYSTEM
Quarterly Data Report
Q3: July 1 to September 30, 2024

Ontario Clean Water Agency
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McGarry Waste Water System		July	August	September	Compliance
Flows					
Influent – Average Daily Flow	m^3/d	1,416	549	1,013	Average = 1135
Influent – Maximum Daily Flow	m^3/d	6,610	10,200	3,766	N/A
Effluent – Average Daily Flow	m^3/d	947	314	409	Average = 1135
Effluent – Maximum Daily Flow	m^3/d	4,336	1,634	1,350	N/A
Influent					
BOD_5 – Average	mg/L	<6.0	16.0	1.7	N/A
Total Kjeldahl Nitrogen (TKN) – Average	mg/L	11.0	4.9	13.5	N/A
Total Phosphorus (TP) – Average	mg/L	1.37	0.654	0.784	N/A
Total Suspended Solids (TSS) – Average	mg/L	5.0	9.0	12.5	N/A
Effluent					
$cBOD_5$ – Average	mg/L	<0.90	<0.80	<1.35	Monthly Average = 25
$cBOD_5$ Loading	kg/d	<1.0	<0.2	<0.4	Monthly Average = 28.4
TSS – Average	mg/L	<1.70	<3.75	<7.88	Monthly Average = 25
TSS Loading	kg/d	<2.1	<1.0	<1.5	Monthly Average = 28.4
TP – Average	mg/L	0.42	0.37	0.58	Monthly Average = 0.5
TP Loading	kg/d	0.64	0.09	0.15	Monthly Average = 0.6
Total Ammonia Nitrogen (TAN) – Average	mg/L	0.36	0.12	<0.48	Monthly Average = 5
TAN Loading	kg/d	0.305	0.037	<0.168	Monthly Average = 5.7