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 | October 1 to December 31, 2023

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.

McGarry Wastewater Treatment Lagoon

- The influent flow meter was replaced

Capital Plan Progress

The Capital Letter which provides a list of recommended capital and major maintenance for 2024 was provided to the Owner in December 2023. Approval or rejection of the capital projects identified in the letter is a requirement under the system's Quality and Environmental Management System.

Status of capital work completed in 2023.

Capital Work – Water Treatment System	Status
lifting device inspections main break Dorfman chemical upset limit	Billed

Capital Work - Wastewater Lagoon System	Status
N/A	N/A

Incidents

Virginiatown Drinking Water System:

November 20 watermain break and subsequent loss of pressure during repairs caused a BWA to be issued affecting Casselman Ave (AWQI 164057)

December 12 due to the location of the required repair on the line to the tower, and the strong chance of contamination, a BWA was issued to the entire community (AWQI 164197)

McGarry Lagoon:

October 21 Overflow – SAC Ref 1-3Y5CX0

Heavy rain caused a surcharge in the collection system that lasted from October 21 at 11:51 to October 23 at 08:08. An estimated volume of 6,500 m^3 overflowed into Larder Lake.

COMPLAINTS

No complaints were documented this quarter.

CALL-OUT SUMMARY

Number of Call-outs this Quarter:	2 (water system)	1 (sewage lagoon)
Total Call-outs to Date (2023):	6	
Annual Call-out Allowance:	8	
Details of the Call-outs:	Refer to Appendix A for a call-out summary.	

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)

- The management review meeting was conducted on November 29

Sampling, Testing and Monitoring

- Refer to Appendix A for Quarterly Data Summaries.

Reporting

- No reporting was required this quarter.

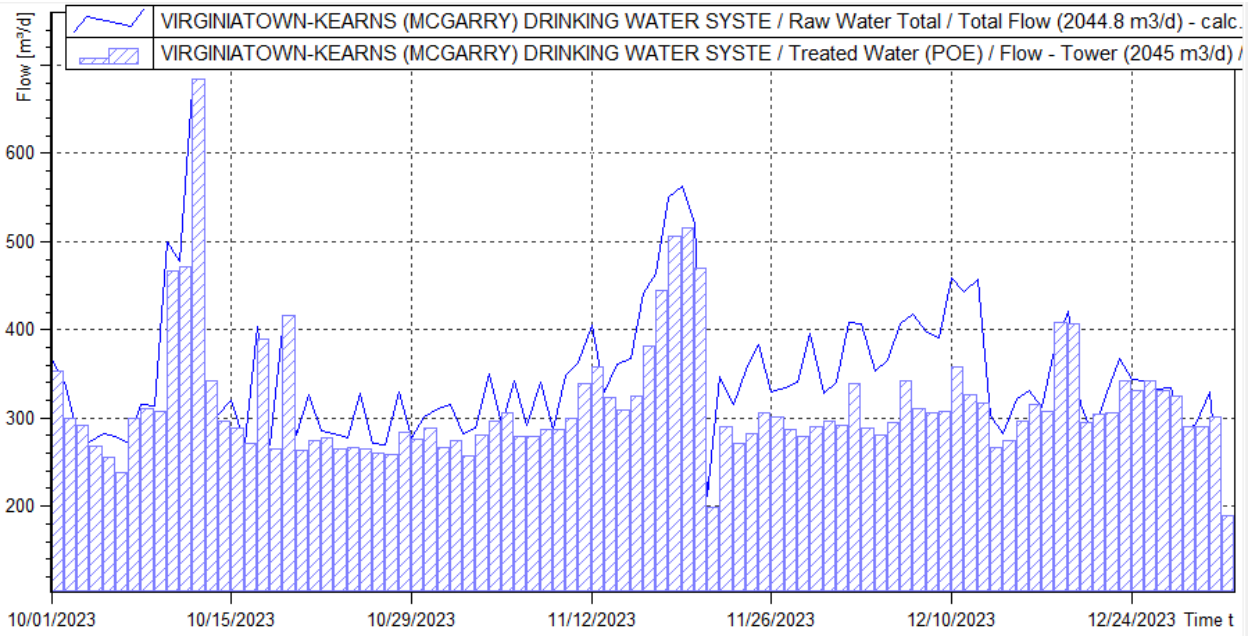
FLOW SUMMARIES

Virginiatown-Kearns Water Treatment Plant (Tower Flows)

Year	Total Raw Flows (m^3)	Total Treated Flows (m^3)	Average Daily Treated Flow (m^3/d)	Maximum Treated Flow (m^3/d)	Maximum % of Rated Capacity (2045 m^3/d)
Jan to Dec 2023	**152,271**	**148,564**	**407**	**684**	**33.4**
2022	194,073	167,244	458	1254	61.3
2021	145,878	142,720	391	789	38.6
2020	191,383	188,494	515	889	43.5
2019	233,524	230,717	632	991	45.5

Raw Flow verses Treated Flow

October 1 to December 31, 2023

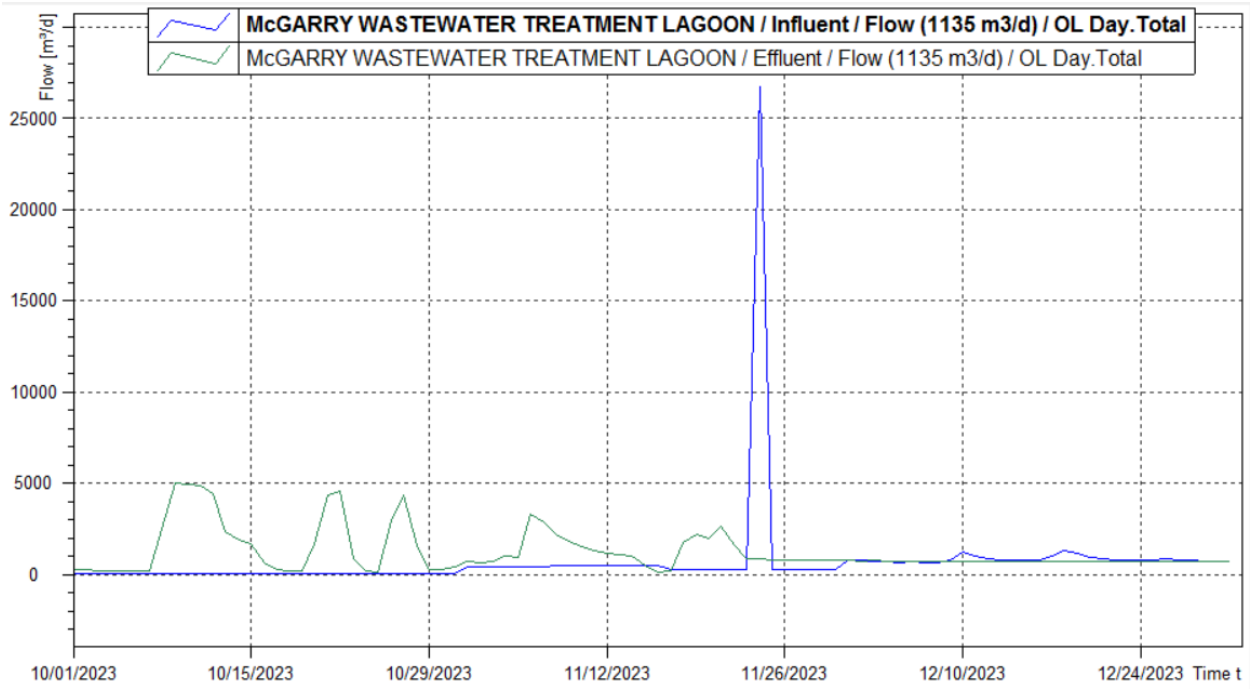


McGarry Lagoon

Year	Total Effluent Flow (m^3)	Total Influent Flow (m^3)	Maximum Influent Flow (m^3/d)	Average Daily Influent Flow (m^3/d)	Average Day % of Design Capacity (1135 m^3/d)
Jan to Dec 2023	**326,775**	**253,193**	**7995**	**694**	**61.1**
2022	373,865	514,595	7897	1410	124
2021	258,570	349,792	10,000	958	84.4
2020	426,479	476,828	6191	1303	115
2019	434,790	475,681	7585	1303	115

Influent Flow verses Effluent Flow

October 1 to December 31, 2023



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:
  - ✓ Critical Risk and Work Planning
  - ✓ Lockout
  - ✓ Working in Cold Weather / Winter Driving

APPENDIX A

Call Out Summary

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

3622970: ALARM - Low Tower AWQI 163782 ORG 5085

Asset: 0000090423 METER FLOW TREATED
Location: 5085-WTMG-P 5085, McGarry WTP Pump House, Process

Page Time:	10/12/2023 05:30 PM
Arrive time:	10/12/2023 06:00 PM
Leave time:	10/12/2023 10:00 PM
Finish Time:	10/12/2023 10:00 PM
Report Date:	10/14/23
Reported By:	Steven Gerl
Supervisor:	

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

Actual Labor

Task ID	Craft	Labor	Regular Hours	Premium Hours
	OPERATOR	Steven Gerl	00:00	04:00

Log

Date	Created By	Description
10/14/23	Steven Gerl	ALARM - Low Tower AWQI 163782 ORG 5085

The Low Tower / high treated flow ALARM showed a dist. main break.
After the break was isolated I called MOH for a Boil water.
Called SAC and completed Form 2a and 3 sections

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

3624496: McGarry Connel Ave SPS overflow

Asset:
Location: 1022-WLMC-F 1022, McGarrys Sewage Treatment Lagoon, Facility

Page Time:	10/21/2023 11:45 AM
Arrive time:	10/21/2023 01:15 PM
Leave time:	10/25/2023 04:30 PM
Finish Time:	10/21/2023 05:15 PM
Report Date:	10/25/23
Reported By:	Julien Bernatchez
Supervisor:	

Site:	OCWASITE
Priority:	5
Work Type:	CALL
Status:	CLOSE
Classification	COMPLIANCE
GL Account:	MCGARY1022-21OM

Actual Labor

Task ID	Craft	Labor	Regular Hours	Premium Hours
	OPERATOR	Julien Bernatchez	00:00	04:00

Log

Date	Created By	Description
10/25/23	Julien Bernatchez	McGarry Connel Ave SPS overflow

Received a call from Mark from V-town informing me that the McGarry Connel Ave SPS is in overflow.
Drove to the SPS to collect the samples, and deliver them the the on call person at testmark labs.
Completed the environmental incident report form, and made the appropriate calls, and emails to MOE SAC, and THU.

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Work Order Call Back Details Report

3666502: ALARM - LOW CL2 FREE COMPLIANCE TOWER 5085

Asset: 0000090412 ANALYZER CHLORINE 01 TOWER
Location: 5085-WTTW-P 5085, McGarry WTP Tower, Process

Page Time:	11/27/2023 05:30 PM
Arrive time:	11/27/2023 06:00 PM
Leave time:	11/27/2023 10:00 PM
Finish Time:	11/27/2023 10:00 PM
Report Date:	11/28/23
Reported By:	Steven Gerl
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
	OPERATOR	Steven Gerl	00:00	04:00

Log

Date	Created By	Description
11/28/23	Steven Gerl	ALARM - LOW CL2 FREE COMPLIANCE TOWER 5085

Mark Brown attempted to calibrate the On line Cl2 free analyzer.
the residual dropped to "0"mg/l
I performed a 'Dis. Cal' Zero calibration
normal ops resumed

APPENDIX B

Quarterly Data Summaries

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

Quarterly Data Report

October 1 to December 31, 2023

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Virginiatown-Kearns Drinking Water System		October	November	December	Compliance
Flows					
Total Raw Flow - Max. Daily Volume	m^3/d	672	563	459	Max. = 2044.8
Well 1 Flow - Maximum Daily Volume	m^3/d	672	563	459	Max. = 2044.8
Well 1 Flow - Maximum Flow Rate	L/min	1,402	1,410	1,370	Max. = 1420
Well 2 Flow - Maximum Daily Volume	m^3/d	62	77	63	Max. = 1500
Well 2 Flow - Maximum Flow Rate	L/min	1,104	1,222	1,100	Max. = 1105
Tower Flow - Maximum Daily Volume	m^3/d	684	516	408	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	0.68	0.99	0.55	N/A
Well 2 Turbidity - Maximum	NTU	0.44	0.21	0.46	N/A
Treated Water					
Free Chlorine Residual - Minimum	mg/L	0.97	1.17	0.73	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	<0.1	-	-	Max. = 10
Nitrite	mg/L	0.02	-	-	Max. = 1
Distribution Water					
Free Chlorine Residual - Minimum	mg/L	0.41	0.88	0.75	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	3.2	-	-	N/A
THM four quarter average	ug/L	7.45			Max. = 100 µg/L [2]

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

Quarterly Data Report

October 1 to December 31, 2023

Ontario Clean Water Agency
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Distribution Water		April	May	June	
Haloacetic Acids (HAAs)	µg/L	<8	-	-	N/A
HAA four quarter running average	ug/L	<8			Max. = 80 µg/L [3]
Lead – Maximum	µg/L	<0.1	-	-	Max. = 10 µg/L[4]
Alkalinity - Maximum	mg/L	72	-	-	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 and September/October of each year.

McGARRY WASTEWATER SYSTEM
Quarterly Data Report
October 1 to December 31, 2023

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

McGarry Waste Water System		October	November	December	Compliance
Flows					
Influent – Average Daily Flow	m^3/d	71	375	822	Average = 1135
Influent – Maximum Daily Flow	m^3/d	71	471	1,329	N/A
Effluent – Average Daily Flow	m^3/d	1,670	1,254	715	Average = 1135
Effluent – Maximum Daily Flow	m^3/d	4,985	3,306	760	N/A
Influent					
BOD_5 – Average	mg/L	3.7	1.1	3.1	N/A
Total Kjeldahl Nitrogen (TKN) – Average	mg/L	0.4	<0.2	0.5	N/A
Total Phosphorus (TP) – Average	mg/L	0.387	0.235	0.351	N/A
Total Suspended Solids (TSS) – Average	mg/L	8.5	3	2	N/A
Effluent					
$cBOD_5$ – Average	mg/L	1.68	3.75	1.68	Monthly Average = 25
$cBOD_5$ Loading	kg/d	2.81	4.7	1.2	Monthly Average = 28.4
TSS – Average	mg/L	2.67	7.63	4.05	Monthly Average = 25
TSS Loading	kg/d	4.45	9.56	2.90	Monthly Average = 28.4
TP – Average	mg/L	0.26	0.24	0.26	Monthly Average = 0.5
TP Loading	kg/d	0.43	0.29	0.19	Monthly Average = 0.6
Total Ammonia Nitrogen (TAN) – Average	mg/L	0.27	1.01	0.27	Monthly Average = 5
TAN Loading	kg/d	0.45	1.26	0.19	Monthly Average = 5.7