

Prepared By: The Ontario Clean Water Agency

Prepared for: The Township of McGarry

SYSTEM OVERVIEW

July 1 to September 30, 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

McGarry Wastewater Treatment Lagoon

- Mid-July the influent flow meter stopped working

CAPITAL PLAN PROGRESS

The Capital Letter which provides a list of recommended capital and major maintenance for 2023 was provided to the Owner on December 5, 2022. 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
Tower inspection	Added to 2024 expenditures

CAPITAL WORK - WASTEWATER LAGOON SYSTEM	STATUS
N/A	N/A

INCIDENTS

Virginiatown Drinking Water System:

- AUGUST 5 AWQI 162949 – Watermain repair/LOP/BWA
 24th Ave and 25th Ave were without pressure during a watermain break; a boil water advisory was issued. After sampling, the BWA was lifted on August 11
- SEPTEMBER 4 AWQI 163291 – Watermain repair/LOP/BWA
 Dorfman Street south of Connell Ave was without pressure during a watermain break thus a boil water advisory was issued. After sampling, the BWA was lifted on September 7
- SEPTEMBER 17 AWQI 163488 – alarms unable to call out
 The service issues Northern Telephone experienced, and were working to fix, impacted the ability of the alarm at the water plant to call an operator during an alarm condition. Remote monitoring of the plant conditions via SCADA/Wonderware were increased. The loss of the ability of alarms to call out

was reported as a precaution. There were no true adverse conditions in the water plant. With the landline service fully restored, this issue is now resolved.

McGarry Lagoon:

There were no incidents to report

COMPLAINTS

No complaints were documented this quarter.

CALL-OUT SUMMARY

Number of Call-outs this Quarter:	2 (water system)	0 (sewage lagoon)
Total Call-outs to Date (2023):	3	
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

- August 17 – the Ministry of Environment, Conservation and Parks conducted an inspection

Quality & Environmental Management System (QEMS)

- The internal audit was conducted on August 16
- The risk assessment was conducted on August 25
- The external audit was conducted on September 27

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)

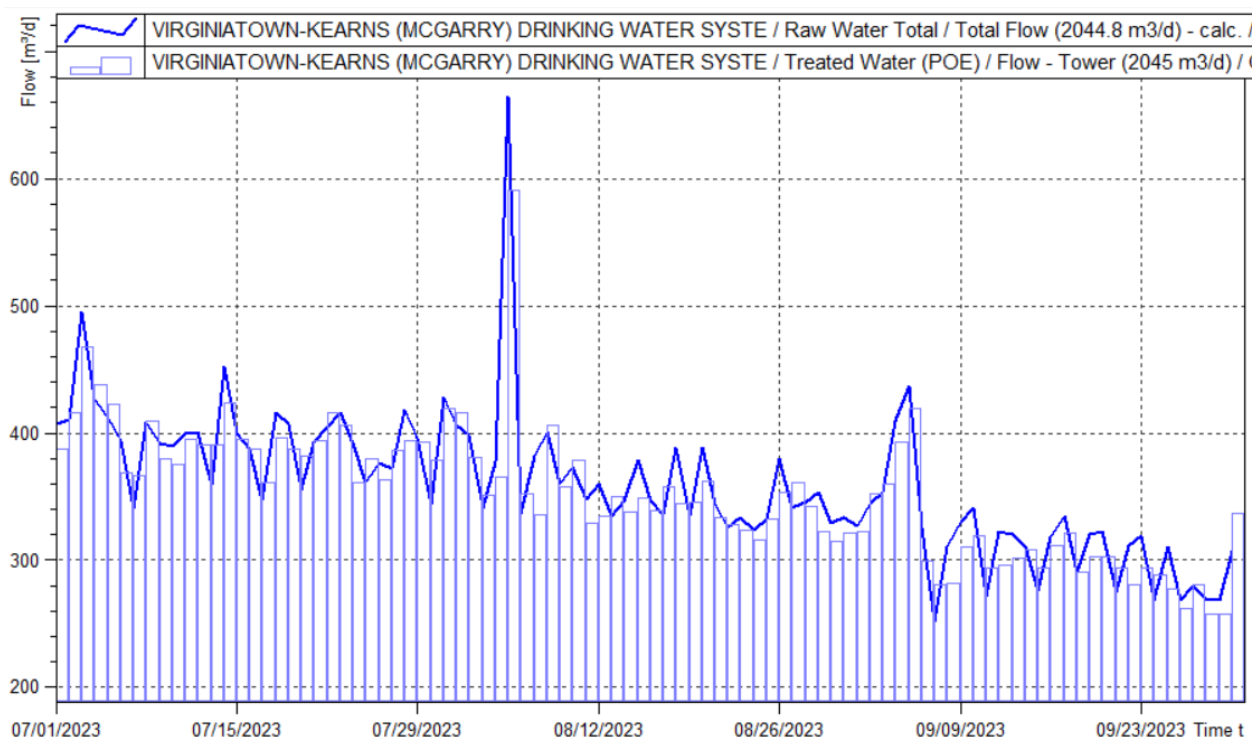
Year	Total Raw Flows (m ³)	Total Treated Flows (m ³)	Average Daily Treated Flow (m ³ /d)	Maximum Treated Flow (m ³ /d)	Maximum % of Rated Capacity (2045 m ³ /d)
Jan to Sept 2023	120,305	119,505	438	630	30.8
2022	194,073	167,244	458	1254	61.3
2021	145,878	142,720	391	789	38.6

MCGARRY WATER & WASTEWATER SYSTEMS QUARTERLY OPERATIONS REPORT

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)
2020	191,383	188,494	515	889	43.5
2019	233,524	230,717	632	991	45.5

Raw Flow versus Treated Flow

July 1 to September 30, 2023

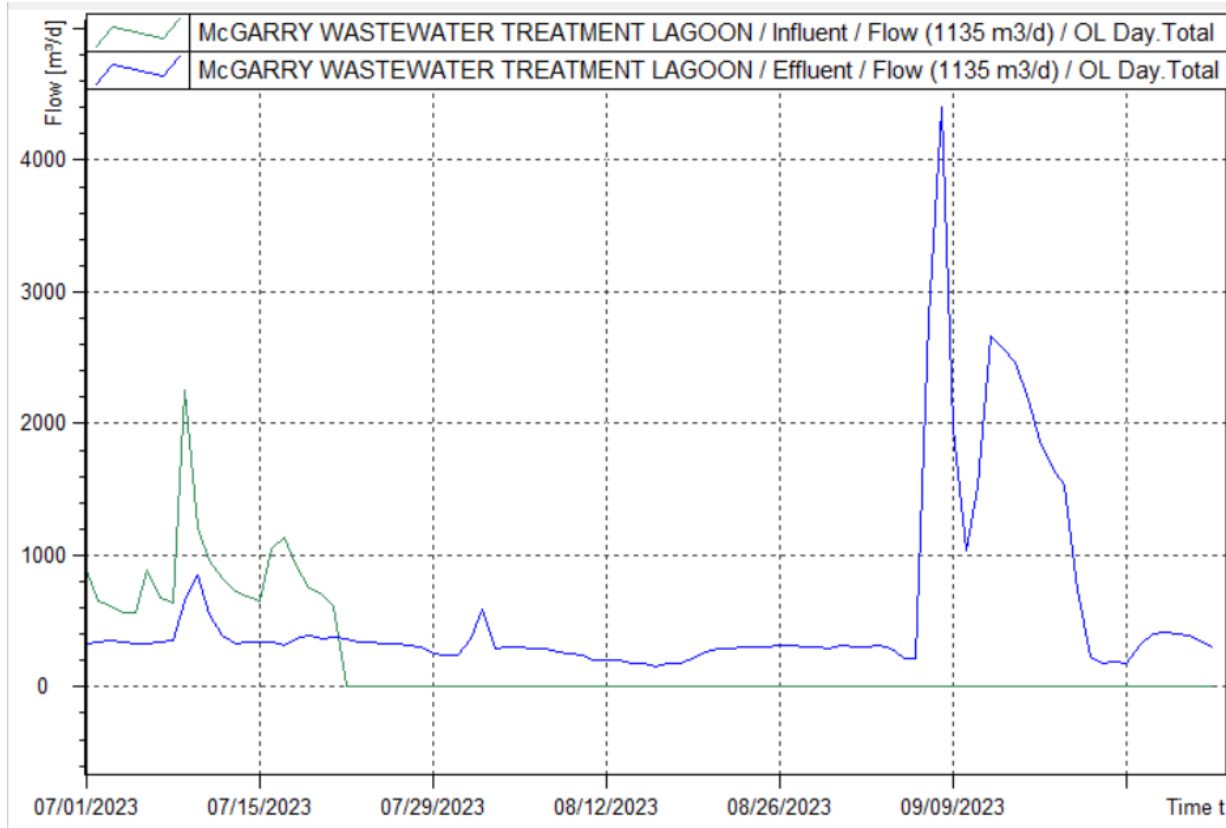


McGarry Lagoon

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 Sept 2023	120,305	119,505	438	630	30.8
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 versus Effluent Flow

July 1 to September 30, 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:
 - ✓ Facility Emergency Plan review
 - ✓ Safety Data Sheet review
 - ✓ Lone worker protection



APPENDIX A

Call Out Summary

Work Order Call Back Details Report

3524466: McGarry water main break

Asset:

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

Page Time:	08/05/2023 05:45 PM
Arrive time:	08/05/2023 06:00 PM
Leave time:	08/05/2023 10:00 PM
Finish Time:	08/05/2023 10:00 PM
Report Date:	8/9/23
Reported By:	Sean McCurdy
Supervisor:	

Site:	OCWASITE
Priority:	5
Work Type:	CALL
Status:	CLOSE
Classification	COMPLIANCE
GL Account:	MCGARY5085-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	OPERATOR	Sean McCurdy	00:00	04:00

Log		
Date	Created By	Description
8/9/23	Sean McCurdy	McGarry water main break
Low tower level alarm due to water main break. Notified moh and sac of break affecting 7 houses. Completed notice of adverse test results and issue resolution form and sent to moh, moe, pct, and township.		

Work Order Call Back Details Report

3572788: McGarry water main break

Asset:

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

Page Time:	09/04/2023 02:15 PM
Arrive time:	09/04/2023 02:30 PM
Leave time:	09/04/2023 06:30 PM
Finish Time:	09/04/2023 10:30 PM
Report Date:	9/11/23
Reported By:	Sean McCurdy
Supervisor:	

Site:	OCWASITE
Priority:	5
Work Type:	CALL
Status:	COMP
Classification	COMPLIANCE
GL Account:	MCGARY5085-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	OPERATOR	Sean McCurdy	00:00	08:00

Log		
Date	Created By	Description
9/11/23	Sean McCurdy	McGarry water main break
Notified of water main break affecting 7 houses and medical centre on Dorfman Street, south of Connell Avenue. Notified Health Unit and SAC by phone. Boil water advisory issued by health unit. Houses notified and provided with bottled water and access to fill containers.		



APPENDIX B

Quarterly Data Summaries

VIRGINIATOWN-KEARNS (McGarry) DRINKING WATER SYSTEM

Quarterly Data Report

July 1 to September 30, 2023



Virginiatown-Kearns Drinking Water System		July	August	September	Compliance
Flows					
Total Raw Flow - Max. Daily Volume	m ³ /d	495	665	437	Max. = 2044.8
Well 1 Flow - Maximum Daily Volume	m ³ /d	495	599	434	Max. = 2044.8
Well 1 Flow - Maximum Flow Rate	L/min	1,378	1,372	1,401	Max. = 1420
Well 2 Flow - Maximum Daily Volume	m ³ /d	67	66	69	Max. = 1500
Well 2 Flow - Maximum Flow Rate	L/min	1,104	1,099	1,101	Max. = 1105
Tower Flow - Maximum Daily Volume	m ³ /d	468	665	437	Max. = 2045
Raw Water					
Well 1 Total Coliforms - Maximum	c/100mL	0	0	0	N/A
Well 1 <i>E.coli</i> - Maximum	c/100mL	0	0	0	N/A
Well 2 Total Coliforms - Maximum	c/100mL	0	0	0	N/A
Well 2 <i>E.coli</i> - Maximum	c/100mL	0	0	0	N/A
Well 1 Turbidity - Maximum	NTU	0.36	0.30	0.30	N/A
Well 2 Turbidity - Maximum	NTU	0.52	0.82	3.39	N/A
Treated Water					
Free Chlorine Residual - Minimum	mg/L	0.87	0.78	0.66	Min. = 0.10 (CT) ¹
Total Coliforms - Maximum	c/100mL	0	0	0	Max. = 0
<i>E. coli</i> - Maximum	c/100mL	0	0	0	Max. = 0
Nitrate	mg/L	<0.1	-	-	Max. = 10
Nitrite	mg/L	<0.01	-	-	Max. = 1
Distribution Water					
Free Chlorine Residual - Minimum	mg/L	0.58	0.49	0.40	Min. = 0.05
Total Coliforms - Maximum	c/100mL	0	0	0	Max. = 0
<i>E.coli</i> - Maximum	c/100mL	0	0	0	Max. = 0
Trihalomethanes (THMs)	µg/L	22	-	-	N/A
THM four quarter average	ug/L	7.45			Max. = 100 µg/L ²

VIRGINIATOWN-KEARNS (McGarry) DRINKING WATER SYSTEM

Quarterly Data Report

July 1 to September 30, 2023



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	-	-	-	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 and September of each year.

McGARRY WASTEWATER SYSTEM

Quarterly Data Report

July 1 to September 30, 2023



McGarry Waste Water System		July	August	September	Compliance
Flows					
Influent – Average Daily Flow	m ³ /d	579	No reading	No reading	Average = 1135
Influent – Maximum Daily Flow	m ³ /d	2,257	No reading	No reading	N/A
Effluent – Average Daily Flow	m ³ /d	367	274	1,079	Average = 1135
Effluent – Maximum Daily Flow	m ³ /d	853	589	4,401	N/A
Influent					
BOD ₅ – Average	mg/L	37	19	8	N/A
Total Kjeldahl Nitrogen (TKN) – Average	mg/L	7	2.95	1.5	N/A
Total Phosphorus (TP) – Average	mg/L	2.39	0.482	0.375	N/A
Total Suspended Solids (TSS) – Average	mg/L	180	19	6	N/A
Effluent					
cBOD ₅ – Average	mg/L	2.6	2.95	<1.1	Monthly Average = 25
cBOD ₅ Loading	kg/d	0.837	0.708	<2.48	Monthly Average = 28.4
TSS – Average	mg/L	<3.6	<11.4	<1.25	Monthly Average = 25
TSS Loading	kg/d	<1.28	<2.45	<2.3	Monthly Average = 28.4
TP – Average	mg/L	0.23	0.41	0.27	Monthly Average = 0.5
TP Loading	kg/d	0.074	0.093	0.430	Monthly Average = 0.6
Total Ammonia Nitrogen (TAN) – Average	mg/L	2.55	0.77	<0.15	Monthly Average = 5
TAN Loading	kg/d	0.840	0.210	<0.387	Monthly Average = 5.7