Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss Lakeshore Drinking Water System Operations Report Second Quarter 2025

Ontario Clean Water Agency, Midwest Region
Paul Sherban, Sr. Operations Manager,
Huron-Kinloss Cluster
Date: August 26, 2025

Facility Description

Facility Name:	Lakeshore Drinking Water System
Regional Manager:	Sam Smith - (519) 377-1540
Senior Operations Manager:	Paul Sherban - (226) 378-8986
Business Development Manager:	Susan Budden - (519) 318-3271
Facility Type:	Municipal
Classification:	Class 3
Drinking Water System Category:	Large Municipal
Residential Title Holder:	Municipality

Service Information

The Lakeshore Drinking Water System (Lakeshore DWS) is owned by the Township of Huron-Kinloss and the Ontario Clean Water Agency is the Operating Authority.

The Lakeshore DWS supply consists of five drilled bedrock wells. It is characterized as a secure groundwater system. There are four well houses that deliver the potable water to the Lakeshore communities, extending from Point Clark in the south, to Huronville in the north, and to the Courtney/Amberley Beach subdivision in the Township of Ashfield-Colborne-Wawanosh. The Township of Huron-Kinloss has an agreement with The Township of Ashfield-Colborne-Wawanosh, where the Courtney/Amberley Beach Subdivision is treated as part of the Lakeshore Drinking Water System. The well houses are located in Point Clark, Blairs Grove, Huronville South, and Murdoch Glen. The Lakeshore Drinking Water System services approximately 2441 service connections.

CLIENT CONNECTION MONTHLY CLIENT REPORT

Facility Name: Lakeshore Drinking Water System
ORG#: 1779

SECTION 1: COMPLIANCE SUMMARY

Lakeshore DWS is sampled in accordance with O. Reg. 170/03. Detailed sample results for each DWS can be found within the report. Table 1 provides a summary of compliance and sampling for the first quarter (Q1).

	Lakeshore DWS			
	Q1	**Q2**	**Q3**	**Q4**
# Non-compliances				
# AWQIs				
# RW Microbiological Samples	58	49		
# TW Microbiological Samples	45	42		
# DW Microbiological Samples	52	47		
# DW Free Chlorine Residuals	93	87		

FIRST QUARTER:

The Lakeshore Drinking Water System performed well during the first quarter. There were no compliance issues reported during the first quarter.

SECOND QUARTER:

The Lakeshore Drinking Water System performed well during the second quarter. There were no compliance issues reported during the second quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

There were no MECP or MOL inspections conducted during the first quarter.

SECOND QUARTER:

There were no MECP or MOL inspections conducted during the second quarter.

SECTION 3: QEMS SUMMARY

The Drinking Water Quality Management Standard (DWQMS) sets out a framework for operating authorities and owners of municipal drinking water systems to develop a quality management system in Ontario. To meet the requirements of the DWQMS, OCWA has developed and maintained a Quality and Environmental Management System (QEMS). OCWA's QEMS is documented in the Township of Huron-Kinloss Operational Plan which supports the relevant facilities in maintaining compliance with applicable environmental laws.

FIRST QUARTER:

The QEMS involves continual improvement whereby action items are generated from performing annual audits of the system. OCWA has received transitional Limited Scope Accreditation to operate the Huron-Kinloss DWS. The external audit was completed on December 19, 2024 by Intertek. There were no non-conformances and two opportunities for improvement (OFIs) identified in the report. These OFIs will be addressed through the Management Review process. An internal audit and management review will be scheduled in May, 2025 and full scope accreditation will be applied for after this date. Tentatively the external audits are scheduled for June 2 and June 26 (onsite).

SECOND QUARTER

The management review was completed on May 8, 2025 and the internal audit was completed June 2, 2025. The external audit was completed June 17, 2025 by Intertek. There were no non-conformances and five opportunities for improvement (OFIs) identified in the report. The onsite external audit is scheduled for July 3, 2025 by Intertek.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

Flow Monitoring

The raw flow is measured at each well in the Lakeshore Drinking Water System (DWS). The average and maximum daily flow compared against the Permit to Take Water (PTTW) daily limits are identified in Figure 1 for Murdoch Glenn, Figure 2 for Point Clark, Figure 3 for Blairs Grove and Figure 4 for Huronville South.

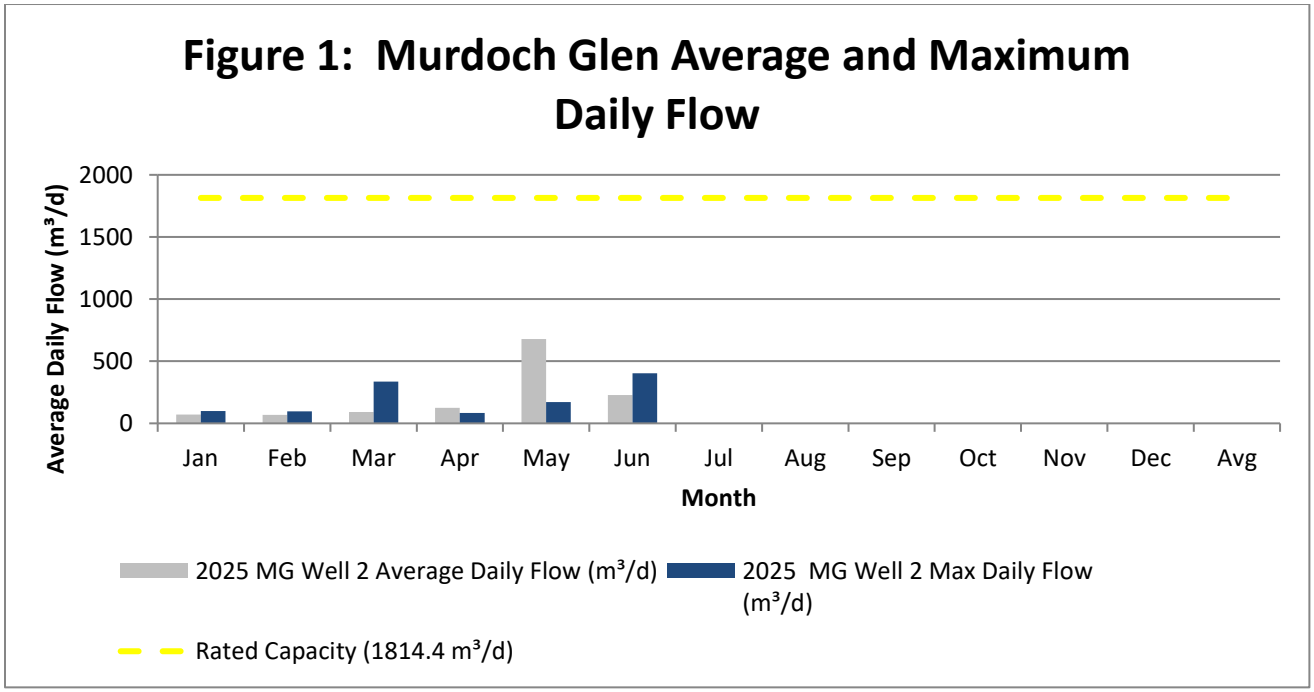


Figure 2: Point Clark Average and Maximum Daily Flow

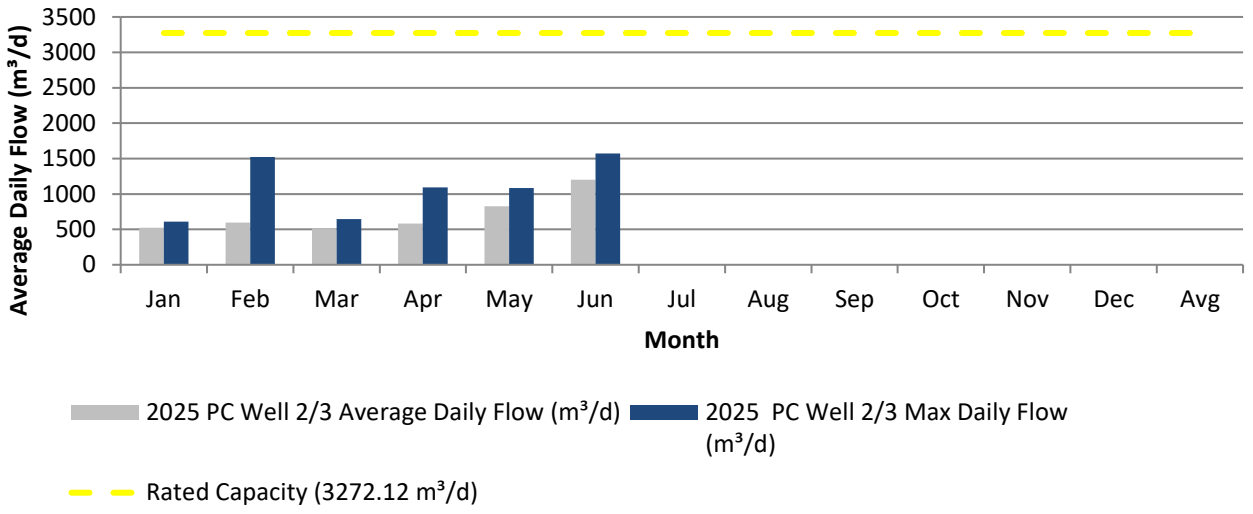
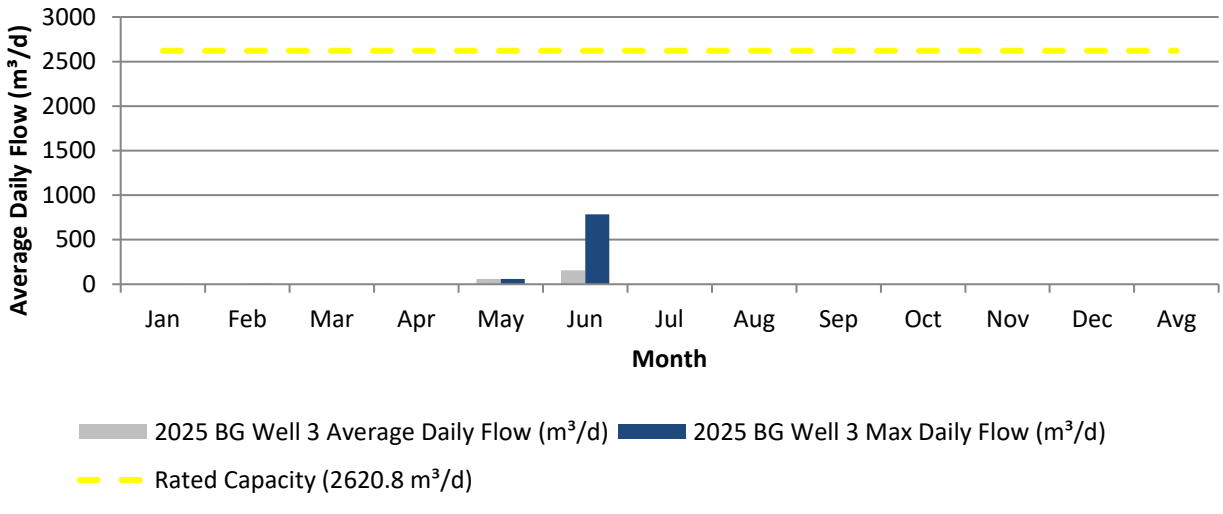
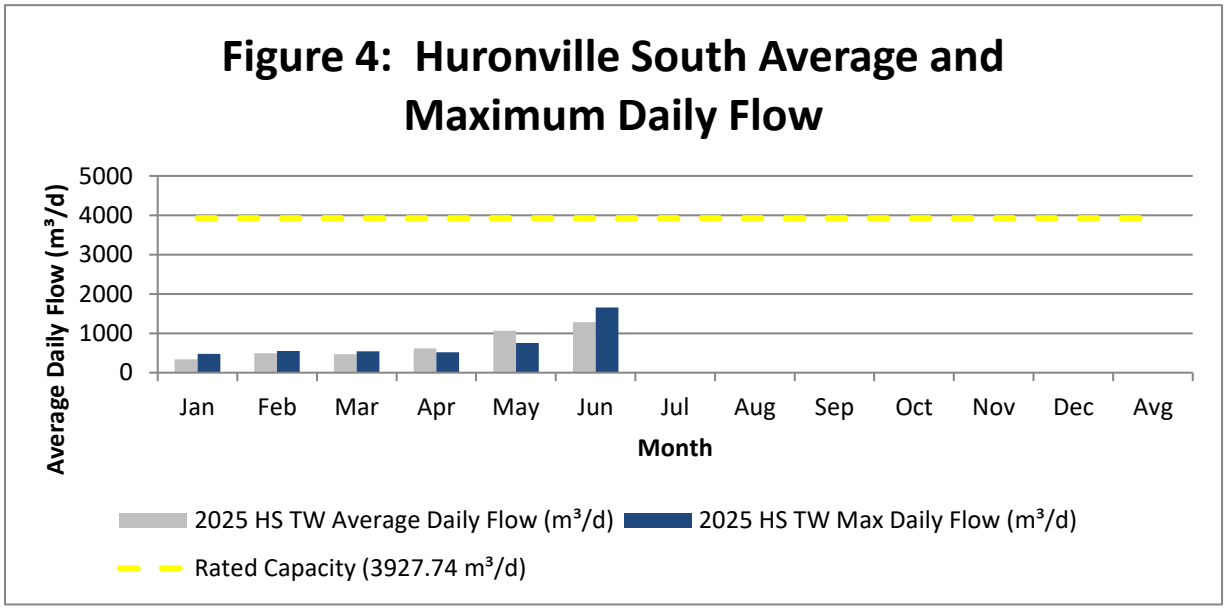


Figure 3: Blairs Grove Average and Maximum Daily Flow





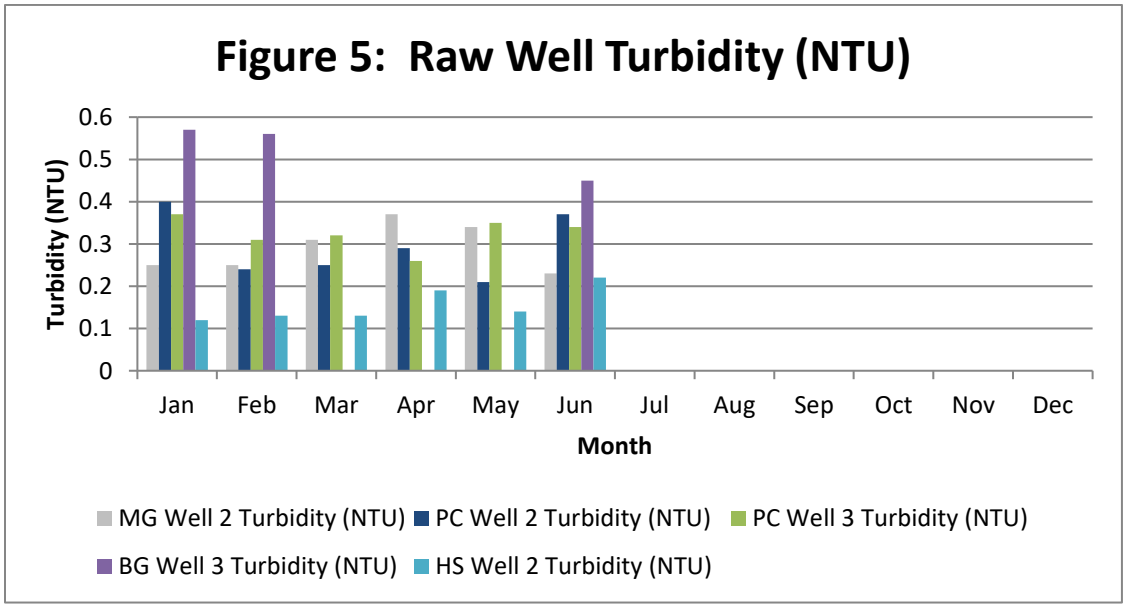
Raw Water Monitoring

Raw water is sampled on a weekly basis and tested for E. coli and Total Coliforms. Turbidity is sampled monthly to meet regulatory requirements. There is no regulatory limit for raw water samples; however, it is expected that Total Coliform and E. coli concentrations are zero for the groundwater source. Table 1 identifies the number of samples taken each quarter along with the range of results.

Table 1: Raw Microbiological Results

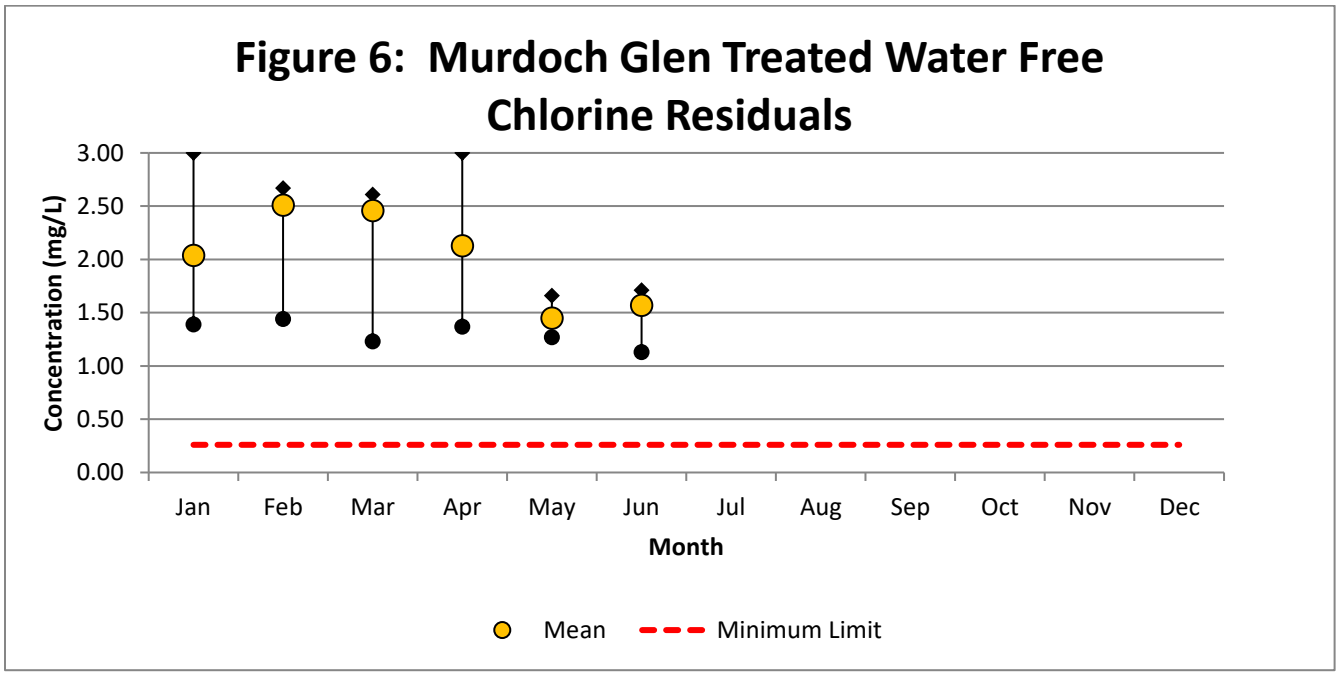
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	58	0.00 - 0.00	0.00 - 0.00
Q2	49	0.00 - 0.00	0.00 - 0.00
Q3			
Q4			

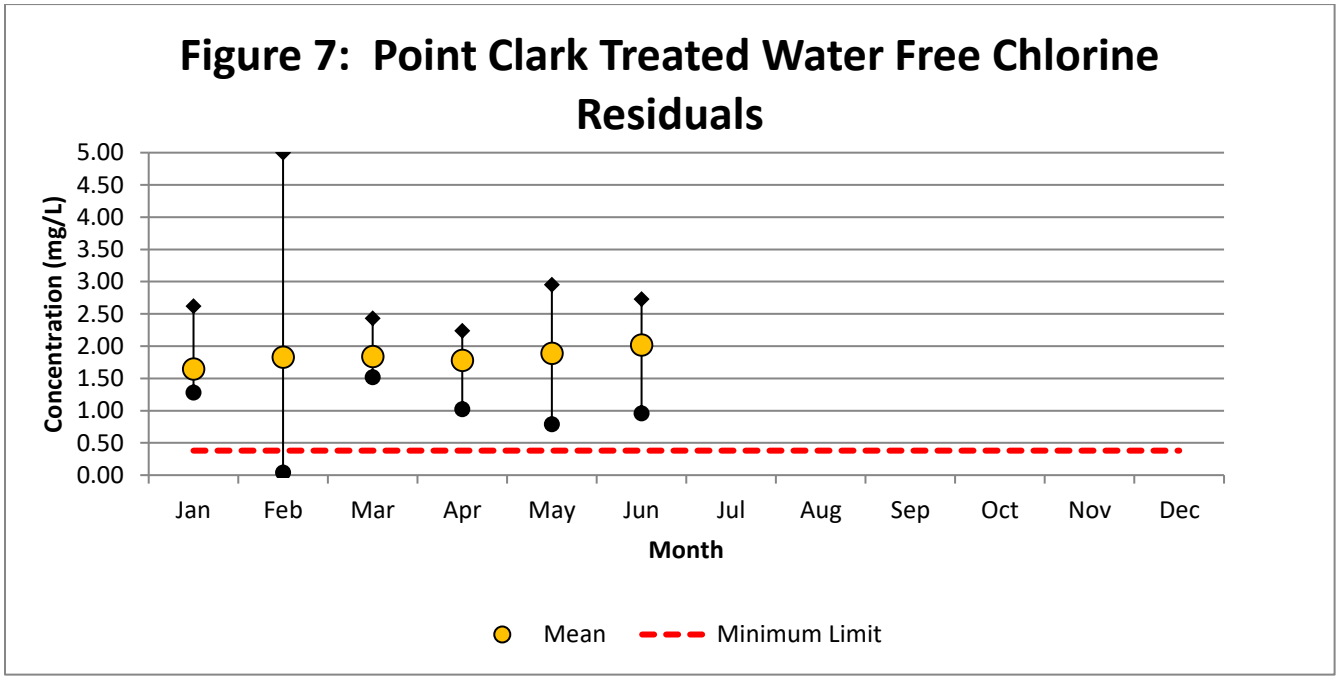
Turbidity results should be less than 1 ntu for the raw water, with an aesthetic objective at the point of consumption to be less than 5 ntu. Refer to Figure 5 for a summary of turbidity readings recorded for each well.

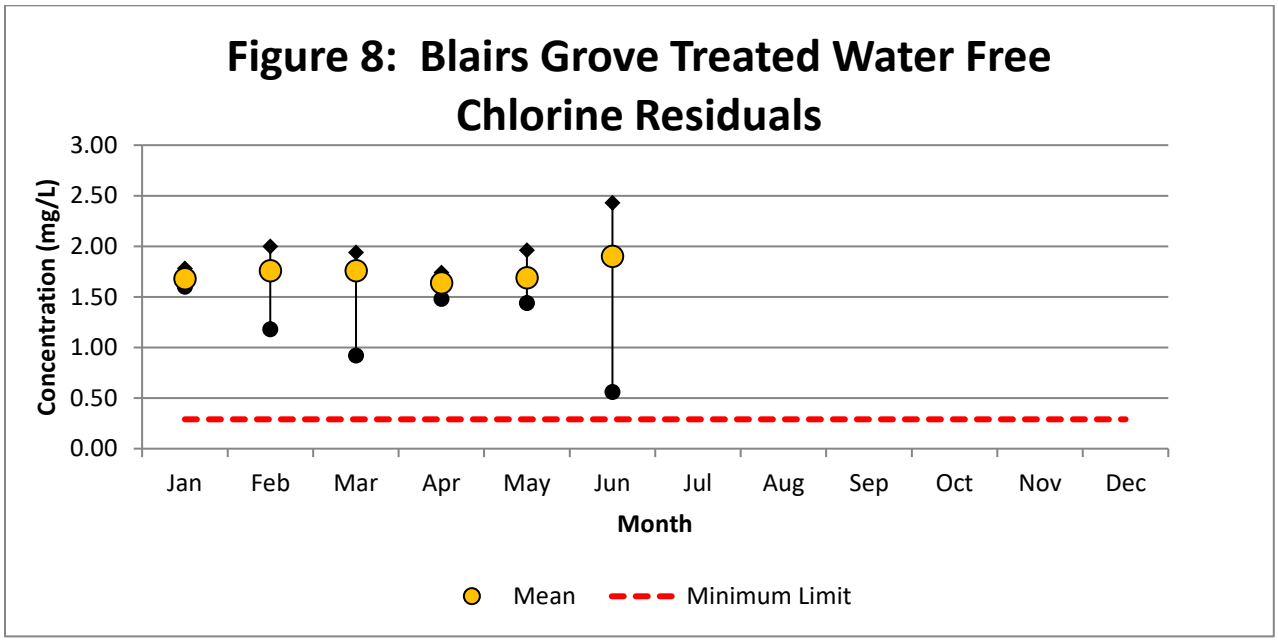


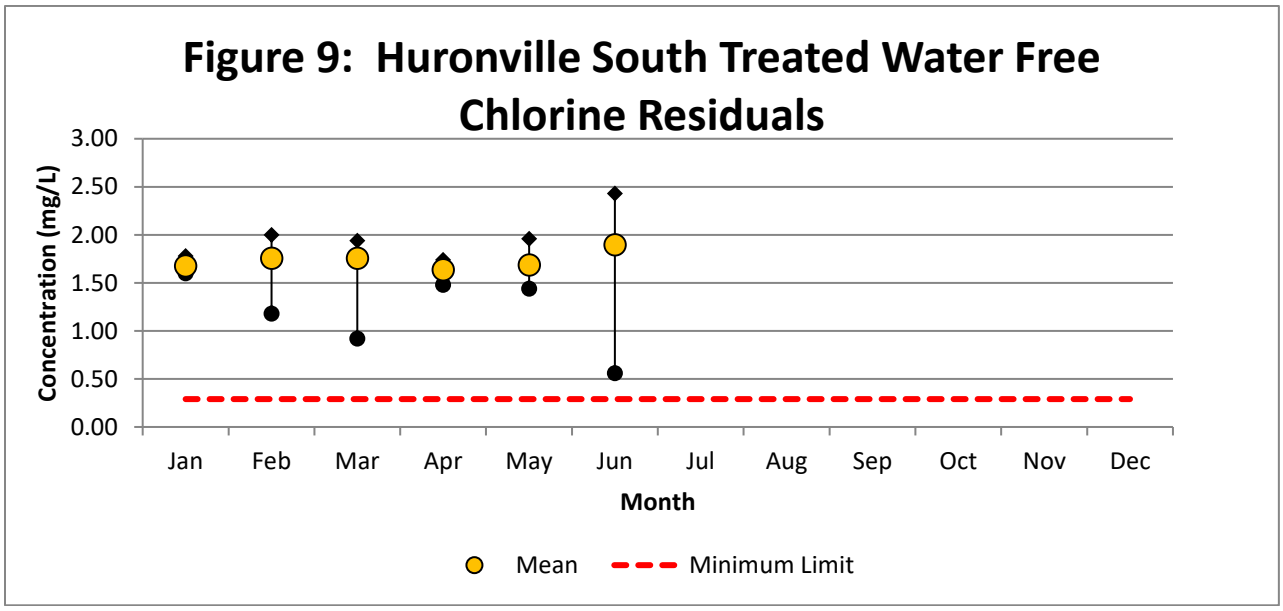
Treated Water Monitoring

The treated water is analyzed for free chlorine residual in order to confirm primary disinfection requirements of a minimum free chlorine residual of 0.29 mg/L for Blairs Grove, 0.42 mg/L for Huronville South, 0.38 mg/L for Point Clark and 0.26 mg/L for Murdoch Glen. A chlorine analyzer continuously monitors the free chlorine residual at a minimum frequency of every 5 minutes. Figures 6, 7, 8 and 9 identify the monthly minimum and maximum values for the treated water free chlorine residuals at all the wells. On February 9, 2025, the minimum residual was not met in the Point Clark system due to a flow detection device on the sodium hypochlorite system (this has since been replaced). However, CT calculations were completed, and it was determined that compliance was met.









On a quarterly basis, the treated water is tested for nitrates and nitrites, which have limits of 10 mg/L and 1 mg/L, respectively. All sample results met regulatory requirements, refer to Table 2.

Table 2: Nitrate and Nitrite Results

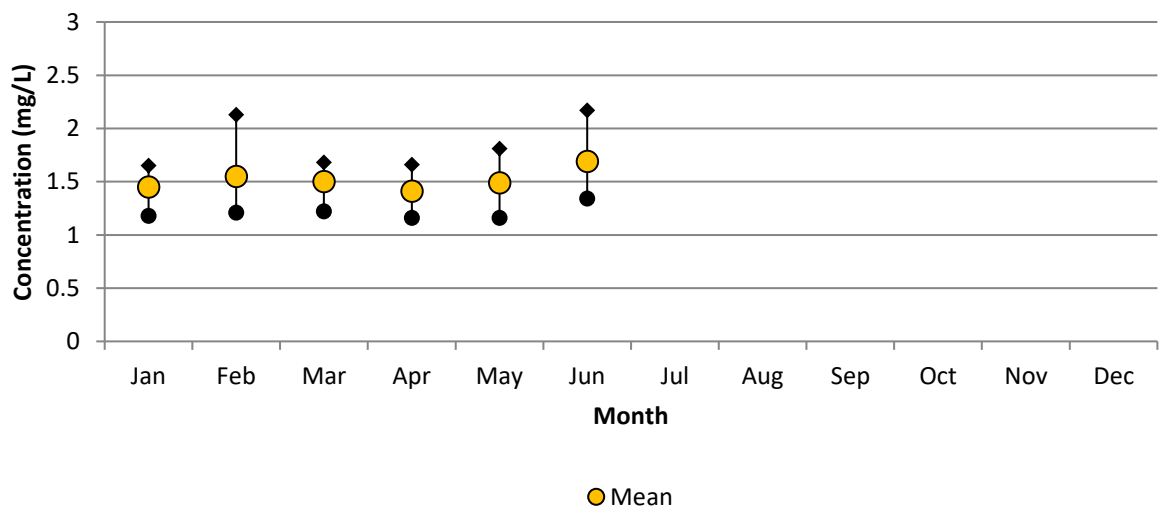
		Point Clark		Blairs Grove		Murdoch Glen		Huronville South	
	# Samples	Nitrate(mg/L)	Nitrite (mg/L)	Nitrate(mg/L)	Nitrite (mg/L)	Nitrate(mg/L)	Nitrite (mg/L)	Nitrate(mg/L)	Nitrite (mg/L)
Q1	4	0.006	0.003	0.006	0.003	0.006	0.003	0.006	0.003
Q2	4	0.006	0.003	0.006	0.003	0.006	0.003	0.006	0.003
Q3									
Q4									

Sampling for sodium and fluoride occurs every 60 months in the Lakeshore Drinking Water System. Organic and inorganic parameters are required to be sampled for every 36 months. The last sodium samples were collected in 2021, therefore are required in 2026. Fluoride samples were last collected in 2022 and are required in 2027. All four Well Houses exceeded the MAC for fluoride due to naturally occurring fluoride in the aquifers. These exceedances were reported to the Health Unit and the Ministry's Spills Action Center (SAC). All four Well Houses exceeded the sodium MAC of 20mg/L and were reported to the Health Unit and the Ministry's Spills Action Center (SAC). Organic and inorganic parameters were last sampled in 2024 and are therefore not due until 2027. All organic/inorganic sample results with the exception of Point Clark arsenic met regulatory limits.

Distribution System Monitoring

Free chlorine residuals are monitored throughout the distribution system in order to ensure adequate secondary disinfection is provided. Figure 10 provides the minimum, maximum and average readings of free chlorine residuals taken as grab samples throughout the distribution system. All results have met regulatory requirements.

Figure 10: Distribution Free Chlorine Residuals



The distribution system is sampled on a weekly basis at various locations and tested for E. coli, Total Coliforms and heterotrophic plate count (HPC) to meet regulatory requirements. The regulatory limit for Total Coliform and E. coli is zero. Heterotrophic plate count (HPC) does not have a limit as it is an operational guide to initiate an action plan if results are continuously high. Table 3 identifies the number of samples taken each month along with the range of results.

Table 3: Microbiological Sample Results

	# Samples	Total Coliform Range (cfu/100mL)	# AWQI	E. coli Range (cfu/100mL)	# AWQI	# Samples	HPC Range (cfu/100mL)
January	16	0.00 - 0.00	0	0.00 - 0.00	0	16	<10 - 30
February	16	0.00 - 0.00	0	0.00 - 0.00	0	16	<10 - <10
March	20	0.00 - 0.00	0	0.00 - 0.00	0	20	<10 - <10

April	15	0.00 - 0.00	0	0.00 - 0.00	0	15	<10 - <10
May	16	0.00 - 0.00	0	0.00 - 0.00	0	16	<10 - <10
June	16	0.00 - 0.00	0	0.00 - 0.00	0	16	<10 - <10
July							
August							
September							
October							
November							
December							

On a quarterly basis, disinfection by-products are monitored for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Table 4 provides the running average quarterly results compared against the running average limits. All results are within regulatory requirements.

Table 4: Disinfection By-product Results

	THM Limit (µg/L)	THM Result (µg/L)	HAA Limit (µg/L)	HAA Results (µg/L)
Aug 2024	-	9.6	-	5.3
Nov 2024	-	15	-	5.3
Feb 2025	-	11.84	-	5.3
Apr 2025	-	12.98	-	5.3
Running Average	100	12.35	80	5.3

Schedule 15.1 in O. Reg. 170/03 requires sampling for lead, alkalinity and pH. This is required twice per year. Table 5 shows the results for 2025 Schedule 15.1 sampling. All sample results met regulatory limits for lead (10 ug/L) and objective guidelines for pH (6.5-8.5) and alkalinity (30-500 mg/L).

Table 5: Lead Sampling Summary

Date	# Samples	pH result range	Alkalinity result range (mg/L)	Lead result range (ug/L)
March 2025	10	7.18 - 7.94	161.0 - 189.0	0.1 - 0.56
July 2025	-	-	-	-

SECTION 5: OCCUPATIONAL HEALTH & SAFETY

FIRST QUARTER

There were no health and safety issues identified during the first quarter.

SECOND QUARTER

There were no health and safety issues identified during the second quarter.

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

Routine facility checks, meter readings, equipment inspections, process operations, generator testing, in house lab analysis and sample collection has been completed as required. Additional notable activities included:

- Cleaned up of facilities
- Tagging assets

SECOND QUARTER

April 03 – On-site at Point Clark to replace lines on flow control valve for HLP1
April 10 – On-site at Point Clark to repair limit switch on HLP1
April 15 – Electrician on-site at Point Clark to inspect electrical panel on HLP1
May 28 – Started the process to get Blairs Grove reservoir back online
June 2 – On-site at all well houses for annual calibrations of analyzers, flow meters and Miltronics
June 2 – Electrician on-site at Huronville South to replace Tacmina flow sensor on chlorine panel
June 9 – Electrician on-site to fix electrical issue with wellhouse interior lights
June 10 – Electrician on-site at Murdoch Glen to replace Tacmina flow sensor on chlorine panel
June 13 – Electrician on-site at Huronville South to replace wiring in the motor of HLP1
June 22 – Electrician on-site at Point Clark to trouble shoot issue with HLP1
June 24 – On-site to rebuild RW Singer valve
June 26 – Replaced chlorine pump 1 at Point Calrk

Maintenance and capital work is captured in the workplace management system.

Table 6. Summary of Repairs and Service Shutoffs

	# of Locates	# of Water Service On/Off	# of Curb stop Repairs	# of Watermain Repairs	# of Service Repairs	# Water Meter Reads Completed
January	10	3	1	0	0	n/a
February	8	2	0	0	0	n/a
March	21	1	0	0	0	Completed
April	71	10	0	0	0	n/a
May	61	7	0	0	0	n/a
June	38	5	0	0	4	Completed
July						
August						
September						
October						
November						
December						
TOTALS						

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

- Point Clark HLP 1 fault
- Well Pump failed
- Murdoch Glen Call for HLP fail
- chlorine pump 1 and 2 failed alarms
- Point Clark HLP 1 fail
- Chlorine pump 3 and pump 4 failed alarm

SECOND QUARTER:

April 07 – Point Clark chlorine pump 2 fault alarm
April 07 – Point Clark power fail
April 10 – Point Clark HLP1 failed to stop
April 27 – Point Clark HLP1 pump fault
May 18 – Murdoch Glen Well flow hihi
May 18 – Huronville South chlorine pump 2 fail
May 24 – Point Clark lo chlorine and chlorine pump 2 fail
May 24 – Point Clark lo chlorine
May 25 – All sites power fail
May 29 – Huronville South lo chlorine
May 31 – Huronville South chlorine no flow
June 1 – Huronville South chlorine no flow
June 2 – Huronville South chlorine no flow and chlorine pump fail
June 2 – Point Clark lo chlorine alarm
June 7 – Point Clark chlorine pump 1 and pump 2 fault
June 7-9– Murdoch Glen well flow hi
June 9 – Murdoch Glen chlorine pump fail
June 13 – Huronville South HLP1 uncommand stop alarm
June 16 – Blairs Grove well lo flow
June 16 – Huronville South high POE pressure
June 21 – Murdoch Glen HLP1 uncommand stop and fail
June 21 – Point Clark well pump 2 uncommand stop and fail
June 26 – Point Clark chlorine pump 1 no flow
June 30 – Murdoch Glen low pressure

Table 5. Summary of Alarm Response

	Lakeshore DWS
Q1	7
Q2	26
Q3	
Q4	
TOTAL	33

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

There were two community complaints received in the first quarter

- 752 Lakerange Drive for low pressure, flushed hydrants along Lakerange and the pressure seemed to fluctuate from normal to low. The issue was suspected to be due to a PRV at the Murdoch Glen Wellhouse and adjustmetns were made. Spoke with the homeowner and the issue seemed to be rectified.
- Homeowner had issues with discolored water. An operator flushed a hydrant near the home and instructed the homeowner to flush taps inside their home. After flushing the hydrant and the lines inside the home the issue was resolved.

SECOND QUARTER:

Two community complaints were received during the second quarter, both in June:

- 106 Lurgan Lane for discolored water, increased sodium silicate dosage at Blairs Grove and flushed lines
- 207 Brown st for low pressure, homeowners pressure was tested and was 70 psi

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss

Lucknow Drinking Water System

Operations Report

Second Quarter 2025

Ontario Clean Water Agency, Midwest Region
Paul Sherban, Sr. Operations Manager,
Huron-Kinloss Cluster
Date: August 26, 2025

Facility Description

Facility Name:	Lucknow Drinking Water System
Regional Manager:	Sam Smith - (519) 377-1540
Senior Operations Manager:	Paul Sherban - (226) 378-8986
Business Development Manager:	Susan Budden - (519) 318-3271
Facility Type:	Municipal
Classification:	Class 2
Drinking Water System Category:	Large Municipal
Residential Title Holder:	Municipality

Service Information

The Corporation of the Township of Huron-Kinloss is the Owner of the Lucknow Drinking Water System. The Ontario Clean Water Agency (OCWA) Midwest Region is the Operating Authority for the Lucknow Drinking Water System.

The Lucknow DWS is characterized as a secure groundwater system consisting of two (2) bedrock wells supplying to the Village of Lucknow and ten (10) Lucknow South properties in the Township of Ashfield-Colborne-Wawanosh in Huron County. The Township of Huron-Kinloss has an agreement with The Township of Ashfield-Colborne-Wawanosh, where the Lucknow South distribution system is treated as part of the Lucknow Drinking Water System (By-Law 60-2014). Each well supply is located within its own pumphouse in the Village of Lucknow.The Lucknow drinking water system supplies water to residential, commercial, and industrial development. This water system also includes an elevated storage tank.

CLIENT CONNECTION MONTHLY CLIENT REPORT

Facility Name: Lucknow Drinking Water System
ORG#: 1783

SECTION 1: COMPLIANCE SUMMARY

The Lucknow DWS is sampled in accordance with O. Reg. 170/03. Detailed sample results for each DWS can be found within the report. Table 1 provides a summary of compliance and sampling in 2025 so far.

	Lucknow DWS			
	Q1	**Q2**	**Q3**	**Q4**
# Non-compliances	1			
# AWQIs				
# RW Microbiological Samples	24	26		
# TW Microbiological Samples	24	26		
# DW Microbiological Samples	37	38		
# DW Free Chlorine Residuals	91	91		

FIRST QUARTER:

The Lucknow Drinking Water System has overall performed well during the first quarter however, there was one non-compliance reported. On March 12th, 2025 a Notification of Non-compliance was submitted to the MECP. This non-compliance was reported due to the system not meeting the requirements specified in O. Reg 170/03 Schedule 6-5 (1)(i). This was due to the CL-17 analyzer faulting and thus not meeting continuous monitoring requirements. The issue was resolved by reducing the pressure on the analyzer inlet sample line and replacing the tubing in the analyzer.

SECOND QUARTER:

The Lucknow Drinking Water System performed well during the second there. There were no compliance issues reported during the second quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

There were no MECP or MOL inspections conducted during the first quarter.

SECOND QUARTER:

On June 12th, Provincial Officer Robert Graham conducted a routine, announced inspection of the system. The report has not yet been received.

SECTION 3: QEMS SUMMARY

The Drinking Water Quality Management Standard (DWQMS) sets out a framework for operating authorities and owners of municipal drinking water systems to develop a quality management system in Ontario. To meet the requirements of the DWQMS, OCWA has developed and maintained a Quality and Environmental Management System (QEMS). OCWA's QEMS is documented in the Township of Huron-Kinloss Operational Plan which supports the relevant facilities in maintaining compliance with applicable environmental laws

FIRST QUARTER:

The QEMS involves continual improvement whereby action items are generated from performing annual audits of the system. OCWA has received transitional Limited Scope Accreditation to operate the Huron-Kinloss DWS. The external audit was completed on December 19, 2024 by Intertek. There were no non-conformances and two opportunities for improvement (OFIs) identified in the report. These OFIs will be addressed through the Management Review process. An internal audit and management review will be scheduled in May, 2025 and full scope accreditation will be applied for after this date. Tentatively the external audits scheduled for June 2 and June 26 (onsite).

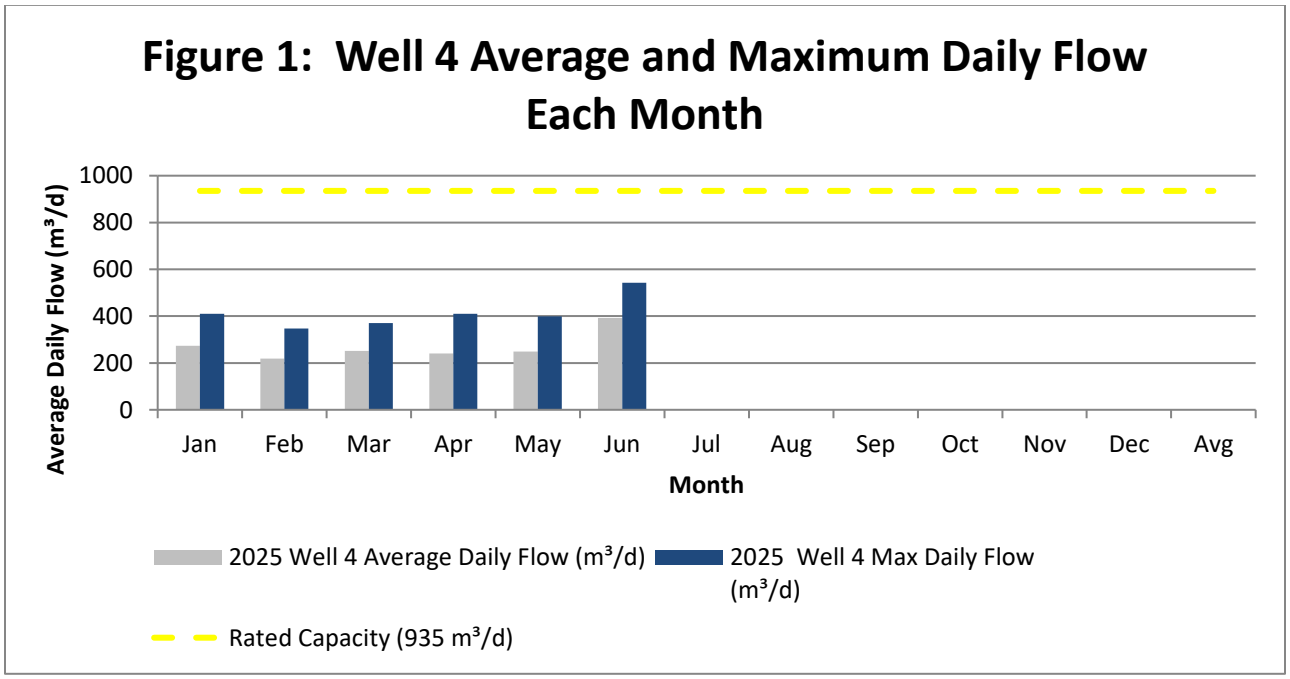
SECOND QUARTER

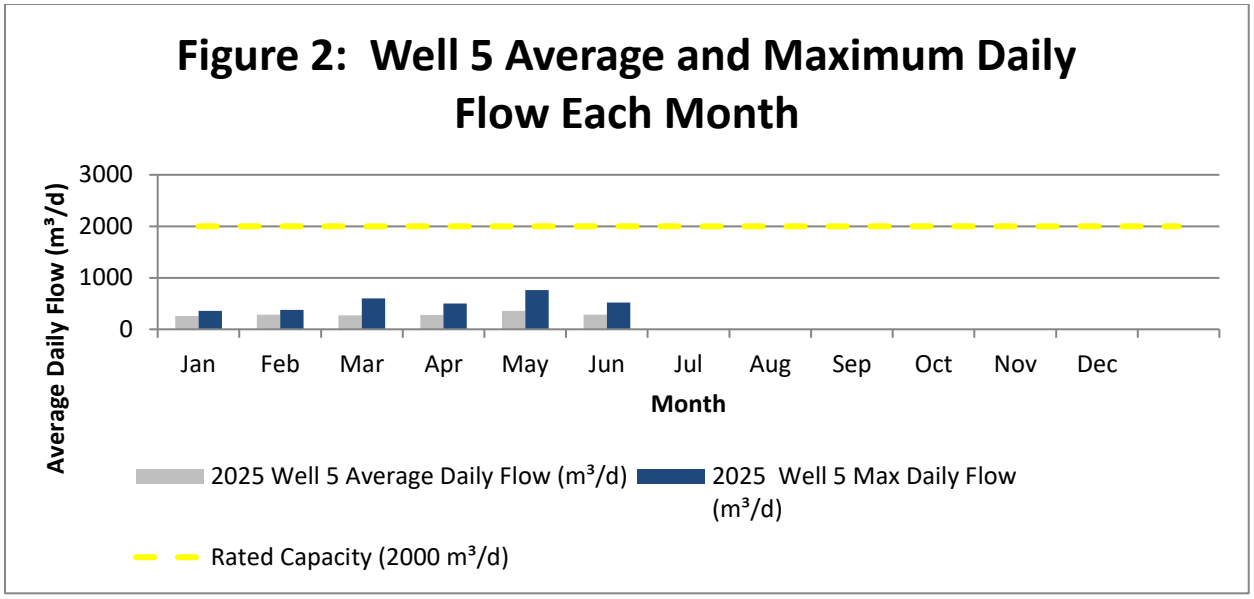
The management review was completed on May 8, 2025 and the internal audit was completed June 2, 2025. The external audit was completed June 17, 2025 by Intertek. There were no non-conformances and five opportunities for improvement (OFIs) identified in the report. The onsite external audit is scheduled for July 3, 2025 by Intertek.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

Flow Monitoring

The raw flow is measured at Well 4 and 5 in Lucknow. The average and maximum daily flow compared against the Municipal Drinking Water License rated capacity and the Permit to Take Water (PTTW) daily limits are identified in Figure 1 for Well 4 and Figure 2 for Well 5.





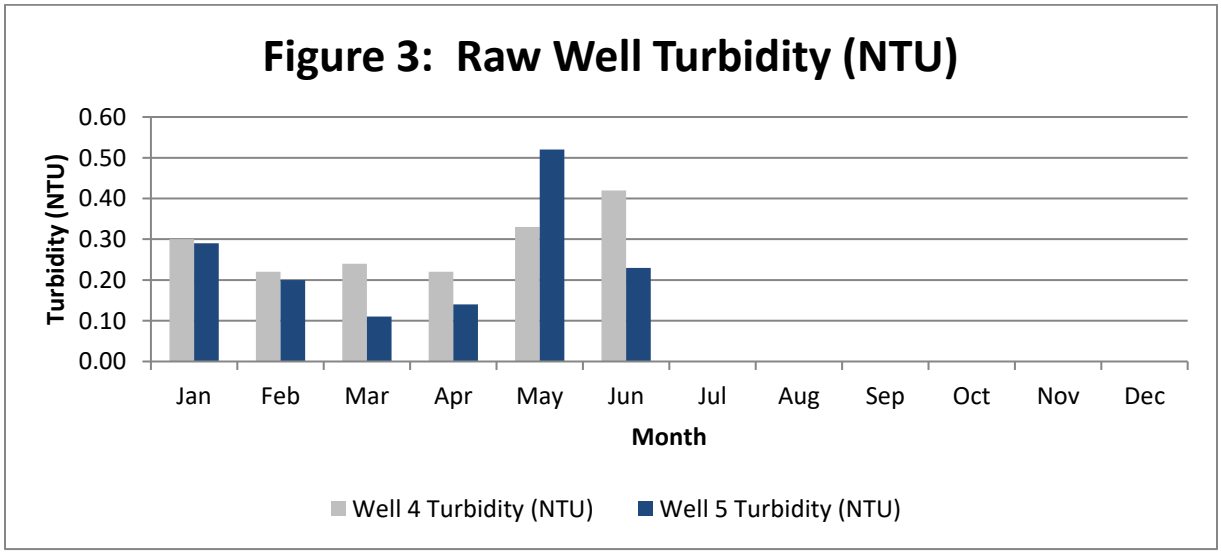
Raw Water Monitoring

Raw water is sampled on a weekly basis and tested for E. coli, Total Coliforms. Turbidity is sampled monthly to meet regulatory requirements. There is no regulatory limit for raw water samples; however, it is expected that concentrations for Total Coliform and E. coli are zero for the groundwater source. Table 1 identifies the number of samples taken each quarter along with the range of results.

Table 1: Raw Microbiological Results

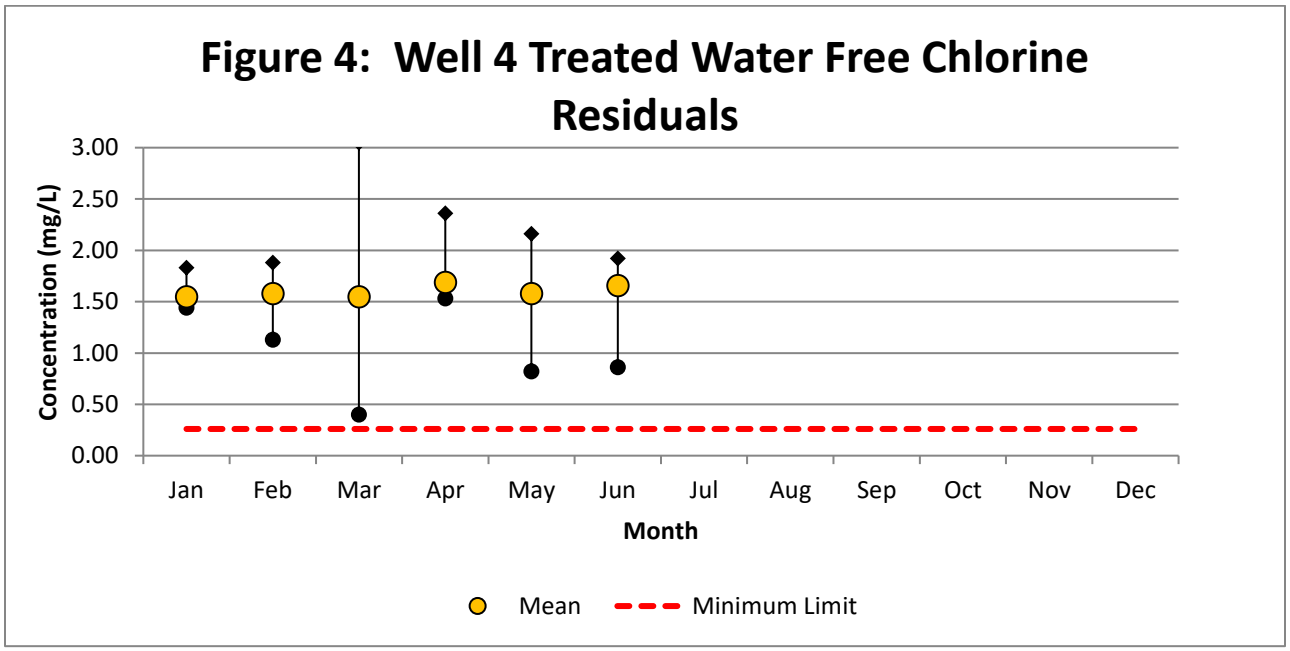
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	24	0.00 - 0.00	0.00 - 0.00
Q2	28	0.00 - 0.00	0.00 - 0.00
Q3			
Q4			

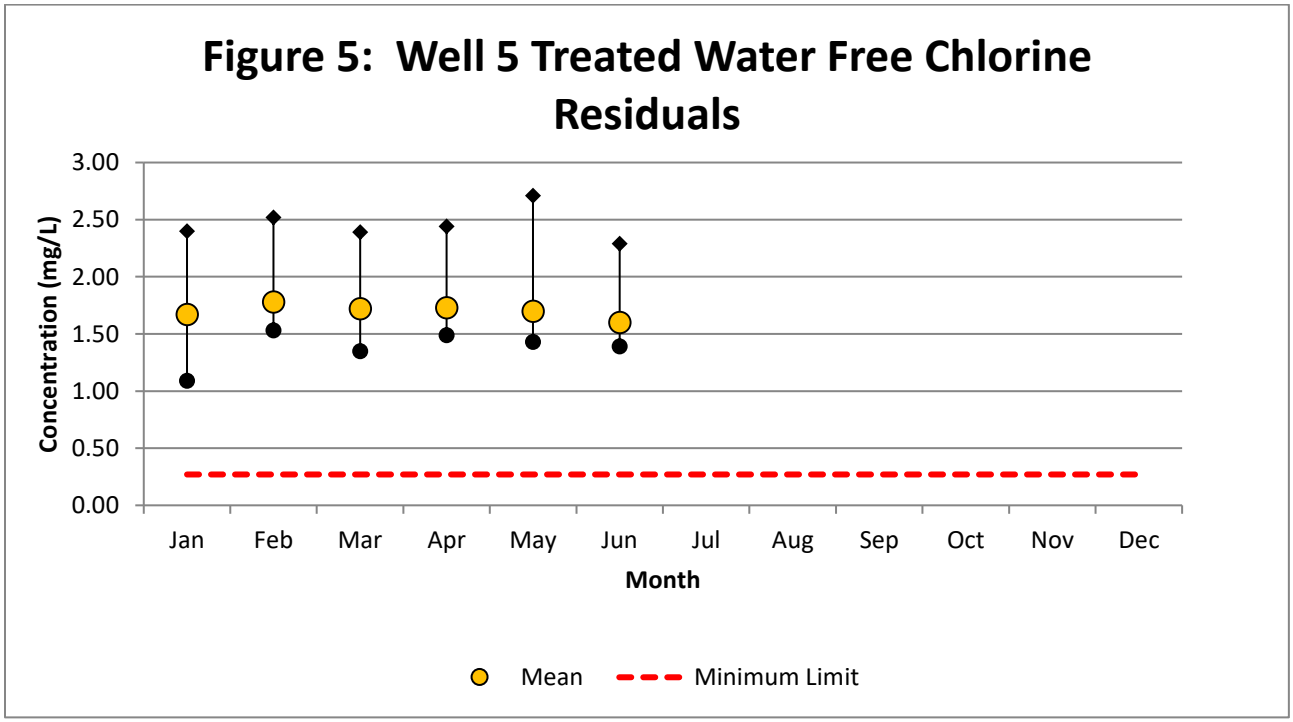
Turbidity results should be less than 1 ntu for raw water, with an aesthetic objective at the point of consumption to be less than 5 ntu. Refer to Figure 3 for a summary of turbidity readings recorded for each well.



Treated Water Monitoring

The treated water is analyzed for free chlorine residual in order to confirm primary disinfection requirements of a minimum free chlorine residual of 0.26 mg/L for Well 4 and 0.27mg/L for Well 5. A chlorine analyzer continuously monitors this residual at a minimum frequency of every 5 minutes. Refer to Figure 4 and 5 for the treated water free chlorine residuals at Well 4 and 5 which identifies the minimum and maximum values for each month.





On a quarterly basis, the treated water is tested for nitrates and nitrites, which have limits of 10 mg/L and 1 mg/L, respectively. All sample results met regulatory requirements, refer to Table 2.

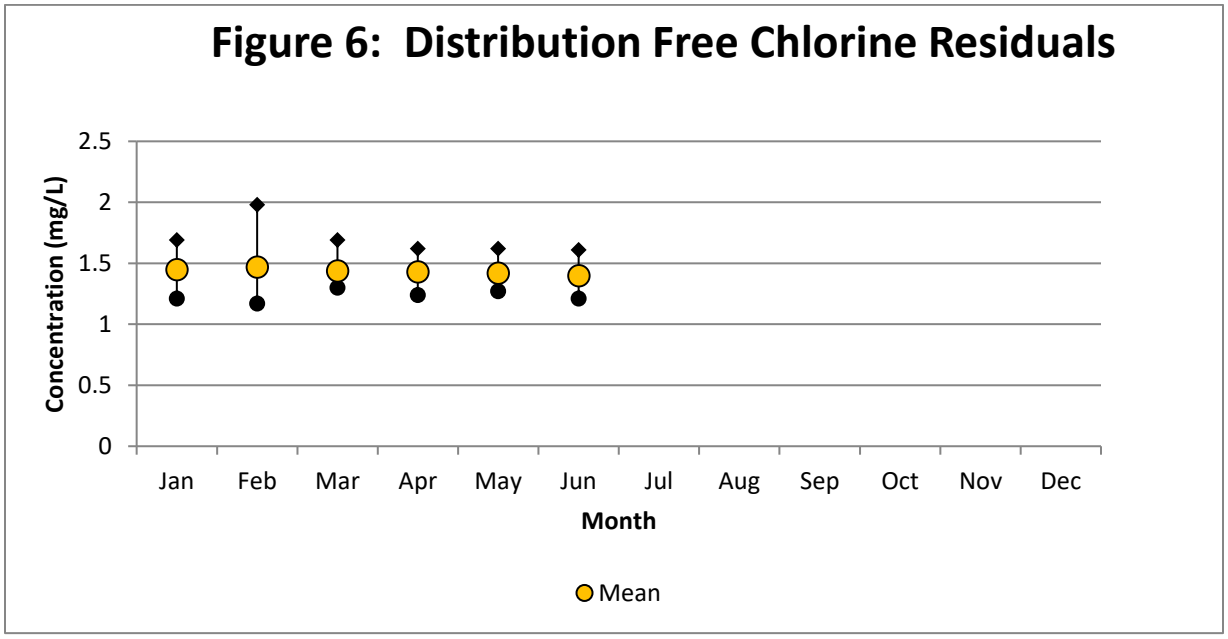
Table 2: Nitrate and Nitrite Results

TW Well 4	# Samples	Nitrate (mg/L)	Nitrite (mg/L)
Q1	1	0.007	0.003
Q2	1	0.008	0.003
Q3			
Q4			
TW Well 5	**# Samples**	**Nitrate (mg/L)**	**Nitrite (mg/L)**
Q1	1	0.006	0.003
Q2	1	0.006	0.003
Q3			
Q4			

Sampling for sodium and fluoride occurs every 60 months, whereas organic and inorganic parameters are sampled for every 36 months. The last samples for sodium were taken in 2021, therefore are due in 2026. Fluoride samples were last collected in 2022 and are due in 2027. Fluoride levels are naturally elevated in the Lucknow DWS. An advisory has been issued by the health unit. Organic and inorganic parameters were last sampled for in 2024 and are therefore not due until 2027. All sample results with the exception of fluoride met regulatory limits.

Distribution System Monitoring

Free chlorine residuals are monitored throughout the distribution system in order to ensure adequate secondary disinfection is provided. Figure 6 provides the minimum, maximum and average readings of free chlorine residuals taken as grab samples throughout the distribution system. All results have met regulatory requirements.



The distribution system is sampled on a weekly basis at various locations for E. coli, Total Coliforms and heterotrophic plate count (HPC) to meet regulatory requirements. The regulatory limit for Total Coliform and E. coli is zero, heterotrophic plate count (HPC) does not have a limit. This is an operational guide to initiate an action plan if HPC results are continuously high. Table 3 identifies the number of samples taken each month along with the range of results.

Table 3: Microbiological Sample Results

	# Samples	Total Coliform Range (cfu/100mL)	# AWQI	E. coli Range (cfu/100mL)	# AWQI	# Samples	HPC Range (cfu/100mL)
January	13	0.00-0.00	0	0.00-0.00	0	8	<10 - <10
February	12	0.00 - 0.00	0	0.00 - 0.00	0	8	<10 - <10
March	12	0.00 - 0.00	0	0.00 - 0.00	0	8	<10 - <10
April	15	0.00-0.00	0	0.00-0.00	0	10	<10 - <10
May	12	0.00-0.00	0	0.00-0.00	0	8	<10 - <10
June	12	0.00-0.00	0	0.00-0.00	0	8	<10 - <10
July							
August							
September							
October							
November							
December							

On a quarterly basis disinfection by-products are tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Table 4 provides the running average quarterly results compared against the running average limits. All results are within regulatory requirements.

Table 4: Disinfection By-product Results

	THM Limit (µg/L)	THM Result (µg/L)	HAA Limit (µg/L)	HAA Results (µg/L)
Aug 2024	-	16	-	<5.3
Nov 2024	-	12	-	<5.3
Feb 2025	-	6.95	-	<5.3
Apr 2025	-	6.70	-	5.3
Running Average	100	10.41	80	5.3

Schedule 15.1 in O. Reg. 170/03 requires sampling for lead, alkalinity and pH. This is required twice per year. Table 5 shows the results for 2025 Schedule 15.1 sampling. All sample results met regulatory requirements for lead (10 ug/L) and objective guidelines for pH (6.5-8.5) and alkalinity (30-500 mg/L).

Table 5: Lead Sampling Summary

Date	# Samples	pH result range	Alkalinity result range (mg/L)	Lead result range (ug/L)
March 2025	6	7.38 - 7.45	227-232	0.05 - 0.96
July 2025				

SECTION 5: OCCUPATIONAL HEALTH & SAFETY FIRST QUARTER

FIRST QUARTER

There were no health and safety issues identified during the first quarter.

SECOND QUARTER

There were no health and safety issues identified during the second quarter.

SECTION 6: GENERAL MAINTENANCE

Routine facility checks, meter readings, equipment inspections, process operations, generator testing, in house lab analysis and sample collection has been completed as required. Additional notable activities included:

FIRST QUARTER:

- Clean up of facilities
- Tagging assets
- Two heaters replaced in well house 4 and 5

SECOND QUARTER:

- May – Spring flushing was completed
- June 3 – Complete annual calibrations of analyzers and flow meters

Maintenance and capital work is captured in the workplace management system.

Table 6. Summary of Repairs and Service Shutoffs

	# of Locates	# of Water Service On/Off	# of Curb stop Repairs	# of Watermain Repairs	# of Service Repairs	# Water Meter Reads Completed
January	0	1	0	0	0	n/a
February	7	0	0	0	0	n/a
March	4	2	0	0	0	Completed
April	6	0	0	0	0	n/a
May	11	1	0	0	0	n/a
June	7	0	0	0	0	Completed
July						
August						
September						
October						
November						
December						
TOTALS						

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

- Low chlorine alarm
- Chlorine leak alarm

SECONDARY QUARTER:

April 2 – All sites power failure
April 4 – Lucknow Well 5 pre contact alarm
April 6 – Lucknow Well 5 pre contact alarm
May 1 – Lucknow Well 4 lo chlorine alarm
May 2 – All sites power failure
May 8 – Lucknow Well 4 lo chlorine
May 29 – All sites power failure
June 26- Lucknow Well 5 pre contact alarm
Jun 29 - Lucknow Well 5 pre contact alarm

Table 7. Summary of Alarm Response

	Lucknow DWS
Q1	2
Q2	9
Q3	
Q4	
TOTAL	11

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

There were no complaints received for the Lucknow DWS during the first quarter.

SECOND QUARTER

There were two complaints received during the second quarter, both in June:

- 752 Stauffer for discolored water, increased the auto flusher run time to 20 minutes every Monday, Wednesday and Friday.
- South Delhi St. for discolored water, flushed blowoff.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss
Lucknow Wastewater System
Operations Report
Second Quarter 2025

Ontario Clean Water Agency, Midwest Region
Paul Sherban, Sr. Operations Manager,
Huron-Kinloss Cluster
Date: August 26, 2025

Facility Description

Facility Name:	Lucknow Wastewater System
Regional Manager:	Sam Smith - (519) 377-1540
Senior Operations Manager:	Paul Sherban - (226) 378-8986
Business Development Manager:	Susan Budden - (519) 318-3271
Classification:	Class 1 WWT, Class 1 WWC
Treatment Type:	Lagoons
Population Serviced:	1121
Rated Capacity:	750 m3/d
Effluent Discharges to:	Groundwater Infiltration Basin

QUARTERLY CLIENT REPORT

Facility Name: Lucknow Wastewater System
ORG#: 6063

SECTION 1: COMPLIANCE SUMMARY

The Lucknow WWTP is sampled in accordance with the Environmental Compliance Approval. The table below provides a summary of compliance in 2025 so far.

	Lucknow WWTP			
	Q1	**Q2**	**Q3**	**Q4**
% Rated Capacity	117			
# of Effluent Objective Exceedances	1	0		
# of Effluent Limit Exceedances	1	0		

FIRST QUARTER

The Lucknow Wastewater Treatment Plant and Collection System performed well during the first quarter of 2025. However, there was one (1) Environmental Compliance Approval (ECA) limit exceedance and two (2) spills. No bypasses or overflows occurred during the first quarter.

Lucknow Lagoon Non-Compliance – In February the effluent total suspended solids (TSS) exceeded the reportable limit of 5.0 mg/L, with a monthly average of 7.5 mg/L. The elevated TSS concentration is attributed to sampling error, while obtaining the sample the operator sampled to close to the discharge pipe causing debris from the pipe to enter the sample. This was reported to the MECP in accordance with the ECA.

Lucknow Lagoon Spills – In January 2025, a gate valve the Lucknow Lagoon froze causing the effluent chamber to fill and spill out a conduit hole. As a result of the spill, approximately 9m3 of effluent was released on the lagoon gravel roadway. This was reported to the MECP's Spills Action Center (SAC), Ref # 1-G582FH

In March 2025, Lucknow Lagoon Cell 1 spilled due to rain and snow melt. As a result of the spill, approximately 2300m3 flowed over the banks of the lagoon. This was reported to the MECP's SAC, Ref#1-J2IY9S.

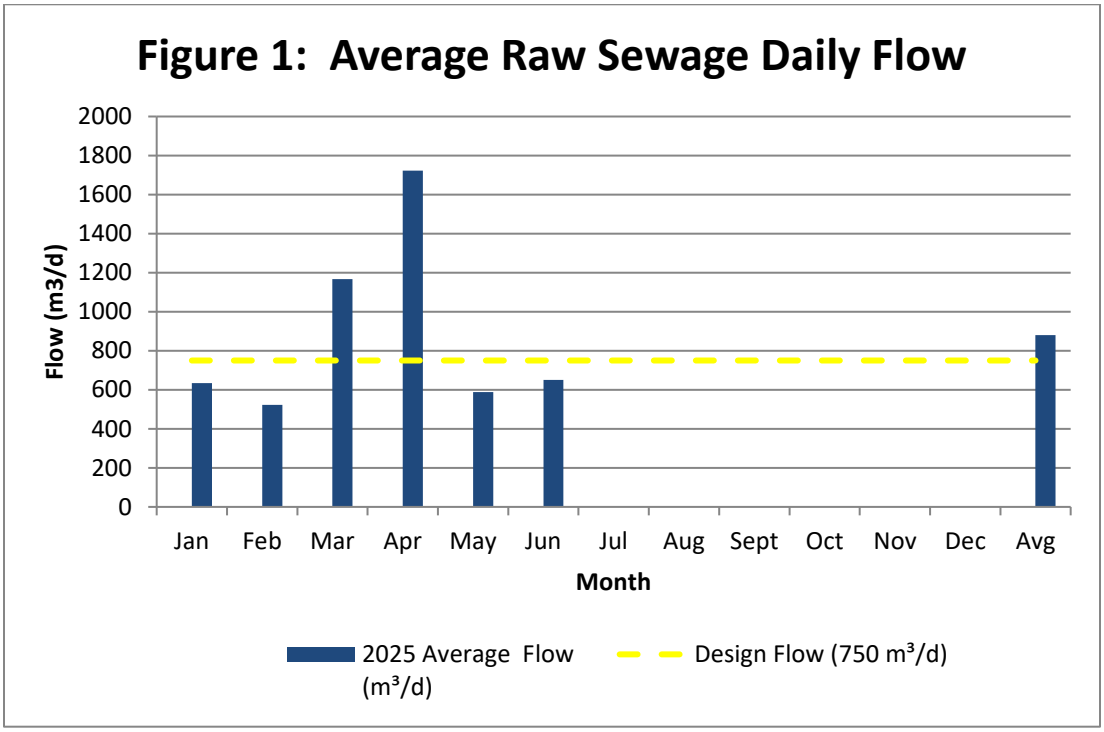
SECOND QUARTER

The Lucknow WWTP and Collection System performed well during the second quarter of 2025. No bypasses, spills or overflows occurred in the second quarter.

SECTION 2: MONITORING RESULTS

Raw Sewage Monitoring

In 2025, the raw sewage average daily flow to date is 880.78 m3/d, currently the annual average flow is at 117% of the rated capacity of the plant.



Groundwater Monitoring

The Lucknow lagoon effluent is a continuous discharge lagoon. There are ECA limits for the Groundwater Seepage to Swale.

-	cBOD5(mg/L)	TSS (mg/L)	TP(mg/L)	TAN (mg/L)	Unionized Ammonia (mg/L)	E. coli (mpn/100mL)*
ECA Limit	5	5	0.1	2.5	0.1	100
January	2	1.25	0.03	0.2	0	0
February	2	7.5	0.03	0.1	0	0
March	2	1	0.03	0.1	0	0
April	2	1.2	0.03	0.18	0	0
May	2	1.25	0.03	0.12	0	0
June	2.25	1.75	0.03	0.1	0	0
July	-	-	-	-		-
August	-	-	-	-		-
September	-	-	-	-		-
October	-	-	-	-		-
November	-	-	-	-		-
December	-	-	-	-		-

Figure 2. *Groundwater seepage to swale sample results*

FIRST QUARTER

During the first quarter, the Lucknow WWTP met all ECA effluent limits and objectives for all parameters except TSS. See Section 1 for details.

SECOND QUARTER

During the second quarter, the Lucknow WWTP met all ECA effluent limits and objectives.

SECTION 3: MAINTENANCE AND CAPITAL ACTIVITES

Routine facility checks, equipment inspections, process operations, generator testing, in house lab analysis and sample collection were completed as required; additional notable activities included:

FIRST QUARTER

- High flows caused a spill at the lagoon. Wastewater was diverted to storage tank.

SECOND QUARTER

June 03 – Completed annual calibrations of flow meters and Miltronics
June 16 – Completed annual generator inspection for Lucknow SPS
June 16 – Electrican on onsite at Lucknow SPS to install a temporary disconnect switch on the main feed, as the main breaker is out of service.
June 18 - completed bi-annual SPS cleanout and inspection

SECTION 4: ALARM SUMMARY

FIRST QUARTER

- High flows dues to weather and snow melt
- Power Failure

SECOND QUARTER

April 02 – Lucknow SPS power outage
April 03 – Lucknow SPS high level
May 30 – Lucknow SPS temperature alarm
June 16 – Lucknow SPS pump 3 fail
June 27 – Lucknow SPS hi level

SECTION 5: COMMUNITY CONCERNS

FIRST QUARTER

No community complaints or concerns were received during the first quarter.

SECOND QUARTER

No community complaints or concerns were received during the second quarter.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss
Ripley Drinking Water System
Operations Report
Second Quarter 2025

Ontario Clean Water Agency, Midwest Region
Paul Sherban, Sr. Operations Manager,
Huron-Kinloss Cluster
Date: August 26, 2025

Facility Description

Facility Name:	Ripley Drinking Water System
Regional Manager:	Sam Smith - (519) 377-1540
Senior Operations Manager:	Paul Sherban - (226) 378-8986
Business Development Manager:	Susan Budden - (519) 318-3271
Facility Type:	Municipal
Classification:	Class WDS2
Drinking Water System Category:	Large Municipal
Residential Title Holder:	Municipality

Service Information

The Corporation of the Township of Huron-Kinloss is the Owner of the Ripley Drinking Water System. The Ontario Clean Water Agency (OCWA) Midwest Region is the Operating Authority for the Ripley Drinking Water System. The Ripley DWS has 366 service connections.

The Ripley DWS is characterized as a secure groundwater system, consisting of 3 wells, 1 pumphouse and 1 tower that delivers potable water to the Village of Ripley. Each well supply is located within its own pumphouse in the Village of Ripley. All the Ripley wells are secure, deep bedrock wells that penetrate limestone aquifers. The Ripley DWS has 366 service connections.

CLIENT CONNECTION MONTHLY CLIENT REPORT

Facility Name: Ripley Drinking Water System
ORG#: 1782

SECTION 1: COMPLIANCE SUMMARY

Ripley DWS is sampled in accordance with O. Reg. 170/03. Detailed sample results for the DWS can be found within the report. Table 1 provides a summary of compliance and sampling for the first two quarters.

	Ripley DWS			
	Q1	**Q2**	**Q3**	**Q4**
# Non-compliances				
# AWQIs	1			
# RW Microbiological Samples	36	39		
# TW Microbiological Samples	24	26		
# DW Microbiological Samples	27	26		
# DW Free Chlorine Residuals	88	91		

FIRST QUARTER:

The Ripley Drinking Water System has, overall, performed well during the first quarter however, there was one AWQI reported. The AWQI was due to a watermain break during a winter storm causing road closures in the area. Kempton's was in town and were able to complete the repair but we were unable to have an OIC onsite to classify the break, witness the repair or witness flushing. Considering we weren't onsite we deemed it a category 2 break. A precautionary boil water was given to the 6 homes that were affected and samples were taken the next day which all came back satisfactory.

SECOND QUARTER:

The Ripley Drinking Water System has performed well during the second quarter. There were no compliance issues reported during the second quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

There were no MECP or MOL inspections conducted during the first quarter.

SECOND QUARTER:

There were no MECP or MOL inspections conducted during the second quarter.

SECTION 3: QEMS SUMMARY

The Drinking Water Quality Management Standard (DWQMS) sets out a framework for operating authorities and owners of municipal drinking water systems to develop a quality management system in Ontario. To meet the requirements of the DWQMS, OCWA has developed and maintained a Quality and Environmental Management System (QEMS). OCWA's QEMS is documented in the Township of Huron-Kinloss Operational Plan which supports the relevant facilities in maintaining compliance with applicable environmental laws

FIRST QUARTER:

The QEMS involves continual improvement whereby action items are generated from performing annual audits of the system. OCWA has received transitional Limited Scope Accreditation to operate the Huron-Kinloss DWS. The external audit was completed on December 19, 2024 by Intertek. There were no non-conformances and two opportunities for improvement (OFIs) identified in the report. These OFIs will be addressed through the Management Review process. An internal audit and management review will be scheduled in May, 2025 and full scope accreditation will be applied for after this date. Tentatively the external audits scheduled for June 2 and June 26 (onsite).

SECOND QUARTER

The management review was completed on May 8, 2025 and the internal audit was completed June 2, 2025. The external audit was completed June 17, 2025 by Intertek. There were no non-conformances and five opportunities for improvement (OFIs) identified in the report. The onsite external audit is scheduled for July 3, 2025 by Intertek.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

Flow Monitoring

The raw flow is measured at Well 2, 3, and 4 in the Ripley Drinking Water System (DWS). The average and maximum daily flow compared against the Municipal Drinking Water License rated capacity and the Permit to Take Water (PTTW) daily limits are identified in Figure 1 for Well 2, Figure 2 for Well 3 and Figure 3 for Well 4.

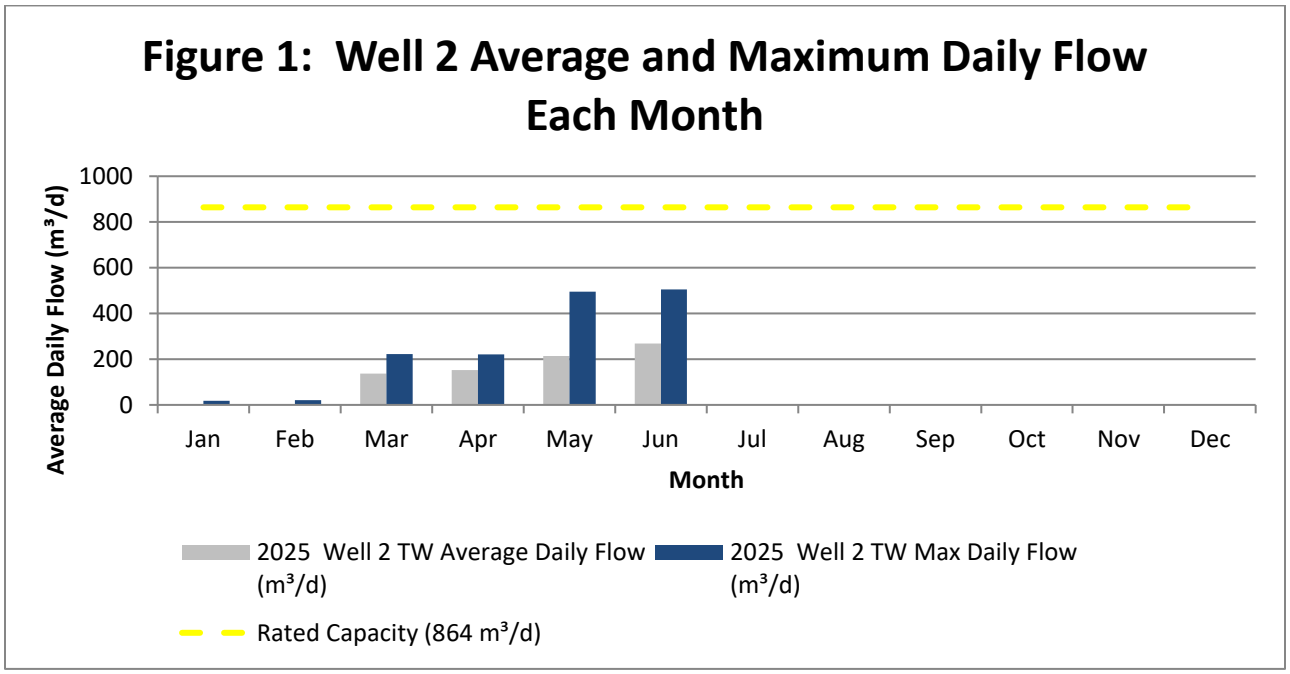


Figure 2: Well 3 Average and Maximum Daily Flow Each Month

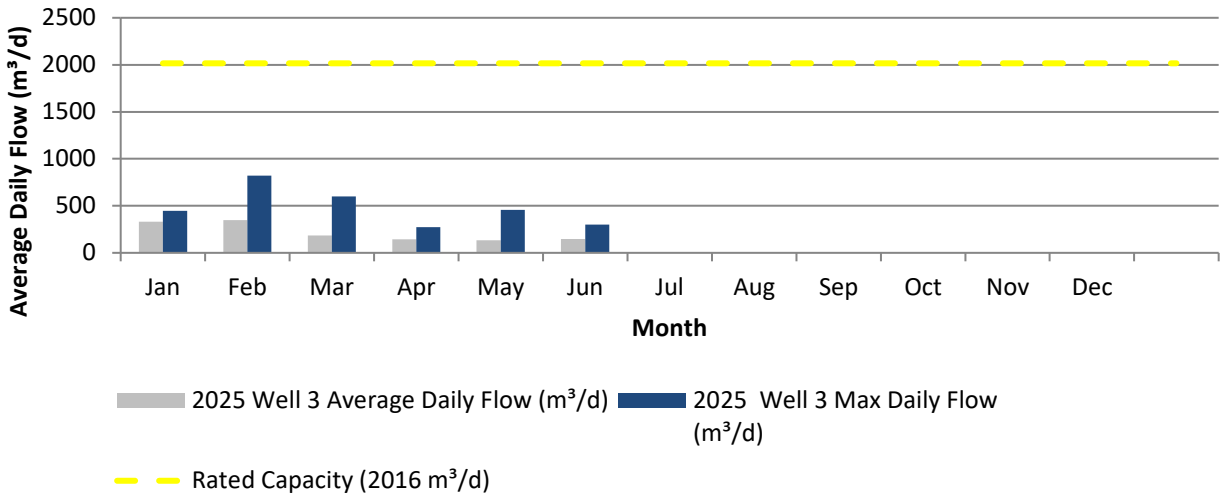
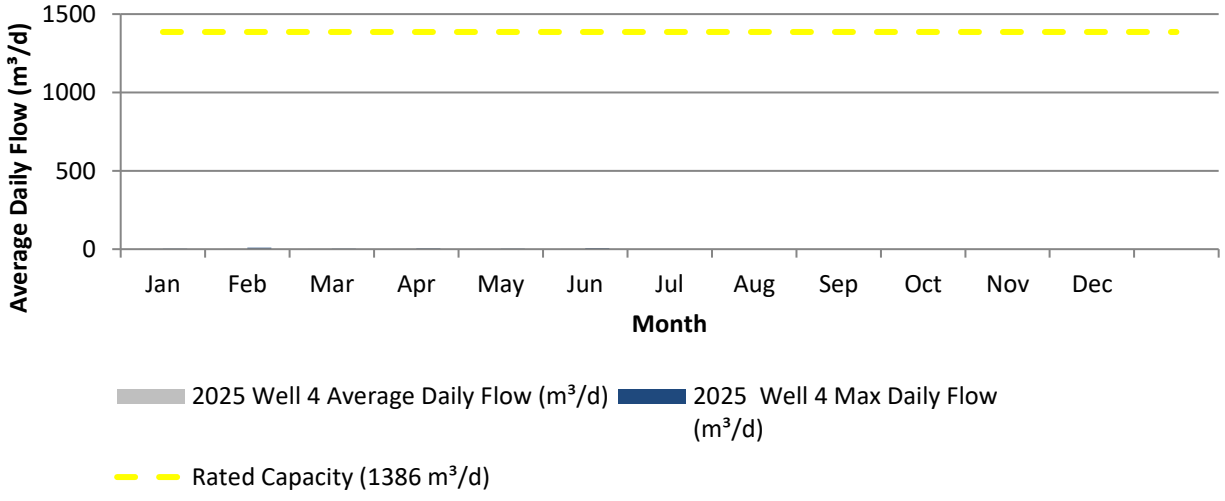


Figure 3: Well 4 Average and Maximum Daily Flow Each Month



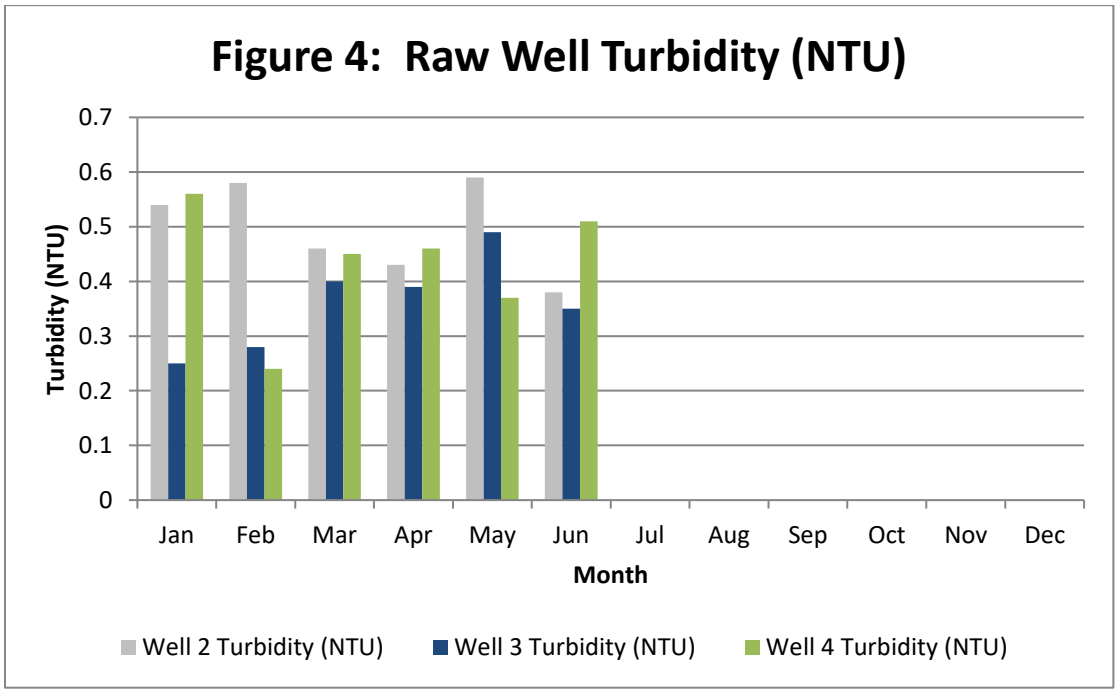
Raw Water Monitoring

Raw water is sampled on a weekly basis and tested for E. coli, Total Coliforms. Turbidity is sampled monthly to meet regulatory requirements. There is no regulatory limit for raw water samples; however, concentrations for Total Coliform and E. coli are expected to be zero for the groundwater source. Table 1 identifies the number of samples taken each quarter along with the range of results.

Table 1: Raw Microbiological Results

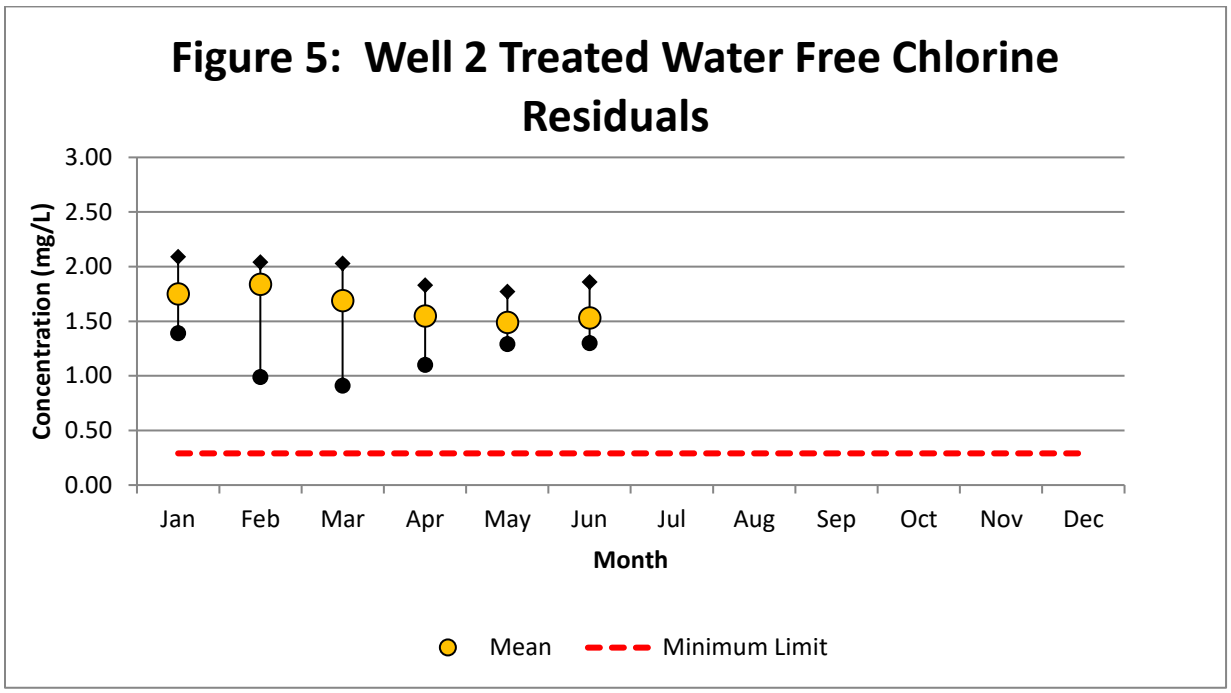
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	36	0.00 – 6.00	0.00 - 0.00
Q2	39	0.00 – 4.00	0.00 - 0.00
Q3			
Q4			

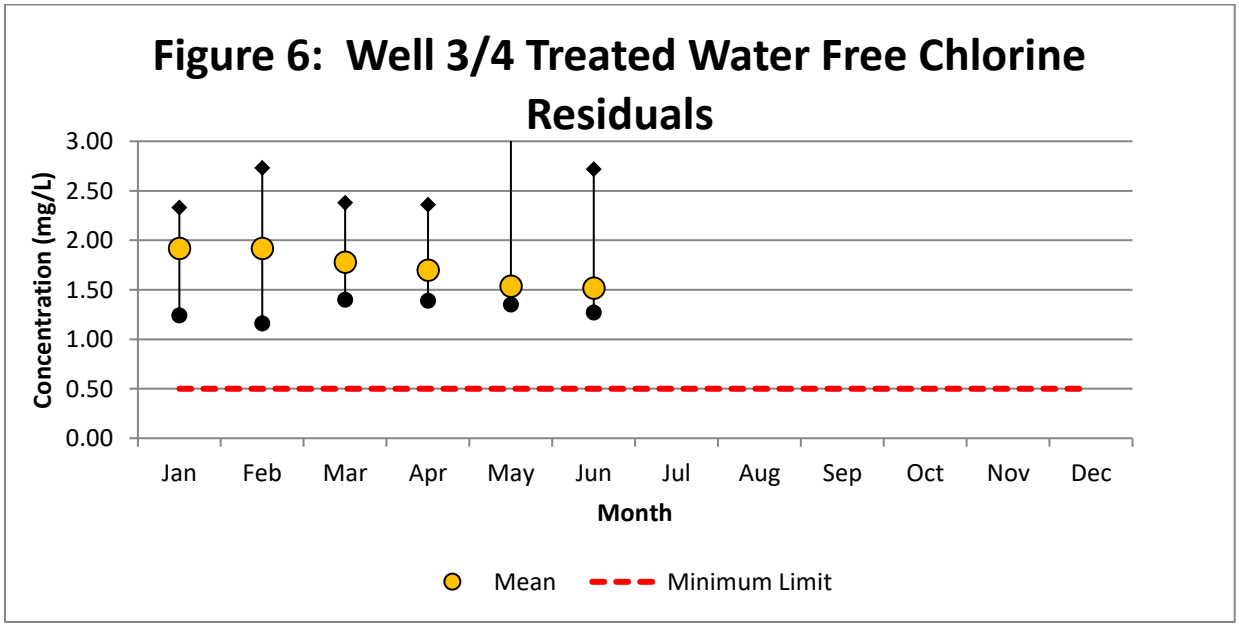
Turbidity results should be less than 1 ntu for raw water, with an aesthetic objective at the point of consumption to be less than 5 ntu. Refer to Figure 4 for a summary of turbidity readings recorded for each well.



Treated Water Monitoring

The treated water is analyzed for free chlorine residual in order to confirm primary disinfection requirements of a minimum free chlorine residual of 0.29 mg/L for Well 2 and 0.50 mg/L for Well 3 and 4. A chlorine analyzer continuously monitors this residual at a minimum frequency of every 5 minutes. Refer to Figure 5 and 6 for the treated water residuals at Well 2 and Well 3/4.





On a quarterly basis, the treated water is tested for nitrates and nitrites, which have limits of 10 mg/L and 1 mg/L, respectively. All sample results met regulatory requirements, refer to Table 2.

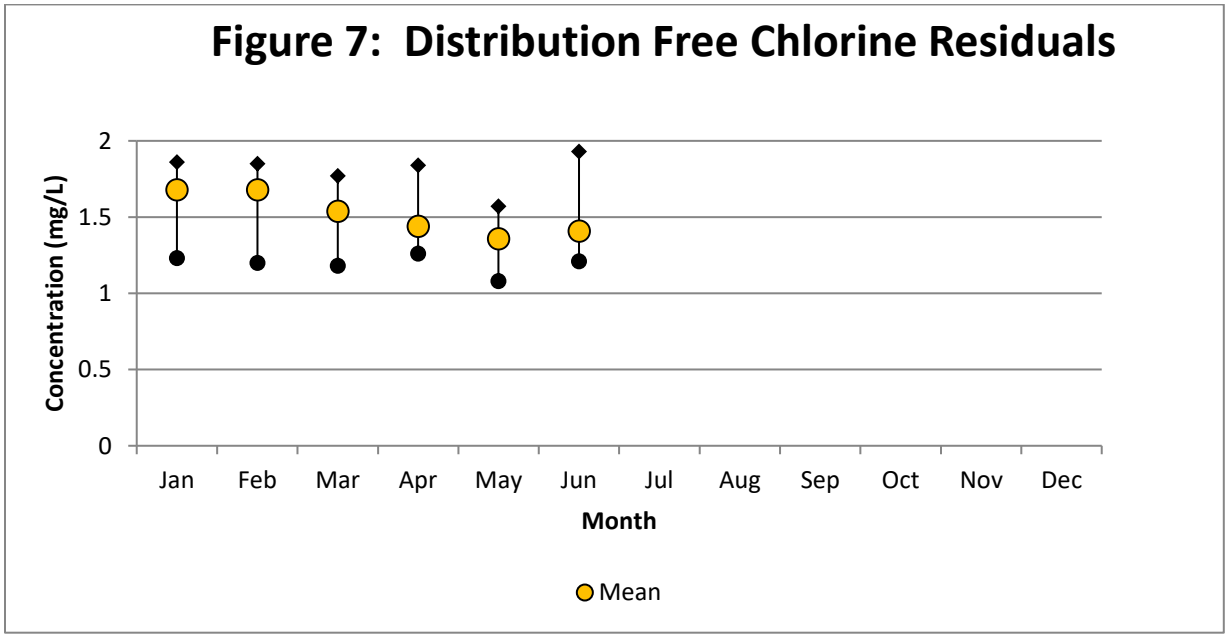
Table 2: Nitrate and Nitrite Results

		Well 2		Well 3/4	
	# Samples	Nitrate (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
Q1	2	0.319	0.003	0.468	0.003
Q2	2	0.081	0.003	1.23	0.003
Q3					
Q4					

Sampling for sodium and fluoride occurs every 60 months, whereas organic and inorganic parameters occurs every 36 months. The last samples for sodium were taken in 2021, therefore are due in 2026. Fluoride was last sampled in 2022 and is due in 2027. The treated water at The Ripley Well house and Ripley Elevated Tank exceeded the MAC for fluoride due to naturally occurring fluoride in the aquifers. These exceedances were reported to the Health Unit and the Ministry's Spills Action Center (SAC). The treated water at The Ripley Well house and Ripley Elevated Tank exceeded the MAC sodium concentration of 20mg/L and was reported to the Health Unit and the Ministry's Spills Action Center (SAC). Organic and inorganic parameters were last sampled in 2024 and are therefore not due until 2027. All sample results with the exception of fluoride and sodium met regulatory limits.

Distribution System Monitoring

Free chlorine residuals are monitored throughout the distribution system in order to ensure adequate secondary disinfection is provided. Figure 7 provides the minimum, maximum and average readings of free chlorine residuals taken as grab samples throughout the distribution system. All results have met regulatory requirements.



The distribution system is sampled on a weekly basis at various locations for E. coli, Total Coliforms and heterotrophic plate count (HPC) to meet regulatory requirements. The regulatory limit for Total Coliform and E. coli is zero, heterotrophic plate count (HPC) does not have a limit. This is an operational guide to initiate an action plan if HPC results are continuously high. Table 3 identifies the number of samples taken each month along with the range of results.

Table 3: Microbiological Sample Results

	# Samples	Total Coliform Range (cfu/100mL)	# AWQI	E. coli Range (cfu/100mL)	# AWQI	# Samples	HPC Range (cfu/100mL)
January	9	0.00 - 0.00	0	0.00 - 0.00	0	9	<10 - < 10
February	9	0.00 - 0.00	0	0.00 - 0.00	0	10	<10 - <10
March	8	0.00 - 0.00	0	0.00 - 0.00	0	8	<10-<10
April	10	0.00 - 0.00	0	0.00 - 0.00	0	10	<10-<10
May	8	0.00 - 0.00	0	0.00 - 0.00	0	8	<10-<10
June	8	0.00 - 0.00	0	0.00 - 0.00	0	8	<10-<10
July							
August							
September							
October							
November							
December							

On a quarterly basis disinfection by-products are tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Table 4 provides the running average quarterly results compared against the running average limits. All results are within regulatory requirements.

Table 4: Disinfection By-product Results

	THM Limit (µg/L)	THM Result (µg/L)	HAA Limit (µg/L)	HAA Results (µg/L)
Aug 2024	-	10.2	-	<5.3
Nov 2024	-	9.3	-	<5.3
Feb 2025	-	6.9	-	<5.3
Apr 2025	-	8.05	-	<5.3
Running Average	100	8.6	80	5.3

Schedule 15.1 in O. Reg. 170/03 requires sampling for lead, alkalinity and pH. This is required twice per year. Table 5 shows the results for 2025 Schedule 15.1 sampling. All sample results met regulatory limits for lead (10 ug/L) and objective guidelines for pH (6.5-8.5) and alkalinity (30-500 mg/L).

Table 5: Lead Sampling Summary

Date	# Samples	pH result range	Alkalinity result range (mg/L)	Lead result range (ug/L)
March 2025	4	7.76 - 7.83	213.00 - 215.00	0.03 - 0.09
July 2025				

SECTION 5: OCCUPATIONAL HEALTH & SAFETY FIRST QUARTER

FIRST QUARTER:

There were no health and safety issues identified during the first quarter.

SECOND QUARTER

There were no health and safety issues identified during the second quarter.

SECTION 6: GENERAL MAINTENANCE

Routine facility checks, meter readings, equipment inspections, process operations, generator testing, in house lab analysis and sample collection has been completed as required. Additional notable activities included:

FIRST QUARTER:

- Clean-up of facilities
- Tagging assets
- Water main break was in front of James St.
- Water main break Jessie St

SECOND QUARTER:

April 11 – On-site at the Elevated Tank to fix the controller on generator
June 2 – Completed calibrations of all analyzers, flow meters and milltronics

Maintenance and capital work is captured in the workplace management system.

Table 6. Summary of Repairs and Service Shutoffs

	# of Locates	# of Water Service On/Off	# of Curb stop Repairs	# of Watermain Repairs	# of Service Repairs	# Water Meter Reads Completed
January	1	0	0	0	0	n/a
February	2	1	0	2	0	n/a
March	1	0	0	0	0	Completed
April	12	0	0	0	0	n/a
May	9	0	0	0	0	n/a
June	19	1	0	0	0	Completed
July						
August						
September						
October						
November						
December						
TOTALS						

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

- Low pressure

SECOND QUARTER:

April 2 – All sites power failure
May 25 – Elevated Tank POE high

Table 7. Summary of Alarm Response

	Ripley DWS
Q1	2
Q2	2
Q3	
Q4	
TOTAL	4

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

There were no complaints for Ripley DWS received during the first quarter.

SECOND QUARTER

There was one complaint received in April related to pressure. The pressure was tested at a nearby hydrant and confirmed adequate.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss
Ripley Wastewater System
Operations Report
Second Quarter 2025

Ontario Clean Water Agency, Midwest Region
Paul Sherban, Sr. Operations Manager,
Huron-Kinloss Cluster
Date: August 26, 2025

Facility Description

Facility Name:	Ripley Wastewater System
Regional Manager:	Sam Smith - (519) 377-1540
Senior Operations Manager:	Paul Sherban - (226) 378 8986
Business Development Manager:	Susan Budden - (519) 318-3271
Classification:	Class 1 WWT, Class 2 WWC
Treatment Type:	Lagoons
Population Serviced:	918
Rated Capacity:	600 m3/d
Effluent Discharges to:	South Pine River

QUARTERLY CLIENT REPORT

Facility Name: Ripley Wastewater System
ORG#: 6062

SECTION 1: COMPLIANCE SUMMARY

The Ripley WWTP is sampled in accordance with the Environmental Compliance Approval. The table below provides a summary of compliance in 2025 so far.

Table 1 – Compliance Summary

	Ripley WWTP			
	Q1	**Q2**	**Q3**	**Q4**
% Rated Capacity	71			
# of Effluent Objective Exceedances	3	2		
# of Effluent Limit Exceedances	1	0		

FIRST QUARTER

The Ripley Wastewater Treatment Plant (WWTP) and Collection System performed well during the first quarter of 2025 however, there was one (1) Environmental Compliance Approval (ECA) limit exceedance. No bypasses or overflows occurred during the first quarter.

Ripley Lagoon Non-Compliance – During the month of March, the effluent E.coli concentration exceeded the limit of 200mpn/100ml. The geometric mean for the month of March was 300mpn/100ml. This non-compliance was reported to MECP in accordance with the ECA. This exceedance is being attributed to the large amount of migrating waterfowl that reside in the Ripley Lagoons.

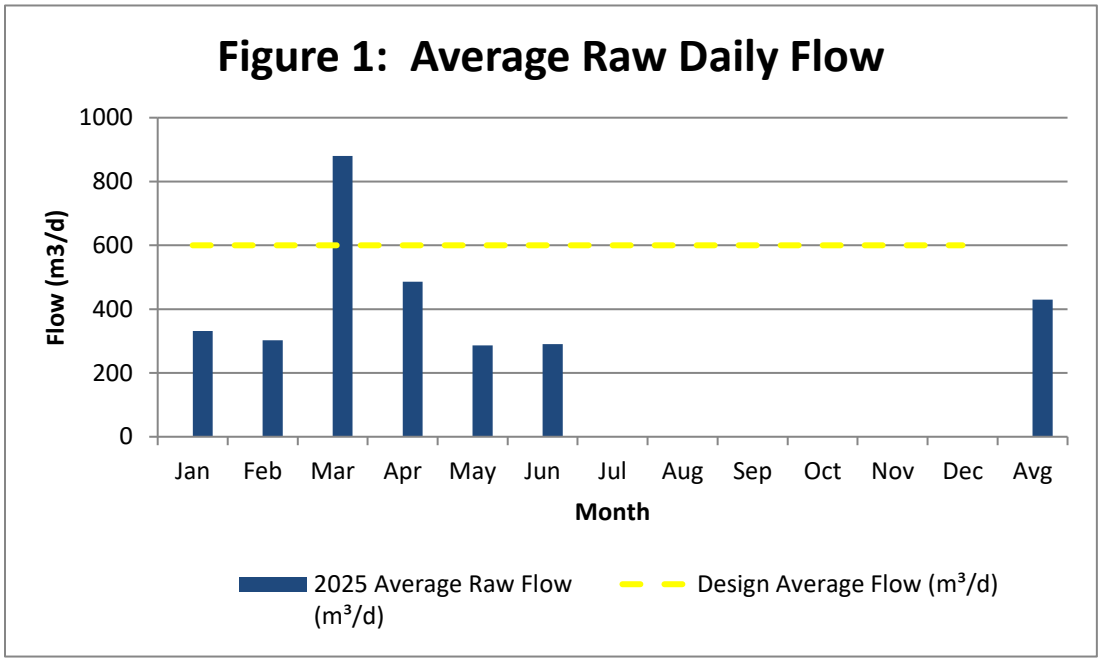
SECOND QUARTER

The Ripley Wastewater Treatment Plant (WWTP) and Collection System performed well during the second quarter of 2025. No bypasses or overflows occurred during the second quarter.

SECTION 2: MONITORING RESULTS

Raw Sewage Monitoring

In 2025, the raw sewage average daily flow to date is 429.54 m^3/d, currently the annual average flow is at 71% of the rated capacity of the plant.



Effluent Monitoring

The Ripley lagoon effluent is permitted to be discharged from October 15 to May 1. Discharge in 2025 began on March 22 and stopped discharge April 30. There are ECA objectives and limits for the Ripley Lagoon, depending on the season the Total Ammonia Nitrogen (TAN) limits/objectives are different. One set of objectives and limits is for the fall and the other for the spring.

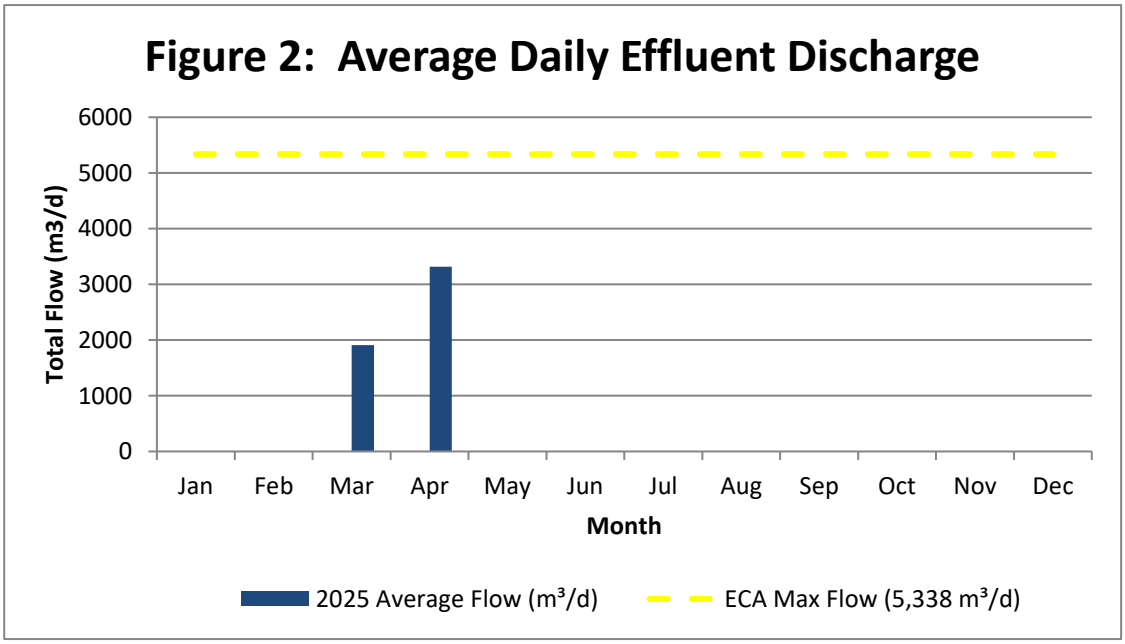


Table 2. Final Effluent Sample Results

-	cBOD5(mg/L)	TSS (mg/L)	TP(mg/L)	TAN (mg/L)	Hydrogen Sulphide (mg/L)	E. coli (mpn/100mL)*	pH
ECA Objective	**15**	**15**	**0.5**	**Spring - 6.0 Fall - 3.0**	**Not Detectable**	**150**	**6.5-8.5**
ECA Limit	**25**	**30**	**0.8**	**Spring - 10.0 Fall - 6.0**	**Absent**	**200**	**6.0-9.5**
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	8.5	21.5	0.05	7.2	0	300	8.00
April	8.11	24.33	0.05	6.66	0	17.61	7.35
October	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-

FIRST QUARTER

During the first quarter, the Ripley Lagoon exceeded the ECA effluent geometric mean for E.coli in the month of March and did not meet all effluent objectives. There were three (3) objective exceedances recorded in March for E.coli, TAN and TSS.

SECOND QUARTER

During the second quarter, the Ripley Lagoon met all ECA effluent limits but did not meet all effluent objectives. There were two (2) objective exceedances recorded in April for TSS and TAN.

SECTION 3: MAINTENANCE AND CAPITAL ACTIVITES

Routine facility checks, equipment inspections, process operations, generator testing, in house lab analysis and sample collection were completed as required; additional notable activities included:

FIRST QUARTER

- Discharged lagoons until end of April.
- Changed pump at SPS.

SECOND QUARTER

April 03 – On-site at Ripley SPS to haul sewage from the SPS to the lagoon due to high flows from rain event
June 02 – Onsite to calibrate all flow meters and Miltronics
June 18 – On-site for bi-annual wet well cleaning and lagoon inlet chamber

SECTION 4: ALARM SUMMARY

FIRST QUARTER

- High flows dues to weather and snow melt
- SPS pump fail

SECOND QUARTER

April 02 – Ripley SPS power failure, hi level alarm

SECTION 5: COMMUNITY CONCERNS

FIRST QUARTER

No community complaints or concerns were received during the first quarter.

SECOND QUARTER

No community complaints or concerns were received during the second quarter.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss
Whitechurch
Drinking Water System
Operations Report
Second Quarter 2025

Ontario Clean Water Agency, Midwest Region
Paul Sherban, Sr. Operations Manager,
Huron-Kinloss Cluster
Date: August 26, 2025

Facility Description

Facility Name:	Whitechurch Drinking Water System
Regional Manager:	Sam Smith - (519) 377-1540
Senior Operations Manager:	Paul Sherban - (226) 378-8986
Business Development Manager:	Susan Budden - (519) 318-3271
Facility Type:	Municipal
Drinking Water System Category:	Small Municipal
Residential Title Holder:	Municipality

Service Information

The Whitechurch Drinking Water System (Whitechurch DWS) is owned by the Township of Huron-Kinloss and the Ontario Clean Water Agency is the Operating Authority.

The Whitechurch DWS is characterized as a secure groundwater system, consisting of two drilled bedrock wells, on the same site as the pumphouse that delivers potable water to the Hamlet of Whitechurch. Both wells are located at 9 Whitechurch Street and are approximately 18 m apart. The water from both these wells is treated at the same pumphouse. The Whitechurch DWS has 42 water service connections.

CLIENT CONNECTION MONTHLY CLIENT REPORT

Facility Name: Whitechurch Drinking Water
System ORG#: 1777

SECTION 1: COMPLIANCE SUMMARY

The Whitechurch DWS is sampled in accordance with O. Reg. 170/03. Detailed sample results for the DWS can be found within the report. Table 1 provides a summary of compliance and sampling for the first two quarters.

	Whitechurch DWS			
	Q1	**Q2**	**Q3**	**Q4**
# Non-compliances		1		
# AWQIs				
# RW Microbiological Samples	24	26		
# TW Microbiological Samples	12	15		
# DW Microbiological Samples	12	15		
# DW Free Chlorine Residuals	28	26		

FIRST QUARTER:

The Whitechurch Drinking Water System has performed well during the first quarter.

SECOND QUARTER:

The Whitechurch Drinking Water System performed well during the second quarter however, there was one non-compliance reported to the MECP in April due to loss of pressure.

- April 20 – A chlorine leak caused a low chlorine alarm and locked out the well pumps. Due to the well pumps not running, the distribution system pressure dropped to 10psi. Onsite, checks were performed to confirm the wells did not run when the chlorine read below 0.20mg/L. The chlorine contact tank was thoroughly flushed to restore the residual and restored the pressure. Flushing was then conducted both upstream and downstream of the well house within the distribution system. Bacteriological samples were collected. Results of sampling were satisfactory.

SECTION 2: INSPECTIONS

FIRST QUARTER:

There were no MECP or MOL inspections conducted during the first quarter.

SECOND QUARTER:

On May 7th a routine, announced MECP inspection was conducted by Provincial Officer, Robert Graham. The report has not yet been received.

SECTION 3: QEMS SUMMARY

The Drinking Water Quality Management Standard (DWQMS) sets out a framework for operating authorities and owners of municipal drinking water systems to develop a quality management system in Ontario. To meet the requirements of the DWQMS, OCWA has developed and maintained a Quality and Environmental Management System (QEMS). OCWA's QEMS is documented in the Township of Huron-Kinloss Operational Plan which supports the relevant facilities in maintaining compliance with applicable environmental laws

FIRST QUARTER:

The QEMS involves continual improvement whereby action items are generated from performing annual audits of the system. OCWA has received transitional Limited Scope Accreditation to operate the Huron-Kinloss DWS. The external audit was completed on December 19, 2024 by Intertek. There were no non-conformances and two opportunities for improvement (OFIs) identified in the report. These OFIs will be addressed through the Management Review process. An internal audit and management review will be scheduled in May, 2025 and full scope accreditation will be applied for after this date. Tentatively the external audits scheduled for June 2 and June 26 (onsite).

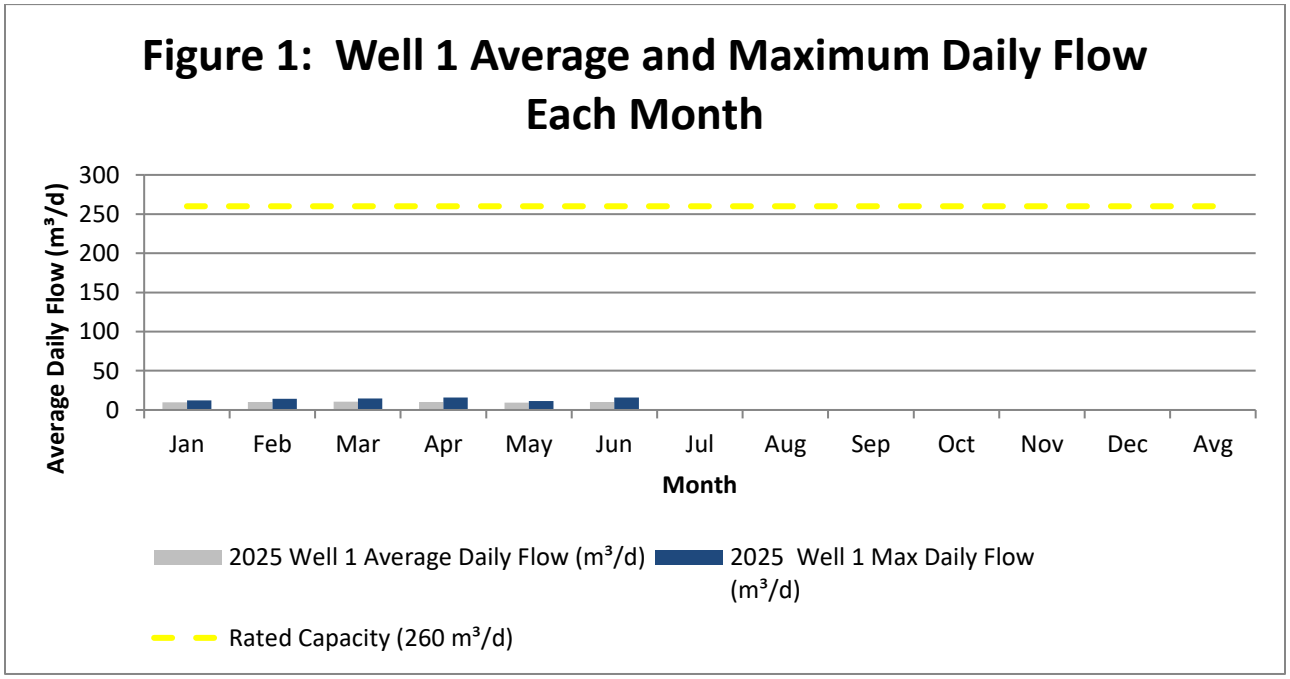
SECOND QUARTER

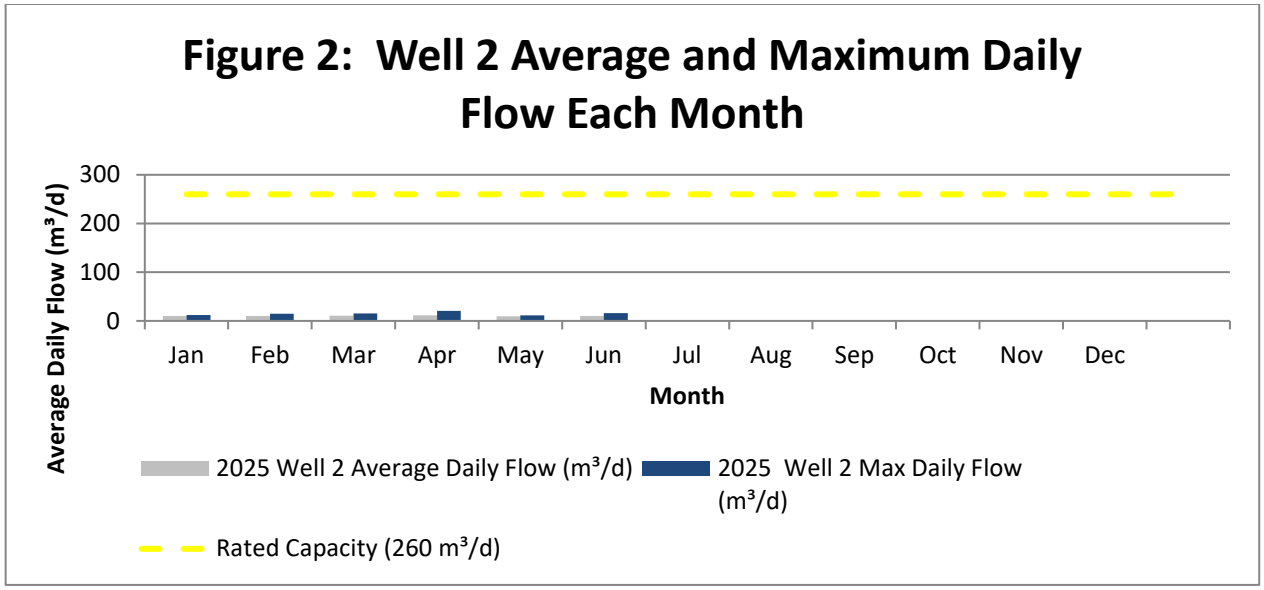
The management review was completed on May 8, 2025 and the internal audit was completed June 2, 2025. The external audit was completed June 17, 2025 by Intertek. There were no non-conformances and five opportunities for improvement (OFIs) identified in the report. The onsite external audit is scheduled for July 3, 2025 by Intertek.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

Flow Monitoring

The raw flow is measured at Well 1 and 2 in the Whitechurch Drinking Water System (DWS). The average and maximum daily flow compared against the Municipal Drinking Water License rated capacity and the Permit to Take Water (PTTW) daily limits are identified in Figure 1 for Well 1 and Figure 2 for Well 2.





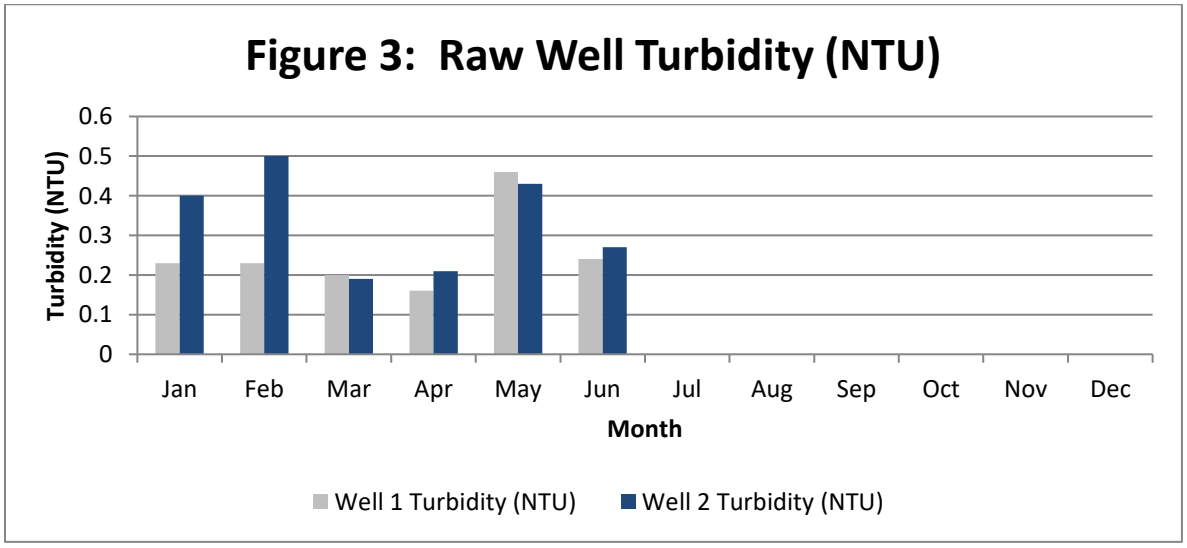
Raw Water Monitoring

Raw water is sampled on a weekly basis and tested for E. coli and Total Coliforms. Turbidity is tested on a monthly basis to meet regulatory requirements. There is no regulatory limit for raw water samples; however, concentrations for Total Coliform and E. coli are expected to be zero for the groundwater source. Table 1 identifies the number of samples taken each quarter along with the range of results.

Table 1: Raw Microbiological Results

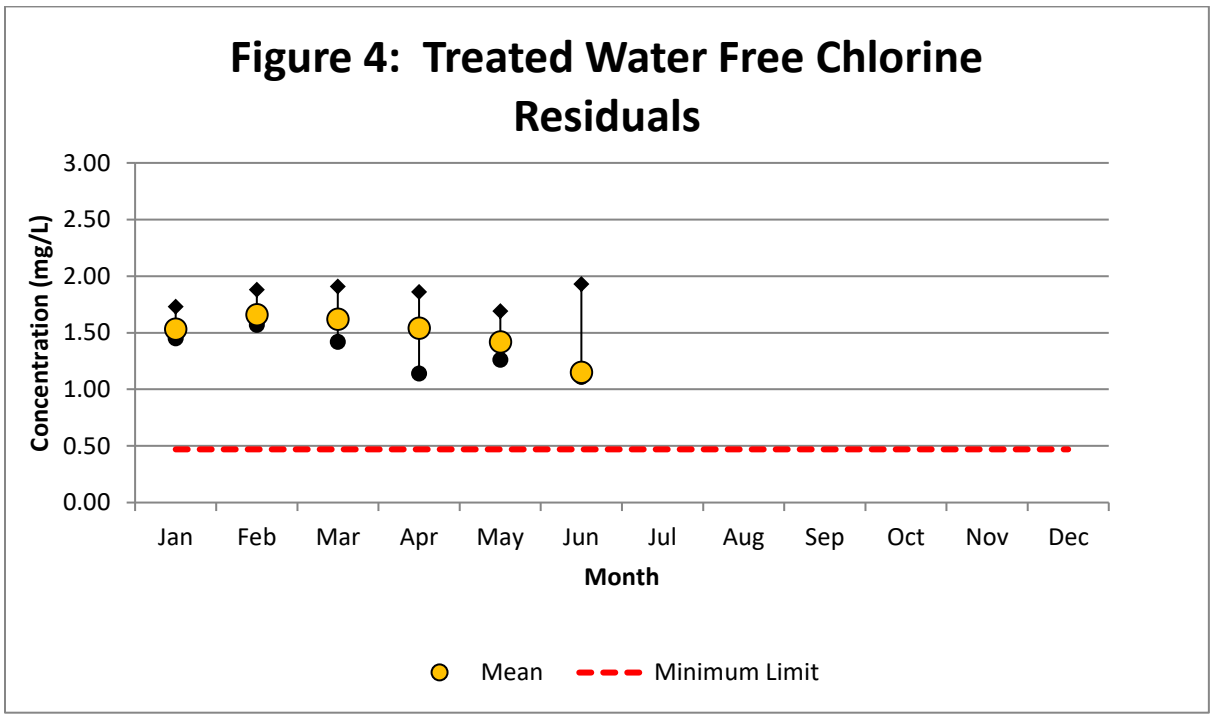
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	24	0.00 - 0.00	0.00 - 0.00
Q2	28	0.00 - 0.00	0.00 - 0.00
Q3			
Q4			

Turbidity results should be less than 1 NTU for raw water, with an aesthetic objective at the point of consumption to be less than 5 NUT. Refer to Figure 3 for a summary of turbidity readings recorded for each well.



Treated Water Monitoring

The treated water is analyzed for free chlorine residual in order to confirm primary disinfection requirements of a minimum free chlorine residual of 0.47 mg/L for Well 1 and Well 2. A chlorine analyzer continuously monitors this residual at a minimum frequency of every 5 minutes. Figure 4 identifies the minimum and maximum values for each month for the treated water residuals at Well 1 and 2.



On a quarterly basis, the treated water is tested for nitrates and nitrites, which have limits of 10 mg/L and 1 mg/L, respectively. All sample results met regulatory requirements, refer to Table 2.

Table 2: Nitrate and Nitrite Results

		Well 1 & 2	
	# Samples	**Nitrate (mg/L)**	**Nitrite (mg/L)**
Q1	1	0.006	0.003
Q2	1	0.006	0.003
Q3			
Q4			

On a quarterly basis the treated water is tested for barium, which has a limit of 1000 µg/L. All sample results met regulatory requirements, refer to table 3.

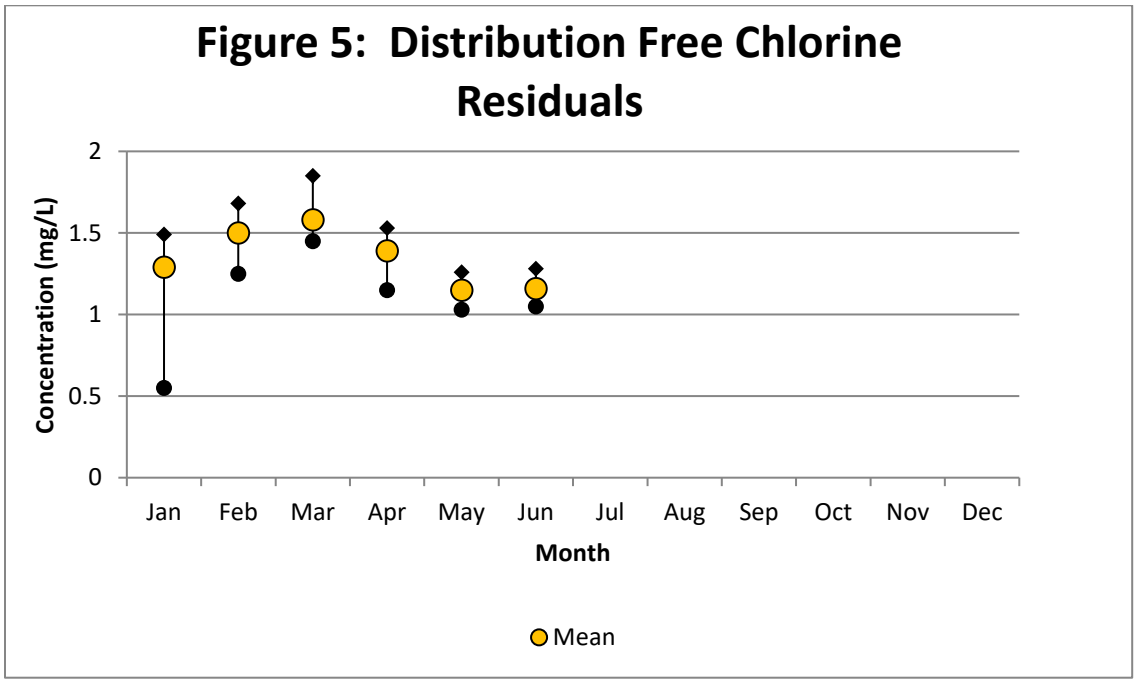
Table 3: Barium Results

		Well 1 & 2
	# Samples	**Barium (µg/L)**
Q1	1	803
Q2	1	773
Q3		
Q4		

Sampling for sodium and fluoride occurs every 60 months, whereas organic and inorganic parameters occurs every 36 months. The previous sodium samples were taken January 31, 2023 therefore are due in 2028. Fluoride was last sampled November 26, 2024 and are due in 2029. Organic and inorganic parameters were last sampled September 12, 2022 and are therefore not due until 2027. All sample results met regulatory limits.

Distribution System Monitoring

Free chlorine residuals are monitored throughout the distribution system in order to confirm adequate secondary disinfection is provided. Figure 5 provides the minimum, maximum and average readings of free chlorine residuals taken as grab samples throughout the distribution system. All results have met regulatory requirements.



The distribution system is sampled on a weekly basis at various locations and tested for E. coli, Total Coliforms and heterotrophic plate count (HPC) to meet regulatory requirements. The regulatory limit for Total Coliform and E. coli is zero, heterotrophic plate count (HPC) does not have a limit. This is an operational guide to initiate an action plan if HPC results are continuously high. Table 4 identifies the number of samples taken each month along with the range of results.

Table 4: Microbiological Sample Results

	# Samples	Total Coliform Range (cfu/100mL)	# AWQI	E. coli Range (cfu/100mL)	# AWQI	# Samples	HPC Range (cfu/100mL)
January	4	0.00 - 0.00	0	0.00 - 0.00	0	4	<10.0 - <10.0
February	4	0.00 - 0.00	0	0.00 - 0.00	0	4	<10.0 - <10.0
March	4	0.00 - 0.00	0	0.00 - 0.00	0	4	<10.0 - <10.0
April	7	0.00 - 0.00	0	0.00 - 0.00	0	7	<10.0 - <10.0
May	4	0.00 - 0.00	0	0.00 - 0.00	0	4	<10.0 - <10.0
June	4	0.00 - 0.00	0	0.00 - 0.00	0	4	<10.0 - <10.0
July							
August							

September							
October							
November							
December							

On a quarterly basis, disinfection by-products are tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Table 5 provides the running average quarterly results compared against the running average limits. All results are within regulatory requirements.

Table 5: Disinfection By-product Results

	THM Limit (µg/L)	THM Result (µg/L)	HAA Limit (µg/L)	HAA Results (µg/L)
Aug 2024	-	36	-	20.2
Nov 2024	-	23	-	13.1
Feb 2025	-	16	-	<5.30
Apr 2025	-	16	-	<5.30
Running Average	100	22.75	80	10.9

Schedule 15.1 in O. Reg. 170/03 requires sampling for lead, alkalinity and pH. This is required twice per year. Table 6 shows the results for 2025 Schedule 15.1 sampling. All sample results met regulatory limits for lead (10 ug/L) and objective guidelines for pH (6.5-8.5) and alkalinity (30-500 mg/L).

Table 6: Lead Sampling Summary

Date	# Samples	pH result range	Alkalinity result range (mg/L)	Lead result range (ug/L)
March 2025	1	7.93	277.0	0.01
July 2025				

SECTION 5: OCCUPATIONAL HEALTH & SAFETY FIRST QUARTER

FIRST QUARTER:

There were no health and safety issues identified during the first quarter.

SECOND QUARTER

There were no health and safety issues identified during the second quarter.

SECTION 6: GENERAL MAINTENANCE

Routine facility checks, meter readings, equipment inspections, process operations, generator testing, in house lab analysis and sample collection has been completed as required. Additional notable activities included:

FIRST QUARTER:

- Clean-up of facilities
- Tagging assets

SECOND QUARTER:

June 03 – Completed annual calibrations of analyzers and flow meters
June 03 – Electrician on-site to investigate well pump uncommand stop dc
June 16 – Sommers on site for annual generator maintenance

Maintenance and capital work is captured in the workplace management system.

Table 7. Summary of Repairs and Service Shutoffs

	# of Locates	# of Water Service On/Off	# of Curb stop Repairs	# of Watermain Repairs	# of Service Repairs
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	1	0	0	0	0
May	0	0	0	0	0
June	2	0	0	0	0
July					
August					
September					
October					
November					
December					
TOTALS					

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

- Power failure due to weather

SECOND QUARTER:

April 02 – Power fail
April 19 – Pre contact alarm
April 20 – Lo chlorine alarm
May 03 – Power fail
June 01 – Pre contact
June 08 – General alarm, Well pump uncommand stop
June 09 – General alarm, Well pump uncommand stop

Table 9. Summary of Alarm Response

	Whitechurch DWS
Q1	1
Q2	7
Q3	
Q4	
TOTAL	8

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

There were no complaints received for the Whitechurch DWS during the first quarter.

SECOND QUARTER

There were no complaints received for the Whitechurch DWS during the second quarter.