Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Huron-Kinloss Drinking Water Systems
Client Operations Report
First Quarter 2025

Lucknow Drinking Water System
Lakeshore Drinking Water System
Ripley Drinking Water System
Whitechurch Drinking Water System

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Contents

Compliance Summary

The four drinking water systems in Huron-Kinloss have overall performed well to date, below is a summary of issues experienced during the first quarter of 2025.

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

Table 1. Summary of Compliance and Sampling

	Lucknow DWS				Lakeshore DWS				Ripley DWS				Whitechurch DWS			
	Q1	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
# Non-compliances	1												1			
# AWQIs									1							
# RW Microbiological Samples	24				58				36				24			
# TW Microbiological Samples	24				45				24				12			
# DW Microbiological Samples	37				52				27				12			
# DW Free Chlorine Residuals	91				93				88				28			

DWQMS 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.

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 DWSs. Intertek completed the external audit on December 19, 2024. 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).

Ministry of Conservation & Parks (MECP) Inspections:

There have been no MECP inspection conducted during the first quarter in any of the the Huron-Kinloss Drinking Water Systems.

Maintenance and Capital Activities

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

Lucknow Drinking Water System

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

Lakeshore Drinking Water System

- Clean up of facilities
- Tagging assets

Ripley Drinking Water System

- Clean up of facilities
- Tagging assets

Whitechurch Drinking Water System

- Clean up of facilities
- Tagging assets

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

Table 2. 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	19	8	0	0	0	n/a
February	16	4	0	2	0	n/a
March	20	6	0	0	0	Completed
April						
May						
June						
July						
August						
September						
October						
November						
December						
TOTALS						

Summary of Community Concerns

- There were two community complaints received in the first quarter. One complaint was a result of low pressure, which was addressed by flushing the hydrants in the area, the second was due to coloured water and flushing of lines resulted in clear water.

Summary of Health and Safety

The 2025 Annual Health and Safety Inspections will be completed in the second quarter. There were no health and safety issues identified during the first quarter.

Alarm Summary

First Quarter

Lucknow Drinking Water System

- Low chlorine alarm
- Chlorine leak alarm

Lakeshore Drinking Water System

- 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

Ripley Drinking Water System

- Water main break was in front of James St.
- Water main break Jessie St

Whitechurch Drinking Water System

- Power failure due to weather

Table 3. Summary of Alarm Response

	Lucknow DWS	Lakeshore DWS	Ripley DWS	Whitechurch DWS
Q1	2	7	2	1
Q2				
Q3				
Q4				
TOTAL	2	7	2	1

Appendix A: Lucknow Drinking Water System

Facility Name:	Lucknow Drinking System
Classification:	Class 3 Water Distribution and Supply System
System Type:	Large Municipal Residential
DWS #	220002663
Population Served:	1154
Facilities:	Well 4-600 Havelock St. Well 5-381 South Delhi St. Tower-656 Wheeler St.

Flow Monitoring

The raw flow is measured at Wells 4 and 5 in Lucknow. The average and maximum daily flows compared against the Permit to Take Water (PTTW) daily limits are identified in Figure 1 for Well 4 and Figure 2 for Well 5. The maximum flow rates for each well are monitored and compared to the PTTW flow rate limits; refer to Figures 3 and 4.

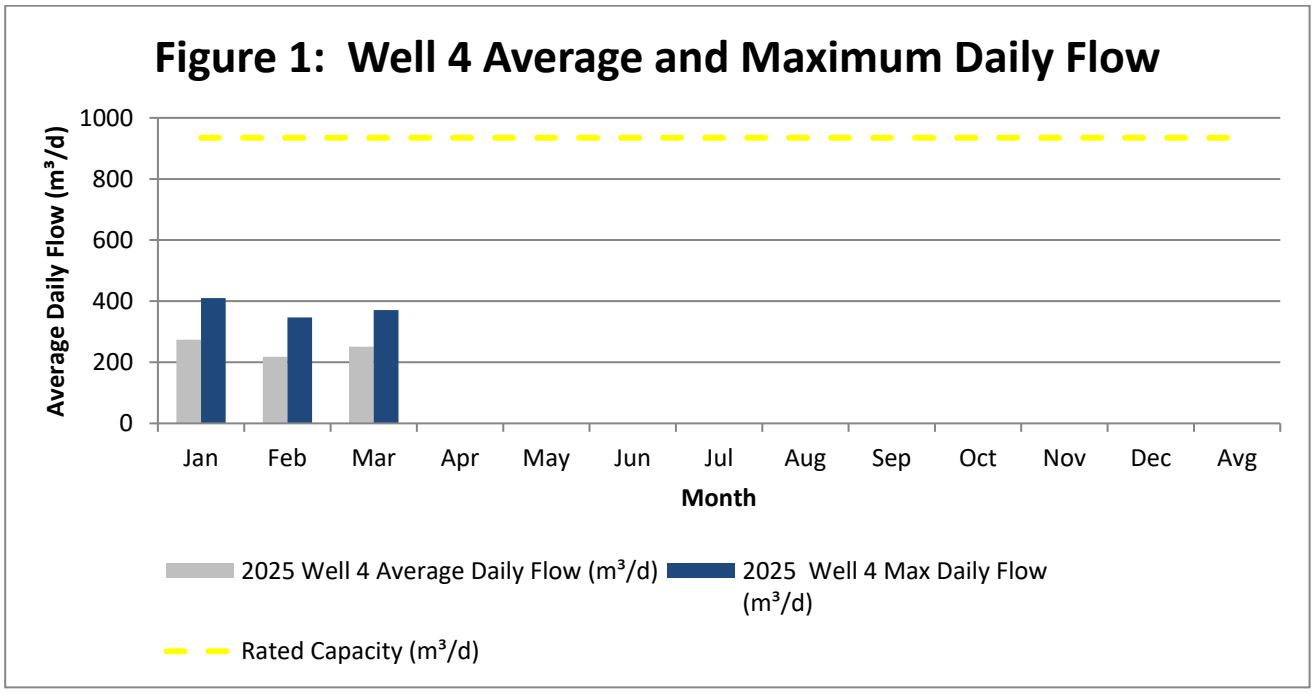


Figure 2: Well 5 Average and Maximum Daily Flow

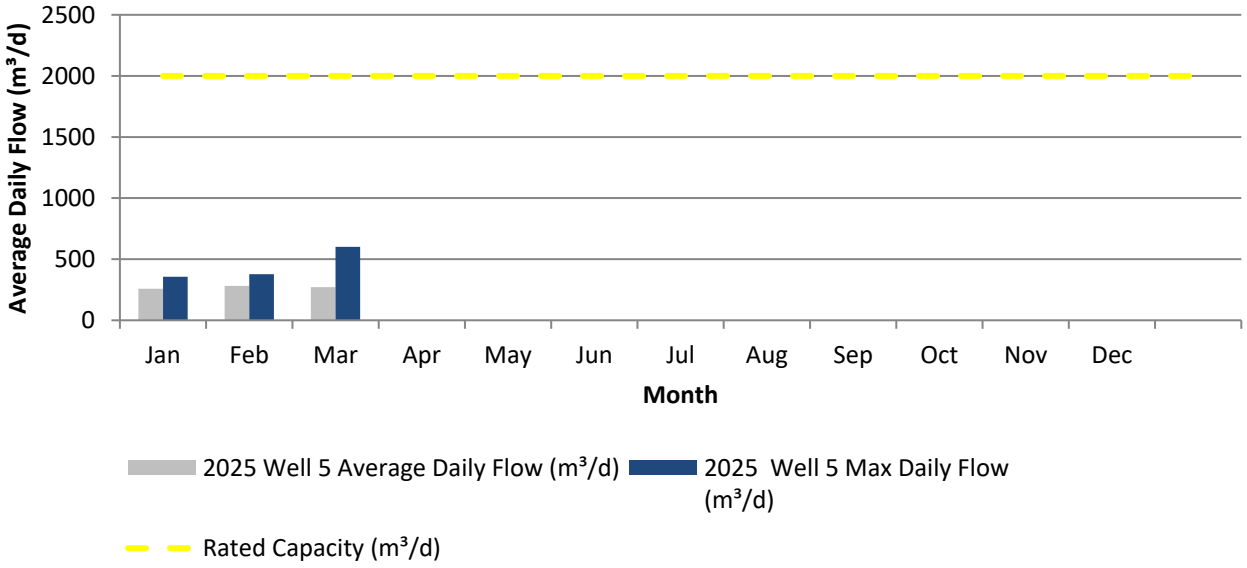
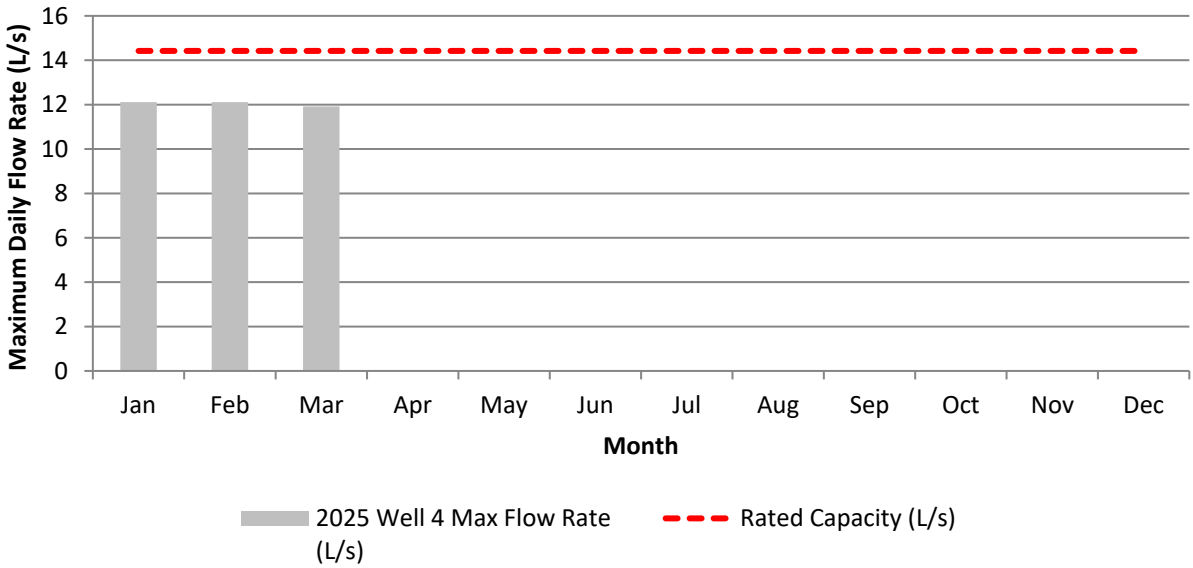
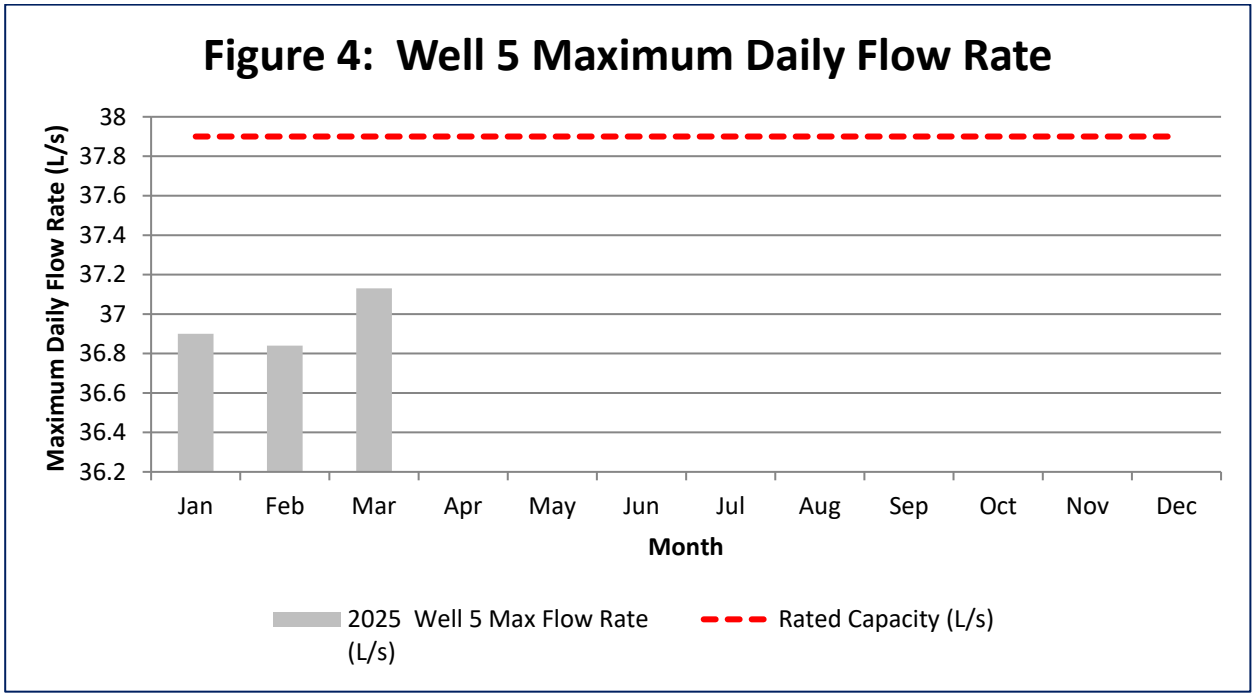


Figure 3: Well 4 Maximum Daily Flow Rate





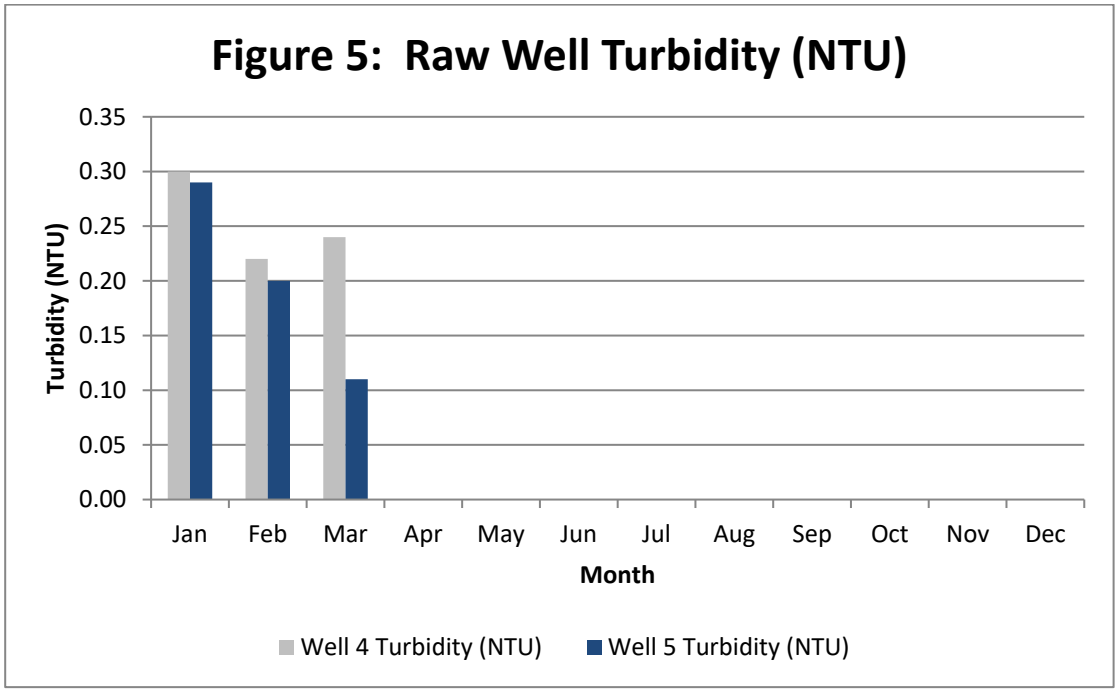
Raw Water Monitoring

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

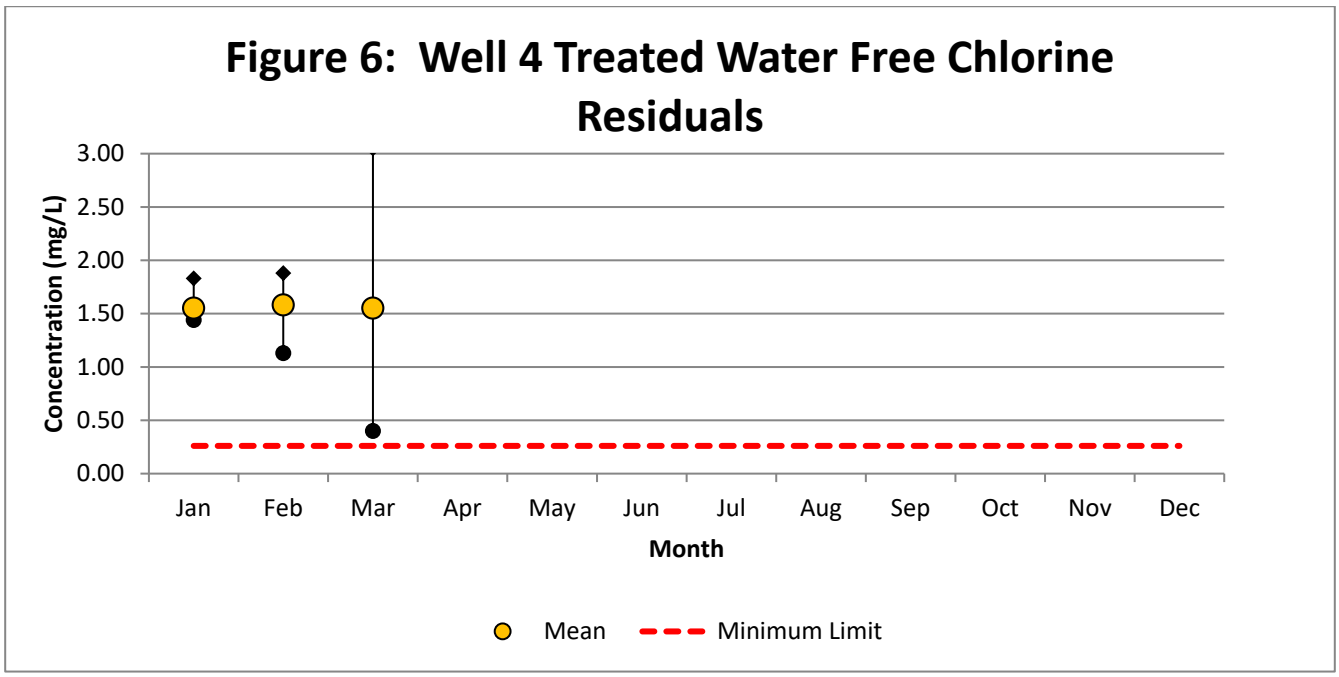
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	24	0.00-0.00	0.00-0.00
Q2			
Q3			
Q4			

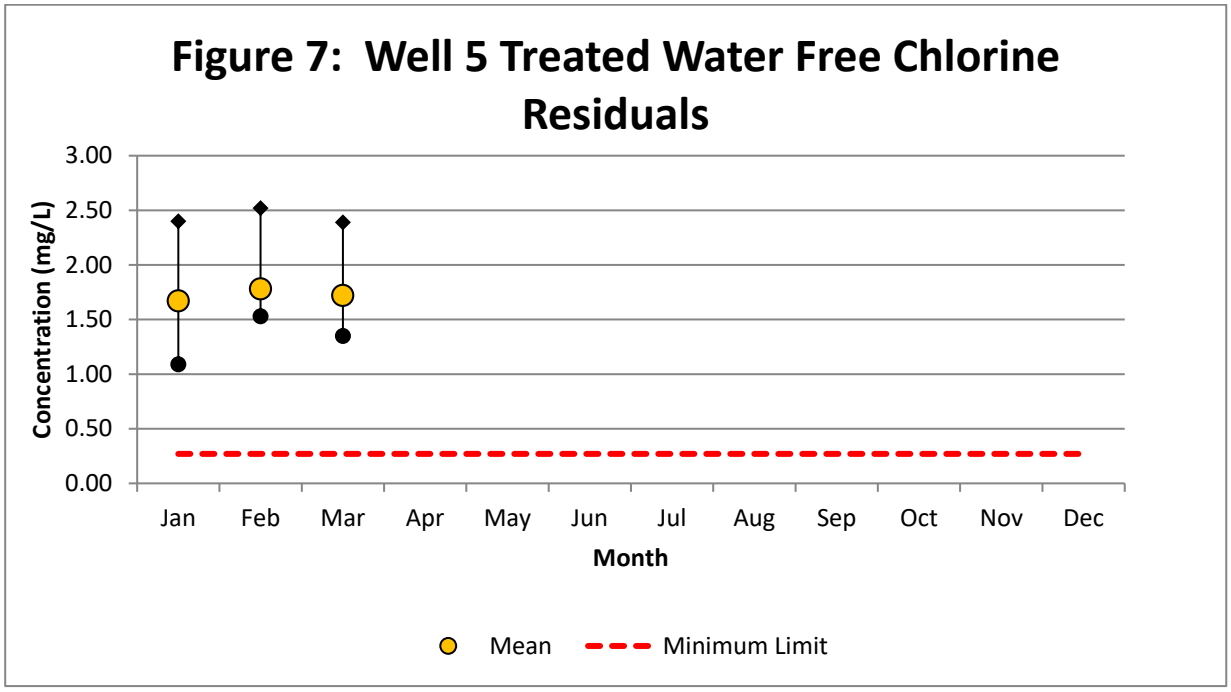
Turbidity results should be less than 1 NTU for raw water, with an aesthetic objective at the point of consumption to be less than 5 NTU. Refer to Figure 5 for a summary of turbidity readings recorded for each well.



Treated Water Monitoring

The treated water is analyzed for free chlorine residual in order to meet 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 6 and 7 for the treated water 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 has a limit of 10 mg/L. All sample results met regulatory requirements during the first quarter, refer to Table 2.

Table 2: Nitrate and Nitrite Results

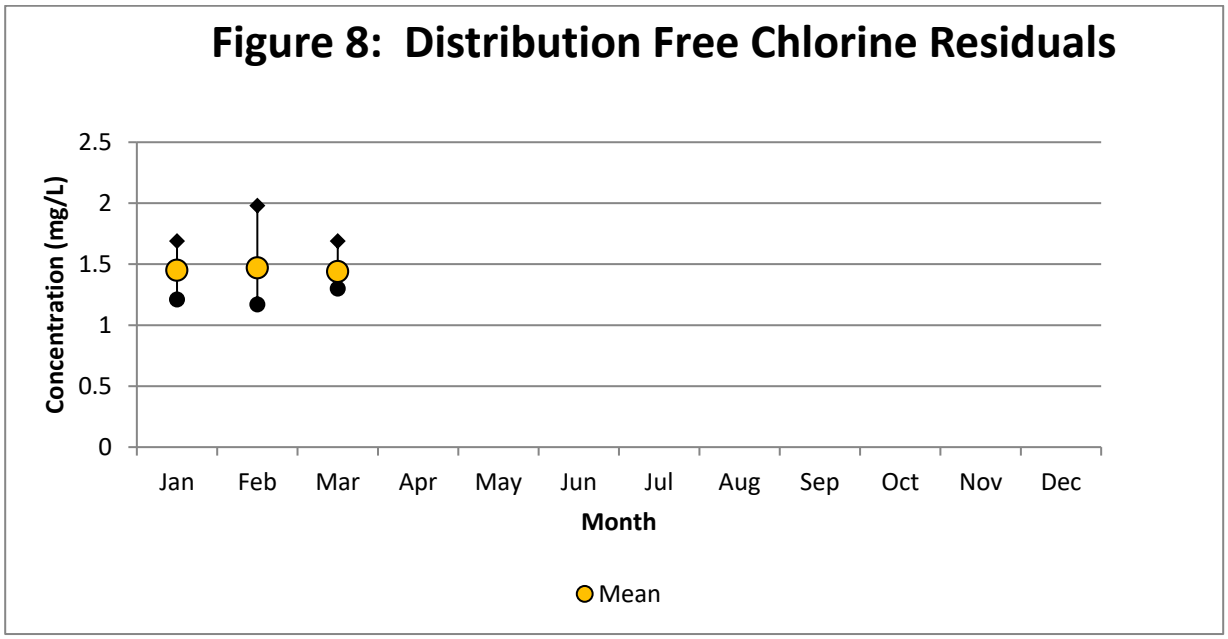
TW Well 4	# Samples	Nitrate (mg/L)	Nitrite (mg/L)
Q1	1	0.007	0.003
Q2			
Q3			
Q4			
TW Well 5	**# Samples**	**Nitrate (mg/L)**	**Nitrite (mg/L)**
Q1	1	0.006	0.003
Q2			
Q3			
Q4			

Sampling for sodium and fluoride occurs every 60 months. Organic and Inorganic sampling is required every 36 months. The last samples for sodium were taken in 2021, and are therefore due in 2026. Fluoride was last sampled in 2022 and will be required in 2027. Naturally, occurring fluoride concentrations are elevated in the Lucknow DWS. The Health Unit is aware of the elevated concentrations and has provided an advisory to consumers. Organic and inorganic parameters were

last sampled for in 2024 and are therefore not required 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 8 provides the minimum, maximum and average 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. There is no specified limit for Heterotrophic plate count (HPC) as 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							
May							
June							
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)
May 2024	-	12	-	<5.3
Aug 2024	-	16	-	<5.3
Nov 2024	-	12	-	<5.3
Feb 2025	-	6.95	-	<5.3
Running Average	100	11.73	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	6	7.38 - 7.45	227-232	0.05 - 0.96
July 2025				

Appendix B: Lakeshore Drinking Water System

Facility Name:	Lakeshore Drinking Water System
Classification:	Class 3 Water Distribution and Supply System
System Type:	Large Municipal Residential
DWS #	220000425
Population Served:	3183
Facilities:	Point Clark Well House (603 Tuscarora Road) Blairs Grove Well House (28 Cathcart Street) Murdoch Glenn Well House (815 Parkplace) Huronville South Well House (39 Penetangore Road South) Lakeshore Standpipe (3402 Concession 2)

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. The maximum flow rates for each well are monitored and compared to the PTTW flow rate limits; refer to Figure 5, 6, 7 and 8.

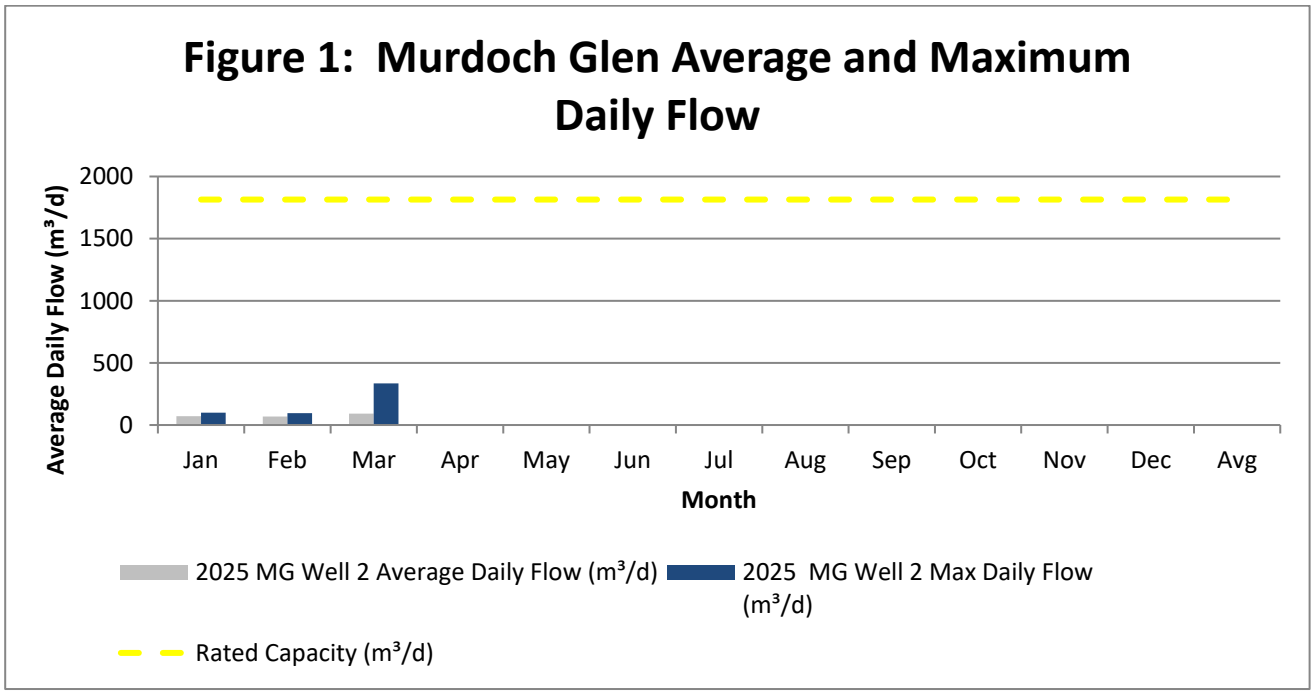


Figure 2: Point Clark Average and Maximum Daily Flow

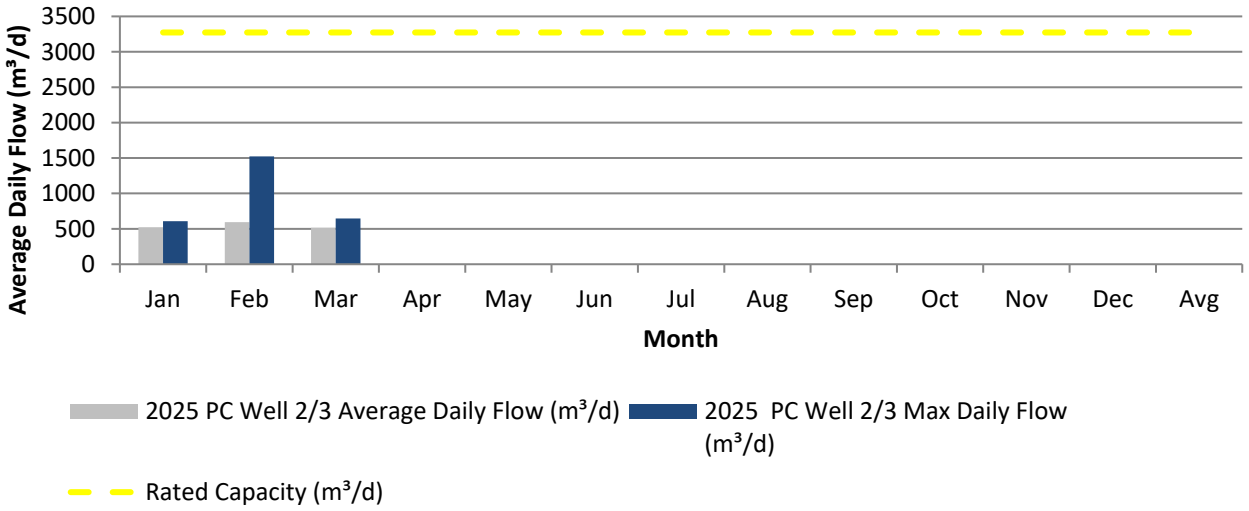


Figure 3: Blairs Grove Average and Maximum Daily Flow

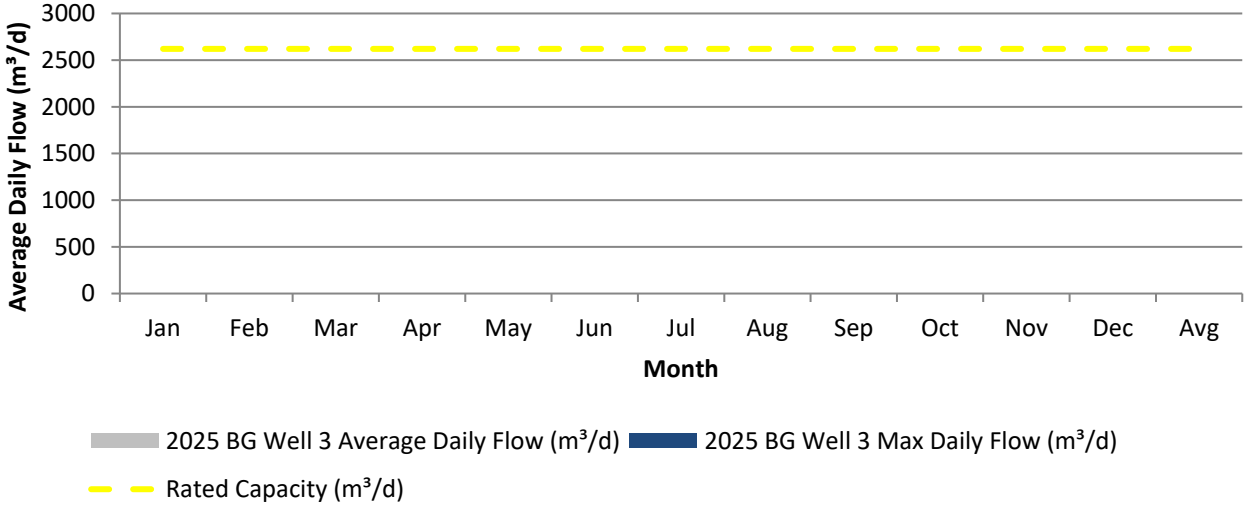


Figure 4: Huronville South Average and Maximum Daily Flow

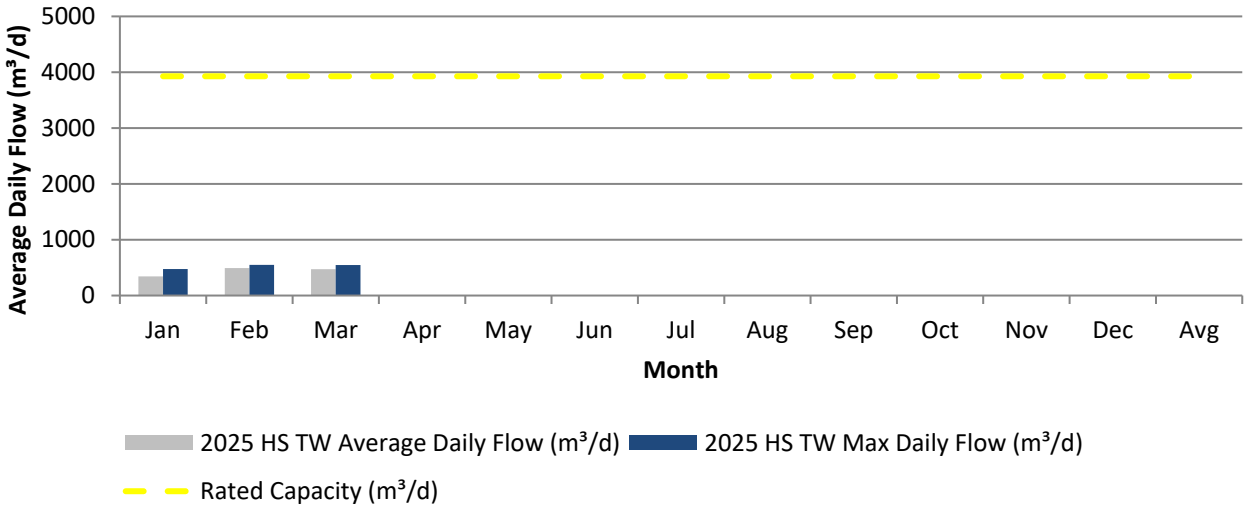


Figure 5: Murdoch Glen Maximum Daily Flow Rate

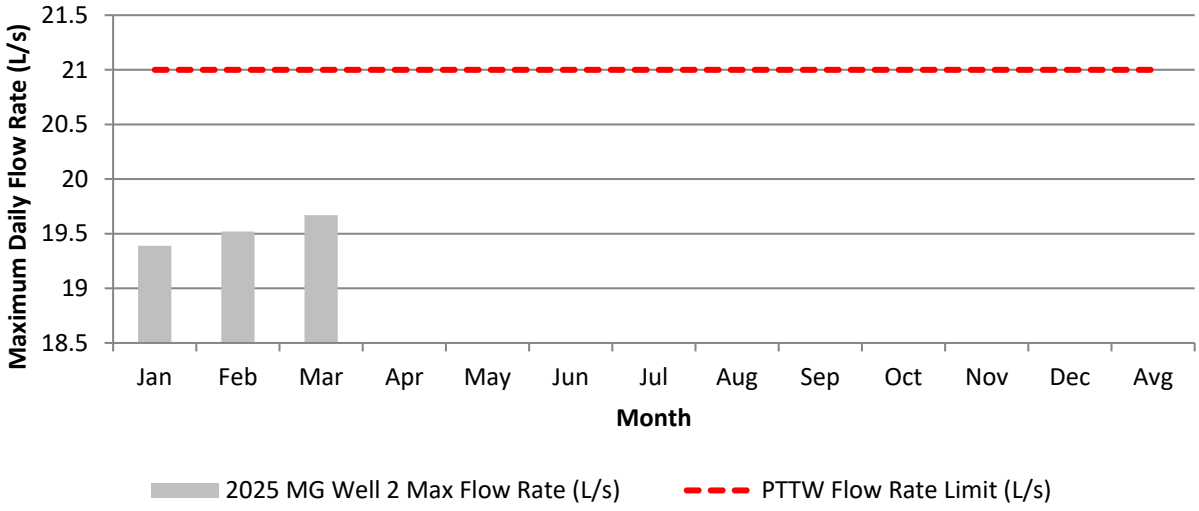


Figure 6: Point Clark Maximum Daily Flow Rate

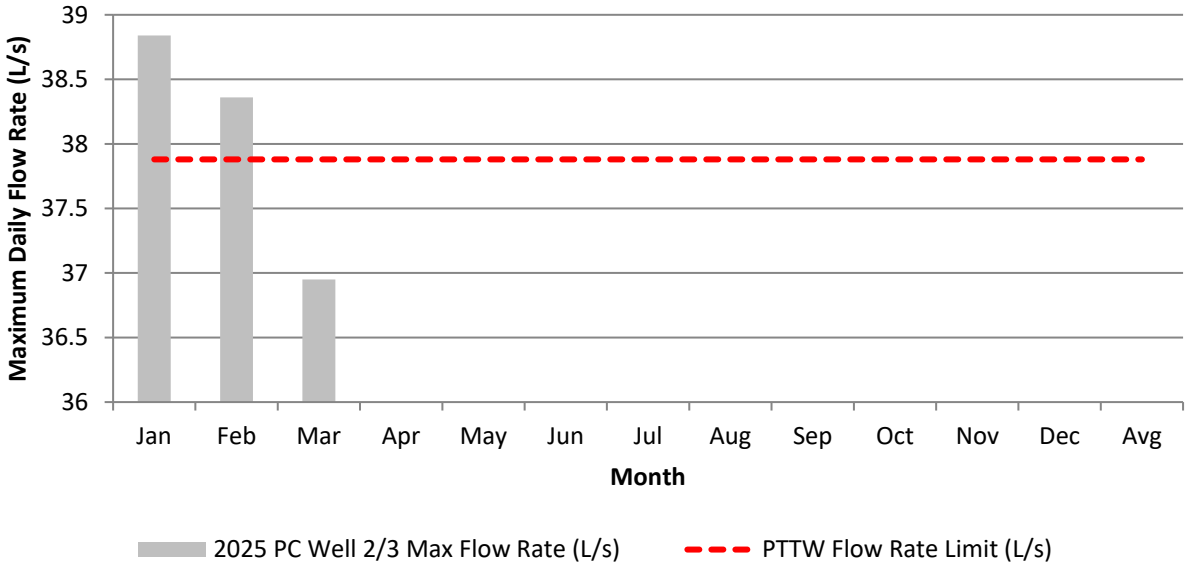
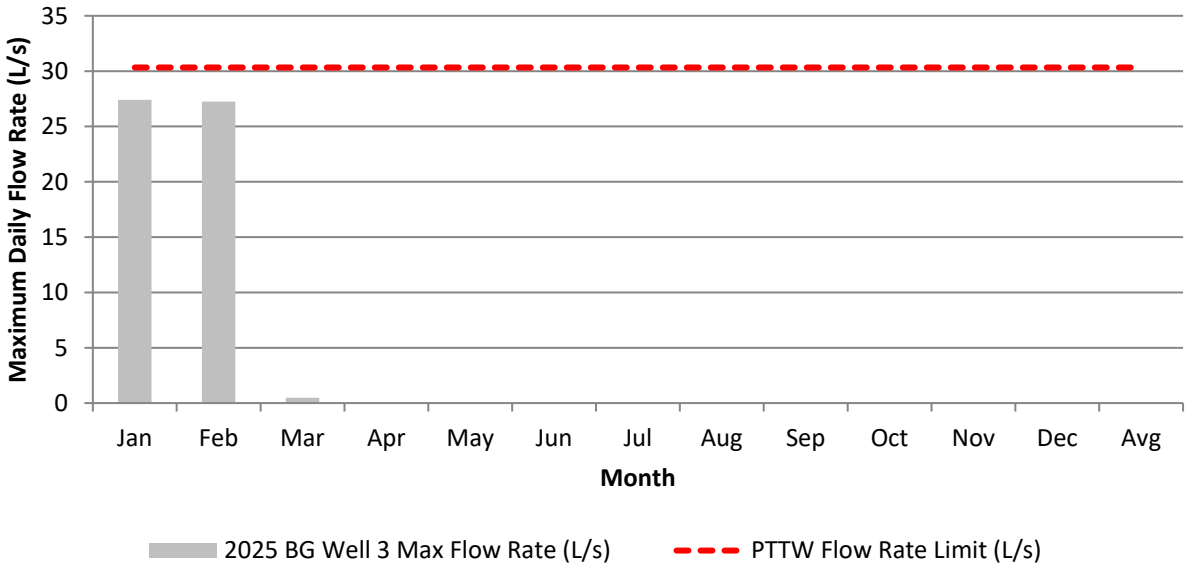
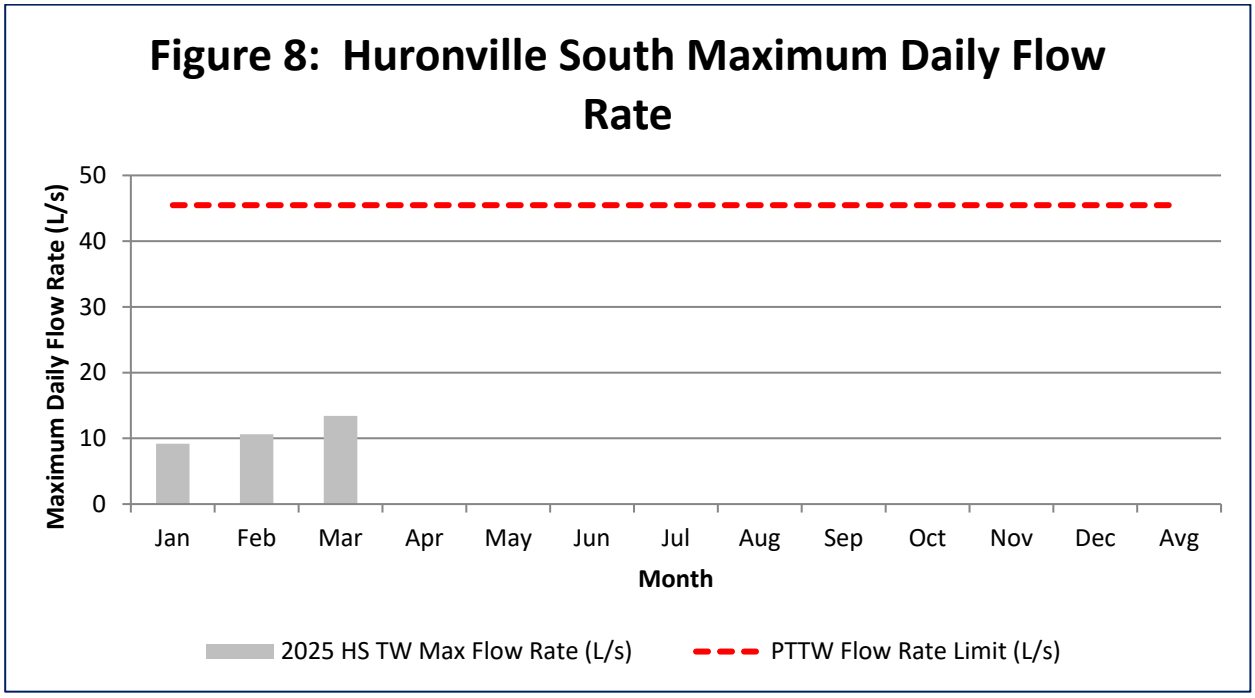


Figure 7: Blairs Grove Maximum Daily Flow Rate





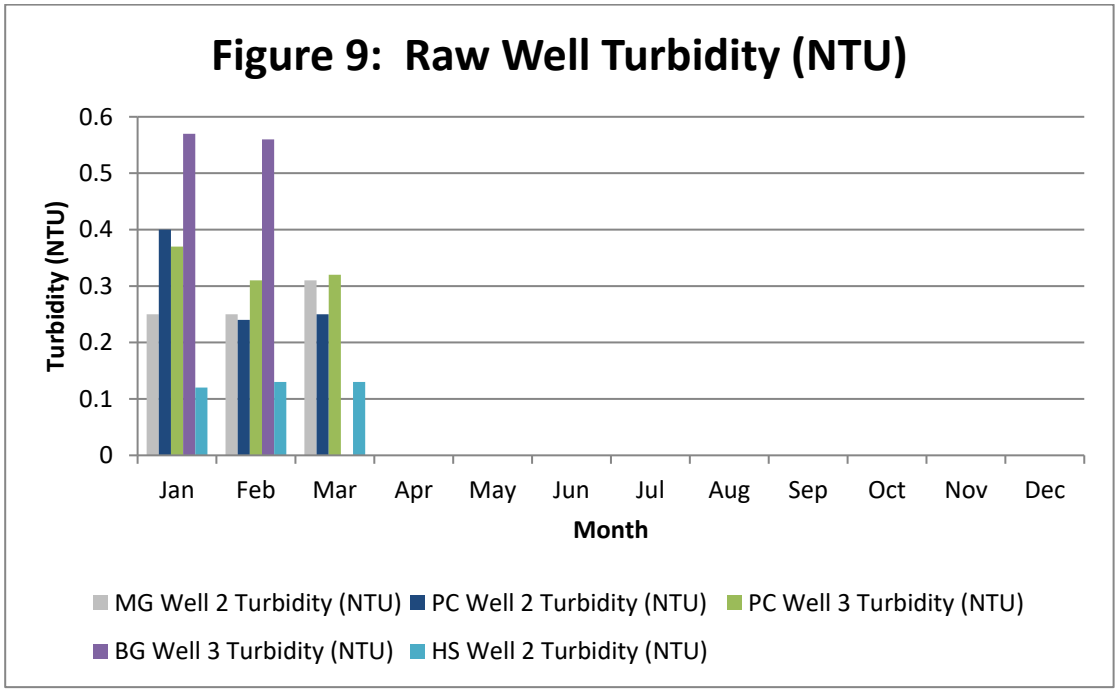
Raw Water Monitoring

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			
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 9 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 meet primary disinfection requirements of a minimum free chlorine residual of 0.22 mg/L for Blairs Grove, 0.40 mg/L for Huronville South, 0.32 mg/L for Point Clark and 0.26 mg/L for Murdoch Glen. A chlorine analyzer continuously monitors this residual at a minimum frequency of every 5 minutes. Figures 10, 11, 12 and 13 identify the monthly minimum and maximum values for the treated water residuals at all the wells.

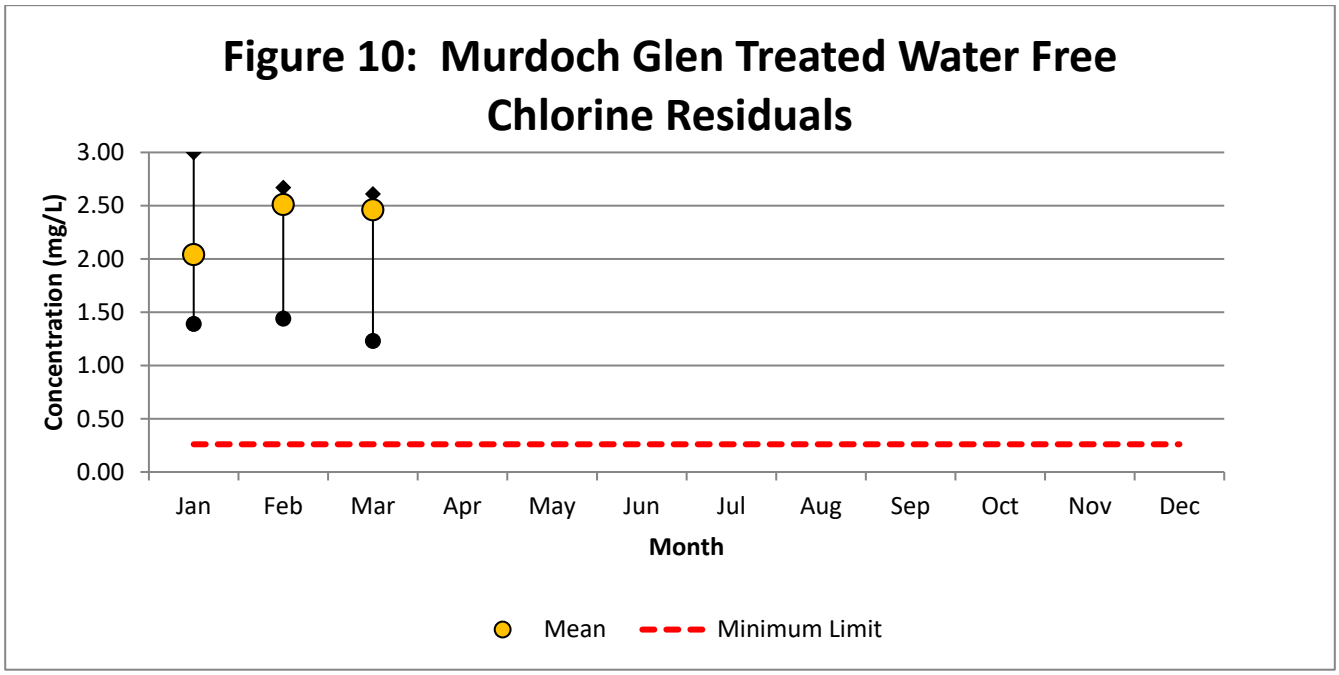


Figure 11: Point Clark Treated Water Free Chlorine Residuals

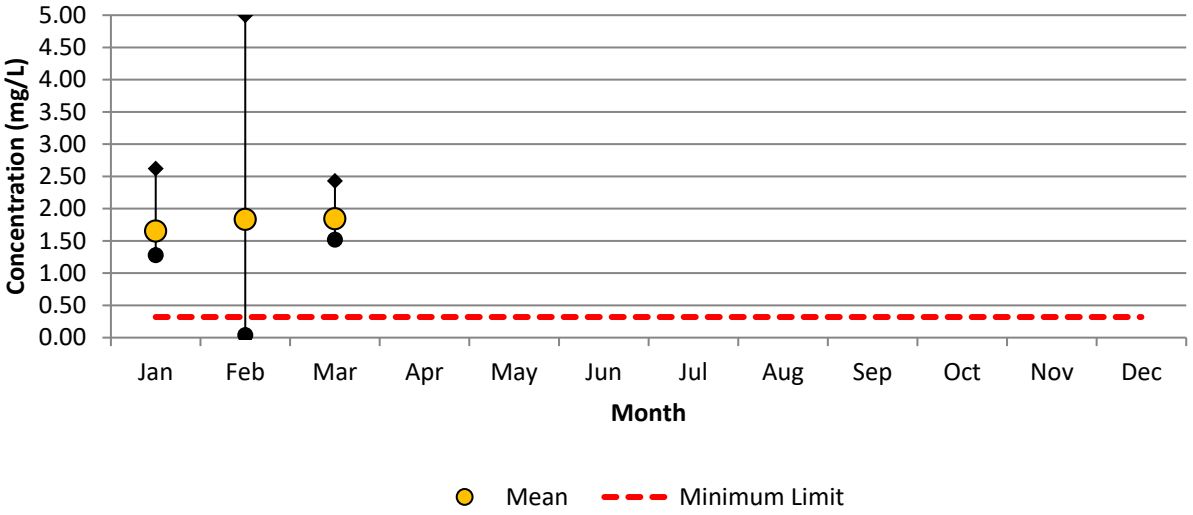
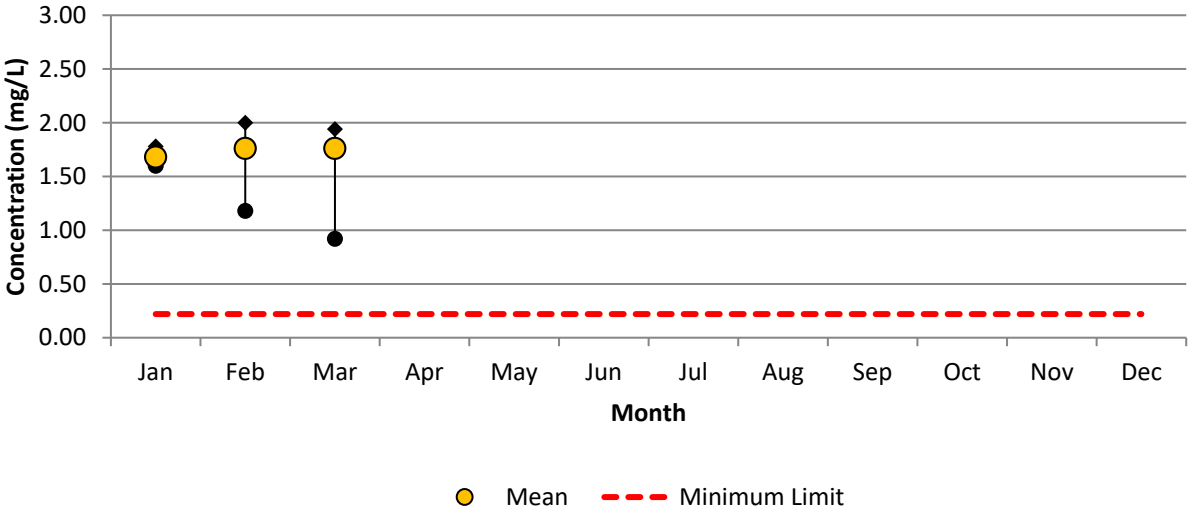
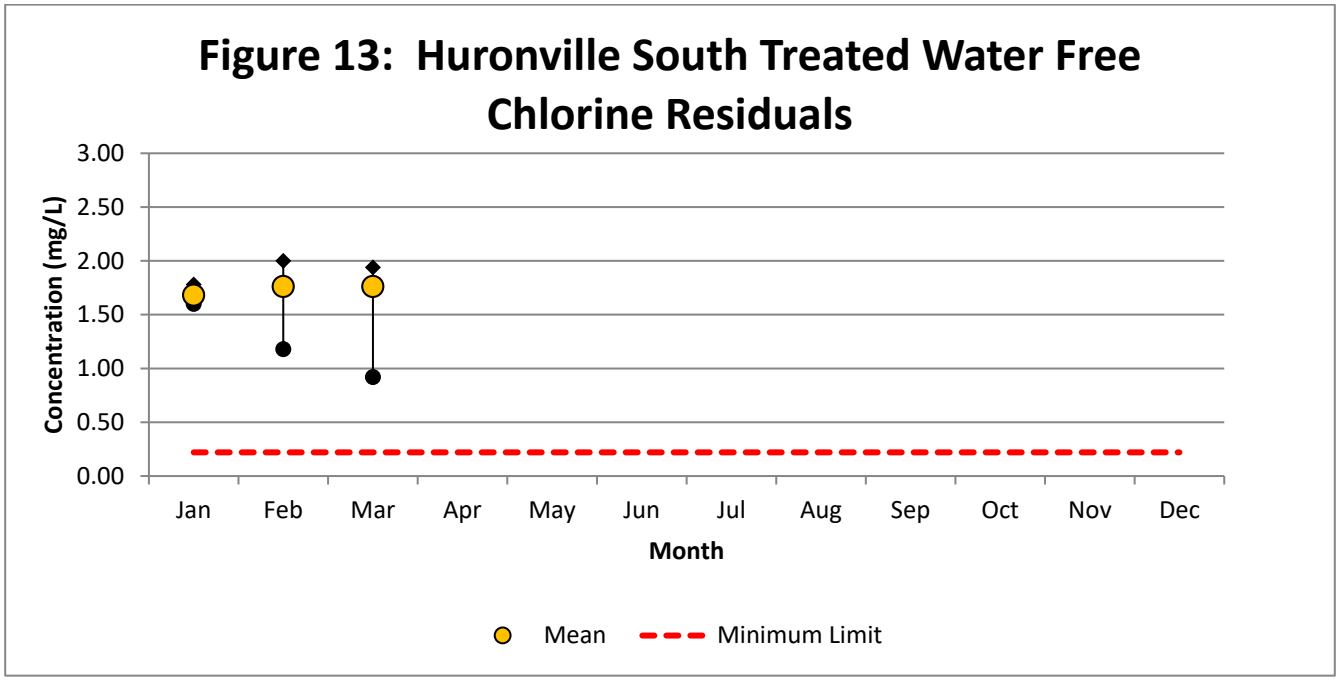


Figure 12: Blairs Grove Treated Water Free Chlorine Residuals





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

Table 2: Nitrate and Nitrite Results

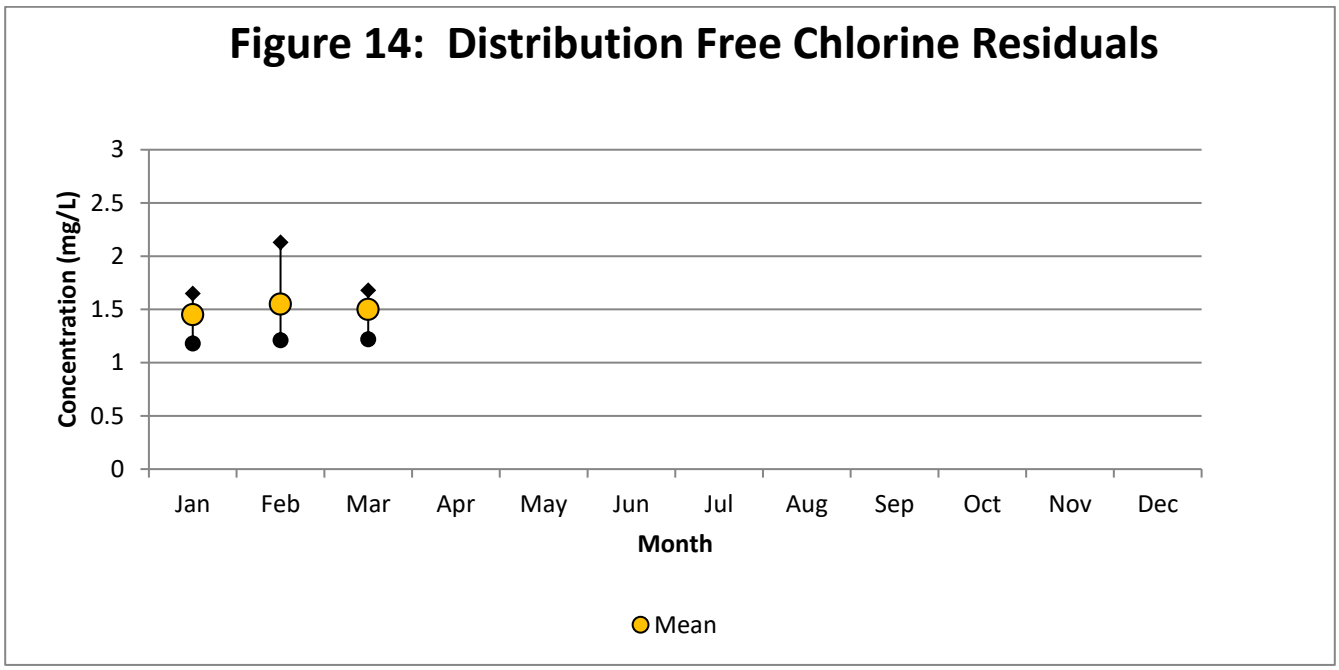
		Point Clark		Blairs Grove		Murdoch Glen		Huronville South	
	# Samples	Nitrate(mg/L)	Nitrite (mg/L)	Nitrate(mg/L)	Nitrite (mg/L)	Nitrate(mg/L)	Nitrite (mg/L)	Nitrate(mg/L)	Nitrite (mg/L)
Q1	4	0.006	0.003	0.006	0.003	0.006	0.003	0.006	0.003
Q2									
Q3									
Q4									

Sampling for sodium and fluoride occurs every 60 months. 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 14 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 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							
May							
June							
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)
May 2024	-	14	-	5.3
Aug 2024	-	9.6	-	5.3
Nov 2024	-	15	-	5.3
Feb 2025	-	11.84	-	5.3
Running Average	100	12.61	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				

Appendix C: Ripley Drinking Water System

Facility Name:	Ripley Drinking Water System
Classification:	Water Distribution and Supply Class 2
System Type:	Large Municipal Residential
DWS #	260002636
Population Served:	800
Facilities:	Well 2 House (71 Huron Street) Well 3 and 4 (21 Queen Street) Ripley Tower (21 Queen Street)

Flow Monitoring

The raw flow is measured at Wells 2, 3, and 4 in the Ripley 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 Well 2, Figure 2 for Well 3 and Figure 3 for Well 4. The maximum flow rates for each well are monitored and compared to the PTTW flow rate limits; refer to Figures 4 and 5.

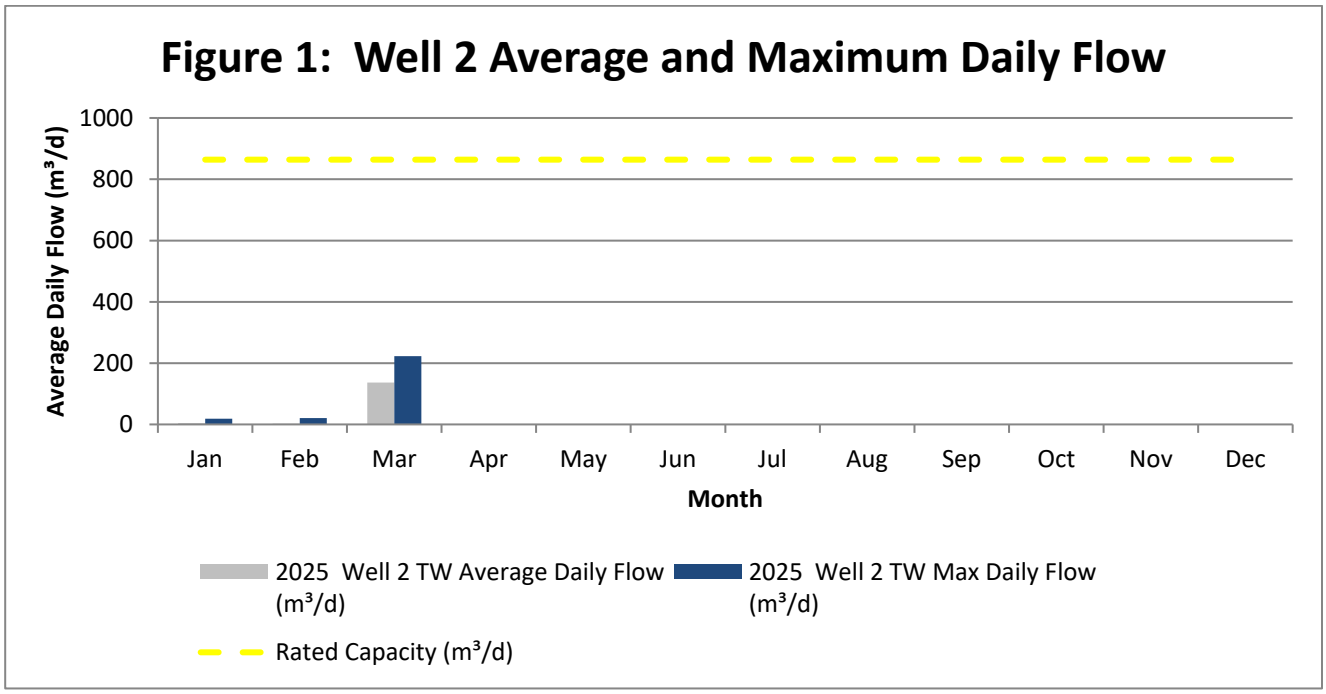


Figure 2: Well 3 Average and Maximum Daily Flow

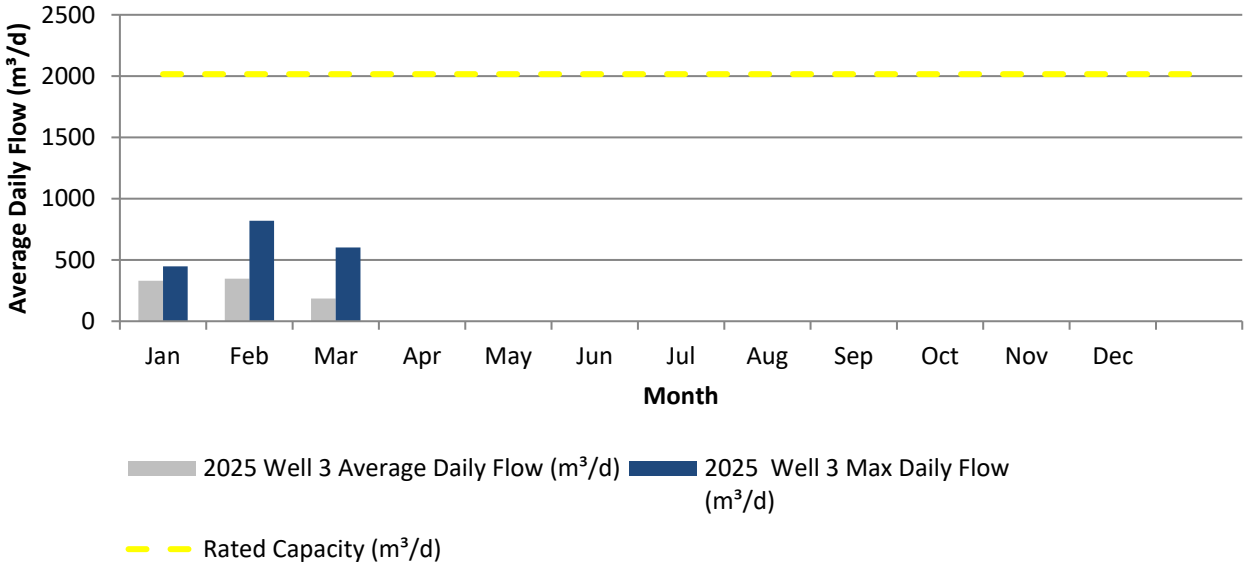
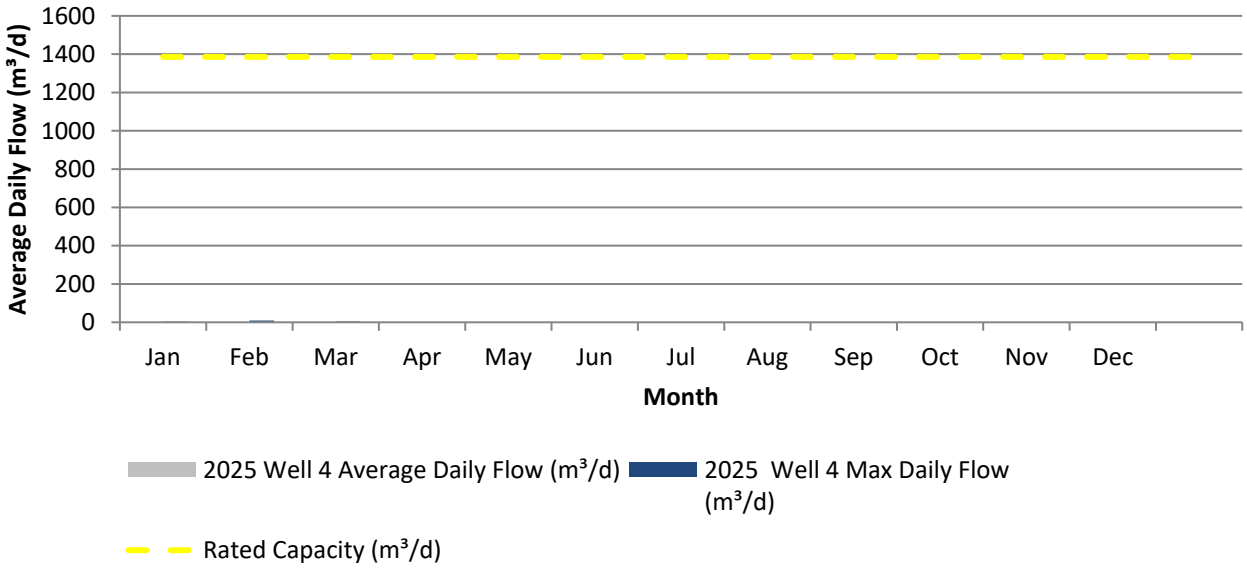
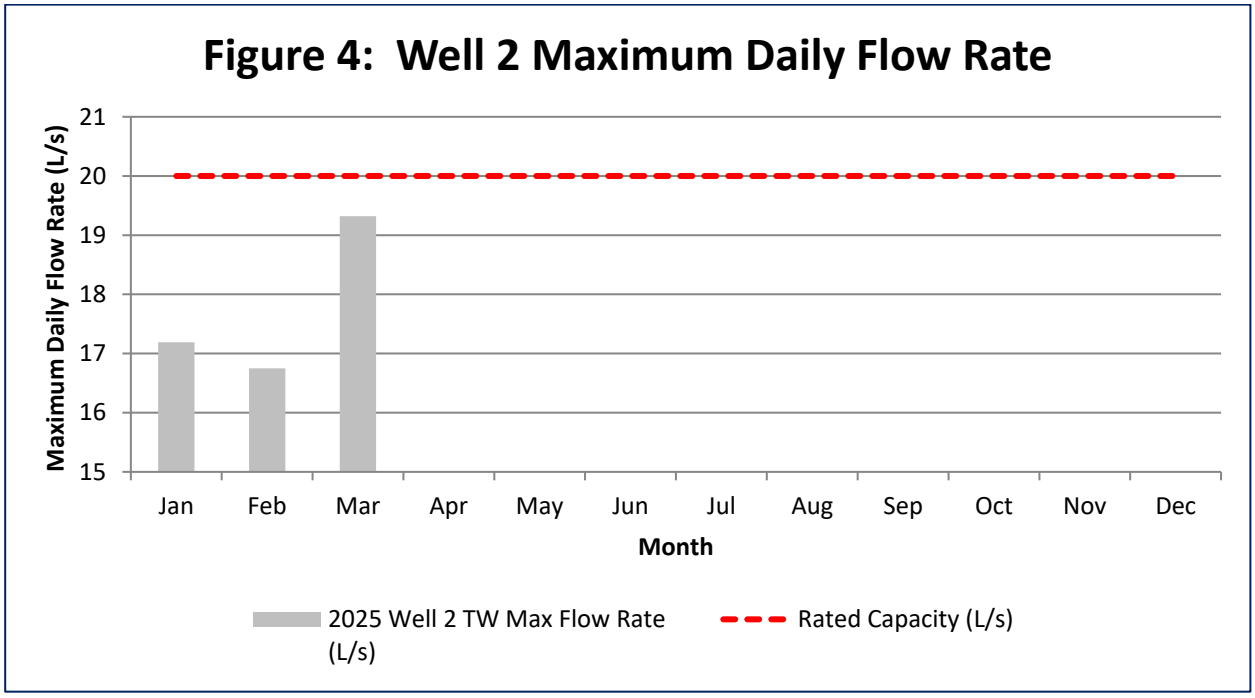
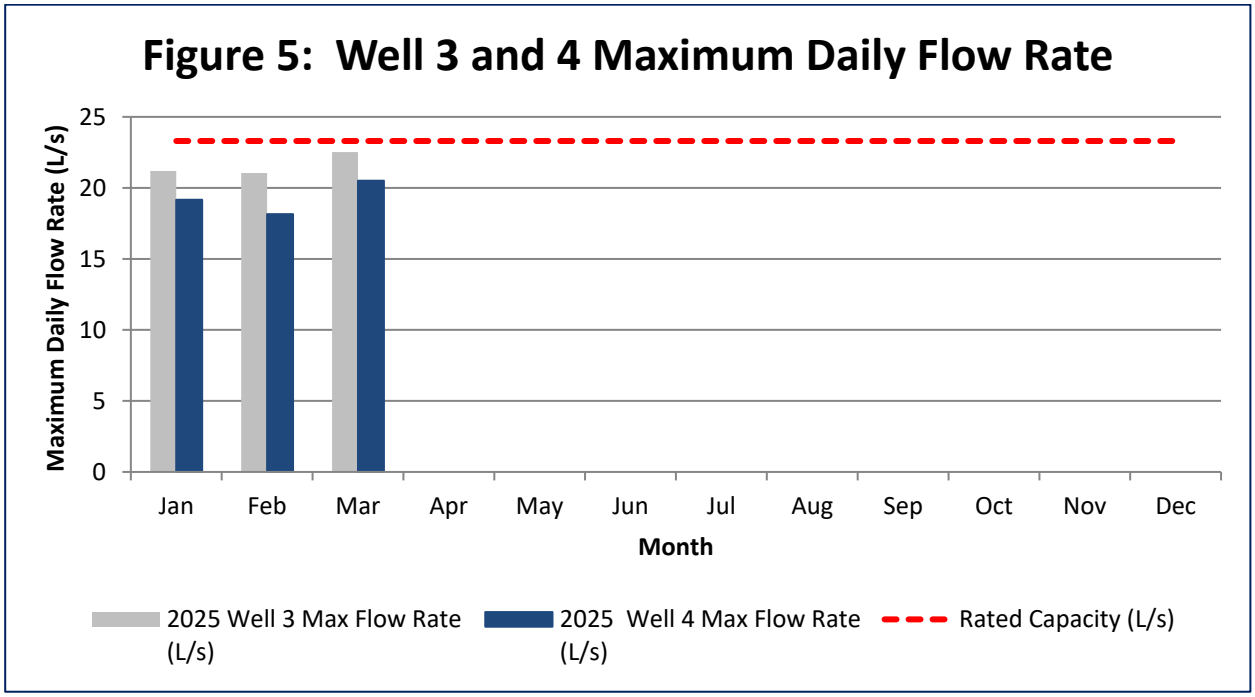


Figure 3: Well 4 Average and Maximum Daily Flow







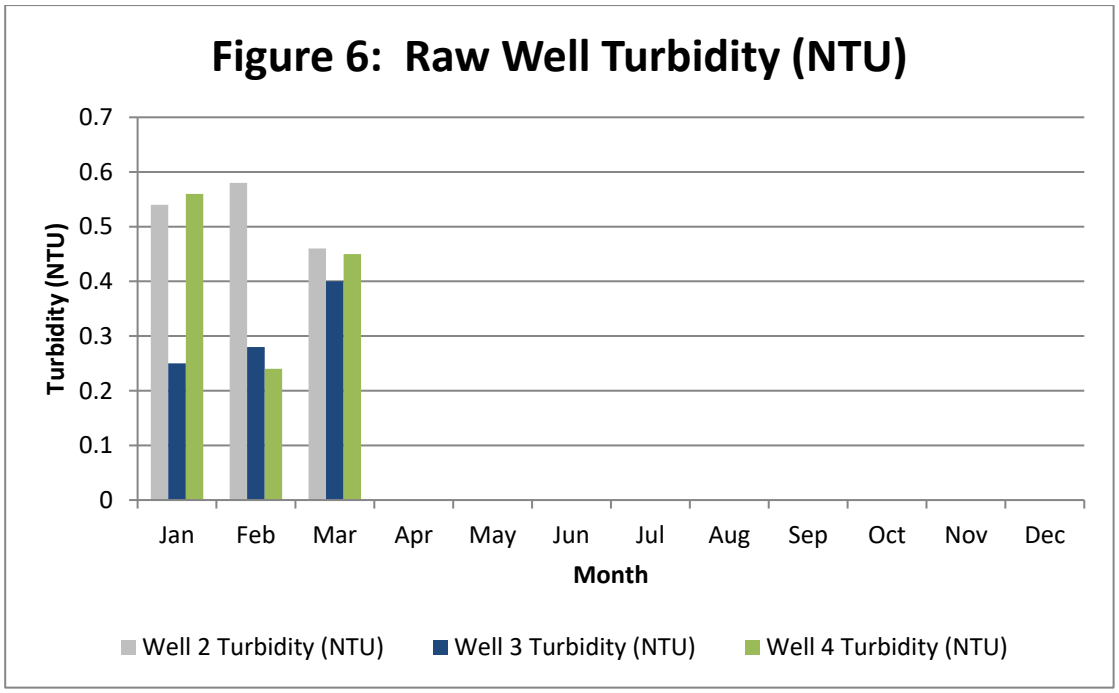
Raw Water Monitoring

Raw water is sampled on a weekly basis and tested for E. coli, Total Coliforms. Turbidity is sampled weekly 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

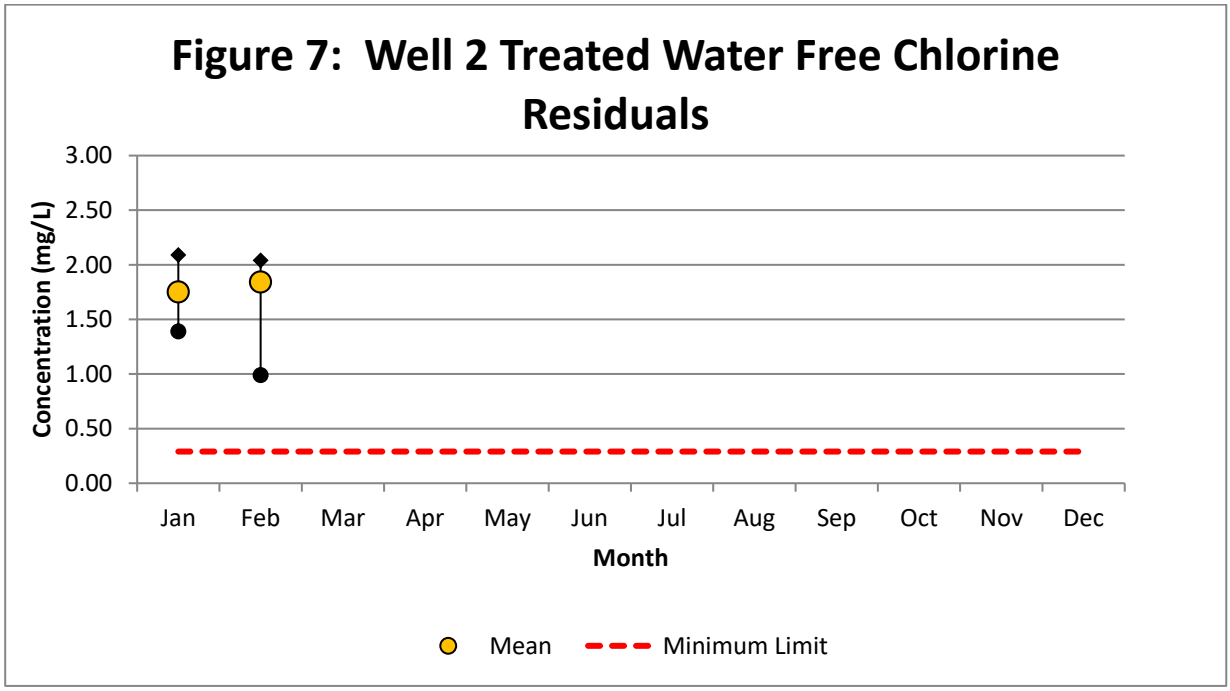
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	36	0.00-6.00	0.00-0.00
Q2			
Q3			
Q4			

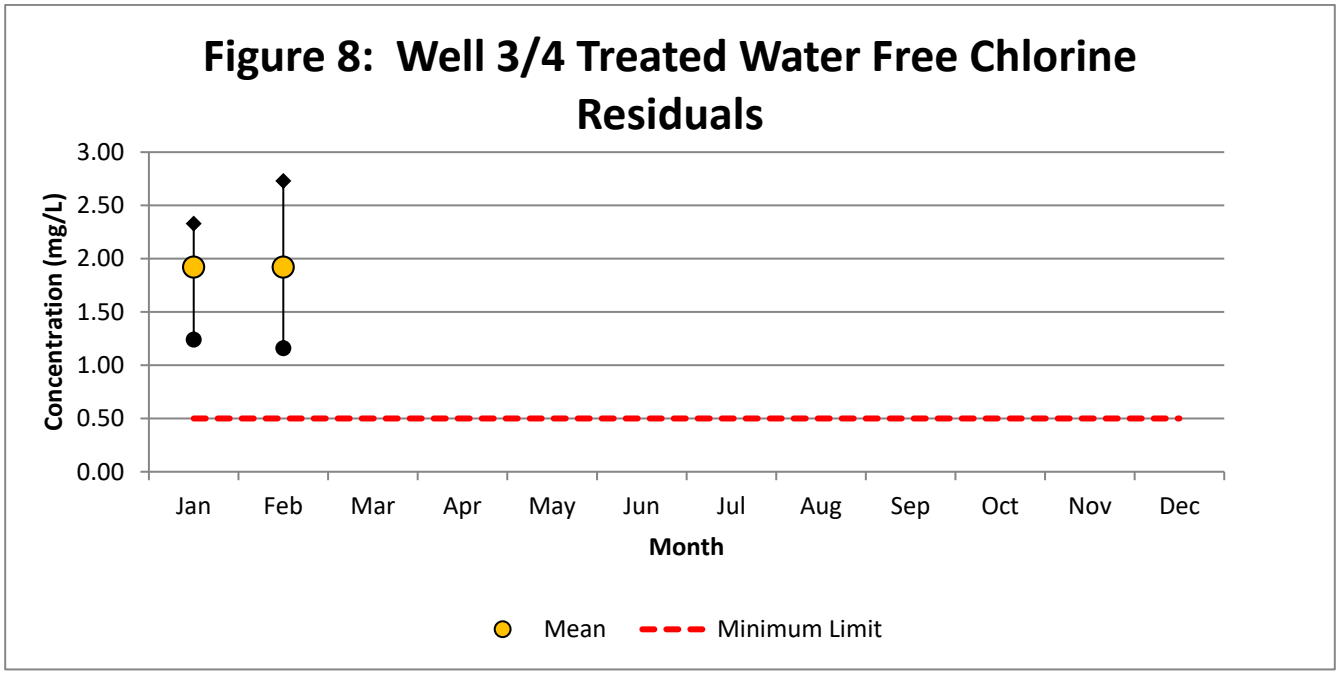
Turbidity results should be less than 1 NTU for raw water, with an aesthetic objective at the point of consumption to be less than 5 NTU. Refer to Figure 6 for a summary of turbidity readings recorded for each well.



Treated Water Monitoring

The treated water is analyzed for free chlorine residual in order to meet primary disinfection requirements of a minimum free chlorine residual of 0.29 mg/L for Well 2 and 0.50 mg/L for Wells 3 and 4. A chlorine analyzer continuously monitors these residuals at a minimum frequency of every 5 minutes. Refer to Figure 7 and 8 for the treated water residuals at Well 2 and Wells 3/4.





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

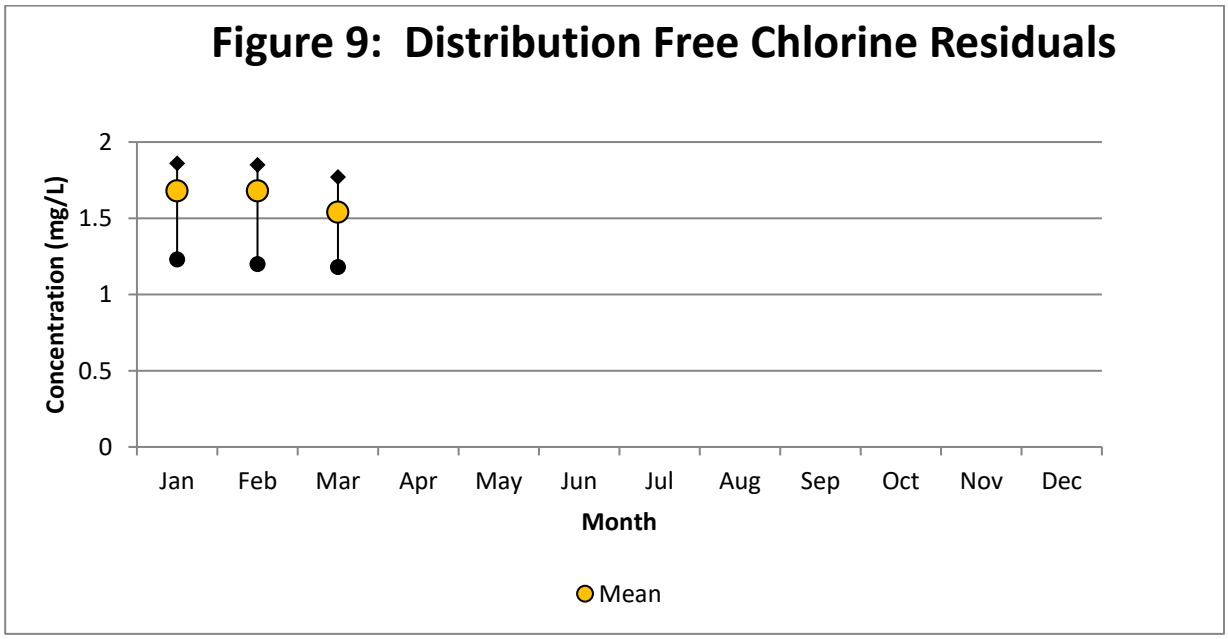
Table 2: Nitrate and Nitrite Results

		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					
Q3					
Q4					

Sampling for sodium and fluoride occurs every 60 months. Organic and inorganic parameters are sampled for every 36 months. The sodium samples were collected in 2021 and are therefore required in 2026. Fluoride was last sampled for in 2022 and will be required 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 samples at The Ripley Well house and Ripley Elevated Tank exceeded the sodium MAC of 20mg/L. These results were also 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 required 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 9 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 as this 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	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	<
April							
May							
June							
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)
May 2024	-	14	-	<5.3
Aug 2024	-	10.2	-	<5.3
Nov 2024	-	9.3	-	<5.3
Feb 2025	-	6.9	-	<5.3
Running Average	100	10.1	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				

Appendix D: Whitechurch Drinking Water System

Facility Name:	Whitechurch Drinking Water System
Classification:	Limited Groundwater System
System Type:	Small Municipal Residential
DWS #	220008863
Population Served:	109
Facilities:	Well House (9 Whitechurch Street)

Flow Monitoring

The raw flow is measured at Wells 1 and 2 in the Whitechurch Drinking Water System (DWS). The average and maximum daily flows compared against the Permit to Take Water (PTTW) daily limits are identified in Figure 1 for Well 1 and Figure 2 for Well 2. The maximum daily flow rates for each well are monitored and compared to the PTTW flow rate limits, refer to Figure 3.

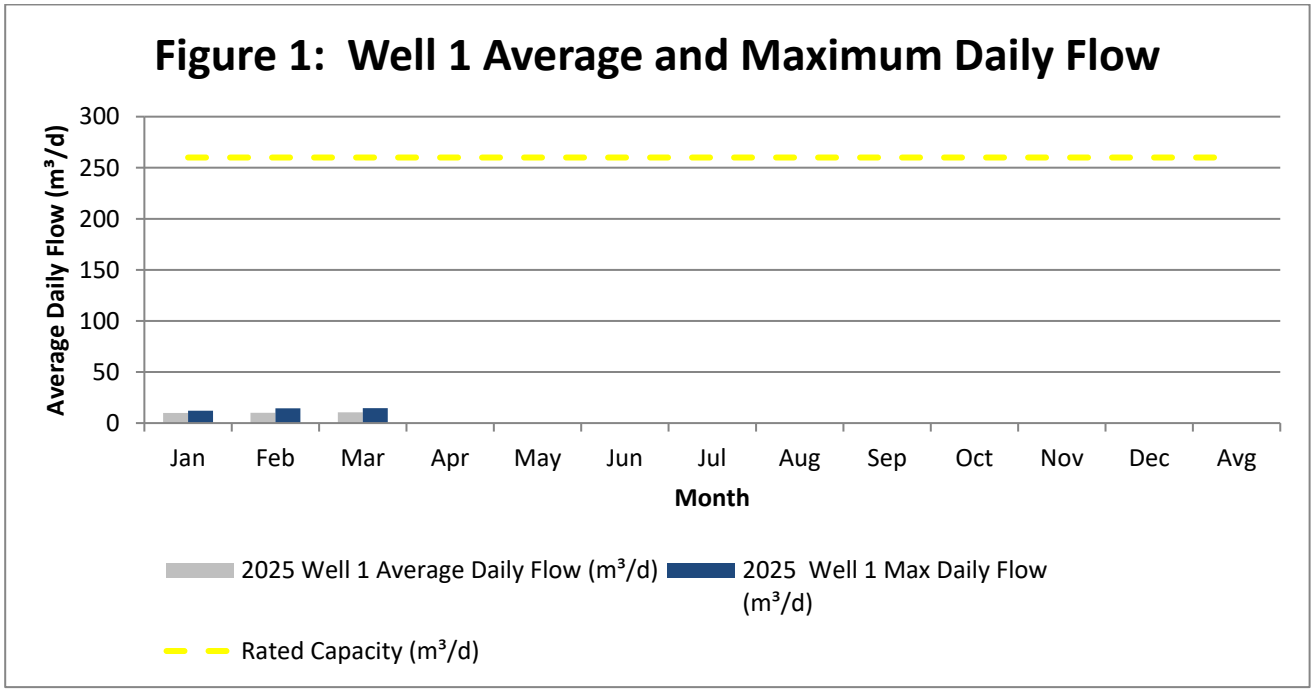


Figure 2: Well 2 Average and Maximum Daily Flow

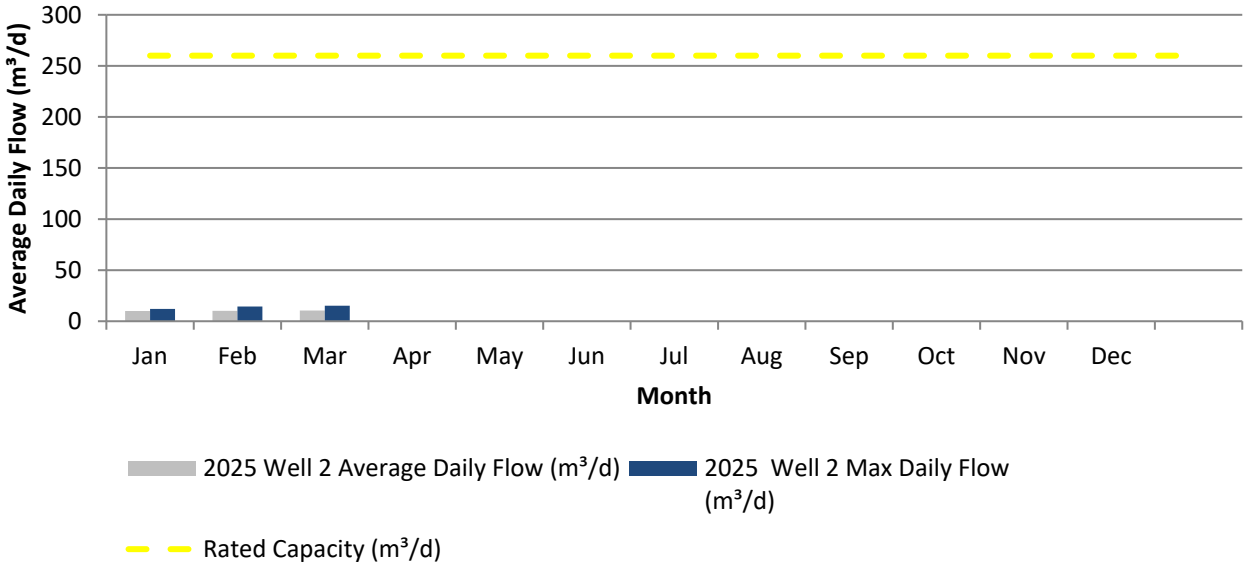
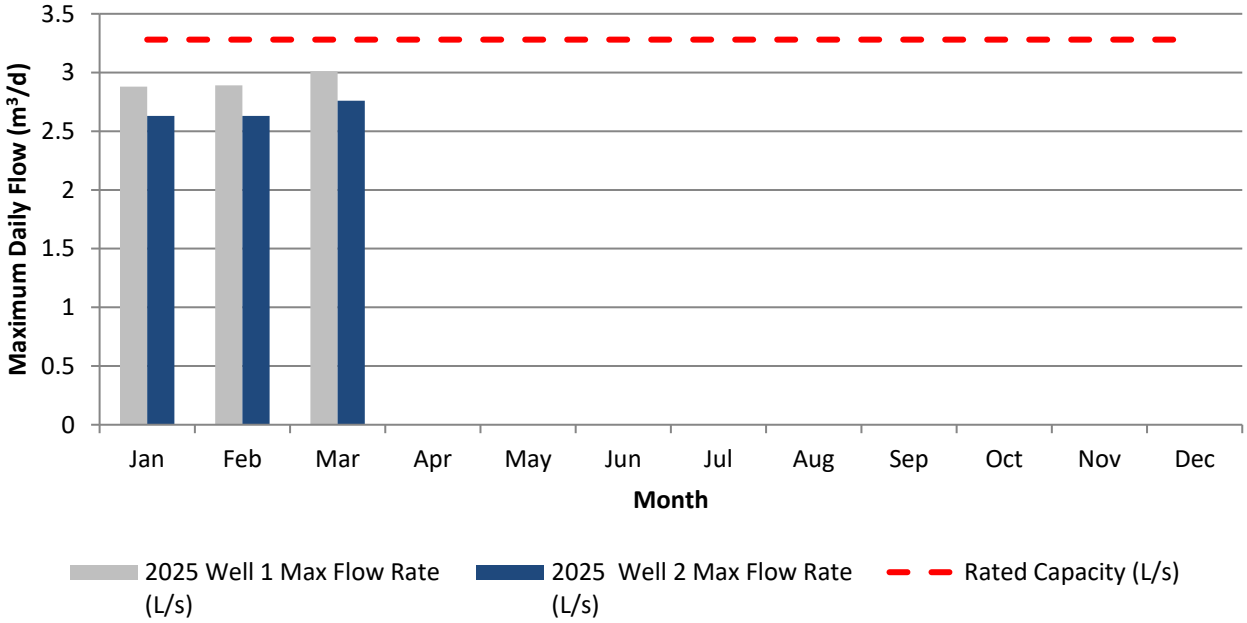


Figure 3: Maximum Daily Flow Rate



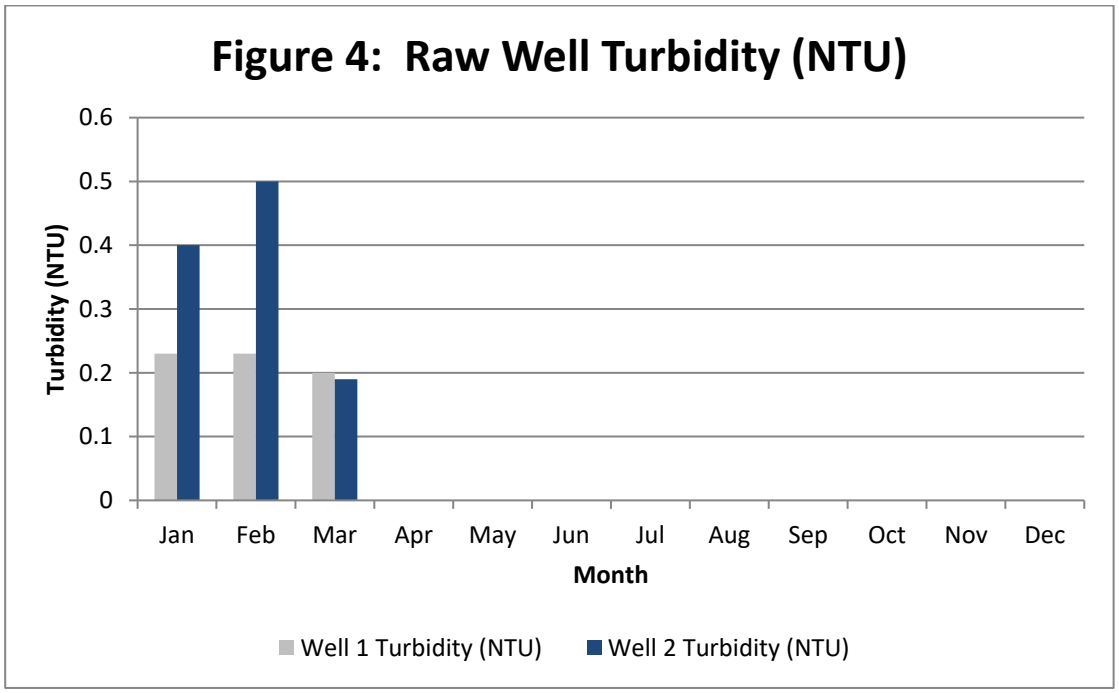
Raw Water Monitoring

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, 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

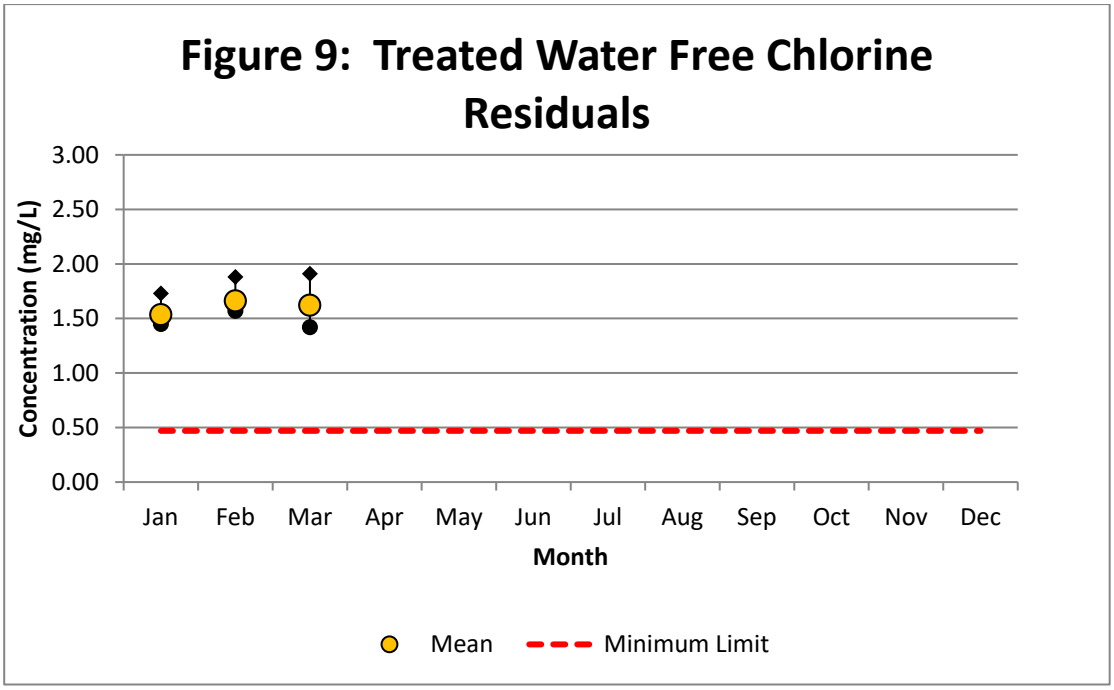
	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)
Q1	24	0.00 - 0.00	0.00 - 0.00
Q2			
Q3			
Q4			

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 monitored for free chlorine residual in order to meet primary disinfection requirements of a minimum free chlorine residual of 0.47 mg/L for Wells 1 and 2. A chlorine analyzer continuously monitors the treated water residual at a minimum frequency of every 5 minutes. Figure 9 identifies the monthly minimum and maximum values for the treated water residuals at Well 1 and 2.



On a quarterly basis, the treated water is tested for nitrates and nitrites, which has a limit of 10 mg/L. 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			
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.

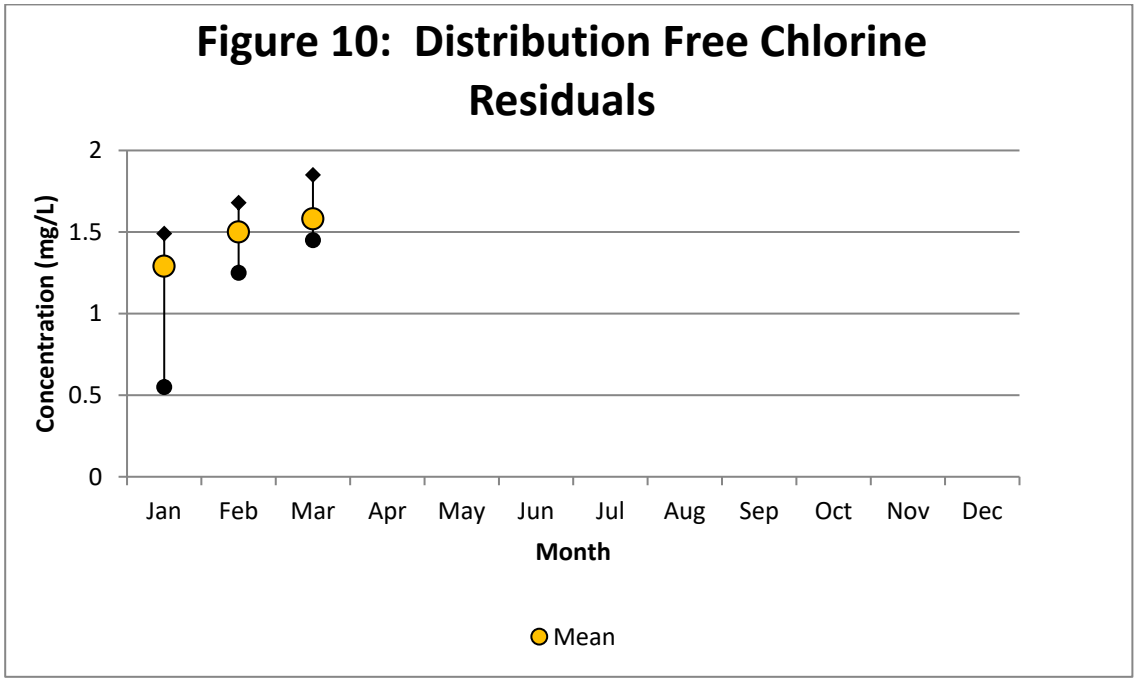
Table 3: Barium Results

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

Sampling for sodium, fluoride, organic and inorganic parameters occurs every 60 months. The last samples for sodium were collected in 2023, therefore are required in 2028. Fluoride was last sampled for in 2024and are thus required in 2029. Organic and inorganic parameters were last sampled for in 2022 and are thus required in 2027. All sample results 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.



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 as this is an operational guide to initiate an action plan if 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							
May							
June							
July							
August							
September							
October							
November							
December							

On a quarterly basis, disinfection by-products are monitored 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)
May 2024	-	19	-	13.4
Aug 2024	-	36	-	20.2
Nov 2024	-	23	-	13.1
Feb 2025	-	16	-	<5.30
Running Average	100	23.5	80	13

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				