

Haley Drinking Water System

Waterworks # 250001233
System Category – Small Municipal Residential

Annual Water Report

Prepared For: The Township of Whitewater Region

Reporting Period of January 1st – December 31st 2024

Issued: February 25th, 2025

Operating Authority:



This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11 and Schedule 22

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Report Availability

The annual report will be available to residents at the Township of Whitewater Region’s Municipal Office and copies provided free of charge if requested. The Township of Whitewater Region’s Municipal Office is located at, 44 Main Street, Cobden, Ontario.

There are no additional drinking water systems that receive water from this facility.

Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	1 MECP Inspection on July 24 th 2024 with a rating of 100%
Ministry of Labour Inspections	0
QEMS External Audit	1 Reaccreditation Audit completed on April 16 th 2024 by Intertek - SAI Global. No major or minor non-conformances were identified.
AWQI's/BWA	1 AWQI – See Summary of Non-Compliance for Details / 0
Non-Compliance	0
Community Complaints	5
Spills	0
Watermain Breaks	0

System Process Description

Raw Source

The Haley DWS drinking water is drawn from two ground water production wells. Both wells are located outside the treatment plant, in a fenced enclosure at 565 Heather Place, in Haley Station Ontario. Well #1 was drilled in late 2005, measuring 150 mm in diameter, 61 m deep and is equipped with a submersible pump rated at 115 L/min at a total dynamic head of 42 m. Well 1 is not under the direct influence of surface water.

Well #2 was drilled in September 2006, measuring 150 mm diameter, 103 m deep and is equipped with a submersible pump rated at 115 L/min with a total dynamic head of 42 m. Well #2 is potentially ground water under the direct influence of surface water (GUDI) however, there is adequate in-situ filtration.

Treatment

Raw water enters the treatment plant via one of two 50 mm discharge lines, one for each well, before joining a common header and being injected with sodium hypochlorite from one of two chemical metering pumps. A below-grade 12 m long pipeline provides contact time for disinfection to occur. Treated water leaving the plant is continuously monitored for chlorine residual.

Distribution

This Class 2 Water Distribution and Supply system supplies treated water to 34 single family homes. The most recent estimate of the population served is 96 people. An examination of the residential services completed in 2002, confirmed the absence of cross-connections. The complete replacement of all distribution piping occurred in the fall of 2010.

A hydraulic pressure tank, which is essential in maintaining adequate pressure in the distribution system during the time it takes to switch between the production wells, is located at 532 Sullivan Street. The townsite is presently without hydrant-based fire protection since the hydrants have been disconnected from their water supply. Sampling/flushing stations are installed at two dead end locations at Heather Street and Sullivan Street.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite (12%)	Disinfection	Brenntag Canada Inc.

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
01/16/2024	164349	Treated Water	Sodium Exceedance	Result of 69.1 mg/L	O.Reg 170/03	Resample, results of 65.5 mg/L

Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
None to report.				

Non-Compliance Identified in a Ministry Inspection:

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
None to report.				

Flows

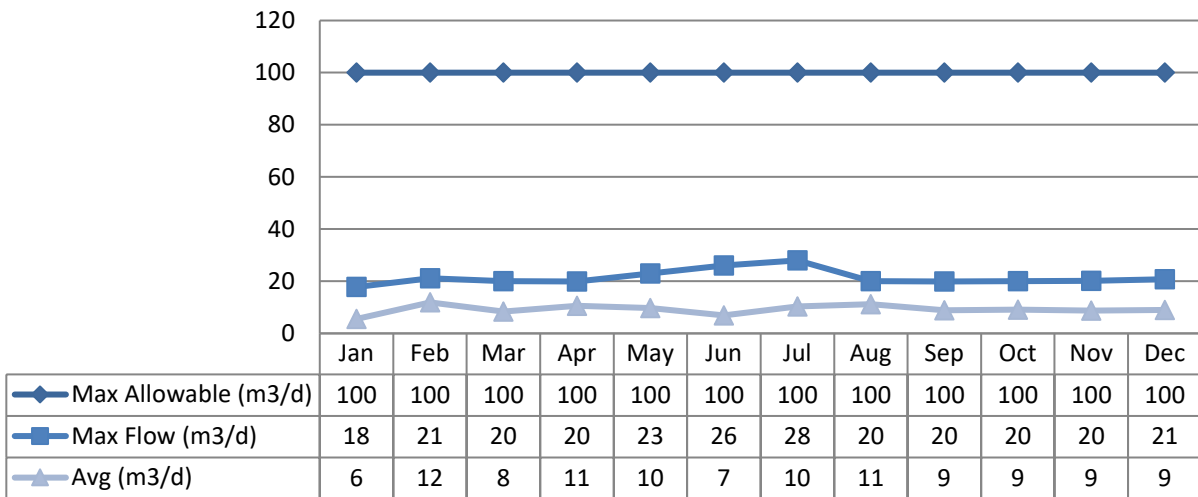
The Haley Drinking Water System is operating on average under half the rated capacity.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water (PTTW). 2024 Raw Flow Data was submitted to the Ministry electronically under permit #P-300-8175675490. The confirmations of the data submitted are attached in Appendix A.

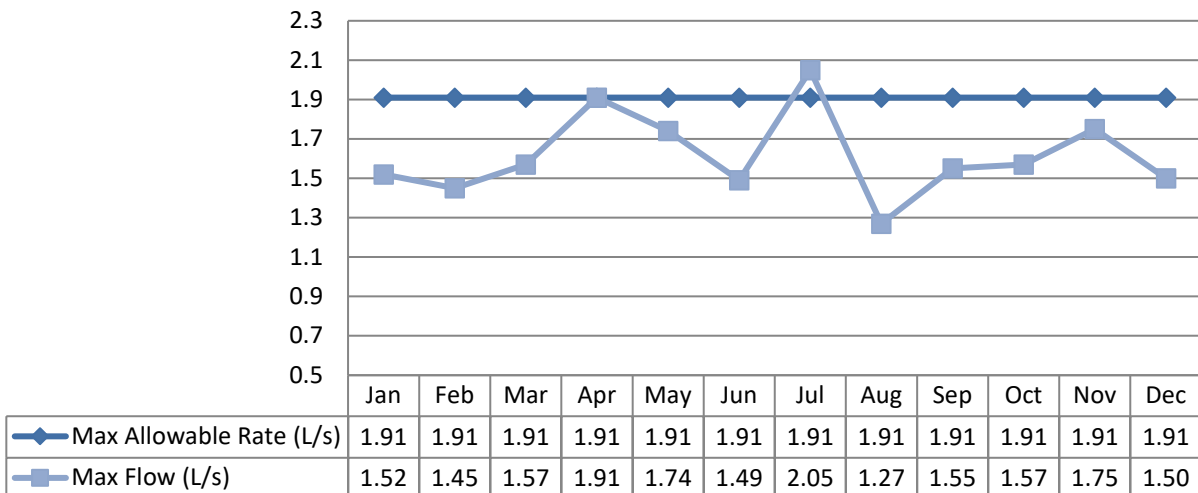
Well 1 Total Monthly Flows

Max Allowable - PTTW



Well 1 Maximum Flow Rates

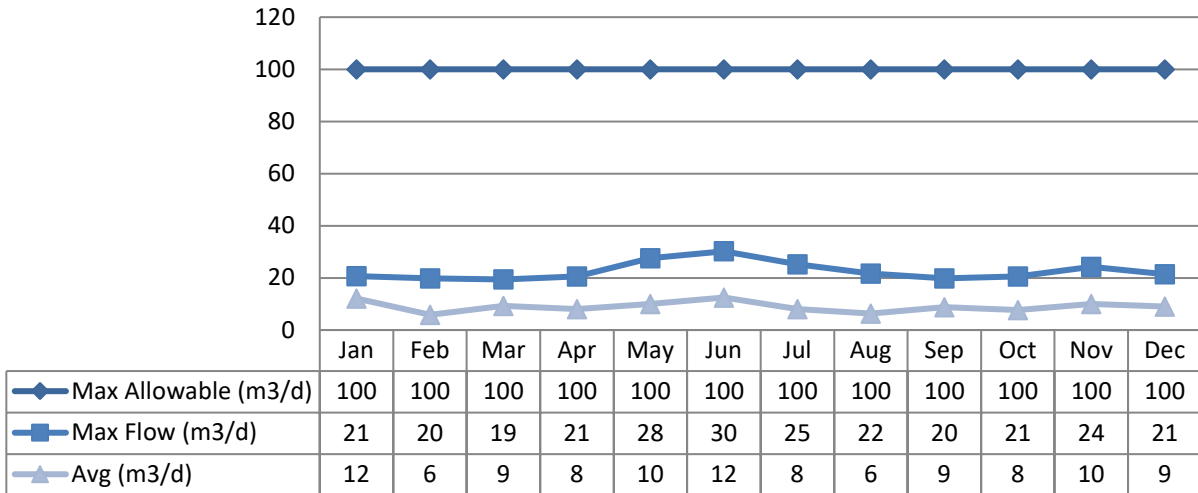
Max Allowable Rate - PTTW



*Note: the spike in flow rate that was above the max allowable rate were on well pump start up to re-pressurize the system and lasted less than a minute, events under a minute are not reportable as a PTTW exceedance

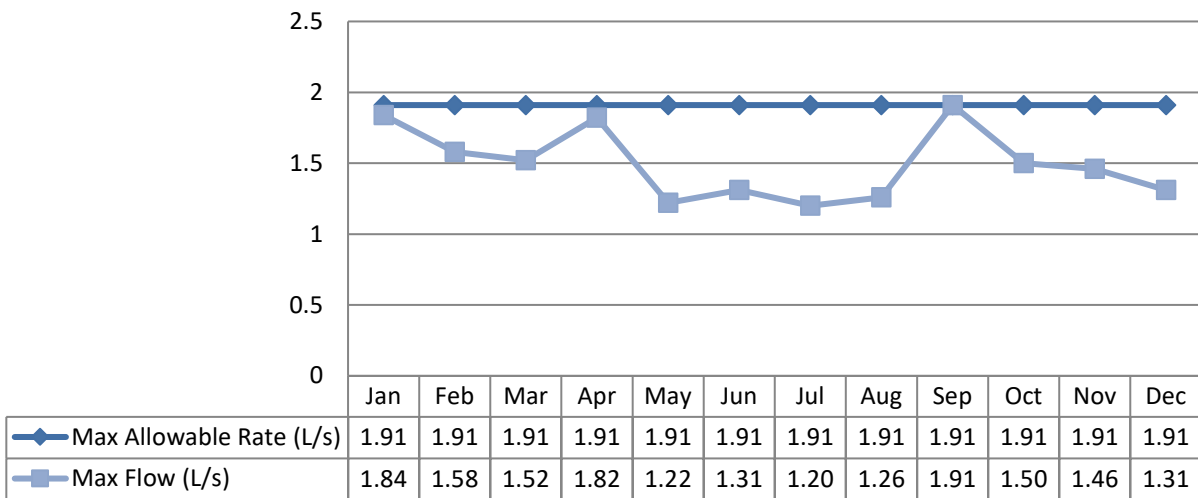
Well 2 Total Monthly Flows

Max Allowable - PTTW



Well 2 Maximum Flow Rates

Max Allowable Rate - PTTW

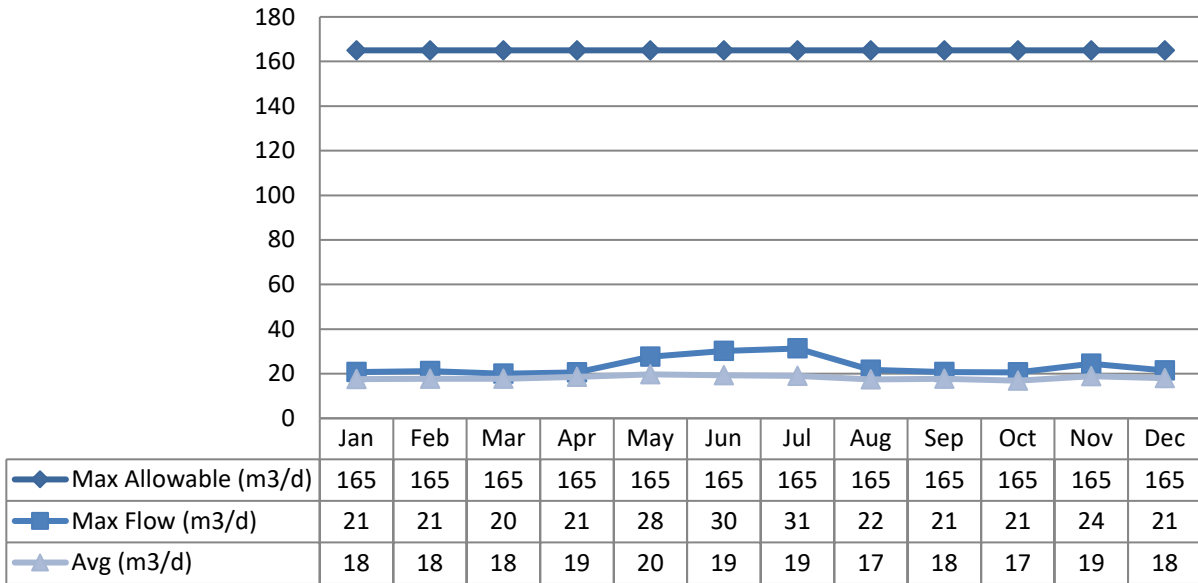


Treated Water Flows

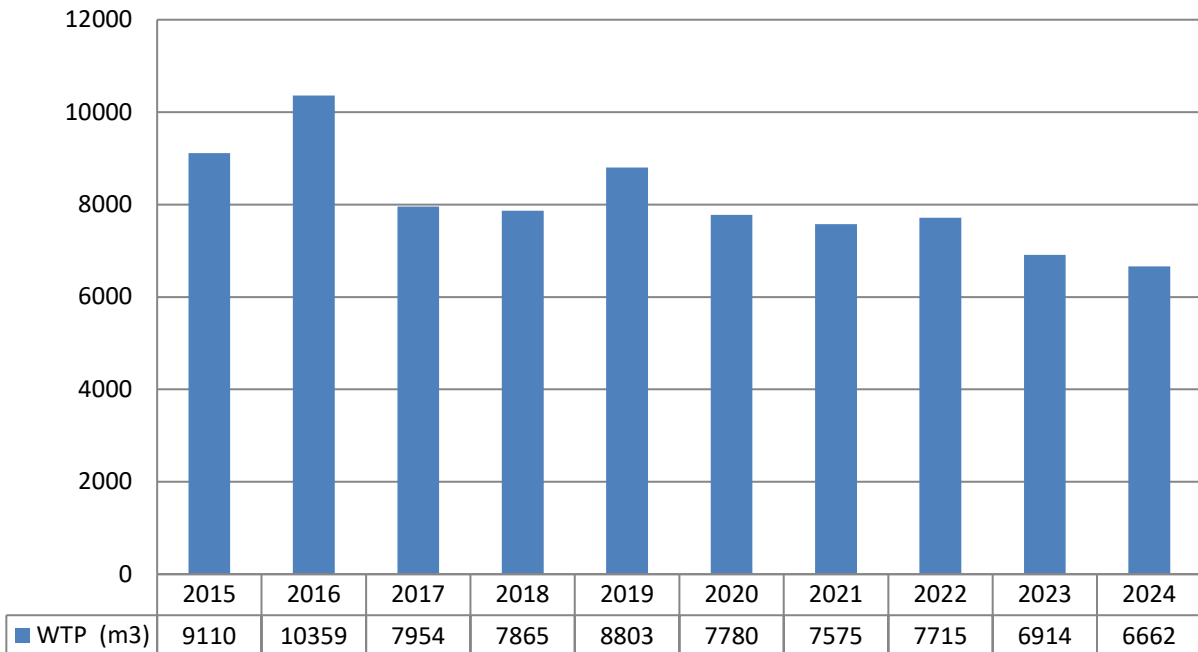
Treated water flows are regulated under the Municipal Drinking Water Licence (MDWL).

Treated Flows

Rated Capacity - MDWL



Annual Total Flow Comparison



Regulatory Sample Results Summary

Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Raw Water Well 1	12	0	0	0	0	N/A	N/A
Raw Water Well 2	12	0	0	0	0	N/A	N/A
Distribution Water	26	0	0	0	0	0	27

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity, In-House (NTU) - RW1	13	0.07	0.72
Turbidity, In-House (NTU) - RW2	13	0.09	0.46
Turbidity, In-House (NTU) - TW	245	0.15	0.90
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.75	4.25
Free Chlorine Residual, In-House (mg/L) - DW	105	0.80	1.84

NOTE: Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes are reviewed for compliance with O. Reg. 170/03

Inorganic Parameters

These parameters are tested as a requirement under O. Reg. 170/03. Sodium and Fluoride are required to be tested every 60 months. Nitrate and Nitrite are tested quarterly and metals are tested every 60 months as required under O. Reg. 170/03. In the event any parameter exceeds half the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- <MDL = Less than Method Detection Limit

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2021/01/13	<MDL 0.9	6.0	No	No
Arsenic: As (ug/L) - TW	2021/01/13	0.8	10.0	No	No
Barium: Ba (ug/L) - TW	2024/01/09	607	1000.0	No	Yes
Barium: Ba (ug/L) - TW	2024/04/09	541	1000.0	No	Yes
Barium: Ba (ug/L) - TW	2024/07/02	590	1000.0	No	Yes
Barium: Ba (ug/L) - TW	2024/10/01	593	1000.0	No	Yes
Boron: B (ug/L) - TW	2021/01/13	24.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2021/01/13	0.172	5.0	No	No
Chromium: Cr (ug/L) - TW	2021/01/13	1.36	50.0	No	No
Mercury: Hg (ug/L) - TW	2021/01/13	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2021/01/13	0.4	50.0	No	No
Uranium: U (ug/L) - TW	2021/01/13	1.47	20.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Additional Inorganics					
Nitrite (mg/L) - TW	2024/01/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/04/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/07/02	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/10/01	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2024/01/09	7.33	10.0	No	Yes
Nitrate (mg/L) - TW	2024/04/09	4.65	10.0	No	No
Nitrate (mg/L) - TW	2024/07/02	7.63	10.0	No	Yes
Nitrate (mg/L) - TW	2024/10/01	4.78	10.0	No	No
Fluoride (mg/L) - TW	2024/01/09	0.17	1.5	No	No
Sodium: Na (mg/L) - TW	2024/01/16	65.5	20*	Yes	Yes

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified mg/L when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O.Reg 170/03. This system is under reduced sampling. No plumbing samples were collected.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	2	4	301	320	N/A	N/A
pH	2	3	7.31	8.24	N/A	N/A
Lead (ug/L)	2	3	0.32	0.36	10	0

Organic Parameters

These parameters are tested every 60 months as a requirement under O. Reg. 170/03. In the event any parameter exceeds half the maximum allowable concentration the parameter is required to be sampled quarterly. Distribution samples are tested quarterly for THM's and HAA's in accordance with O. Reg. 170/03.

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- <MDL = Less than Method Detection Limit

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2021/01/13	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2021/01/13	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L) - TW	2021/01/13	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2021/01/13	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L) - TW	2021/01/13	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2021/01/13	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2021/01/13	<MDL 0.05	90.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Carbofuran (ug/L) - TW	2021/01/13	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2021/01/13	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2021/01/13	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2021/01/13	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2021/01/13	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2021/01/13	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2021/01/13	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2021/01/13	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2021/01/13	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2021/01/13	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2021/01/13	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2021/01/13	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2021/01/13	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2021/01/13	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2021/01/13	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2021/01/13	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2021/01/13	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2021/01/13	<MDL 0.02	190.0	No	No
Metolachlor (ug/L) - TW	2021/01/13	<MDL 0.01	50.0	No	No
Metribuzin (ug/L) - TW	2021/01/13	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2021/01/13	<MDL 0.3	80.0	No	No
Paraquat (ug/L) - TW	2021/01/13	<MDL 1.0	10.0	No	No
PCB (ug/L) - TW	2021/01/13	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L) - TW	2021/01/13	<MDL 0.15	60.0	No	No
Phorate (ug/L) - TW	2021/01/13	<MDL 0.01	2.0	No	No
Picloram (ug/L) - TW	2021/01/13	<MDL 1.0	190.0	No	No
Prometryne (ug/L) - TW	2021/01/13	<MDL 0.03	1.0	No	No
Simazine (ug/L) - TW	2021/01/13	<MDL 0.01	10.0	No	No
Terbufos (ug/L) - TW	2021/01/13	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L) - TW	2021/01/13	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2021/01/13	<MDL 0.2	100.0	No	No
Triallate (ug/L) - TW	2021/01/13	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L) - TW	2021/01/13	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2021/01/13	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW	2021/01/13	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2021/01/13	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L) - TW	2021/01/13	<MDL 0.17	1.0	No	No

Distribution samples are tested quarterly for THM's and HAA's in accordance with O. Reg. 170/03.

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
DISTRIBUTION WATER					
Trihalomethane (THM): Total (ug/L) – DW*	2024	15.2	100.0	No	No
Haloacetic Acid (HAA): Total (ug/L) - DW*	2024	5.3	80.0	No	No

*Running Annual Average

<MDL = Less than Method Detection Limit

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

Additional Legislated Samples

No additional sampling required.

Maintenance Summary

WO #	Description
3952721	Purchased backup chlorine dosing pump

Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
570 Sullivan Street	07/30/2024	Low Pressure	Pressure restored once system flushing was completed
574 Sullivan Street	07/30/2024	Low Pressure	Pressure restored once system flushing was completed
564 Sullivan Street	07/30/2024	Coloured Water	Coloured water due to system flushing to in the area, resident advised to flush cold water until clear
575 Heather Place	08/29/2024	Low Pressure	Verified pressure leaving facility, resident advised to flush cold water to remove air from the line
575 Heather Place	09/08/2024	Low Pressure	Verified pressure leaving facility, Township Manager of Public Works spoke with resident

Appendix A

RSRS Data and Submission Confirmation



Client Name: THE CORPORATION OF THE TOWNSHIP OF WHITEWATER REGION Reporting Year: 2024 Service: PTTW Permit Number: P-300-8175675490 Permit Version: 1.0 New or Updated Submission: NEW

Site Name: Haley Water Treatment Plant

Source ID: 500000637580

Source Name: Well 1

Source Type: Well

UTM(Zone/Easting/Northing): 18/362875.0/5050014.0

Method of Determination: Metered

Unit of Measure: Litre

Description: Well 1

Purpose Category: Utilities

Specific Category: Municipal Supply

Activity: Water Supply

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	17600.0	16100.0			17600.0	16400.0		17800.0	17800.0	6300.0	16500.0	18900.0
2	9100.0	17600.0		7700.0	19000.0	16400.0	11100.0	16800.0	18100.0		17800.0	4600.0
3		18200.0		17200.0	17000.0	17500.0	18000.0	19600.0	6500.0		19300.0	
4		18200.0		18600.0	21100.0	18200.0	18600.0	18000.0			5100.0	
5		16700.0	9000.0	16500.0	19900.0		13300.0	18100.0				
6		9300.0	18000.0	15400.0	19600.0			6400.0				
7			17000.0	18600.0	10300.0							
8			16900.0	18000.0						8800.0		
9			19400.0	17400.0			200.0		12000.0	17900.0		12600.0
10			20000.0	19900.0						16400.0		17900.0
11			16100.0	6500.0						15400.0		17200.0
12			16900.0					11600.0	16600.0	16100.0	10700.0	17900.0
13			17900.0					16100.0	16500.0	17100.0	16500.0	18000.0
14			16200.0					18200.0	16000.0	18000.0	17000.0	17900.0
15		11800.0	18100.0				10800.0	20000.0	19000.0	16300.0	16800.0	19600.0
16		16300.0	18000.0				15300.0	16200.0	8300.0	17800.0	18400.0	5600.0
17	10800.0	19200.0	19300.0				17300.0	15200.0		16300.0	20200.0	
18	5100.0	16600.0	15700.0				17300.0	18100.0		15500.0	18500.0	
19		21100.0	4300.0			12100.0	21800.0	5100.0		16800.0	4600.0	
20		19600.0	12500.0			20000.0	23800.0	13500.0		17500.0		
21		16300.0	5500.0			19300.0	23400.0	17600.0		3400.0		
22		19000.0		12200.0	12700.0	17700.0	28000.0	5900.0				
23		17800.0		19700.0	23000.0	17900.0	5000.0		11800.0			15300.0
24	11500.0	16500.0		19300.0	18500.0	18900.0	12700.0		17500.0			20800.0
25	15300.0	19000.0		19900.0	16300.0	20000.0	17000.0		17100.0			16100.0
26	17000.0	17400.0		16600.0	18800.0	5900.0	16700.0	10600.0	19000.0		13200.0	16600.0
27	17400.0	16000.0		18400.0	17900.0		16800.0	16700.0	16500.0		17300.0	18200.0
28	17300.0	17200.0		18300.0	18200.0		20000.0	16600.0	14800.0	13600.0	17200.0	18200.0
29	15500.0	4700.0		18300.0	19200.0		3400.0	17800.0	19900.0	20000.0	15700.0	18800.0
30	17800.0			17600.0	16400.0		300.0	16900.0	19600.0	15300.0	17600.0	4900.0
31	17200.0				16900.0		8900.0	15200.0		15800.0		

Site Name: Haley Water Treatment Plant

Source ID: 50000637579

Source Name: Well 2

Source Type: Well

UTM(Zone/Easting/Northing): 18/362870.0/5050014.0

Method of Determination: Metered

Unit of Measure: Litre

Description: Well 2

Purpose Category: Utilities

Specific Category: Municipal Supply

Activity: Water Supply

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1			17000.0	18200.0			19600.0			12800.0		
2	9000.0		19200.0	10800.0			5000.0			20600.0		12200.0
3	17400.0		18700.0						13400.0	16400.0		19100.0
4	19100.0		17700.0			14900.0			17100.0	15300.0	11300.0	18600.0
5	18800.0	100.0	9200.0			19000.0	2200.0		18200.0	17000.0	19100.0	16100.0
6	18800.0	7900.0				16500.0	14800.0	9600.0	14700.0	18500.0	21800.0	17300.0
7	20700.0	18300.0			10900.0	17200.0	17300.0	17020.0	16700.0	16500.0	21300.0	17000.0
8	17700.0	16300.0			27600.0	18100.0	17100.0	17500.0	19200.0	5700.0	19500.0	21400.0
9	19200.0	16800.0			18300.0	19200.0	16100.0	17000.0	6400.0		18100.0	4600.0
10	19200.0	18400.0			17400.0	16700.0	16400.0	15600.0	16000.0	100.0	21200.0	
11	17600.0	19800.0		13800.0	17600.0	24600.0	17900.0	16700.0	19600.0		19000.0	
12	16300.0	18600.0		18200.0	18500.0	30200.0	17100.0	6200.0			6200.0	
13	15900.0	16500.0		19700.0	22100.0	17700.0	16200.0					
14	18900.0	18000.0		19800.0	19700.0	17500.0	17800.0					
15	15800.0	5900.0		18100.0	17200.0	15800.0	5300.0					
16	17000.0			19600.0	22400.0	19700.0			10000.0			11100.0
17	6300.0			18400.0	25800.0	18300.0			17000.0			18900.0
18	10500.0			20000.0	21100.0	18500.0			18600.0			16700.0
19	16000.0		13000.0	17500.0	25000.0	7400.0		10200.0	15700.0		11200.0	17200.0
20	18100.0		5400.0	20600.0	24500.0			5900.0	18700.0		17900.0	15600.0
21	20100.0		11000.0	20200.0	16300.0				17500.0	12200.0	18000.0	18800.0
22	16100.0		16000.0	5500.0	4000.0		100.0	12900.0	19800.0	18500.0	17900.0	20000.0
23	17500.0		16000.0				16400.0	19100.0	4100.0	15000.0	20600.0	2900.0
24	7300.0		18600.0				4000.0	17400.0		15400.0	22600.0	
25			17800.0					21700.0		15900.0	24300.0	
26			17700.0			14200.0		7400.0		18200.0	11200.0	
27			17600.0			17600.0				17800.0	400.0	
28			17500.0			18200.0				3800.0		
29		13100.0	19400.0			16200.0	25200.0					
30			17200.0			16800.0	12300.0					12900.0
31			18700.0				7400.0					19300.0

Name of Attester

First Name: Kaylee

Last Name: Saar

Company: Ontario Clean Water Agency

Date Certified/Submitted(yyyy/mm/dd): 2025/02/24