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KINCARDINE

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Tiverton Drinking Water System

2024 Annual Water Summary Report

1. INTRODUCTION AND BACKGROUND

The municipality owns and operates drinking water systems to provide residents with safe, potable water. These municipal drinking water systems are regulated under various legislation and legal documents including the Safe Drinking Water Act and Ontario Regulation 170/03 Drinking Water Systems. O. Reg. 170 requires that the municipality complete an annual water report (Section 11) and an annual summary report (Schedule 22). The information required for each of these reports has been combined into this one report. This annual water summary report will be made available for inspection as per O. Reg. 170 subsection 12 (4).

The reports are available free of charge on the municipal website at www.kincardine.ca or by contacting the Environmental Services Department at waterservice@kincardine.ca. Requests will also be received in person or by telephone at the Municipal Administration Centre (1475 Concession 5, 519-396-3468) or the Environmental Services Office (155 Durham Street, Kincardine, 519-396-4660).

1.1. System Description

Drinking-Water System Number:	220002609
Drinking-Water System Name:	Tiverton Drinking Water System
Drinking-Water System Owner:	Municipality of Kincardine
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	Year 2024

The Tiverton Drinking Water System (DWS) is a non-GUDI groundwater supply (which means that it is a secure well and not under the influence of surface water) consisting of 3 active wells, Briar Hill Well #1, Briar Hill Well #2 and Dent Well #2. The newest well, Briar Hill Well #2, went on-line August 2007 and is a 220mm diameter 93 m deep drilled well with a maximum water taking of 8.3 L/s or 720 m^3/d. Briar Hill Well #1 is a 150 mm diameter 93 m deep groundwater well rated at 6.1 L/s or 524.16 m^3/d. The third active well is Dent Well #2. This well was put in service on July 15, 2005, and replaced the original Dent Well. Dent Well #2 is an approximately 87 m deep drilled well with a 200mm diameter steel casing. The flow rate is restricted to a maximum of 4.6 L/s and a maximum taking of 250.5 m^3/d. Both pumphouses are equipped with raw and treated flow meters, a disinfection system consisting of 2 sodium hypochlorite metering pumps with auto switchover capabilities and interlocked well shutdown, and a polyphosphate (Carus 1200) iron sequestering system. The sodium hypochlorite and Carus 1200 are NSF certified. Additional contact time is provided at both pumphouses by 600 mm diameter feeder watermain immediately leaving the pumphouse and prior to the first consumer. The water system is equipped with a 1500 m^3 standpipe. Both pumphouses are equipped with a standby generator.

1.2. Major Expenses

The system incurred expenses necessary to install, repair or replace required equipment as follows:

Raw Water upgrades	$1,128.08
Treatment Equipment	$28,616.07
Distribution Repairs	$67,318.41
Water Meter Upgrades	$460,925.88
EA Study	$78,415.18

2. WATER QUALITY MONITORING

Each municipal drinking water system is required to do testing to ensure that the water supplied to consumers is safe for consumption. Some of these tests such as chlorine residuals are done on site while others, like microbiological testing, must be performed by a licenced laboratory.

2.1. Microbiological Testing

O. Reg. 170 Schedule 10, requires the Tiverton DWS to take a minimum of one sample per week of raw and treated water from each well. A minimum of one sample must be taken every week of distribution water with a total of eight required every month. All raw, treated and distribution samples must be tested for Escherichia coli (E. coli) and total coliforms (TC). All the treated samples and twenty five percent of the distribution samples must also be tested for heterotrophic plate count (HPC). Our internal sampling schedule exceeds the minimum requirements by having operations staff collect three raw, three treated and three distribution samples every week and having them tested for E. coli, total coliform and HPC.

Any E. coli or total coliform results above zero (0) in treated or distribution water must be reported to the Ministry of the Environment, Conservation and Parks (MECP) Spills Action Centre (SAC) and Medical Officer of Health (MOH).

Heterotrophic plate count is a colony count of general bacteria population. There is no adverse limit for HPC samples. Results over 500 colonies per 1 mL may indicate a change in water quality but it is not considered an indicator of unsafe water.

The results from the 2024 sampling program are shown in the following table.

Water Source	Number of EC/TC Samples	Range of Total Coliform Results (#-#)	Range of E. coli Results (#-#)	Number of HPC Samples	Range of HPC Results (#-#)
Raw	158	0 – 0	0 – 0	0	--
Treated	158	0 – 0	0 – 0	158	0 – 10
Distribution	161	0 – 0	0 – 0	161	0 – 2000

Note: Briar Hill Well #1 raw and treated samples not taken August 12, 19 and 26 as the Tiverton Tower was offline and Briar Hill Well #2 was running on the Variable Frequency Drive (VFD). HPC result of 2000 at Tiverton Tower, sample feed line was replaced and HPC count decreased.

2.2. Chemical Testing

The Safe Drinking Water Act Reg 170 Schedule 13 requires periodic testing of the water for chemical parameters. The Tiverton DWS is required to test for nitrite/nitrate, trihalomethanes and haloacetic acids on a quarterly basis. The tables below outline these as well as other inorganic and organic parameters that are required to be tested for every three years and include the date and result of the most recent test. Any result displayed as less than (<) are below the method detection limit of the lab.

Sodium and fluoride levels exceed the Ontario Drinking Water Quality Standards, but they are naturally occurring in the groundwater and do not need to be tested more frequently than every five years.

If the concentration of a parameter is above half of the Maximum Acceptable Concentration (MAC) under the Ontario Drinking Water Quality Standards, an increased testing frequency of once every three months is required by O. Regulation 170. Historically, arsenic levels at Dent Well have been around the half MAC and the frequency has been increased to quarterly.

Briar Hill Well #1

Inorganic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	July 8/24	< 0.6	µg/L	No
Arsenic	July 8/24	2.2	µg/L	No
Barium	July 8/24	11.1	µg/L	No
Boron	July 8/24	161	µg/L	No
Cadmium	July 8/24	0.008	µg/L	No
Chromium	July 8/24	0.17	µg/L	No
Mercury	July 8/24	< 0.01	µg/L	No
Selenium	July 8/24	0.06	µg/L	No
Sodium	October 12/22 October 18/22	43.6 38.4	mg/L	Yes
Uranium	July 8/24	0.572	µg/L	No
Fluoride	April 11/23 April 17/23	1.97 1.90	mg/L	Yes
Nitrite	January 15/24 April 8/24 July 8/24 October 7/24	< 0.003 0.008 < 0.003 < 0.003	mg/L	No
Nitrate	January 15/24 April 8/24 July 8/24 October 7/24	0.006 < 0.006 0.006 0.006	mg/L	No

Briar Hill Well #2

Inorganic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	July 11/22	<0.6	µg/L	No
Arsenic	July 11/22	2.3	µg/L	No
Barium	July 11/22	11.2	µg/L	No
Boron	July 11/22	159	µg/L	No
Cadmium	July 11/22	0.030	µg/L	No
Chromium	July 11/22	0.22	µg/L	No
Mercury	July 11/22	<0.01	µg/L	No
Selenium	July 11/22	< 0.04	µg/L	No
Sodium	October 12/22 October 18/22	44 36.3	mg/L	Yes
Uranium	July 11/22	0.551	µg/L	No
Fluoride	April 11/23 April 17/23	1.96 1.83	mg/L	Yes
Nitrite	January 15/24 April 8/24 July 8/24 October 7/24	< 0.003 0.009 < 0.003 < 0.003	mg/L	No
Nitrate	January 15/24 April 8/24 July 8/24 October 7/24	0.006 0.006 < 0.006 < 0.006	mg/L	No

Dent Well #2

Inorganic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	July 10/23	<0.6	µg/L	No
Arsenic	January 15/24 April 8/24 July 8/24 October 7/24	4.2 4.5 4.4 4.5	µg/L	No
Barium	July 10/23	9.55	µg/L	No
Boron	July 10/23	188	µg/L	No
Cadmium	July 10/23	<0.003	µg/L	No
Chromium	July 10/23	0.11	µg/L	No
Mercury	July 10/23	<0.01	µg/L	No
Selenium	July 10/23	0.09	µg/L	No
Sodium	Oct 12/22 Oct 18/22	42.3 36.4	mg/L	Yes
Uranium	July 10/23	0.806	µg/L	No
Fluoride	April 11/23 April 17/23	2.13 1.93	mg/L	Yes
Nitrite	January 15/24 April 8/24 July 8/24 October 7/24	0.003 0.009 < 0.003 < 0.003	mg/L	No
Nitrate	January 15/24 April 8/24 July 8/24 October 7/24	< 0.006 < 0.006 < 0.006 < 0.006	mg/L	No

Briar Hill Well #1

Organic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	July 8/24	< 0.02	µg/L	No
Atrazine + N-dealkylated metabolites	July 8/24	< 0.01	µg/L	No
Azinphos-methyl	July 8/24	< 0.05	µg/L	No
Benzene	July 8/24	< 0.32	µg/L	No
Benzo(a)pyrene	July 8/24	< 0.004	µg/L	No
Bromoxynil	July 8/24	< 0.33	µg/L	No
Carbaryl	July 8/24	< 0.05	µg/L	No
Carbofuran	July 8/24	< 0.01	µg/L	No
Carbon Tetrachloride	July 8/24	< 0.17	µg/L	No
Chlorpyrifos	July 8/24	< 0.02	µg/L	No
Diazinon	July 8/24	< 0.02	µg/L	No
Dicamba	July 8/24	< 0.20	µg/L	No
1,4-Dichlorobenzene	July 8/24	< 0.36	µg/L	No
1,2-Dichlorobenzene	July 8/24	< 0.41	µg/L	No
1,2-Dichloroethane	July 8/24	< 0.35	µg/L	No
1,1-Dichloroethylene	July 8/24	< 0.33	µg/L	No
Dichloromethane	July 8/24	< 0.35	µg/L	No
2-4 Dichlorophenol	July 8/24	< 0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 8/24	< 0.19	µg/L	No
Diclofop-methyl	July 8/24	< 0.40	µg/L	No
Dimethoate	July 8/24	< 0.06	µg/L	No
Diquat	July 8/24	< 1	µg/L	No
Diuron	July 8/24	< 0.03	µg/L	No
Glyphosate	July 8/24	< 1	µg/L	No
Malathion	July 8/24	< 0.02	µg/L	No
2 methyl-4-chlorophenoxyacetic acid	July 8/24	<0.00012	µg/L	No
Metolachlor	July 8/24	< 0.01	µg/L	No
Metribuzin	July 8/24	< 0.02	µg/L	No
Monochlorobenzene	July 8/24	< 0.3	µg/L	No
Paraquat	July 8/24	< 1	µg/L	No
Pentachlorophenol	July 8/24	< 0.15	µg/L	No
Phorate	July 8/24	< 0.01	µg/L	No
Picloram	July 8/24	< 1	µg/L	No
Polychlorinated Biphenyls (PCB)	July 8/24	< 0.04	µg/L	No
Prometryne	July 8/24	< 0.03	µg/L	No
Simazine	July 8/24	< 0.01	µg/L	No
Terbufos	July 8/24	< 0.01	µg/L	No
Tetrachloroethylene	July 8/24	< 0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	July 8/24	< 0.20	µg/L	No
Triallate	July 8/24	< 0.01	µg/L	No
Trichloroethylene	July 8/24	< 0.44	µg/L	No
2,4,6-Trichlorophenol	July 8/24	< 0.25	µg/L	No
Trifluralin	July 8/24	< 0.02	µg/L	No
Vinyl Chloride	July 8/24	< 0.17	µg/L	No

Briar Hill Well #2

Organic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	July 11/22	< 0.02	µg/L	No
Atrazine + N-dealkylated metabolites	July 11/22	< 0.01	µg/L	No
Azinphos-methyl	July 11/22	< 0.05	µg/L	No
Benzene	July 11/22	< 0.32	µg/L	No
Benzo(a)pyrene	July 11/22	< 0.004	µg/L	No
Bromoxynil	July 11/22	< 0.33	µg/L	No
Carbaryl	July 11/22	< 0.05	µg/L	No
Carbofuran	July 11/22	< 0.01	µg/L	No
Carbon Tetrachloride	July 11/22	< 0.17	µg/L	No
Chlorpyrifos	July 11/22	< 0.02	µg/L	No
Diazinon	July 11/22	< 0.02	µg/L	No
Dicamba	July 11/22	< 0.20	µg/L	No
1,2-Dichlorobenzene	July 11/22	< 0.41	µg/L	No
1,4-Dichlorobenzene	July 11/22	< 0.36	µg/L	No
1,2-Dichloroethane	July 11/22	< 0.35	µg/L	No
1,1-Dichloroethylene	July 11/22	< 0.33	µg/L	No
Dichloromethane	July 11/22	< 0.35	µg/L	No
2-4 Dichlorophenol	July 11/22	< 0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 11/22	< 0.19	µg/L	No
Diclofop-methyl	July 11/22	< 0.40	µg/L	No
Dimethoate	July 11/22	< 0.06	µg/L	No
Diquat	July 11/22	< 1	µg/L	No
Diuron	July 11/22	< 0.03	µg/L	No
Glyphosate	July 11/22	< 1	µg/L	No
Malathion	July 11/22	< 0.02	µg/L	No
2 methyl-4-chlorophenoxyacetic acid	July 11/22	< 0.00012	µg/L	No
Metolachlor	July 11/22	< 0.01	µg/L	No
Metribuzin	July 11/22	< 0.02	µg/L	No
Monochlorobenzene	July 11/22	< 0.3	µg/L	No
Paraquat	July 11/22	< 1	µg/L	No
Pentachlorophenol	July 11/22	< 0.15	µg/L	No
Phorate	July 11/22	< 0.01	µg/L	No
Picloram	July 11/22	< 1	µg/L	No
Polychlorinated Biphenyls (PCB)	July 11/22	< 0.04	µg/L	No
Prometryne	July 11/22	< 0.03	µg/L	No
Simazine	July 11/22	< 0.01	µg/L	No
Terbufos	July 11/22	< 0.01	µg/L	No
Tetrachloroethylene	July 11/22	< 0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	July 11/22	< 0.20	µg/L	No
Triallate	July 11/22	< 0.01	µg/L	No
Trichloroethylene	July 11/22	< 0.44	µg/L	No
2,4,6-Trichlorophenol	July 11/22	< 0.25	µg/L	No
Trifluralin	July 11/22	< 0.02	µg/L	No
Vinyl Chloride	July 11/22	< 0.17	µg/L	No

Dent Well #2

Organic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	July 10/23	< 0.02	µg/L	No
Atrazine + N-dealkylated metabolites	July 10/23	< 0.01	µg/L	No
Azinphos-methyl	July 10/23	< 0.05	µg/L	No
Benzene	July 10/23	< 0.32	µg/L	No
Benzo(a)pyrene	July 10/23	< 0.004	µg/L	No
Bromoxynil	July 10/23	< 0.33	µg/L	No
Carbaryl	July 10/23	< 0.05	µg/L	No
Carbofuran	July 10/23	< 0.01	µg/L	No
Carbon Tetrachloride	July 10/23	< 0.17	µg/L	No
Chlorpyrifos	July 10/23	< 0.02	µg/L	No
Diazinon	July 10/23	< 0.02	µg/L	No
Dicamba	July 10/23	< 0.20	µg/L	No
1,2-Dichlorobenzene	July 10/23	< 0.41	µg/L	No
1,4-Dichlorobenzene	July 10/23	< 0.36	µg/L	No
1,2-Dichloroethane	July 10/23	< 0.35	µg/L	No
1,1-Dichloroethylene	July 10/23	< 0.33	µg/L	No
Dichloromethane	July 10/23	< 0.35	µg/L	No
2-4 Dichlorophenol	July 10/23	< 0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 10/23	< 0.19	µg/L	No
Diclofop-methyl	July 10/23	< 0.40	µg/L	No
Dimethoate	July 10/23	< 0.06	µg/L	No
Diquat	July 10/23	< 1	µg/L	No
Diuron	July 10/23	< 0.03	µg/L	No
Glyphosate	July 10/23	< 1	µg/L	No
Malathion	July 10/23	<0.02	µg/L	No
2 methyl-4-chlorophenoxyacetic acid	July 10/23	< 0.00012	µg/L	No
Metolachlor	July 10/23	< 0.01	µg/L	No
Metribuzin	July 10/23	< 0.02	µg/L	No
Monochlorobenzene	July 10/23	< 0.3	µg/L	No
Paraquat	July 10/23	< 1	µg/L	No
Pentachlorophenol	July 10/23	< 0.15	µg/L	No
Phorate	July 10/23	< 0.01	µg/L	No
Picloram	July 10/23	< 1	µg/L	No
Polychlorinated Biphenyls (PCB)	July 10/23	< 0.04	µg/L	No
Prometryne	July 10/23	< 0.03	µg/L	No
Simazine	July 10/23	< 0.01	µg/L	No
Terbufos	July 10/23	< 0.01	µg/L	No
Tetrachloroethylene	July 10/23	< 0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	July 10/23	< 0.20	µg/L	No
Triallate	July 10/23	< 0.01	µg/L	No
Trichloroethylene	July 10/23	< 0.44	µg/L	No
2,4,6-Trichlorophenol	July 10/23	< 0.25	µg/L	No
Trifluralin	July 10/23	< 0.02	µg/L	No
Vinyl Chloride	July 10/23	< 0.17	µg/L	No

Trihalomethane (THM) distribution sampling is required quarterly and must also be expressed as a running annual average. The limit as set in the Ontario Drinking Water Quality Standards is 100 ug/L. Trihalomethanes are a by-product of the disinfection process. The THM results for 2024 are as follows:

Date Sampled	THM Result Value (µg/L)	Running Annual Average (µg/L)	Exceedance
January 15/24	35	41.3	No
April 8/24	13	41.0	No
July 8/24	14	29.0	No
October 7/24	13	18.8	No

Sampling and testing for haloacetic acids (HAA) in the distribution system is a new requirement in 2017. The limit as set in the Ontario Drinking Water Quality Standards is 80 ug/L and starting in 2020 must also be expressed as a running annual average. Haloacetic acids are a by-product of the disinfection process. The HAA results for 2024 are as follows:

Date Sampled	HAA Result Value (µg/L)	Running Annual Average (µg/L)	Exceedance
January 15/24	< 5.3	5.3	No
April 8/24	< 5.3	5.3	No
July 8/24	8.5	6.1	No
October 7/24	< 5.3	6.1	No

The Tiverton DWS does not have significant levels of lead and so is currently under a reduced-sampling program. Under this sampling program, O. Reg 170 Schedule 15.1 requires sampling for lead every three years and lead-related parameters (pH and alkalinity) every year. Lead, PH and Alkalinity sampling was performed in 2024, below are the results.

Date Sampled	Location Type	Number of Samples	Parameter	Range of Results
March 25, 2024	Distribution	2	Lead (ug/L)	0.09 - 0.10
			pH	8.1 – 8.6
			Alkalinity (mg/L)	88 - 100
August 12, 2024	Distribution	2	Lead (ug/L)	0.09 – 0.92
			pH	7.6 – 7.60
			Alkalinity (mg/L)	102 - 102

2.3. Operational Monitoring

Sodium hypochlorite is used for primary and secondary disinfection. The free chlorine residual is monitored continuously on the treated water and seven grab samples are taken each week in the distribution system. In addition, free chlorine levels are monitored continuously at one location in the distribution system. The Ministry of the Environment, Conservation and Parks *Procedure for Disinfection of Drinking Water in Ontario* outlines the minimum chlorine residual for adequate treatment.

As a target, the free chlorine residual should be above 0.20 mg/L. A distribution free chlorine level lower than 0.05 mg/L must be reported and corrective action taken.

Free Chlorine Residual	Number of Grab Samples	Range of Results (#-#)
Briar Hill Well #1 & #2 Treated Water	Continuous Monitoring	0.00 – 10.01
Dent Well #2 Treated Water	Continuous Monitoring	0.00 – 4.10
Distribution Water	366	0.47 – 1.76
Distribution Water	Continuous Monitoring	0.10 – 2.00

Notes:

1. Jan 9-Briar Hill battery changed in backup unit for analyzer caused min 0.05mg/L and max 10.01mg/L readings.
2. Feb 7-Dent Well Low Cl2 alarm caused min residual of 0.22mg/L to be recorded, well was locked out.
3. Feb 8-Dent Well Low cl2 alarm caused min residual of 0.01mg/L to be recorded, well was locked out.
4. Feb 21-Alarm testing caused false max cl2 readings at both Dent and Briar Hill.
5. March 13-Dent Well Low cl2 cause min reading of 0.17mg/L to be recorded, well was locked out
6. March 21-Dent Well Low cl2 alarm caused min residual of 0.02mg/L to be recorded, well was locked out
7. March 22-Briar Hill-Alarm testing caused false min residual of 0.22mg/L to be recorded.
8. March 29-Briar Hill Low cl2 alarm caused min residual of 0.00mg/L to be recorded, well was locked out
9. April 11-Briar Hill Low cl2 alarm caused min residual of 0.00mg/L to be recorded, well was locked out.
10. April 27-Dent Well Low cl2 alarm caused min residual of 0.02mg/L to be recorded, well was locked out.
11. April 29-Dent Well Low cl2 alarm caused min residual of 0.35mg/L to be recorded, well was locked out.
12. June 21-Tiverton Tower Cl2 analyzer maintenance caused false min reading of 0.10mg/L to be recorded for Distribution Water
13. July 9-Briar Hill cl2 analyzer maintenance caused false min and max readings of 0.00mg/L and 10.01mg/L.
14. July 10-Dent Well cl2 analyzer maintenance caused false min and max readings
15. August 1-Briar Hill and Dent well cl2 alarm testing caused false minimum residuals to be recorded
16. August 22-Dent Well Low cl2 alarm caused min residual of 0.02mg/L to be recorded, well was locked out.
17. November 19-Dent well low cl2 alarm testing caused false minimum residual of 0.18mg/L to be recorded.

O. Reg 170 Schedule 7 requires that turbidity in the raw water is tested at least once every month. Consistent turbidity results greater than 5 NTU could indicate surface water influence on the well.

Raw Water Turbidity	Number of Samples	Range of Results (#-#)
Briar Hill Well #1	46	0.16 – 0.50
Briar Hill Well #2	53	0.09 – 0.51
Dent Well #2	50	0.10 – 0.62

Note: Briar Hill Well #1 was offline from Aug 6-30

3. WATER QUANTITY

The following tables list the quantities and flow rates of the water supplied to the distribution system during the reporting period covered by this report, including monthly average and maximum daily flows and a comparison to the rated capacity specified in the system Municipal Drinking Water Licence.

Briar Hill Wells #1 and #2

The rated capacity from the Briar Hill Pumphouse is 717.12 m^3/day. There is no maximum flow rate specified for water supplied to the distribution system, however a flow rate of 5.5 L/s should not be exceeded to ensure the required 15 minutes of contact time for CT.

Month	Total Treated Flow (m3)	Average Daily Flow (m^3/day)	% Average Day Flow/ Rated Capacity	Maximum Daily Flow (m^3/day)	% Maximum Day Flow/ Rated Capacity
January	3,534	114	16%	154	22%
February	3,473	124	17%	165	23%
March	3,597	116	16%	186	26%
April	3,290	110	15%	154	21%
May	4,207	136	19%	267	37%
June	4,629	154	22%	239	33%
July	5,075	164	23%	231	32%
August	8,089	261	36%	489	68%
September	5,256	175	24%	293	41%
October	5,041	163	23%	237	33%
November	4,493	150	21%	275	38%
December	4,065	131	18%	181	25%
Annual	**54,748**	**149.8**	**21%**	**489**	**68%**

Briar Hill Wells #1 and #2

Month	Average Daily Flow Rate (L/s)	Maximum Daily Flow Rate (L/s)
January	1.3	7.0
February	1.4	10.0
March	1.3	9.9
April	1.3	10.0
May	1.6	9.6
June	1.8	10.2
July	1.9	9.0
August	3.0	9.7
September	2.0	10.2
October	1.9	10.0
November	1.7	8.7
December	1.5	9.9
Annual	**1.73**	**10.21**

Note: All max flow rates above 5.5 L/s caused by monthly generator testing and power interruptions

Dent Well #2

The rated capacity from the Dent Pumphouse is 397.44 m^3/day. There is no maximum flow rate specified for water supplied to the distribution system, however the flow rate should not exceed 5.2 L/s to ensure the required 15 minutes of contact time for CT. (It should be noted that the Permit to Take Water limit for water taking from the Dent Well is 250.5 m^3/d.)

Month	Total Treated Flow (m3)	Average Daily Flow (m^3/day)	% Average Day Flow/ Rated Capacity	Maximum Daily Flow (m^3/day)	% Maximum Day Flow/ Rated Capacity
January	2,455	79	20%	108	27%
February	2,277	81	20%	111	28%
March	2,574	83	21%	185	47%
April	2,613	87	22%	239	60%
May	2,760	89	22%	188	47%
June	2,884	96	24%	151	38%
July	3,308	107	27%	151	38%
August	3,604	116	29%	245	62%
September	3,454	115	29%	194	49%
October	3,304	107	27%	156	39%
November	3,048	102	26%	213	53%
December	2,825	91	23%	127	32%
Annual	**35,106**	**96.1**	**24%**	**245**	**62%**

Dent Well #2

Month	Average Daily Flow Rate (L/s)	Maximum Daily Flow Rate (L/s)
January	0.9	10.1
February	0.9	9.6
March	1.0	10.0
April	1.0	10.3
May	1.0	10.1
June	1.1	10.3
July	1.2	10.3
August	1.3	9.4
September	1.3	9.8
October	1.2	10.1
November	1.2	10.2
December	1.1	10.2
Annual	**1.11**	**10.3**

Note: All max flow rates above 5.2 L/s caused by monthly generator testing and power interruptions

4. ADVERSE WATER QUALITY INCIDENTS AND NON-COMPLIANCE FINDINGS

Any adverse results from microbiological samples, chemical samples or observations of operational conditions that indicate adverse water quality are reported to the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks and the Medical Officer of Health (MOH). All adverse conditions are responded to immediately and corrective actions taken. There were no reportable incidents in 2024.

The annual Ministry of the Environment, Conservation and Parks Inspection took place on June 13, 2024, for the reporting period from May 26, 2023, to June 13, 2024. The inspection report did not identify any non-compliance issues.

O. Reg 170 Schedule 22 requires the municipality to identify any requirements of the Safe Drinking Water Act, Regulations, Drinking Water Works Permit, Municipal Drinking Water Licence and any Order that the system failed to meet during the reporting period. There were three issues identified in 2024.

Drinking Water Legislation	**Requirements the System Failed to Meet**	**Duration**	**Corrective Actions**
Permit to Take Water 5581-BVHT5L Sec. 4.2	Dent Well- Well Depth transducer not recording May 14 to 16. Measurements required at least once every hour.	47 hours	New well depth transducer installed
O. Reg 170/03, Schedule 10, Sec 10-3 and 10-4	Briar Hill Well #1 raw and treated samples not taken Aug 12, 19 and 26	3 weeks	Well #1 was offline during tower maintenance, sampled before being placed back online.
O. Reg. 170, Schedule 6, Section 10. 1. ii	The continuous monitoring equipment would not signal an alarm to call out to a location where a person is present.	September 26, 2024 Briar Hill 1035am to 11:22am Dent Well 1215 to 1225pm	Bruce Telecom onsite for fibre upgrades. Operator turned wells off during upgrades, all data and sensaphones verified afterwards. No issues, MECP notified as a courtesy.