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Tiverton Drinking Water System

2023 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 2023

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 220 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 200 mm 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:

Treatment Equipment $14,474.54

Distribution Repairs $4,759.57

Other Major Expenses:

Building Maintenance $16,622.28

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 2023 sampling program are shown in the table below.

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	156	0 – 0	0 – 0	9	0 – 165
Treated	156	0 – 0	0 – 0	156	0 – 20
Distribution	156	0 – 0	0 – 0	156	0 – >2000

Note: High HPC count in distribution caused by piece of hose on sample tap at the Tower

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 12/21	< 0.9	µg/L	No
Arsenic	July 12/21	2.6	µg/L	No
Barium	July 12/21	11.2	µg/L	No
Boron	July 12/21	193	µg/L	No
Cadmium	July 12/21	0.009	µg/L	No
Chromium	July 12/21	0.18	µg/L	No
Mercury	July 12/21	< 0.01	µg/L	No
Selenium	July 12/21	< 0.04	µg/L	No
Sodium	October 12/22 October 18/22	43.6 38.4	mg/L	Yes
Uranium	July 12/21	0.531	µg/L	No
Fluoride	April 11/23 April 17/23	1.97 1.90	mg/L	Yes
Nitrite	January 9/23 April 11/23 July 10/23 October 10/23	< 0.003 < 0.003 < 0.003 < 0.003	mg/L	No
Nitrate	January 9/23 April 11/23 July 10/23 October 10/23	< 0.006 < 0.006 < 0.006 0.007	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 9/23 April 11/23 July 10/23 October 10/23	< 0.003 < 0.003 < 0.003 < 0.003	mg/L	No
Nitrate	January 9/23 April 11/23 July 10/23 October 10/23	< 0.006 < 0.006 0.007 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 9/23 April 11/23 July 10/23 October 10/23	5.7 4.5 4.6 4.2	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 9/23 April 11/23 July 10/23 October 10/23	0.003 0.003 < 0.003 < 0.003	mg/L	No
Nitrate	January 9/23 April 11/23 July 10/23 October 10/23	< 0.006 < 0.006 0.010 < 0.006	mg/L	No

Briar Hill Well #1

Organic Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	July 12/21	< 0.02	µg/L	No
Atrazine + N-dealkylated metabolites	July 12/21	< 0.01	µg/L	No
Azinphos-methyl	July 12/21	< 0.05	µg/L	No
Benzene	July 12/21	< 0.32	µg/L	No
Benzo(a)pyrene	July 12/21	< 0.004	µg/L	No
Bromoxynil	July 12/21	< 0.33	µg/L	No
Carbaryl	July 12/21	< 0.05	µg/L	No
Carbofuran	July 12/21	< 0.01	µg/L	No
Carbon Tetrachloride	July 12/21	< 0.17	µg/L	No
Chlorpyrifos	July 12/21	< 0.02	µg/L	No
Diazinon	July 12/21	< 0.02	µg/L	No
Dicamba	July 12/21	< 0.20	µg/L	No
1,4-Dichlorobenzene	July 12/21	< 0.36	µg/L	No
1,2-Dichlorobenzene	July 12/21	< 0.41	µg/L	No
1,2-Dichloroethane	July 12/21	< 0.35	µg/L	No
1,1-Dichloroethylene	July 12/21	< 0.33	µg/L	No
Dichloromethane	July 12/21	< 0.35	µg/L	No
2-4 Dichlorophenol	July 12/21	< 0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	July 12/21	< 0.19	µg/L	No
Diclofop-methyl	July 12/21	< 0.40	µg/L	No
Dimethoate	July 12/21	< 0.06	µg/L	No
Diquat	July 12/21	< 1	µg/L	No
Diuron	July 12/21	< 0.03	µg/L	No
Glyphosate	July 12/21	< 1	µg/L	No
Malathion	July 12/21	< 0.02	µg/L	No
2 methyl-4-chlorophenoxyacetic acid	July 12/21	<0.00012	µg/L	No
Metolachlor	July 12/21	< 0.01	µg/L	No
Metribuzin	July 12/21	< 0.02	µg/L	No
Monochlorobenzene	July 12/21	< 0.3	µg/L	No
Paraquat	July 12/21	< 1	µg/L	No
Pentachlorophenol	July 12/21	< 0.15	µg/L	No
Phorate	July 12/21	< 0.01	µg/L	No
Picloram	July 12/21	< 1	µg/L	No
Polychlorinated Biphenyls (PCB)	July 12/21	< 0.04	µg/L	No
Prometryne	July 12/21	< 0.03	µg/L	No
Simazine	July 12/21	< 0.01	µg/L	No
Terbufos	July 12/21	< 0.01	µg/L	No
Tetrachloroethylene	July 12/21	< 0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	July 12/21	< 0.20	µg/L	No
Triallate	July 12/21	< 0.01	µg/L	No
Trichloroethylene	July 12/21	< 0.44	µg/L	No
2,4,6-Trichlorophenol	July 12/21	< 0.25	µg/L	No
Trifluralin	July 12/21	< 0.02	µg/L	No
Vinyl Chloride	July 12/21	< 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.

Date Sampled	THM Result Value (µg/L)	Running Annual Average (µg/L)	Exceedance
January 9/23	32	30.8	No
April 11/23	14	30.3	No
July 10/23	62	37.5	No
October 10/23	64	40.5	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.

Date Sampled	HAA Result Value (µg/L)	Running Annual Average (µg/L)	Exceedance
January 9/23	< 5.3	5.3	No
April 11/23	< 5.3	5.3	No
July 10/23	< 5.3	5.3	No
October 10/23	< 5.3	5.3	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. PH and Alkalinity sampling was performed in 2023, below are the results.

Date Sampled	Location Type	Number of Samples	Parameter	Range of Results
April 3, 2023	Distribution	2	pH	8.0– 8.1
			Alkalinity (mg/L)	89 - 98
August 14, 2023	Distribution	2	pH	7.6 – 7.70
			Alkalinity (mg/L)	89 - 100

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.

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 – 2.01
Distribution Water	365	0.25 – 1.64
Distribution Water	Continuous Monitoring	0.24 – 1.67

Notes:

1. January-Dent well site maintenance caused a low cl2 residual of 0.18mg/L to be recorded.
2. March-Briar Hill Well maintenance on cl2 panel caused a cl2 residual above 4.0mg/L, Dent well low chlorine alarm on March 13 recorded a residual of 0.16mg/L-well was locked out.
3. April-Briar Hill maintenance on analyzer caused cl2 residuals of 0mg/L and 10.1mg/L to be recorded, Briar Hill low chlorine alarm April 25 recorded a cl2 residual of 0.01mg/L-well was locked out.
4. May-Briar Hill low chlorine on May 1 recorded a cl2 residual of 0.08mg/L-well was locked out.
5. July-Briar Hill low chlorine alarm and testing on July 10 and 19 recorded cl2 residuals of 0.12mg/L and 0.16mg/L-well was locked out, Dent Well Low cl2 alarm testing recorded a residual of 0.16mg/L-well was locked out.
6. September-Briar Hill maintenance on analyzer caused cl2 residuals of 0mg/L and 10.01mg/L to be recorded, Dent Well maintenance on analyzer caused a cl2 residual of 0mg/L to be recorded.
7. October-Briar Hill injector maintenance caused a cl2 residual of 6.35 to be recorded-well was locked out.
8. November-Dent Well low cl2 alarm caused a cl2 residual of 0.19 to be recorded-well was locked out, Power interruptions on November 29 caused high cl2 residuals of 9.0mg/L and 2.0mg/L to be recorded.
9. December-Briar Hill maintenance on analyzer caused cl2 residuals of 0mg/L and 10.01mg/L to be recorded, Dent Well low cl2 alarm on December 23 and 24 caused cl2 residuals of 0.06mg/L and 0.04mg/L to be recorded-well was locked out.

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	51	0.12 – 0.87
Briar Hill Well #2	49	0.09 – 0.57
Dent Well #2	51	0.10 – 0.52

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	3,614	117	16%	137	19%
February	3,652	130	18%	157	22%
March	3,698	119	17%	142	20%
April	3,911	130	18%	280	39%
May	4,269	138	19%	204	28%
June	4,894	163	23%	235	33%
July	4,323	139	19%	175	24%
August	4,160	134	19%	148	21%
September	3,949	132	18%	161	22%
October	3,745	121	17%	153	21%
November	3,518	117	16%	156	22%
December	3,377	109	15%	141	20%
Annual	47,110	129.2	18%	280	39%

Briar Hill Wells #1 and #2

Month	Average Daily Flow Rate (L/s)	Maximum Daily Flow Rate (L/s)
January	1.3	9.7
February	1.5	9.7
March	1.4	9.1
April	1.5	9.9
May	1.6	10.1
June	1.9	10.2
July	1.6	9.3
August	1.6	10.3
September	1.5	9.6
October	1.4	9.6
November	1.4	10.3
December	1.4	7.0
Annual	1.49	10.30

Note: All max flow rates above 5.5 caused by monthly generator testing 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	2,400	77	19%	91	23%
February	2,434	87	22%	104	26%
March	2,437	79	20%	95	24%
April	2,643	88	22%	190	48%
May	2,856	92	23%	126	32%
June	3,242	108	27%	158	40%
July	3,035	98	25%	185	47%
August	2,778	90	23%	101	25%
September	2,790	93	23%	149	38%
October	2,498	81	20%	102	26%
November	2,314	77	19%	104	26%
December	2,367	76	19%	171	43%
Annual	31,793	87.1	22%	190	48%

Dent Well #2

Month	Average Daily Flow Rate (L/s)	Maximum Daily Flow Rate (L/s)
January	0.9	10.3
February	1.0	10.3
March	0.9	9.5
April	1.0	9.9
May	1.1	10.3
June	1.3	10.3
July	1.1	8.7
August	1.0	10.3
September	1.1	5.1
October	0.9	10.2
November	0.9	10.0
December	0.9	9.6
Annual	1.01	10.30

Note: All max flow rates above 5.5 L/s caused by monthly generator testing 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 was one reportable incident in 2023 for Fluoride Adverse.

Incident Date	Parameter	Result	Corrective Action	Corrective Action Date
April 14, 2023 AWQI# 161747	Fluoride above MAC limit of 1.5mg/L	Briar #1 1.97 mg/L Briar #2 1.96 mg/L Dent #2 2.13 mg/L	Resampled and annual notification given to system users	April 17, 2023

The annual Ministry of the Environment, Conservation and Parks Inspection took place on May 26, 2023, for the reporting period from April 21, 2022, to May 26, 2023. 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 was one issue identified in 2023.

Drinking Water Legislation	**Requirements the System Failed to Meet**	**Duration**	**Corrective Actions**
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. Telephone system outage caused alarm system outage	December 24, 2023 for 1 hour and 7 minutes	Communication alarm from Win911 for Tiverton Tower notified staff of outage. Staff responded to site and monitored well systems.