THE CORPORATION OF THE TOWNSHIP OF HAMILTON

CAMBORNE AND CREIGHTON HEIGHTS

DRINKING WATER SYSTEMS

ANNUAL SUMMARY REPORT 2019

Prepared By:

Water Operations Manager

CONTENTS

1. WATER SYSTEMS INFORMATION

All items listed below and referenced throughout this document are available at any time by contacting the Water Operations Manager at (905) 342-2810 ext. 147 or emailing snoble@hamiltontownship.ca

Camborne

- Drinking Water System # 220008113
- Municipal Drinking Water Licence # 139-103
- Drinking Water Works Permit # 139-203
- Permit to Take Water # 2140-AP5P6D

Creighton Heights

- Drinking water System # 220008104
- Municipal Drinking Water Licence # 139-102
- Drinking Water Works Permit # 139-202
- Permit to Take Water # 7265-8W9HLX

2. PURPOSE

The *Safe Drinking Water Act, 2002* sets out the framework for the treatment and distribution of safe drinking water in Ontario. *Regulation 170/03* sets requirements for public waterworks regarding treatment equipment, operational checks, maintenance, sampling, and corrective actions. In addition to this, the regulation also has requirements for specific reports that must be prepared by the owner of a drinking water system annually.

This report satisfies all conditions set out in *Ontario Regulation 170/03* Section 11 – Annual Reports, and Schedule 22 – Summary Reports.

This report is completed annually by the Water Operations Manager, representing the Township of Hamilton as the owner and operating authority of the Camborne Drinking Water System and the Creighton Heights Drinking Water System.

2.1 Scope

The Annual Summary Report contains information about the two Drinking Water Systems, for which the Township of Hamilton is the owner and operating authority, for the period of January 1, 2019 to December 31, 2019. *Ontario Regulation 170/03* requires this information be made available to the following stakeholders:

- Drinking Water System Owner (Mayor and Council)
- Operating Authority Top Management (CAO)
- The Public

2.2 Availability

Hard copies of the Annual Summary Report are available for viewing at the Township of Hamilton office located at 8285 Majestic Hills Drive, Cobourg, ON. Alternatively, the report can be accessed online at hamiltontownship.ca by navigating to the Water Services page located in the Resident Services tab.

3. DRINKING WATER SYSTEMS OVERVIEW

Camborne

The Camborne Drinking Water System provides potable water to approximately 70 homes and one elementary school. There are no commercial or industrial service connections on this system.

The Camborne Water Treatment Plant (WTP) takes water from two drilled artesian wells. The water is injected with sodium hypochlorite (liquid chlorine) before being directed through two manganese greensand filters used for removal of oxidized iron. Filtered water is discharged into an underground reservoir which consists of two cells and inner baffling to ensure proper chlorine contact time to achieve primary disinfection. A high-Lift pumping system, consisting of three pumps and series of large pressure tanks, is used to provide flow and adequate pressure to the end users in the distribution system. Continuous online monitoring is used to measure chlorine residual, pressure, and flow at all times to maintain regulatory compliance. These instruments communicate with our Supervisory Control and Data Acquisition System (SCADA) and are equipped with alarms to notify an operator of any drifting from a control setpoint. Process wastewater is de-chlorinated using sodium thiosulfate and allowed to settle before clear liquid is pumped to the storm water system.

The distribution system consists of approximately 2.5 km of watermains throughout the settlement area. The Camborne Drinking Water System is not designed to provide fire protection.

Creighton Heights

The Creighton Heights Drinking Water System provides potable water to approximately 450 residential customers, approximately 10 commercial/industrial properties, and one elementary school.

The Creighton Heights WTP takes water from three conventional drilled wells located just outside the plant. The water is injected with potassium permanganate before being directed through two manganese greensand filters used for removal of oxidized iron and manganese. Filtered water is sent through a parallel system of Ultraviolet equipment to achieve primary disinfection. Sodium hypochlorite is injected for secondary disinfection prior to the water being discharged into an underground reservoir. A high lift pumping system, consisting of three pumps for regular system pressure and two pumps designed for fire protection, provide flow and pressure to the end users of the distribution system. Continuous online monitoring is used to measure chlorine residual, pressure, and flow at all times to maintain regulatory compliance. These instruments communicate with our SCADA and are equipped with alarms to notify an operator of any drifting from a control setpoint. Process wastewater is de-chlorinated using sodium thiosulfate and allowed to settle before clear liquid is pumped to the storm water system.

The distribution system consists of approximately 14 km of watermains ranging in diameter from 50 mm to 300 mm. The Creighton Heights Drinking Water System is designed with fire protection functionality and there are approximately 72 hydrants installed.

4. COMPLIANCE

4.1 Licence and Permit

The Camborne and Creighton Heights Drinking Water Systems were operated in accordance with all terms and conditions of their Municipal Drinking Water Licence, Drinking Water Works Permit, Permit to Take Water, and all relevant Provincial legislation in 2019. Any items of non-compliance are identified in the annual Ministry of Environment Conservation and Parks (MECP) Inspection Reports referenced in section 4.2.

The Permit to Take Water governs the amount of groundwater allowed to be taken per day at specified flow rates per minute. There were no instances of exceeding the permitted amount of water taking on any day during 2019. The Camborne and Creighton Heights Drinking Water Systems flow summaries are detailed below.

Camborne

Raw Water

The two wells at Camborne are classified as artesian and thus overflow constantly to a stormwater system which ultimately discharges to an adjacent creek. Flow meters measure the overflow to ensure regulatory compliance. The artesian flow is relatively constant from both wells and is well below the permitted amount. The water taken for treatment and distribution (Plant Flow) is also metered to ensure compliance with permitted amounts.

Table 1. Camborne Permit to Take Water # 2140-AP5P6D Maximum Flows and Totals

Location	Maximum Flow (L/min)	Maximum Total per Day (m^3)
Well 1A Plant Flow	200	288
Well 2A Plant Flow	286	412
Well 1A Artesian Overflow	340	489.6
Well 2A Artesian Overflow	360	518.4

Note: $1m^3$ = 1000 L

Table 2. Camborne Actual Plant Water Taken 2019

Month	Total Water Taken (m^3)	Average Daily (m^3)	Maximum Day (m^3)
January	1,626.8	52.5	72.7
February	1,456.6	52.0	75.0
March	1,729.2	55.8	79.8
April	1,488.1	49.6	75.5
May	1,786.9	56.8	78.3
June	2,091.2	69.7	93.7
July	1,801.7	59.6	114.7
August	1,729.6	53.2	71.7
September	1,459.1	47.7	72.8
October	1,415.4	44.8	67.9
November	1,327.5	42.6	72.3
December	1,512.3	47.9	85.3

Average daily water taking remains relatively consistent throughout the year with slightly elevated averages during summer months. Overall daily average for the year is approximately 52 m^3/day, which represents roughly 18% of the permitted water taking from Well 1A and roughly 13% of the permitted water taking from Well 2A.

Treated Water

In accordance with the Camborne Drinking Water Licence, the rated capacity and permitted amount of water that can be discharged to the distribution system is 415 m^3/day. Table 3 below illustrates the flow data for 2019. The daily average for the year is approximately 50.8 m^3/day, which represents roughly 12% of the rated capacity and permitted discharge.

Table 3. Camborne Treated Flow Data 2019

Month	Total Water Discharged (m^3)	Average Daily (m^3)	Maximum Day (m^3)
January	1,576.2	50.8	62.5
February	1,418.0	50.6	58.0
March	1,670.8	54.0	76.3
April	1,419.5	47.3	65.3
May	1,733.4	55.9	63.9
June	1,706.0	56.9	53.8
July	1,731.6	57.7	87.9
August	1,679.2	53.7	59.0
September	1,403.8	46.8	59.5
October	1,409.4	45.5	53.2
November	1,298.4	43.3	50.9
December	1,443.9	46.6	54.0

Creighton Heights

Raw Water

There are three conventional groundwater wells at our Creighton Heights facility. Wells 6 and 7 are primary wells and only one can operate at a time. Well 1 is a back-up well designed to run in conjunction with either primary well during periods of high demand. Flow meters measure the amount of water being taken from the wells to ensure regulatory compliance.

Table 4. Creighton Heights Permit to Take Water # 7265-8W9HLX Maximum Flows and Totals

Location	Maximum Flow (L/min)	Maximum Total per Day (m^3)
Well 1	225	489.6
Well 6	680	979.2
Well 7	680	979.2

Table 5. Creighton Heights Actual Plant Water Taken 2019

Month	Total Water Taken (m^3)	Average Daily (m^3)	Maximum Day (m^3)
January	10,042.1	324.0	469.1
February	8,546.8	305.2	419.4
March	10,209	329.3	676.3
April	9,382.3	312.7	404.0
May	10,417.7	336.1	409.3
June	10,742.8	358.1	483.6
July	14,411	464.9	655.2
August	11,781.8	380.1	667.7
September	10,023.9	334.3	434.3
October	9,787.5	325.9	463.7
November	10,855.9	361.8	543.9
December	10,112.3	324.1	454.2

Average daily water taking remains relatively consistent throughout the year with slightly elevated averages during summer months and hydrant flushing program in the fall. Overall daily average for the year is approximately 350 m^3/day, which represents roughly 36% of the permitted water taking from Well 6 or 7. These numbers indicate that we are within our regulated limits

Treated Water

In accordance with the Creighton Heights Drinking Water Licence, the rated capacity and permitted amount of water that can be discharged to the distribution system is 979.2 m^3/day. Table 6 below illustrates the flow data for 2019. The daily average for the year is approximately 320 m^3/day, which represents roughly 33% of the rated capacity and permitted discharge.

Table 6. Creighton Heights Treated Flow Data 2019

Month	Total Water Discharged (m^3)	Average Daily (m^3)	Maximum Day (m^3)
January	9,456.7	305.0	380.1
February	8,071.5	288.3	343.2
March	8,875.1	286.0	325.3
April	8,616.5	287.2	322.8
May	9,674.1	312.1	452.1
June	9,940.1	331.3	434.1
July	13,483.0	434.9	575.6
August	10,899.3	351.6	474.3
September	9,304.1	310.1	412.9
October	8,364.7	298.7	383.4
November	9,868.2	328.9	433.2
December	9,208.4	297.1	381.0

It should be noted that the Creighton Heights Drinking Water System appears to be well below rated and/or permitted capacities as illustrated in the tables above. The design of the Water Treatment Plant and continued water processing challenges suggest that we are currently running very close to the processing capabilities. If new development in the Creighton Heights Settlement Area is going to be considered, further review of WTP processing capabilities will have to be considered.

4.2 MECP Annual Inspections

Camborne

The MECP annual inspection took place on January 23,2020 and consisted of a site visit and documentation review. A final grade of 95.19% was given as a result of two minor infractions regarding the collection of chlorine residuals. There is a regulated timeframe for collecting samples each week. On two occasions it was documented that the samples taken were just slightly inside the minimum time required. The issued corrective action was for more frequent review of times being recorded to ensure the target is achieved. A staff meeting was held to review the required action and a procedure has been put in place to ensure future compliance.

Creighton Heights

At the time of this document being prepared, the inspection results were not yet delivered to the Township. Upon receiving the results, this section will be updated.

4.3 Adverse Water Quality Incidents and Corrective Actions

There were no instances of adverse water quality in the Camborne Drinking Water System during 2019. The Creighton Heights Drinking Water System had two adverse water quality incidents which are described below:

- March 12, 2019 – Water being discharged to the distribution system had a total chlorine residual higher than the permitted amount of 3.00 mg/L. Corrective action issued by the HKPR Health Unit was to take several samples out in the system to ensure the water being directed to our users had a residual of less than 3.00 mg/L before issuing any flushing directives. Samples collected over the course of three days from several locations showed nothing greater than 2.76 mg/L.

- November 12, 2019 – During our annual break-point chlorination program, a sample collected from one point in our distribution system showed a free chlorine residual of 0.03 mg/L. The minimum regulated free chlorine residual is 0.05 mg/L. Our break-point program converts chloraminated water to chlorinated water over the course of 24-48 hours. During this change over there can be areas which are caught in between one type or the other. The MECP is aware that we have this challenge and is appreciative that we follow proper reporting procedures. HKPR Health Unit corrective action was to flush this area of the distribution system until a minimum free chlorine residual of 0.2 mg/L was achieved and take two consecutive bacteria samples to be analyzed for contamination. The sample results showed no evidence of contamination.

5. CAPITAL AND OPERATING INFRASTUCTURE UPGRADES

The Township of Hamilton Water Department underwent a SCADA upgrade in 2019 which was awarded to Eramosa Engineering and carried a cost of $115,000. The Camborne WTP had the submersible pump replaced in Well 1A costing approximately $10,000. A new mainline valve was installed in Creighton Heights which incurred a cost of $10,500. During 2019 there were several smaller operating costs associated with improving the operation of our systems.

6. SAMPLING AND ANALYSIS

During 2019 the Water Department complied with all regulated sampling required by *Ontario Regulation 170/03.* All samples were analyzed by an accredited third-party laboratory located in Lakefield, Ontario. There were no instances of adverse water quality reported as a result of a parameter exceeding a maximum acceptable concentration in 2019.

Camborne

Table 7. Camborne Microbiological Testing (Schedule 11 of O.Reg 170/03)

	Number of Samples	E.Coli (cfu/100mL) (min #)-(max #)	Total Coliform (cfu/100mL) (min #)-(max #)	Number of HPC Samples	HPC Results (cfu/1mL) (min #)-(max #)
Raw	2	0 – 0	0 – 0	N/A	N/A
Treated	52	0 – 0	0 – 0	52	0 – 2

Note: cfu refers to colony forming units

Table 8. Camborne Operational Testing (Schedule 7 of O.Reg 170/03)

	Number of Grab Samples	Range of Results (Min – Max)
Chlorine Residual (primary disinfection)	8760 (continuous monitoring)	0.74 mg/L – 1.12 mg/L

Table 9. Camborne Additional Sampling Requirements

Date of MDWL	Parameter	Number of Samples	Maximum Annual Average Concentration	Actual Average Concentration
Aug. 18, 2016	Total Suspended Solids	4 (Quarterly)	25 mg/L	8 mg/L

Table 10. Camborne Lead Testing (MDWL 139-103 Schedule D)

Location Type	Date	Sample Location	pH	Alkalinity	Lead
Distribution	Mar. 19, 2019	Albert's Alley	7.4	195 mg/L	0.11 ug/L
Distribution	Sept. 24, 2019	Albert's Alley	7.5	184 mg/L	0.36 ug/L

In addition to the samples listed in tables 7-10, there are many other parameters that are tested on a less frequent basis. For these parameters the most recent analysis is listed in Table 11 below. A parameter below the method detection limit (indicated by <MDL) cannot be detected by the method

used in the laboratory. This means the concentration of the parameter is less than the lowest measurement possible.

Table 11. Camborne Organic and Inorganic Sampling (Schedules 13,23, and 24 of O.Reg 170/03)

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Jun 7, 2016	.02<MDL	ug/l	no
Arsenic	Jun 7, 2016	.7	ug/l	no
Barium	Jun 7, 2016	117	ug/l	no
Boron	Jun 7, 2016	12	ug/l	no
Cadmium	Jun 7, 2016	.005	ug/l	no
Chromium	Jun 7, 2016	.34	ug/l	no
Mercury	Jun 7, 2016	.01<MDL	ug/l	no
Selenium	Jun 7, 2016	1<MDL	ug/l	no
Sodium	June 5, 2016	8.01	mg/l	no
Uranium	Jun 7, 2016	.276	ug/l	no
Fluoride	June 5, 2016	.15	mg/l	no
Nitrite	Mar. 19, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	.003<MDL .003<MDL .003<MDL .003<MDL	mg/l	no
Nitrate	Mar. 19, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	.006<MDL .006<MDL .006<MDL .006<MDL	mg/l	no
Alachlor	Jun 7, 2016	.02<MDL	ug/l	no
Atrazine	Jun 7, 2016	.01<MDL	ug/l	no
Atrazine + N-dealkylated metobolites	Jun 7, 2016	.01<MDL	ug/l	no
Desethyl atrazine	Jun 7, 2016	.01<MDL	ug/l	no
Azinphos-methyl	Jun 7, 2016	.05<MDL	ug/l	no
Benzene	Jun 7, 2016	.32<MDL	ug/l	no
Benzo(a)pyrene	Jun 7, 2016	.004<MDL	ug/l	no
Bromoxynil	Jun 7, 2016	.33<MDL	ug/l	no
Carbaryl	Jun 7, 2016	.05<MDL	ug/l	no
Carbofuran	Jun 7, 2016	.01<MDL	ug/l	no
Carbon Tetrachloride	Jun 7, 2016	.16<MDL	ug/l	no
Chlorpyrifos	Jun 7, 2016	.02<MDL	ug/l	no
Diazinon	Jun 7, 2016	.02<MDL	ug/l	no
Dicamba	Jun 7, 2016	.20<MDL	ug/l	no
1,2-Dichlorobenzene	Jun 7, 2016	.41<MDL	ug/l	no
1,4-Dichlorobenzene	Jun 7, 2016	.36<MDL	ug/l	no
1,2-Dichloroethane	Jun 7, 2016	.35<MDL	ug/l	no
1,1-Dichloroethylene (vinylidene chloride)	Jun 7, 2016	.33<MDL	ug/l	no
Dichloromethane	Jun 7, 2016	.35<MDL	ug/l	no
2-4 Dichlorophenol	Jun 7, 2016	.15<MDL	ug/l	no

2,4-Dichlorophenoxy acetic acid (2,4-D)	Jun 7, 2016	.19<MDL	ug/l	no
Diclofop-methyl	Jun 7, 2016	.40<MDL	ug/l	no
Dimethoate	Jun 7, 2016	.03<MDL	ug/l	no
Diquat	Jun 7, 2016	1<MDL	ug/l	no
Diuron	Jun 7, 2016	.03<MDL	ug/l	no
Glyphosate	Jun 7, 2016	1<MDL	ug/l	no
Haloacetic Acid (HAA)	Mar. 19, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	5.3<MDL (Running Annual Average)	ug/l	no
Malathion	Jun 7, 2016	.02<MDL	ug/l	no
Metolachlor	Jun 7, 2016	.01<MDL	ug/l	no
Metribuzin	Jun 7, 2016	.02<MDL	ug/l	no
Monochlorobenzene	Jun 7, 2016	.3<MDL	ug/l	no
MCPA	Jun 7, 2016	.00012<MDL	ug/l	no
Paraquat	Jun 7, 2016	1<MDL	ug/l	no
Pentachlorophenol	Jun 7, 2016	.15<MDL	ug/l	no
Phorate	Jun 7, 2016	.01<MDL	ug/l	no
Picloram	Jun 7, 2016	1<MDL	ug/l	no
Polychlorinated Biphenyls(PCB)	Jun 7, 2016	.04<MDL	ug/l	no
Prometryne	Jun 7, 2016	.03<MDL	ug/l	no
Simazine	Jun 7, 2016	.01<MDL	ug/l	no
Trihalomethane (THM)	Mar. 19, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	9.53 (Running Annual Average)	ug/l	no
Terbufos	Jun 7, 2016	.01<MDL	ug/l	no
Tetrachloroethylene	Jun 7, 2016	.35<MDL	ug/l	no
2,3,4,6-Tetrachlorophenol	Jun 7, 2016	.20<MDL	ug/l	no
Triallate	Jun 7, 2016	.01<MDL	ug/l	no
Trichloroethylene	Jun 7, 2016	.44<MDL	ug/l	no
2,4,6-Trichlorophenol	Jun 7, 2016	.25<MDL	ug/l	no
Trifluralin	Jun 7, 2016	.02<MDL	ug/l	no
Vinyl Chloride	Jun 7, 2016	.17<MDL	ug/l	no

Creighton Heights

Table 12. Creighton Heights Microbiological Testing (Schedule 11 of O.Reg 170/03)

	Number of Samples	E.Coli (cfu/100mL) (min #)-(max #)	Total Coliform (cfu/100mL) (min #)-(max #)	Number of HPC Samples	HPC Results (cfu/1mL) (min #)-(max #)
Raw	156	0 – 0	0 – 0	N/A	N/A
Treated	52	0 – 0	0 – 0	52	0 – 168
Distribution	119	0 – 0	0 – 0	52	0 – 82

Note: cfu refers to colony forming units

Table 13. Creighton Heights Operational Testing (Schedule 7 of O.Reg 170/03)

	Number of Grab Samples	Range of Results (Min – Max)
Chlorine Residual (secondary disinfection)	365	1.85 mg/L – 2.84 mg/L (Chloramination) 0.24 mg/L – 2.22 mg/L (Chlorination)

Note: System free chlorinated from Nov. 4, 2019 to Dec. 2, 2019 for distribution maintenance

Table 14. Creighton Heights Additional Sampling Requirements

Date of MDWL	Parameter	Number of Samples	Maximum Annual Average Concentration	Actual Average Concentration
Aug. 18, 2016	Total Suspended Solids	4 (Quarterly)	25 mg/L	7.5 mg/L

Table 15. Creighton Heights Lead Testing (MDWL 139-102 Schedule D)

Location Type	Date	Sample Location	pH	Alkalinity	Lead
Distribution	Mar. 18, 2019	Arena Hwy 45	7.57 7.85	209 mg/L 211 mg/L	0.09 ug/L 0.06 ug/L
Distribution	Sept. 24, 2019	Burwash Hwy 45	7.25 7.30	192 mg/L 193 mg/L	0.15 ug/L 0.13 ug/L

In addition to the samples listed in tables 12-15, there are many other parameters that are tested on a less frequent basis. For these parameters the most recent analysis is listed in Table 16 below. A parameter below the method detection limit (indicated by <MDL) cannot be detected by the method used in the laboratory. This means the concentration of the parameter is less than the lowest measurement possible.

Table 16. Creighton Heights Organic and Inorganic Sampling (Schedules 13, 23, 24 of O.Reg 170/03)

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	May 29, 2018	0.02<MDL	ug/l	no
Arsenic	May 29, 2018	0.2<MDL	ug/l	no
Barium	May 29, 2018	28.6	ug/l	no
Boron	May 29, 2018	54.0	ug/l	no
Cadmium	May 29, 2018	0.003<MDL	ug/l	no
Chromium	May 29, 2018	0.12	ug/l	no
Mercury	May 29, 2018	.01<MDL	ug/l	no
Selenium	"	.04< MDL	ug/l	no
Sodium	June 5, 2017	27.2	mg/l	no
Uranium	May 29, 2018	0.002<MDL	ug/l	no
Fluoride	June 5, 2017	.34	mg/l	no
Nitrite	Mar. 18, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	0.025 0.022 0.024 0.020	mg/l	no
Nitrate	Mar. 18, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	0.019 0.019 0.015 0.018	mg/l	no
Alachlor	May 29, 2018	.02<MDL	ug/l	no
Aldicarb	May 29, 2018	.02<MDL	ug/l	no
Aldrin + Dieldrin	May 29, 2018	.01<MDL	ug/l	no
Aldrin	May 29, 2018	.01<MDL	ug/l	no
Dieldrin	May 29, 2018	.01<MDL	ug/l	no
Atrazine + N-dealkylated metobolites	May 29, 2018	.01<MDL	ug/l	no
Atrazine	May 29, 2018	.01<MDL	ug/l	no
Azinphos-methyl	May 29, 2018	.05<MDL	ug/l	no
Benzene	May 29, 2018	.32<MDL	ug/l	no
Benzo(a)pyrene	May 29, 2018	.004<MDL	ug/l	no
Bromoxynil	May 29, 2018	.33<MDL	ug/l	no
Carbaryl	May 29, 2018	.05<MDL	ug/l	no
Carbofuran	May 29, 2018	.01<MDL	ug/l	no
Carbon Tetrachloride	May 29, 2018	.16<MDL	ug/l	no
Chlordane (Total)	May 29, 2018	.01<MDL	ug/l	no
Chlorpyrifos	May 29, 2018	.02<MDL	ug/l	no
Cyanazine	May 29, 2018	.03<MDL	ug/l	no
Desethyl atrazine	May 29, 2018	.01<MDL	ug/l	no
Diazinon	May 29, 2018	.02<MDL	ug/l	no
Dicamba	May 29, 2018	.20<MDL	ug/l	no
1,2-Dichlorobenzene	May 29, 2018	.41<MDL	ug/l	no
1,4-Dichlorobenzene	May 29, 2018	.36>MDL	ug/l	no
1,2-Dichloroethane	May 29, 2018	.35<MDL	ug/l	no

1,1-Dichloroethylene (vinylidene chloride)	May 29, 2018	.33<MDL	ug/l	no
Dichloromethane	May 29, 2018	.35<MDL	ug/l	no
2-4 Dichlorophenol	May 29, 2018	.15<MDL	ug/l	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	May 29, 2018	.19<MDL	ug/l	no
Diclofop-methyl	May 29, 2018	.40<MDL	ug/l	no
Dimethoate	May 29, 2018	.03<MDL	ug/l	no
Diquat	May 29, 2018	1<MDL	ug/l	no
Diuron	May 29, 2018	.03<MDL	ug/l	no
Glyphosate	May 29, 2018	1<MDL	ug/l	no
Haloacetic Acid HAA	Mar. 18, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	6.3 (Running Annual Average)	ug/l	no
Malathion	May 29, 2018	.02<MDL	ug/l	no
Metolachlor	May 29, 2018	.01<MDL	ug/l	no
Metribuzin	May 29, 2018	.02<MDL	ug/l	no
Paraquat	May 29, 2018	1<MDL	ug/l	no
Pentachlorophenol	May 29, 2018	.15<MDL	ug/l	no
Phorate	May 29, 2018	.01<MDL	ug/l	no
Picloram	May 29, 2018	1<MDL	ug/l	no
Polychlorinated Biphenyls(PCB)	May 29, 2018	.04<MDL	ug/l	no
Prometryne	May 29, 2018	.03<MDL	ug/l	no
Simazine	May 29, 2018	.01<MDL	ug/l	no
Trihalomethane (THM)	Mar. 18, 2019 June 10, 2019 Sept. 24, 2019 Dec. 12, 2019	1.75 (Running Annual Average)	ug/l	no
Terbufos	May 29, 2018	.01<MDL	ug/l	no
Tetrachloroethylene	May 29, 2018	.35<MDL	ug/l	no
2,3,4,6-Tetrachlorophenol	May 29, 2018	.20<MDL	ug/l	no
Triallate	May 29, 2018	.01<MDL	ug/l	no
Trichloroethylene	May 29, 2018	.44<MDL	ug/l	no
2,4,6-Trichlorophenol	May 29, 2018	.25<MDL	ug/l	no
Trifluralin	May 29, 2018	.02<MDL	ug/l	no
Vinyl Chloride	May 29, 2018	.17<MDL	ug/l	no