

Drinking-Water System Number:	220000460
Drinking-Water System Name:	North Bay Water Drinking Water System
Drinking-Water System Owner:	The Corporation of the City of North Bay
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2020 to December 31, 2020

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [] No []

Is your annual report available to the public at no charge on a web site on the Internet? Yes [] No []

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

The Corporation of the City of North Bay
P.O. Box 360
200 McIntyre Street East
North Bay, ON P1B 8H8

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N/A	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [] No []

Indicate how you notified system users that your annual report is available, and is free of charge.

[] Public access/notice via the web

[] Public access/notice via a newspaper

Describe your Drinking-Water System

The City of North Bay water treatment plant (WTP), water distribution facilities and water distribution piping system are owned and operated by the Corporation of the City of North Bay.

The City of North Bay Water Treatment System is classified as a "Large Municipal Residential" Drinking-Water System, Class 3 Water Treatment Plant and Class 4 Water Distribution System with Drinking-Water System Number: 220000460. The WTP, located at 248 Lakeside Drive in North Bay, treats water from Trout Lake which is part of the Mattawa River watershed. The WTP services a population of approximately 54,000, the permit to take water permits consumption up to 79,500 cubic meters per day.

The water distribution facilities consist of the following:

Ellendale Reservoir, High lift Pump Station & Re-chlorination Facility;

CFB Reservoir;

Canadore Pumping Station;

Cedar Heights Booster pumping station;

Judge Avenue Valve Chamber;

Birches Road Standpipe and Re-chlorination Station; and

Airport Road Standpipe, Booster Pumping Station and Re-chlorination Facility.

Larocque Rd. Standpipe

The membrane filtration water treatment plant has the design capacity of 79,500 cubic meters per day. The plant is a SCADA controlled membrane filtration system with ultraviolet and chlorine disinfection. The plant also doses fluoride, caustic for pH adjustment and Control Max for corrosion control prior to delivery to the distribution system.

The membrane filtration plant meets the Ontario Drinking Water Standards requirements for the removal/disinfection of 3-log Giardia Lambia, 2-log Cryptosporidium and 4-log Viruses. The membrane filtration Primary Barrier provides a 3- log Giardia removal, 2-log Cryptosporidium removal. The chlorine/UV disinfection Secondary Barrier provides for a 0.5 Giardia removal, 0.5-log Cryptosporidium removal and with chlorine addition gives a 4- log virus removal.

In general the North Bay WTP can be described as follows:

Intake

A 1200mm diameter 45 series polyethylene intake pipe, with a capacity of 80,000 cubic meters per day. The pipe, constructed in 1973, extends approximately 300 meters into Delaney Bay of Trout Lake and includes an intake structure consisting of a steel inlet bell mouth with fiber reinforced plastic (FRP) cage and is in approximately 21.5 meters of water at low water level.

Membrane Feed Pump Well/Prescreening

Two (2) parallel sub-surface well chambers with level monitoring containing, two (2) 6mm mesh manual prescreen in series, five (5) vertical turbine pumps (4 duty and one standby) each rated at 20 m³/d feeding the primary membrane system.

Membrane Feed Strainers

Five (5) 300 micron automatic membranes feed strainers (four duties and one standby).

Treatment Plant Process Areas

A building housing the following process components:

- primary and secondary membrane filtration system;
- primary and secondary UV disinfection system;
- Two (2) chlorine contact tanks;
- split high lift pump well
- three (3) chemical storage and delivery rooms housing membrane cleaning and neutralization chemical systems, pre-chlorination system, primary disinfection chemical system, secondary chlorination chemical system, pH adjustment system, and a fluoride addition system. Also includes;
 - high lift pumping room;
 - Generator room;
 - Electrical room.
 - compressor/blower room

Administration Area

Two floor administrative area including laboratory/control room, server room, multipurpose training room, offices, washrooms, women's and men's locker rooms, janitor room, building mechanical room and storage room.

Membrane Filtration

Eleven (11) pressurized primary membrane racks treating water from the membrane feed strainers, two(2) pressurized secondary membrane racks treating non-chemical backwash water from the primary membrane racks. The primary racks have a maximum production flow rate of 78.7 MLD based on raw water flow rate of 79.5 MLD, Ancillary systems including backwash pumps, instrument air for operating valves and integrity testing membranes, process blowers, and chemical cleaning and neutralization systems.

UV Disinfection Systems

Three (3) 600mm primary UV reactors (two duty and one standby) treating water from the eleven (11) pressurized primary membrane racks and two (2) secondary membrane racks. Each reactor contains medium pressure high intensity lamps housed in quartz sleeves; units equipped with self-cleaning mechanism and intensity sensors.

Chemical systems for:

Primary disinfection

Secondary (residual) disinfection

Fluoride Dosing

pH Adjustment

Corrosion Control

Membrane cleaning

Membrane cleaning solutions neutralization

Chlorine Contact Tank #1 and #2

Two (2) baffled chlorine contact tanks in series with storage volumes of 688 cubic meters (tank #1) and 502 cubic meters (tank #2).

High Lift Pump Well #1 and #2

High lift pump well #1 has a capacity of approximately 240 cubic meters and is equipped with one (1) variable speed and two (2) constant speed vertical turbine high lift pumps each rated at 20 MLD. High lift pump well #2 has a capacity of approximately 240 cubic meters and is equipped with one (1) variable speed and one (1) constant speed vertical turbine high lift pump each rated at 20 MLD.

Generator Room

One (1) dual fuel generator set (NG/Diesel) with a rating of 2050KW, to provide power during peak hours and emergency situations.

Wastewater Disposal System**Primary Membrane Backwash Tank**

Tank with a volume of approximately 310 cubic meters,
Two (2) membranes feed pumps supplying water to the Secondary Membrane System.

Secondary Waste Tank

Tank with a volume of approximately 130 cubic meters,
Two (2) pumps, one duty and one standby, to deliver water to the sanitary sewer.

Neutralization Tank #1 and #2

Two (2) tanks each with a volume of 150 cubic meters, pH and Chlorine Residual analyzers. To dechlorinate and adjust pH to suitable levels for wastewater plant.

Sanitary Sewage Disposal

One sump with two (2) submersible pumps in the Administration Area and two (2) sumps and two (2) submersible pumps in the Process Area discharging to the sanitary sewer along Lakeside Drive

The treated water is pumped to the distribution system.

The water distribution facilities can be described as follows:

Ellendale Reservoir, High lift Pumping Station and Re-chlorination Facility

The facility is a reinforced concrete at-grade, double cell, un-baffled, treated water reservoir, located at

the east end of Ellendale Drive. The reservoir has an approximate capacity of 18,200 cubic meters, with dimensions of 71 meters by 38 meters by 7 meters. The facility is equipped with a sodium hypochlorite re-chlorination system, on-line continuous water quality analyzer for free chlorine. Standby power is available with a generator to operate the facility during power outages.

Birch's Road Standpipe and Re-chlorination Station

The facility consists of one (1) 39 meter high, 19 meter diameter, 11,775 cubic meter capacity with a hydrostatic mixing system, the steel treated water standpipe located near the southwest corner of Birch's Road and Booth Road. The facility is equipped with sodium hypochlorite re-chlorination system, on-line continuous water quality analyzer for free chlorine and a fixed 7.5kW, 120/240 Volt single phase, diesel powered generator to power the re-chlorination and SCADA communications during prolonged power outages.

Larocque Rd. Standpipe

The facility consists of one (1) 22 meter high, 15meter diameter, and 4,000 cubic meter capacity glass fused to steel standpipe with a hydrostatic mixing system. The standpipe is located at the North end of the city on Larocque Rd. to provide water pressure to future development, along with the Canadore College and Nipissing University. There is a 10KW, 120/240V backup generator to maintain communication and SCADA controls during power outages.

Judge Avenue Valve Chamber

The facility consists of a valve and is located near the northeast corner of Judge Avenue and Lakeshore Drive. The facility is equipped with a fixed 7.5kW 120/240 Volt single phase, diesel powered generator to power the valve and SCADA communications during prolonged power outages. Valve control for pressure or tower level integrated with Birches Standpipe. The equipment for a re-chlorination station is located at the facility however not currently in use.

CFB North Bay Reservoir and Re-chlorination Facility

The facility consists of a double cell 1820 cubic meter capacity, un-baffled reservoir and a re-chlorination facility located at the north end of Manston Crescent. The facility is equipped with on line continuous water quality analyzer for free chlorine and standby power.

Canadore Pumping Station

The facility is equipped with high lift pumps and pressurized cushion tanks to maintain pressure in the pressurized zone of the distribution system servicing Canadore College and Nipissing University. There is an on-line continuous water quality analyzer to monitor free chlorine residual and a 200kW, 347/600 Volt, 3 phase diesel generator to provide power and SCADA communications during prolonged power outages. Site is offline and on standby now that Cedar Heights is in operation.

Cedar Heights Booster Station

This Facility is equipped with two (2) 100 hp high lift pumps responsible for filling the Larocque Rd. Standpipe with a pressurized cushion tank to protect pressure surges in the grid. There is an on-line continuous water quality analyzer to monitor free chlorine residual and a 357kW, 347/600 Volt, 3 phase diesel generator to provide equipment power and SCADA communications during prolonged power outages.

Airport Standpipe, Booster Pumping Station

This 4,000 cubic meter water storage standpipe, booster pumping station and re-chlorination facility was constructed in 2009. With the standpipe, high lift pumps, pressurized cushion tanks and a 500kW back-up diesel generator. This facility maintains pressure in the pressurized zone of the distribution system servicing the Airport and Carmichael Drive areas. This system consists of a standpipe and a series of pumps to facilitate filling the standpipe and providing pressure to the Airport and Carmichael Dr. area (Zone 5). Filling the standpipe utilizes three booster pumps (2 duty and 1 standby). The standpipe provides suction pressure for four booster pumps (3 duties and 1 standby) and two fire pumps to provide pressure for Zone 5. Zone 5 is equipped with four (4) pneumatic tanks to mitigate minor pressure fluctuations within the distribution system, and to provide some volume of available storage during power interruptions while the standby power system engages.

List all water treatment chemicals used over this reporting period

Sodium Hydroxide
Sodium Hypochlorite
HydroFluorosilicic Acid
Control Max

Were any significant expenses incurred to?

- Install required equipment
 Repair required equipment
 Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred treatment and distribution of water to Major repair and replacement to ensure reliable the water system.

The major capital repairs and replacements include:

- Replaced both blower units at the Water Treatment Plant
- Replaced Air Dryer unit for instrument air supply at the Water Treatment Plant
- Installed new liner and removed old HydroFluorosilicic Acid fill lines to repurpose the tank for bulk Control Max storage
- Rebuilt both gear boxes and the mixing components for CIP batch systems
- Replaced 10 Turbidity Analyzers at the Water Treatment Plant
- SCADA Upgrade was in progress throughout year
- Replaced multiple defective solar panels on Water Treatment Plant

- Replaced 165 m of 150mm water main on Clifford Ave. and Wigston Dr.
- Replaced 80 m of 150mm water main on Howard Ave.
- Replaced 124 m of 200 mm water main on Lakeshore Dr.
- Replaced 140m of 400mm water main on Lakeshore Dr.
- Replaced 110m of 250mm water main on Douglas St.
- Replaced 220m of 200mm water main on Lavase Rd.
- Installation of a 400mm valve on water main in Lee Park
- Replaced 194m of 400mm water main on Pinewood Park Dr.
- Replaced 418m of 250mm water main on Cassells St. between Duke St. and Shaw St.
- Replaced 19m of 200mm water main on Duke St. North
- Replaced 31m of 200mm water main on Duke St. South
- Replaced 25m of 200 mm water main on Chippewa St. North
- Replaced 26m of 200 mm water main on Chippewa St. South
- Replaced 20m of 200mm water main on Aubrey St.
- Replaced 21m of 200mm water main on Olive St. North
- Replaced 19m of 200mm water main on Olive St. South
- Replaced 94m of 200mm water main on Shaw St.
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Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
August 5, 2020	Total Coliforms	17	CFU/100 mL	Bacti sample taken from Hydrant 8-1509 on Lakeshore Dr. which had a Total Coliform level of 17 CFU/100mL. Flushed water main and resampled. Reported to MOH and SAC as per regulations AWQI # 151188	August 6, 2020

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.coli (#)-(#)	Range of Total Coliform Results (#)-(#)	Number of samples Background Colony Counts	Range of Back-ground Colony Counts	Number of HPC Samples	Range of HPC Results (#)-(#)
Raw	52	0-7	0-65	52	0->200	N/A	N/A
Treated	52	0-0	0-0	52	0-0	52	0-48
Distribution Fixed Sites	364	0-0	0-0	364	0-4	104	0-12
Distribution Random Sites	520	0-0	0-0	520	0-7	156	0-34

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

POE Grab Samples	Number of Grab Samples	Range of Results (min #)-(max #)	ODWQS/Operational Requirement
Turbidity	244	0.013 – 0.626 NTU	1.0 NTU max
Chlorine	254	0.83 – 1.59 mg/L	0.05 mg/L min.
Fluoride (If the DWS provides fluoridation)	172	0.0 – 0.82 mg/L	1.5 mg/L max



Distribution Free Chlorine Grab Samples	Number of Grab Samples	Range of Results (min #)-(max #)	ODWQS Requirement
Chlorine Fixed Sites	3284	0.12 – 3.65 mg/L	0.05mg/L min.
Chlorine Random Sites	520	0.13-1.50 mg/L	0.05 mg/L min.

POE on-line Continuous Analyzers	Number of Grab Samples	Range of Results (min #)-(max #)	ODWQS/Operational Requirement
Turbidity	8760	0.02 – 0.524 NTU	5.0 NTU max
Chlorine	8760	0.70 – 3.219 mg/L	0.05 mg/L min.
Fluoride (If the DWS provides fluoridation)	8760	0.0 – 0.983 mg/L	1.5 mg/L max

NOTE: For continuous monitors use 8760 as the number of samples.

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	20 Jul 20	<0.0005	mg/L	no
Arsenic	20 Jul 20	<0.001	mg/L	no
Barium	20 Jul 20	0.01	mg/L	no
Boron	20 Jul 20	<0.01	mg/L	no
Cadmium	20 Jul 20	<0.0001	mg/L	no
Chromium	20 Jul 20	0.001	mg/L	no
Mercury	20 Jul 20	<0.0001	mg/L	no
Selenium	20 Jul 20	<0.001	mg/L	no
Uranium	20 Jul 20	<0.001	mg/L	no
Sodium	20 Jul 20	11.0	mg/L	no
Fluoride	20 Jul 20	0.65	mg/L	no
Nitrite	6 Jan 20 11 Feb 20 1 Apr 20 9 Jul 20 5 Oct 20	<MDL <MDL <MDL <MDL <MDL	mg/L mg/L mg/L mg/L mg/L	no
Nitrate	6 Jan 20 11 Feb 20 1 Apr 20 9 Jul 20 5 Oct 20	<MDL <MDL <MDL <MDL <MDL	mg/L mg/L mg/L mg/L mg/L	no

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(Applicable to the following drinking water systems; large municipal residential systems, small Municipal residential systems and non-municipal year-round residential systems)

	Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Round 1 Dec 15 2019 to Apr 15 2020	Plumbing	24	<0.0001 – 0.0013	mg/L	0
	Distribution	8	0.0001 – 0.0014	mg/L	0
Round 2 June 15 2020 to Oct 15 2020	Plumbing	10	<0.0001 – 0.0007	mg/L	0
	Distribution	8	0.0002 – 0.0013	mg/L	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	20 Jul 20	<0.0005	mg/L	no
Atrazine + N-dealkylated metabolites	20 Jul 20	<0.001	mg/L	no
Azinphos-methyl	20 Jul 20	<0.002	mg/L	no
Benzene	20 Jul 20	<0.0005	mg/L	no
Benzo(a)pyrene	20 Jul 20	<0.00001	mg/L	no
Bromoxynil	20 Jul 20	<0.0005	mg/L	no
Carbaryl	20 Jul 20	<0.005	mg/L	no
Carbofuran	20 Jul 20	<0.005	mg/L	no
Carbon Tetrachloride	20 Jul 20	<0.0002	mg/L	no
Chlorpyrifos	20 Jul 20	<0.001	mg/L	no
Diazinon	20 Jul 20	<0.001	mg/L	no
Dicamba	20 Jul 20	<0.001	mg/L	no
1,2-Dichlorobenzene	20 Jul 20	<0.0004	mg/L	no
1,4-Dichlorobenzene	20 Jul 20	<0.0004	mg/L	no
1,2-Dichloroethane	20 Jul 20	<0.0002	mg/L	no
1,1-Dichloroethylene (vinylidene chloride)	20 Jul 20	<0.0005	mg/L	no
Dichloromethane	20 Jul 20	<0.004	mg/L	no
2-4 Dichlorophenol	20 Jul 20	<0.0002	mg/L	no
2,4-Dichlorophenoxy acetic acid	20 Jul 20	<0.001	mg/L	no
Diclofop-methyl	20 Jul 20	<0.0009	mg/L	no

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Dimethoate	20 Jul 20	<0.0025	mg/L	no
Diquat	20 Jul 20	<0.005	mg/L	no
Diuron	20 Jul 20	<0.01	mg/L	no
Glyphosate	20 Jul 20	<0.01	mg/L	no
Malathion	20 Jul 20	<0.0005	mg/L	no
Metolachlor	20 Jul 20	<0.001	mg/L	no
Metribuzin	20 Jul 20	<0.005	mg/L	no
Monochlorobenzene	20 Jul 20	<0.0005	mg/L	no
Paraquat	20 Jul 20	<0.001	mg/L	no
Pentachlorophenol	20 Jul 20	<0.001	mg/L	no
Phorate	20 Jul 20	<0.0005	mg/L	no
Picloram	20 Jul 20	<0.005	mg/L	no
Polychlorinated Biphenyls(PCB)	20 Jul 20	<0.0001	mg/L	no
Prometryne	20 Jul 20	<0.00025	mg/L	no
Simazine	20 Jul 20	<0.001	mg/L	no
THM (NOTE: show latest annual average)		69.97	ug/L	no
Terbufos	20 Jul 20	<0.0004	mg/L	no
Tetrachloroethylene	20 Jul 20	<0.0003	mg/L	no
2,3,4,6-Tetrachlorophenol	20 Jul 20	<0.001	mg/L	no
Triallate	20 Jul 20	<0.001	mg/L	no
Trichloroethylene	20 Jul 20	<0.0003	mg/L	no
2,4,6-Trichlorophenol	20 Jul 20	<0.001	mg/L	no
Trifluralin	20 Jul 20	<0.001	mg/L	no
Vinyl Chloride	20 Jul 20	<0.0002	mg/L	no
2 Methyl-4-Chlorophenoxyacetic acid (MCPA)	20 Jul 20	<0.01	mg/L	no

THM Dist. Sample Location Mid-Canada Line & Pinewood Park Sample Stations	1st Quarter Result Value	2nd Quarter Result Value	3rd Quarter Result Value	4th Quarter Result Value	Unit of Measure	Exceed- dance
Sample Period	Jan 6 – Mar. 2, 2020	Apr.7 – June. 1, 2020	July 6 – Sept. 8, 2020	Oct. 5 – Dec. 8, 2020	mg/L	
Bromodichloromethane (Average)	0.001 0.0019	0.0035 0.0028	0.0025 0.0024	0.0049 0.0048	mg/L	
Bromoform(Average)	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	mg/L	
Chloroform(Average)	0.06937 0.06555	0.08922 0.08890	0.09872 0.09388	0.10486 0.09587	mg/L	
Dibromochloromethane (Average)	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	mg/L	
Total Trihalomethanes	0.06891	0.09210	0.09877	0.1051	mg/L	No
THM All Distribution sites (Averages)	1st Quarter Result Value	2nd Quarter Result Value	3rd Quarter Result Value	4th Quarter Result Value	Unit of Measure	Exceed- dance
Sample Period	Jan 6 – Mar. 2, 2020	Apr.7 – June. 1, 2020	July 6, - Sep. 8, 2020	Oct. 5 – Dec. 8, 2020	mg/L	
Bromodichloromethane	0.0012	0.0027	0.0015	0.0036	mg/L	
Bromoform	<0.0005	<0.0005	<0.0005	<0.0005	mg/L	
Chloroform	0.06395	0.07947	0.06966	0.06927	mg/L	
Dibromochloromethane	<0.0005	<0.0005	<0.0005	<0.0005	mg/L	
Total Trihalomethanes	0.05236	0.08212	0.07119	0.07421	mg/L	
Total Trihalomethanes 4 Quarter Average (Random & Fixed Sites Included)				0.06997	mg/L	No

HAA Distribution Sample Locations Judge Valve & HLPS (Averages)	1 st Quarter Result Value	2 nd Quarter Result Value	3 rd Quarter Result Value	4 th Quarter Result Value	Unit of Measure	Exceed- dence
Sample Period	Jan 1 – Mar. 31, 2020	Apr.1 – June. 30, 2020	July 1, - Sep. 30, 2020	Oct. 1 – Dec. 31, 2020	mg/L	
(Mono)Bromoacetic Acid	< 0.002 < 0.002	< 0.002 < 0.002	< 0.002 < 0.002	< 0.002 < 0.002	mg/L	
(Mono) Chloroacetic Acid	< 0.002 < 0.002	< 0.002 < 0.002	< 0.002 < 0.002	< 0.002 < 0.002	mg/L	
Dibromoacetic Acid	< 0.002 < 0.002	< 0.002 < 0.002	< 0.002 < 0.002	< 0.002 < 0.002	mg/L	
Dichloroacetic Acid	0.0180 0.0219	0.0415 0.0459	0.0259 0.0271	0.0246 0.0182	mg/L	
Trichloroacetic Acid	0.0243 0.0360	0.0449 0.0482	0.0424 0.0488	0.0310 0.0179	mg/L	
Avg.Total Haloacetic Acids	0.0501	0.0903	0.0721	0.0459	mg/L	
Total Haloacetic Acid Running Quarterly Average				0.0646	mg/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	½ MAC VALUE	MAC VALUE	Date of Sample
THM	0.0796	mg/L	0.050	0.100	Jan.6,2020
THM	0.0764	mg/L	0.050	0.100	Jan.6,2020
THM	0.0527	mg/L	0.050	0.100	Jan.6,2020
THM	0.0680	mg/L	0.050	0.100	Jan.6,2020
THM	0.0657	mg/L	0.050	0.100	Jan.6,2020
THM	0.0589	mg/L	0.050	0.100	Feb.3,2020
THM	0.0569	mg/L	0.050	0.100	Feb.3,2020
THM	0.0581	mg/L	0.050	0.100	Feb.3,2020
THM	0.0544	mg/L	0.050	0.100	Feb.3,2020
THM	0.0586	mg/L	0.050	0.100	Feb.3,2020
THM	0.0889	mg/L	0.050	0.100	Mar.2,2020
THM	0.0790	mg/L	0.050	0.100	Mar.2,2020
THM	0.0641	mg/L	0.050	0.100	Mar.2,2020
THM	0.0571	mg/L	0.050	0.100	Mar.2,2020
THM	0.0687	mg/L	0.050	0.100	Mar.2,2020
THM	0.0547	mg/L	0.050	0.100	Mar.2,2020
THM	0.0583	mg/L	0.050	0.100	Mar.2,2020
THM	0.0681	mg/L	0.050	0.100	Mar.2,2020

Parameter	Result Value	Unit of Measure	½ MAC VALUE	MAC VALUE	Date of Sample
THM	0.0533	mg/L	0.050	0.100	Mar.2,2020
THM	0.0558	mg/L	0.050	0.100	Mar.2,2020
HAA	0.0579	mg/L	0.040	0.080	Mar.5,2020
HAA	0.0423	mg/L	0.040	0.080	Mar.5,2020
THM	0.1000	mg/L	0.050	0.100	May.4,2020
THM	0.1070	mg/L	0.050	0.100	May.4,2020
THM	0.0817	mg/L	0.050	0.100	May.4,2020
THM	0.0805	mg/L	0.050	0.100	May.4,2020
THM	0.0991	mg/L	0.050	0.100	May.4,2020
THM	0.1040	mg/L	0.050	0.100	May.4,2020
THM	0.1300	mg/L	0.050	0.100	June 1,2020
THM	0.1270	mg/L	0.050	0.100	June 1,2020
THM	0.0741	mg/L	0.050	0.100	June 1,2020
THM	0.0780	mg/L	0.050	0.100	June 1,2020
THM	0.1410	mg/L	0.050	0.100	June 1,2020
THM	0.1300	mg/L	0.050	0.100	June 1,2020
HAA	0.0864	mg/L	0.040	0.080	June 1,2020
HAA	0.0941	mg/L	0.040	0.080	June 1,2020
THM	0.1090	mg/L	0.050	0.100	Jul.6,2020
THM	0.1040	mg/L	0.050	0.100	Jul.6,2020
THM	0.0557	mg/L	0.050	0.100	Jul.6,2020
THM	0.0591	mg/L	0.050	0.100	Jul.6,2020
THM	0.1080	mg/L	0.050	0.100	Jul.6,2020
THM	0.1010	mg/L	0.050	0.100	Jul.6,2020
THM	0.0882	mg/L	0.050	0.100	Aug.4,2020
THM	0.0817	mg/L	0.050	0.100	Aug.4,2020
THM	0.0904	mg/L	0.050	0.100	Aug.4,2020
THM	0.0773	mg/L	0.050	0.100	Aug.4,2020
THM	0.0782	mg/L	0.050	0.100	Aug.4,2020
THM	0.0864	mg/L	0.050	0.100	Aug.4,2020
THM	0.0534	mg/L	0.050	0.100	Aug.4,2020
THM	0.0538	mg/L	0.050	0.100	Aug.4,2020
THM	0.1110	mg/L	0.050	0.100	Sep.8,2020
THM	0.1080	mg/L	0.050	0.100	Sep.8,2020
THM	0.0610	mg/L	0.050	0.100	Sep.8,2020
THM	0.0579	mg/L	0.050	0.100	Sep.8,2020
THM	0.0542	mg/L	0.050	0.100	Sep.8,2020
THM	0.0607	mg/L	0.050	0.100	Sep.8,2020
THM	0.0540	mg/L	0.050	0.100	Sep.8,2020
THM	0.0964	mg/L	0.050	0.100	Sep.8,2020
THM	0.0982	mg/L	0.050	0.100	Sep.8,2020
THM	0.0562	mg/L	0.050	0.100	Sep.8,2020
THM	0.0691	mg/L	0.050	0.100	Sep.8,2020

Parameter	Result Value	Unit of Measure	½ MAC VALUE	MAC VALUE	Date of Sample
THM	0.0562	mg/L	0.050	0.100	Sep.8,2020
THM	0.0675	mg/L	0.050	0.100	Sep.8,2020
THM	0.0534	mg/L	0.050	0.100	Sep.8,2020
HAA	0.0759	mg/L	0.040	0.080	Sep.8,2020
HAA	0.0683	mg/L	0.040	0.080	Sep.8,2020
THM	0.1180	mg/L	0.050	0.100	Oct.5,2020
THM	0.1080	mg/L	0.050	0.100	Oct.5,2020
THM	0.0636	mg/L	0.050	0.100	Oct.5,2020
THM	0.0630	mg/L	0.050	0.100	Oct.5,2020
THM	0.0588	mg/L	0.050	0.100	Oct.5,2020
THM	0.0603	mg/L	0.050	0.100	Oct.5,2020
THM	0.0579	mg/L	0.050	0.100	Oct.5,2020
THM	0.0618	mg/L	0.050	0.100	Oct.5,2020
THM	0.0735	mg/L	0.050	0.100	Oct.5,2020
THM	0.0602	mg/L	0.050	0.100	Oct.5,2020
THM	0.1010	mg/L	0.050	0.100	Oct.5,2020
THM	0.0531	mg/L	0.050	0.100	Oct.5,2020
THM	0.0728	mg/L	0.050	0.100	Oct.5,2020
THM	0.0604	mg/L	0.050	0.100	Oct.5,2020
THM	0.0589	mg/L	0.050	0.100	Nov.2,2020
THM	0.0546	mg/L	0.050	0.100	Nov.2,2020
THM	0.0736	mg/L	0.050	0.100	Nov.2,2020
THM	0.0578	mg/L	0.050	0.100	Nov.2,2020
THM	0.0676	mg/L	0.050	0.100	Nov.2,2020
THM	0.0692	mg/L	0.050	0.100	Nov.2,2020
THM	0.0546	mg/L	0.050	0.100	Nov.2,2020
THM	0.0504	mg/L	0.050	0.100	Nov.2,2020
THM	0.0809	mg/L	0.050	0.100	Nov.10,2020
THM	0.0747	mg/L	0.050	0.100	Nov.10,2020
THM	0.0644	mg/L	0.050	0.100	Nov.10,2020
THM	0.0593	mg/L	0.050	0.100	Dec.7,2020
THM	0.0764	mg/L	0.050	0.100	Dec.7,2020
THM	0.0950	mg/L	0.050	0.100	Dec.7,2020
THM	0.0610	mg/L	0.050	0.100	Dec.7,2020
THM	0.0991	mg/L	0.050	0.100	Dec.7,2020
THM	0.0939	mg/L	0.050	0.100	Dec.7,2020
THM	0.1100	mg/L	0.050	0.100	Dec.7,2020
THM	0.0840	mg/L	0.050	0.100	Dec.7,2020
THM	0.0789	mg/L	0.050	0.100	Dec.7,2020
THM	0.0682	mg/L	0.050	0.100	Dec.7,2020
HAA	0.0556	mg/L	0.040	0.080	Dec.7,2020
THM	0.1310	mg/L	0.050	0.100	Dec.8,2020
THM	0.1180	mg/L	0.050	0.100	Dec.8,2020

Parameter	Result Value	Unit of Measure	½ MAC VALUE	MAC VALUE	Date of Sample
THM	0.0939	mg/L	0.050	0.100	Dec.8,2020
THM	0.0933	mg/L	0.050	0.100	Dec.8,2020