City of White Rock
2018 Annual Water Report

Contents

Introduction

The City of White Rock is a unique, ocean-side community of nearly 20,000 citizens known for its sunny weather, expansive beach, historic pier, delightful restaurants, and sense of community. The City is located half an hour south of Vancouver on the shore of Semiahmoo Bay.

The City of White Rock's Water Services provide safe and clean drinking water to its residents. The Engineering and Municipal Operations Department is responsible for the maintenance, repair and upgrades of the water supply and distribution system.

The Conditions of Permit are as follows:

1. The drinking water that you provide must be treated to provide an acceptable secondary disinfectant to the whole system that meets the requirements of the Guidelines for Canadian Drinking Water Quality and is acceptable to Fraser Health Authority. Reports on the levels of disinfectant in the system are to be provided to Fraser Health on a weekly basis.
2. Should arsenic levels exceed the Guidelines for Canadian Drinking Water Quality, the City must start operating a treatment system on or before December 31, 2018 to lower the arsenic level below the Guideline limit and to as low as reasonably achievable. Treatment requirements will be based on the results of the "Sampling and Reporting Protocol for the City of White Rock Water System," October 29, 2015
3. Should the Guidelines for Canadian Drinking Water Quality deem manganese a health criteria, a treatment system must be operational one year after the date of the changes to the Guideline Limits.
4. A written update on the status of the City's plan to meet these conditions to Fraser Health Authority by March 31 of each calendar year.

The City is required to provide an annual report to provide information such as explanation of water source, water test results, maintenance programs and improvements to the water system. The following document summarizes these requirements.

Overview: Water Quality Milestones

2018 was the City of White Rock's third full year of operating the water utility. Since acquiring the water utility less than four years ago, the City has accomplished some substantial milestones, all of which reflect our commitment to delivering safe and clean drinking water to our residents. While our water meets Canadian Drinking Water Guidelines, we are always striving to improve water quality beyond what is mandated, enhance the reliability and resiliency of our water infrastructure, and plan for our future.

Stay up to date with water related initiatives in White Rock at **www.whiterockcity.ca/mywater**

Source Water

Drinking water is obtained from the Sunnyside Uplands Aquifer, and distributed through seven wells located throughout the City.

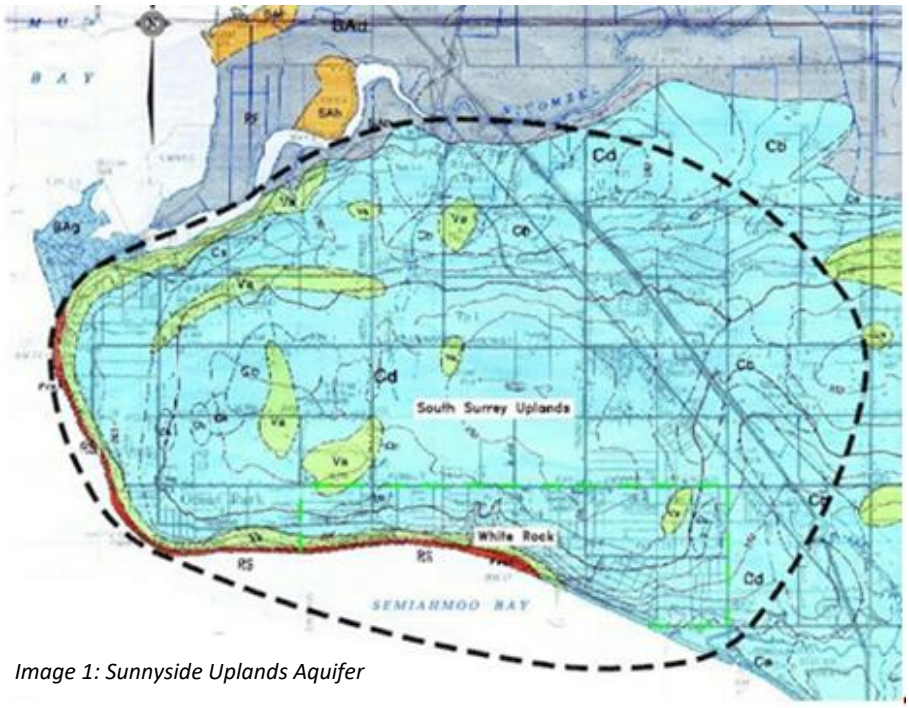


Image 1: Sunnyside Uplands Aquifer

Well Locations in White Rock

The wells range in depth from 60 meters to 150 meters and can provide a combined supply of approximately 15 ML per day. These wells provide an adequate water supply for the community even at peak consumption during the summer months, when consumption can typically rise to 10 ML per day. Wells 1, 2, 3, and 8 are located at the Oxford Site. Well 4 is a seasonal well utilized during the months of June, July and August and is located at High Street, Wells 6 and 7 are located at the Merklin Site. Well 5 was taken out of service on February 16th 2017.

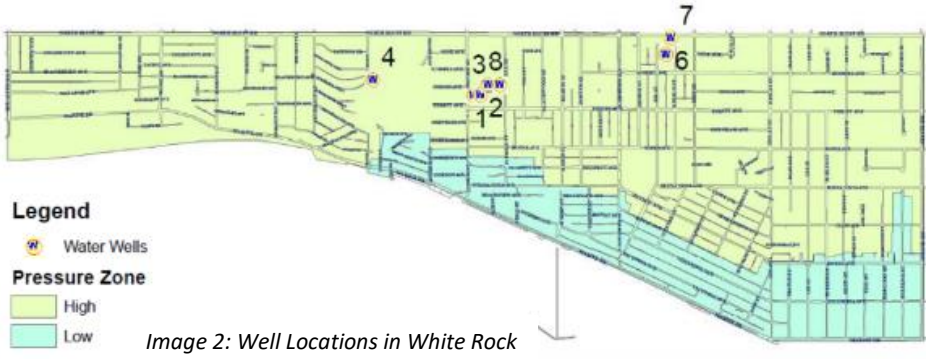


Image 2: Well Locations in White Rock

Well #8

The City of White Rock contracted Piteau Associates to conduct a hydrogeological assessment of aquifer conditions and well performance to identify a location for a new well. This study evaluated potential well sites and concluded that the eastern portion of the City's property at 1444 Oxford Street was a suitable site for a new production well.

The new well, Well 8, is located near the intersection of Everall Street and Goggs Avenue. Wells 1, 2, and 3 are located on this same property, respectively 165, 140, and 95 m to the west of Well 8. Wells 2 and 3 are operated intermittently at instantaneous flow rates of about 25 and 29 L/s. Well 1 is operated at about 24 L/s, only when required to meet demand with wells 2 and 3 operating at capacity. Using hydraulic parameters estimated from pumping test data for Well 7 (which draws water from the same aquifer), Piteau's 2016 assessment estimated interference drawdowns that could occur when a new well at the Well 8 location is pumped at a rate of 31 L/s. Drawdowns of 0.8, 0.8, and 1.2 m were estimated for Wells 1, 2, and 3, respectively. Well #8 was set to provide flow of 25.3 L/s.
Well 8, and other production wells operated by the City, extract groundwater from the White Rock/Sunnyside Uplands Aquifer.

The potential for groundwater from Well 8 to be at risk of containing pathogens has been assessed using the BC Ministry of Health's "Guidance Document for Determining Ground Water at Risk of Containing Pathogens (GARP)" (BC Ministry of Health, 2015). These guidelines specify that water supply system wells should be considered potentially at risk of containing pathogens if they have:

a) An intake depth less than 15 m-below ground level that is located within the natural boundary of surface water or a flood prone area;
b) An intake depth between the high water mark and surface water bottom;
c) If information is not available on surface water depth, 15m below the normal water level, and located within; and
d) Less than 150 m outside the natural boundary of any surface water.

Since none of the conditions are met, in accordance with these criteria, the potential for groundwater from well #8 to yield groundwater that is at risk of containing pathogens is low.

Field measurements of pH, turbidity and temperature recorded during the constant-rate test are listed in *Table* II (See Appendix B). The chemistry trends were generally stable during the 24-hour test.

With the exception of manganese, concentrations of all constituents tested were below Maximum Allowable Concentrations (MACs) and Aesthetic Objectives (AOs) in the Guidelines for Canadian Drinking Water Quality (GCDWQ; Health Canada, 2014). Total and dissolved manganese concentrations were 0.173 and 0.174 mg/L, respectively. Both concentrations exceed the AO of 0.05 mg/L. The total arsenic concentration of 0.0071 mg/L is below the GCDWQ MAC of 0.01 mg/L.

These water quality results are generally consistent with the results of previous water quality testing with Well 3 (2016 Water Annual Report), Well 6 (Piteau, 2010) and Well 7 (Piteau, 2012).

Well #8 was put in service in July 2018.

Total Water Quality Management Project (TWQMP)

The Total Water Quality Management Project (TWQMP) is necessary to treat the water supply and upgrade critical infrastructure in the White Rock water system so that customers consistently and reliably receive high quality drinking water that meets both the Fraser Health's water quality requirements and Health Canada's guidelines for Canadian Drinking Water Quality.

The scope of the TWQMP entails water system upgrades including:

- disinfection
- infrastructure renewal
- storage capacity upgrades
- a modest level of system expansion for future growth

The project was split into two phases:

- Phase 1: Oxford Street site, which was completed in February of 2016, included upgraded facilities, the addition of a reservoir which previously did not exist, and installation of remote monitoring and control of the water system. The upgrade allows the City to comply with Fraser Health's mandate to treat the City's water supply through secondary disinfection.

- Phase 2: Merklin Pumping Station Facility was completed in April 2017. The City has removed the high tower and added a new reservoir to increase the water storage capacity for the city by 1.04 million liters. The increased capacity and seismic upgrades completed at this site provides an increased factor of safety for our water infrastructure.

Water Quality and Quality Assurance

The Guidelines for Canadian Drinking Water Quality (GCDWQ) set the maximum acceptable concentrations of microbial, radiological and chemical contaminants in drinking water. They also address the aesthetic water quality considerations regarding colour and taste. These guidelines are the basis for the work the City does to ensure the best quality drinking water for the community. City staff conducts ongoing water quality sampling and testing to ensure the high quality of the water.

Different water quality parameters are tested throughout the City. These include:

- Daily residual testing
    - Total chlorine, free chlorine, monochloramine, ammonia
- Weekly laboratory testing
    - Microbiological testing for Total Coliforms and Escherichia Coli
    - In-house testing for conductivity, pH, turbidity, free chlorine, total chlorine and temperature
- Monthly laboratory testing
    - Metal testing for naturally occurring arsenic and manganese at the Merklin Site only (Wells 6 and 7)

    - Distribution metals (arsenic, copper, lead, iron, manganese, colour)
- Quarterly laboratory testing
    - Metal testing for arsenic, copper, lead, iron and manganese
    - Testing for Trihalomethane (THM) and Haloacetic Acids (HAA)
- Yearly laboratory testing
    - Inorganics including: antimony, arsenic, barium, boron, bromate, cadmium, chromium, cyanide, fluoride, lead, mercury, nitrate, nitrite, selenium, uranium, aluminum, ammonia, calcium, chloride, copper, hardness, iron, magnesium, silver, sodium, sulphate, sulphide, organic carbon, zinc.

All outside laboratory testing is carried out by accredited B.C. Laboratories (Element (formerly EXOVA) and BCCDC lab). The laboratory results are provided weekly to the City. Once the laboratory results are received by the City, they are reviewed and all of the test results uploaded to the City of White Rock website for public viewing. If there are unacceptable results, the City will notify Fraser Health; depending on the significance of the parameter of concern there are several actions the City may take from flushing the water mains to possibly issuing a "boil water" advisory or "do not use water" advisory. Public notices would be communicated through various media outlets and the City's website.

The water quality sampling and testing provides a good depiction of water quality within the City's mains. However, the sampling and testing does not provide a definitive picture of the drinking water quality within buildings, where water quality can change significantly due to pipe materials, standing times, temperature, and lack of required maintenance by STRATA and residents.

Other steps that are critical in maintaining water quality include:

- Cross Connection Control
  Cross connection control addresses real or potential connections between the drinking water supply and any source of contaminant. For instance, improper plumbing or irrigation systems on private property can contaminate the public drinking water supply. The City has teamed up with BSI Online to implement an online registration, tracking and notification of out of compliance back flow devices (Bylaw 2117-Water Services Bylaw Consolidated December 2017).

- Backflow Prevention and Testing Program
  The City has contracted BSI Online to maintain all backflow testing submissions and newly installed or previously unregistered backflow prevention devices. Testing will have to be completed by an individual who is certified by the British Columbia Water and Waste Association (BCWWA) and following the requirements in the City's Bylaw 2117 (Bylaw 2117-Water Services Bylaw Consolidated December 2017).

Water Quality Testing

The City has been consolidating all the testing data from January to December 2018. This data is included in Appendix A: City of White Rock Water Quality Testing for 2018 – Raw Data. In addition, testing data is updated regularly on the City of White Rock's website: http://www.whiterockcity.ca/300/Water-Quality

The City performed 108 sampling collections for total coliform and e-coli tests and 90 non-routine tests, all results were under the maximum allowable concentration (MAC) for the year of 2018.

The City conducted 1641 individual tests for arsenic, copper, iron, lead and manganese throughout 2018 for routine sampling and Oxford and Merklin sampling.

The City conducted 240 individual tests for Chloroform, Bromodichloromethane, Dibromochloromethane, Bromoform, Total THMs, Dibromofluoromethane, Toluene-d8, Bromofluorobenzene, Monochloroacetic Acid, Monobromoacetic Acid, Dichloroacetic Acid, Bromochloroacetic Acid, Dibromoacetic Acid, Trichloroacetic Acid and Total HAA6 throughout 2018.

Every year the City performs 644 individual tests for organic carbon, ammonia, aluminum, antimony, arsenic, barium, boron, cadmium, chromium, copper, lead, selenium, uranium, vanadium, zinc, mercury, colour, turbidity, pH, electrical conductivity, calcium, iron, magnesium, manganese, potassium, silicon, sodium, t-alkalinity, chloride, fluoride, nitrate, nitrite, sulfate, hardness, and the total dissolved solids.

The City also recommends to residents anytime the water in a particular faucet has not been used, to flush the cold-water pipes by running the water until you notice a change in temperature. This could take a short time if there has been recent heavy water use such as showering or toilet flushing. The more time water has been sitting in your home's pipes, the more manganese it may contain.

Conserving water is still important. Rather than just running the water down the drain, residents could use the water for their plants, garden, or lawn.

Water Distribution System

The utility serves a population of approximately 20,000 people. White Rock also supplies water to approximately 84 neighbouring properties in the Surrey and Semiahmoo First Nation. City staff performed one full set of uni-directional flushing in 2018 (October-November). Uni-directional flushing involves closing valves to increase the velocity of the water through the mains and flushing any sediment through an open fire hydrant.

Image 3: Water Distribution System

Water Consumption

Water consumption patterns are tracked to ensure that the White Rock system continues to provide sufficient water services to customers. Annual, monthly water consumptions and the highest daily consumption (peak day) are discussed below.

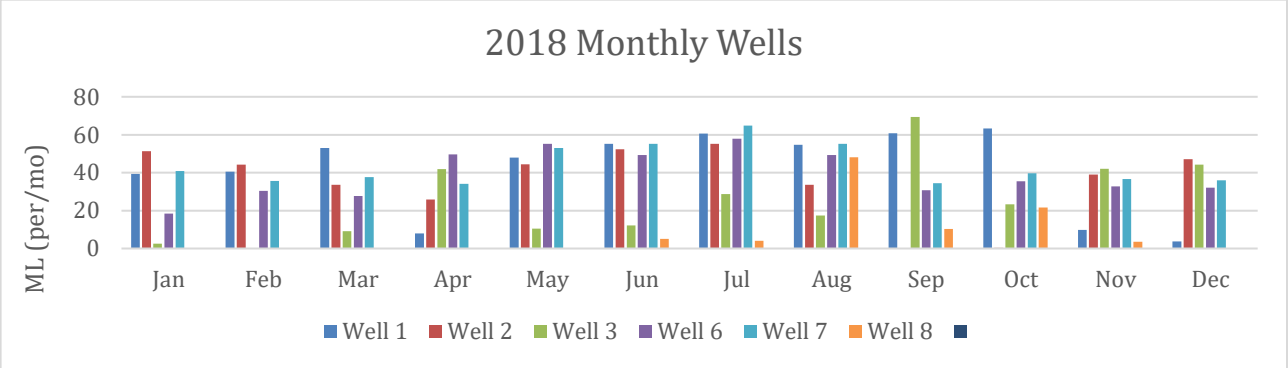
Annual Water Consumption

Total Annual Water Consumption		
Year	2018	2017
(ML)*	2225.7	2171.0
Average Daily Consumption	6.10	5.95

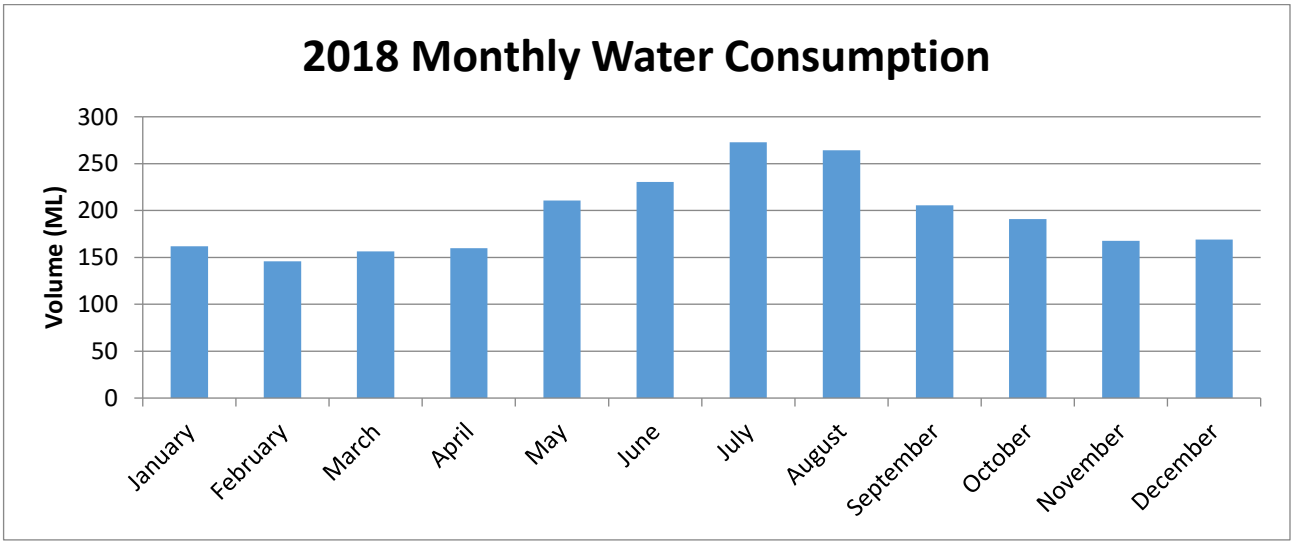
* Million Liters

Table 1: Total Annual Water Consumption

Monthly Water Consumption



Graph 1: 2018 Monthly Water Consumption/Well



Graph 2: 2018 Total Water Monthly Consumption

Peak Day Consumption

The record of peak demand enables us to design water system resources to meet all customer needs, including firefighting and high use periods.

Peak Day Water Consumption

The peak day in 2018 was on July 29

Peak Day Water Consumption		
Year	2018	2017
Day	July 29	September 4
(ML)	9.79	9.35

Table 2: Peak Day Water Consumption

Capacity

The storage requirements for forecasted demands are as shown in the following table. It is noted that the 16% value for balancing storage is based on past studies estimating the specific balancing requirement needs for the City of White Rock's system (Kerr Wood Leidal, 2010).

The available storage capacity is based on tank volumes provided by Stantec (Stantec, 2017).

Required Balancing Storage:	12.4 MLD (144 L/s) x 16%	= 1.99 ML
Required Fire Storage:	212 L/s for 2.6 hours	= 1.98 ML
Required Emergency Storage:	25% of above storage	= 0.99 ML
Total Required		**= 4.96 ML**
Available Storage:	Merklin Reservoirs	= 3.01 ML
	Oxford Reservoir	= 1.95 ML
	Roper Reservoir (Low Zone)	= 1.14 ML
Total Available		**= 6.10 ML**
Excess Available for Pump Cycling		**= 1.14 ML**

Table 3: Balancing Storage Required Versus Available

Based on the assessment, adequate balancing storage is provided by the current system for the forecast future demands.

Maintenance Programs

Maintenance and day-to-day water operations for the 77 km of pipes, 7 wells and 340 hydrants are performed by City staff in the Engineering and Municipal Operations Department. The water distribution operators are licensed with the Environmental Operators Certification Program (EOCP). Other services include:

The City has an ongoing preventative maintenance program that includes:

- Valve exercising
- Hydrant inspection and servicing
- Flushing of water mains

Other services include:

- Operation and maintenance of the pumping station
- Installation of water services
- Water infrastructure repairs and maintenance
- Water quality sampling and testing

In 2018 there were a total of 6 water main breaks throughout the City; the majority of the broken pipes (4) were cast iron, 2 were ductile iron. This is down from 2017 where the City experienced a total of 7 water main breaks. Most of the breaks occurred in cast iron pipes, and the cause of breaks was mainly corrosion, and shear break.

Pressure Monitoring System

Pressure is one of the primary optimization parameters for the delivery of safe drinking water. The loss of pressure can potentially allow outside water sources to contaminate the distribution system. Fluctuations in pressure can affect the physical integrity of pipes. Pressure surges are known to generate an increase in leaks, and water main breaks, which affects the service life of the water system. The use of pressure sensors provides a proper assessment process for the integrity of the water system.

In March of 2018, the City hired Eramosa to design and install a remote pressure monitoring system that was deployed in the water distribution system where communication networks were available. The system contains sensors located in both the high and low pressure areas that transmit readings to a secure web server. These readings tie into our current SCADA system, which allows our operators to receive real-time information on water pressure.

Water Main Replacement

Four (4) water main segments were approved within the 2018 asset improvement budget to be upgraded during the year. Three (3) of these water main segments were scheduled for replacement in the 2017 capital construction program and the construction of the 4th water main was deferred to 2018, pending approval of the 2018 to 2022 Financial Plan.

The five (5) water main upgrades included in the 2018 budget are as follows:

- Marine Drive – Vidal to Martin (deferred from 2017 pending completion of the Memorial Park Project)
- Marine Drive – Bergstrom to Nichol

- Saturna Drive & Archibald Road
- Magdalen Crescent – Marine to Sunset
- Goggs Avenue – Oxford to Everall

These projects were grouped together to achieve economic advantage compared to tendering each project individually. This will best utilize staff and contract resources and reduce the cost to complete the works.

The work included replacement of cast iron pipe with PVC pipe and installation of cathodic protection for the fittings, which has not been included in previous Water Utility works. PVC pipe will not be impacted by corrosion, and the implementation of cathodic protection will reduce corrosion of the metal valves and fittings. The combination of these two will extend the life of the infrastructure by reducing corrosion.

Image 4 - Water Main Replacement

The Saturna Drive project was deferred from 2017 due to scheduling issues. Work along Marine Drive - Vidal to Martin - will be coordinated with the Memorial Park reconstruction project.

Fencing

Municipal and private water systems facilities security measures throughout Canada are being elevated to reduce the potential for vandalism or other activities that could impact water quality or water supply to the public.

The Oxford Pumping Station, Merklin Pumping Station, Roper Reservoir, and Well #4 at High Street are facilities that needed to have additional security measures implemented to mitigate the potential for damage.

As part of the City's commitment to water security, the City's Water Department started fencing of the reservoir and pumping stations. At the present time, the Merklin Pumping Station and Reservoir, Roper Reservoir and the High Street Well #4 have been fenced.

The Oxford Pumping Station and the new Water Treatment Plant which is being constructed next to the Oxford Pumping Station will be fenced by the completion of the Design Build project for the Water Treatment Plant.

Merklin Reservoir

High Street – Well #4

Image 5: Fencing

Unidirectional Flushing Program

Flushing is one of the most powerful tools available to water utilities for addressing distribution system deficiencies and maintenance. Unidirectional flushing (UDF) is designed to bring water through the system in a controlled fashion at velocities sufficient to provide a scouring action within the distribution piping. UDF is being utilized by a growing number of utilities as a cost-effective way of improving and preserving water quality in the distribution system.

Image 6: Water Main Flushing in progress

The City of White established a Unidirectional Flushing Program once a year to reduce the impact of layers of manganese deposited for decades in the distribution system.

Residents were notified during water main flushing and informed that they may experience a temporary discolouration of water while the water main was being flushed. They were also informed that any disruption experienced, would be short-lived.

Advance notification of flushing work to affected areas were provided a week prior to the flushing taking place via letters delivered to local businesses and residents, along with signs being placed on the road side. Also, hospitals/clinics were notified to inform their home-based hemodialysis patients.

During flushing programs residents and businesses have water, however, they are advised not to open their tabs to avoid drawing sediments into their pipes.

In 2017, there was a significant improvement in the discharged water during the flushing program as the amount of sedimentation was less, shorter periods of flushing was required, and there was a decrease in the amount of water used compared to the previous flushing events.

Staff Training and How It Contributes to Water Quality Management

Training for Operators

Planning for future implementation of water treatment at the City of White Rock, and to make sure that the best utilization of existing human resources, the 4 Water Distribution Operators of the City of White Rock started to attend water treatment courses. Four operators attended the Water Treatment 1 course which is delivered by BCWWA and received the course certificate.

The course provides operators with the basic knowledge of water treatment plant components and treatment methods used with varying degrees of complexity. After completing the Water Treatment 1 class the operator be able to:

- Describe procedures associated with monitoring, evaluating and adjusting treatment processes
- Perform basic laboratory analysis procedures
- Describe the drinking water regulations and their impact to water treatment
- Describe the practical aspects of plant operations and perform basic operational and maintenance procedures on equipment
- Perform safety, security and administrative procedures
- Certifications and exams are administered by the Environmental Operators Certification Program (EOCP).

Specialized training programs will be provided in 2018 and beyond, such as Ozone for Drinking Water Treatment, which is delivered by Engineers and Geoscientists British Columbia (formerly Association of Professional Engineers and Geoscientists of British Columbia). The course was delivered twice (April and November, 2018) in Vancouver, by Dr. Saad Jasim P.Eng., Manager, Utilities, City of White Rock, and President Elect International Ozone Association. The course will enhance participant's knowledge in the application of Ozone for drinking water treatment. The course included case studies to evaluate of the effectiveness of the ozone technology to improve water quality, dealing with new challenges and to improve water treatment processes.

Unprecedented Communication and Public Engagement

Since acquiring the water utility from EPCOR in October of 2015, the City of White Rock has provided unprecedented information to the public on the state of the City's water, including steps the City must take as mandated by Health Canada and the Fraser Health, i.e. providing a secondary disinfection throughout the entire system, as well as important capital infrastructure work. This information is readily available on the City's website under the My Water page, which includes links to various projects and initiatives so the public is aware of the action the City has taken, or is taking, to address and improve the water quality and communicating with the public:

- City Water Projects – Where the public can find information on capital projects related to water as part of the City's Total Water Quality Management Project.
- Event Materials – Contains the material from the number of Water Quality Open Houses, community forums and public information meetings.
- Historic Funding Announcement – the City received nearly $12 million dollars in government grant funds to help improve the City's water quality through the construction of treatment processes, set to be completed by March 2019.
- Water Quality – Where public can find monthly water quality test results from the time the City acquired the water utility from EPCOR, who did not provide such information.
- Water Research - to ensure the City implements the right technology to reach its water quality goals, it partnered with RES'EAU-WaterNET. This is where the public can learn about the partnership and the research being done.
- Flushing Program – informs the public of the flushing program, when City Staff would be flushing, and what to do and not to do when flushing is taking place in their area. Our staff also hand deliver notices to residents in the area a few days prior to the flushing starting in their area.

The City also developed FAQ pages related to water and secondary disinfection that further ensures the public is aware of the steps the City is taking to address water quality matters.

The City also provides updates to Council and the public on the statues of the City's water quality and infrastructure through Corporate Reports that are published on the City's website. The Regular Council Meetings are also live streamed so any member of the public who is not able to attend a meeting can either watch the meeting live or the recording at a later date.

This is all in addition to other methods we use to communicate with the public about the City's water related projects and initiatives.

BCIT Environmental Health Program Visit

25 Student accompanied by a Faculty member from the BCIT Environmental Health program, visited the City of White Rock on May 15, 2018. The program provide education and training to the student to graduate as a health inspector and an environmental public health professional.

Dr. Jasim, Manager, Utilities, delivered a presentation to the students at the Council Chambers followed by a tour at the Merklin Pumping Station.

Image 7 – Dr. Jasim delivers a presentation to students from the BCIT Environmental Health at Council Chambers, May 2018

Open Houses

The Water Department organized 3 Open Houses;

1. **Water Research Open House**

   On January 25, 2018, the City of White Rock and the research group, RES'EAU WaterNET organized a "Water Research" Open House, at the White Rock Community Centre, 15154 Russell Avenue from 6 to 8 p.m. Attendants learned more about the research that RES'EAU WaterNET has conducted in White Rock. Their research has focused on finding the technology most suitable for our water and distribution system to reduce the levels of naturally occurring arsenic and manganese. The Open House also provided information on the Design-Build of the water treatment plant.

Image 8 – Water Research Open House

2. Water System Master Plan Open House

The City's Water System Master Plan Open House at the White Rock Community Centre, was organized on February 21, 2018. The Water System Master Plan, approved by City Council in November of 2017. The Water System Master Plan is an all-encompassing comprehensive guide to addressing the City's water system needs to the year 2045.

Image 9 – Master Plan Open House

3. Aquifer Protection Plan Open House

The City of White held an open house to discuss the city-commissioned Aquifer Protection Plan on Wednesday, Sept. 26 at White Rock Community Centre, Rock. The plan, which assesses future water quality and quantity needs for White Rock, also includes strategies for protecting the community's water supply source from potential contaminants, including urban development, commercial, industrial and agricultural activity and saltwater intrusion, and also the effects of population growth, climate change and sea-level rise.

Image 10 – Aquifer Protection Plan Open House

Celebration Event for a Significant Mile Stone for Water Quality Enhancements

The City of White Rock celebrated on September 20, 2018 a milestone event with representatives from the Government of Canada and Government of British Columbia in regards to the construction progress of the City's Water Treatment Plant, funded through the Clean Water & Wastewater Fund (CWWF).

The City's Water Treatment Plant project would not have been possible without the vision of the Government of Canada and Government of British Columbia who created the CWWF as they understand that building and maintaining high-quality water and infrastructure are an essential part of livable communities. Their commitment to partnering with small communities is a testament to their dedication of ensuring that local governments are able to deliver the public infrastructure needed in their respective communities.

Image 11 – Water Treatment Plant Milestone Event, September

Conferences, Seminars

Presentations to national and international Conferences delivered about the progressive steps taken to improve the water system in the City of White Rock:

1. Water Quality Technology Conference (WQTC), AWWA, Toronto, ON, November 11-15, 2018.
2. 2018 Ontario Water Conference and Exhibition, Niagara Falls, ON, May 1-3, 2018.
3. BCWWA Conference, Penticton, BC, May 15-17, 2018. (2 Presentations)
4. Dr. Jasim delivers presentations annually on UN World Water Day to the Rotary Clubs in White Rock.

Image 12 – Dr. Jasim presenting at the 2018 Ontario Water Conference and Exhibition

Dr. Jasim introduced a new course in British Columbia, "Ozone for Drinking Water Treatment" in collaboration with Engineers and Geoscientists British Columbia. All the Water Operators of the City of White Rock, in addition to other outside participants attended the courses in Vancouver, BC.

The course will enhance participant's knowledge in the application of Ozone for drinking water treatment. To evaluate of the effectiveness of the ozone technology to improve water quality, dealing with new challenges and to improve water treatment processes. The course is certified by the Ontario Ministry of Environment and the Environmental Operators Certification Program (EOCP) in British Columbia.

Aquifer Protection Plan

Advisian (part of Worley Parsons Group) was retained by the City of White Rock (CoWR) to prepare an Aquifer Protection Plan (Plan) for the White Rock water supply system. The White Rock water supply system is located within the CoWR, British Columbia. It services a residential population of approximately 20,000 within a 600 hectare service area that includes the CoWR as well as Semiahmoo First Nation and a small portion of the City of Surrey.

The Sunnyside Aquifer is an important natural resource that is used as the water supply source for the CoWR. Population growth, climate change, sea level rise, and other users of the aquifer (e.g. future groundwater use by the City of Surrey) may put increasing pressure on the water supply system. This Plan has been developed as a key component in protecting the community's water supply source. Groundwater protection goals includes stakeholder engagement, advancing the understanding of aquifer characteristics, protecting groundwater quality from contamination, and ensuring future withdrawals sustainably meet future demands.

Key outcomes of the Plan include development of a numerical groundwater model that has been used to delineate the well protection area and to simulate three future scenarios to inform future groundwater management. The report is available on the City of White Rock website.

RES'EAU-WaterNET

The City of White Rock partnered with RES'AU-WaterNET, a research program funded by NSERC's Strategic Partnership Grants for Networks and hosted by the University of British Columbia, to assess a number of water treatment processes and determine the extent to which they can reduce the arsenic and manganese from the City's water supply. This is to ensure the City implements the right technology to reach its water quality goals.

The final report was submitted in 2017 and a copy of the report was provided for the selected Contractors/ Consultants short listed for the RFP. A copy of the full report is available on the City of White Rock website. The research finding played a major role in the design of the new water treatment plant in the City of White Rock.

Arsenic and Manganese Treatment Facility

The Fraser Health Authority (FHA) advised the private company operating the White Rock Water System that should arsenic and manganese levels move above Health Canada's Guideline for Drinking Water Quality (GCDWQ), or should the GCDWQ deem manganese a health criteria, a treatment system must be operational on or before December 31, 2018.

Image 13 – Signage for the Water Treatment Project

The Design of the Water Treatment Plant

The City was conducting a pilot scale study to evaluate the efficacy of the best technologies to provide useful information for the design and construction of a water treatment system for treating the water drawn from wells 1, 2, 3, 6, 7 and 8. Kerr Wood Leidal Associates (KWL) was retained to provide cost evaluations for three options for design and construction of water treatment plant(s).

The options are as follows:

- Option 1 is based on one water treatment plant at the Oxford site;
- Option 2 is based on two water treatment plants, one at Merklin site and another at Oxford site; and

- Option 3 is one water treatment plant covering all the above referenced wells in addition to connecting existing well # 4 to the plant located at the Oxford site.

Water Treatment Objectives

The White Rock Water Treatment Plant is designed to treat the City's existing groundwater supplies to remove naturally occurring manganese and arsenic to ensure that an improved drinking water quality is supplied to the residents that meets the guidelines and aesthetic objectives. The plant is built next to the Oxford Pumping Station of the City of White Rock. The water treatment plant process is multi-stage and includes the following key treatment components:

- Pre-Oxidation with ozone for arsenic and manganese in the raw water supply.
- Removal of manganese using Greensand Plus media filters.
- Removal of arsenic using Bayoxide E33 media filters.

The treatment objectives of the White Rock WTP are to deliver drinking water meeting the following operational targets:

- Mn < 0.02 mg/L
- As < 0.002 mg/L (95% of time, 0.005 mg/L for 5% of operation)

All other water quality parameters shall meet the objectives of the Guidelines for Canadian Drinking Water Quality (GCDWQ).

Ozone Pre-oxidation

Research has shown that the application of ozone for water treatment processes can enhance the ability to remove many emerging contaminants and reduce disinfectant byproducts. Ozone, a strong oxidant, is very effective in the oxidation of organic and Inorganic compounds more effectively than chlorine.

Arsenic present in groundwater in As(III) form needs to be oxidized to As(V). To have an optimum removal of As(III) which is neutrally charged, it should be oxidized to As(V) which is negatively charged. The use of a strong oxidant is an important factor to achieve arsenic removal. Strong chemical oxidants oxidize As(III) very rapidly.

Manganese and Arsenic Removal

Knowledge of raw water quality is an important factor in the selection of the technology and processes to remove certain organic or inorganic compounds that might interfere in achieving the targeted effluent water quality. The City of White Rock's groundwater has elevated, naturally occurring arsenic and manganese. The research conducted by the City of White Rock and RES'EAU-WaterNet showed that the use of ozone as a pre-oxidant, followed by greensand and adsorption filter media for the removal of manganese and arsenic, respectively, is effective for groundwater sources like White Rock's water supply.

The Design Build Team (NAC/Associated Engineering) chose pre-oxidation with ozone followed by filtration using Greensand Plus media for manganese reduction, and AdEdge E33 adsorption media, for arsenic removal to achieve the low target levels required by the Design Objectives, following the research findings

provided to them by the City of White Rock. The use of ozone for pre-oxidation of the arsenic and manganese prior to the two-stage process; filtration and adsorption process was included in the design due to the facts that:

- Many arsenic removal technologies are more effective at removing the pentavalent form of arsenic, arsenate, As(V) than arsenite, As(III).
- Therefore, many treatment systems include a pre-oxidation process to convert Arsenite, As(III) to Arsenate As(V).
- Ozone can achieve 100% oxidation of As(III) to As(V).
- Oxidation alone does not remove arsenic from solution, and must be coupled with a removal process such as adsorption
- The pilot scale experiments indicated that manganese removal was very effective using ozone followed by Greensand Plus

Ozone System

The ozone treatment process at the White Rock WTP is targeting the oxidation of Mn and As for downstream removal by filtration and adsorption. The system is designed to provide up to 1 mg/L of ozone dose for up to 15 MLD of water to treat. The design of the White Rock Water Treatment Plant includes a pre-oxidation with ozone injected via sidestream injection; the concentrated ozonated water is injected into the raw water through an in-line mixer to oxidize metals in raw water.

On-site generated ozone gas will be used to preoxidize the arsenic and manganese in the raw water. Ozone will convert the arsenite form As(III) to the arsenate form As(V). It will also convert Mn(II) to Mn(IV). Both oxidized forms are more readily removable in downstream filtration and adsorption processes. The ozone system includes two parallel trains of oxygen and ozone production with 100% redundancy inactive equipment, followed by two parallel trains of ozone injection system through the application of ozone into two side streams of water pumped from the mainstream line. Undissolved ozone is removed at the side stream level through centrifugal degassing and destroyed back to oxygen through two 100% redundant ozone destruct units.

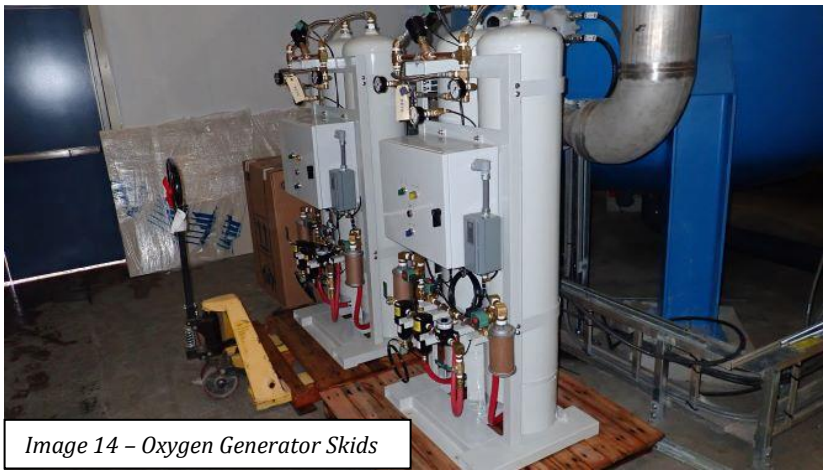


Image 14 – Oxygen Generator Skids

Greensand Plus

Greensand Plus filter media was selected for removing manganese from groundwater supplies of the City of White Rock (Sunnyside Aquifer). Greensand Plus manganese dioxide coated surface acts as a catalyst in the oxidation-reduction reaction of manganese. The silica sand core of Greensand Plus allows it to withstand waters low concentrations in silica, TDS, and hardness without breakdown. Greensand Plus has the WQA Gold Seal Certification for compliance with NSF/ANSI 61. Two (2) pressure filter vessels will be operating in parallel mode, Figures (15-16).

The newly designed and built water treatment plant will utilize a Supervisory Control and Data Acquisition (SCADA) for the daily operation, control and data acquisition for all the water treatment processes. The existing SCADA for the two pumping stations (Oxford and Merklin) will be integrated into the water treatment

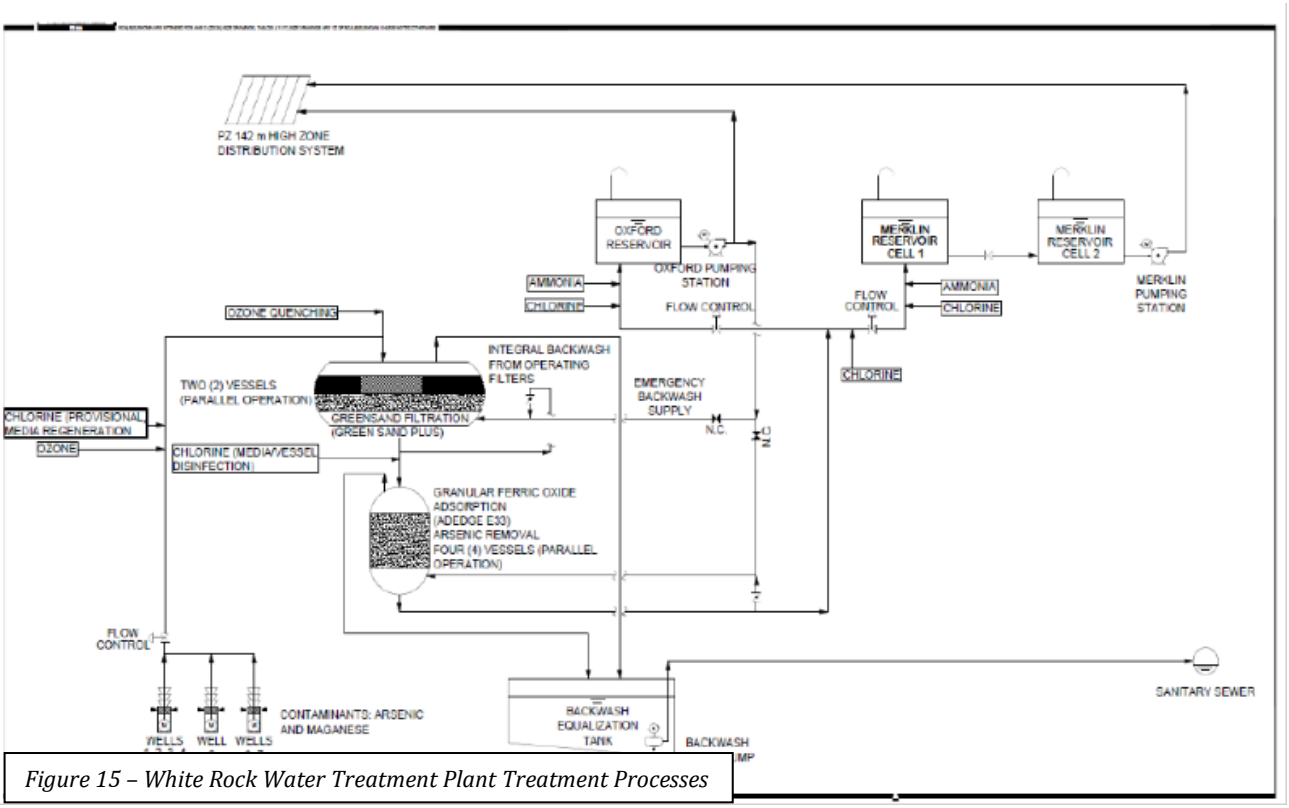


Figure 15 – White Rock Water Treatment Plant Treatment Processes

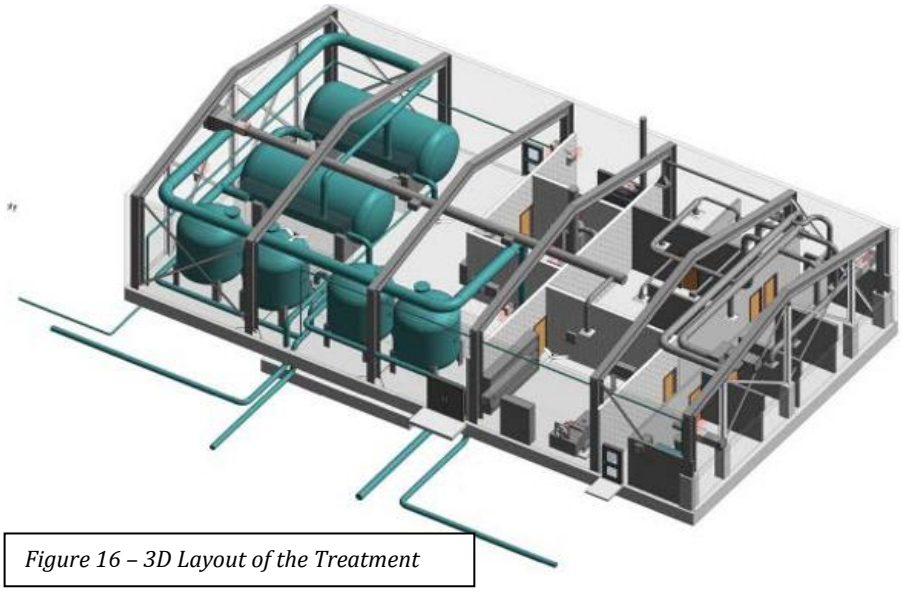


Figure 16 – 3D Layout of the Treatment

Image 17 – The Water Treatment Plant

Emergency Response Action Plan

The City has an emergency response plan in case the water supply is interrupted for any reason. There are procedures that City crews follow whether it is a major or minor problem. The Emergency Response Plan Action Plan follows five general steps:

1. Analyze the type and severity of the emergency;
2. Take any action needed to save lives;
3. Take action to reduce system damage and injuries and reduce environmental damage;
4. According to priority demand, make appropriate repairs, and
5. Return the system to normal operation.

The Emergency Response Plan was added in 2018 to the City of White Rock website

Next Steps for 2019

- Complete the Water Treatment Plant Construction
- Start operation of the Water Treatment Plant
- Complete the 2018 approved Capital Works projects
- Work on the 2019 Capital Works projects
- Maintain the improvement and upgrade for the water distribution system
- Provide the training for the Water Operators to have them update/upgrade their licenses
- Work with Communication Department to maintain updated information on the website
- Work with Communication Department to provide the public with updates on the water system

Summary

The City of White Rock has now owned the water utility for three full years. During 2018 City staff worked on engaging the community and explained steps taken to improve the City's water quality with the addition of a water treatment plant for the arsenic and manganese removal.

During the year of 2018, staff collected and sent 2078 samples for water quality testing.

The City completed the full implementation of secondary disinfection to the distribution system, meeting the requirements of the Permit to Operate by Fraser Health.

The City continues to monitor the levels of arsenic and manganese and will be informing the community in 2018 on the solutions to reduce the level of arsenic and manganese from the data provided by the joint study between the City of White Rock and RES'EAU-WaterNET.

Attachments

References
Tables – Table II – Summary of Water Quality Analyses Results
Appendix A – City of White Rock Water Quality Testing for 2018 – Raw Data

References

Kerr Wood Leidal Associates Ltd., Water System Master Plan Update, Final Report, December 2010.

Piteau Associates Engineering Ltd., 2010. Hydrogeologic Assessment for White Rock Groundwater Supply. Report to Kerr Wood Leidal Associates Ltd. And Epcor White Rock Water, December.

Piteau Associates Engineering Ltd., 2012. Production Well 7 Completion Report. Report to Kerr Wood Leidal Associates, June.

Stantec, *White Rock – Reservoir Volumes Memo,* August 2017

2016 Water Annual Report, www.whiterockcity.ca

Consolidated Bylaws\Bylaw 2117 - Water Services Bylaw Consolidated December 2017.

Appendix A

City of White Rock Water Quality Testing for 2018 – Raw Data

January to December 2018

Microbiological Results 2018

Date	Microbioligical Analysis MPN / 100mL	Guideline Limit	# of Samples	Pass	Fail	Guideline Comments
Jan 2 & Jan 3	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Jan 9 & Jan 10	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Jan 16 & Jan 17	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Jan 23 & Jan 24	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Jan 30 & Jan 31	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Feb 6 & Feb 7	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Feb 13 & Feb 14	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Feb 20 & Feb 21	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Feb 27	Total Coliforms	0 per 100 mL	6	6	0	Below MAC
	Escherichia Coli	0 per 100 mL	6	6	0	Below MAC
Mar 6	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Mar 13	Total Coliforms	0 per 100 mL	6	6	0	Below MAC
	Escherichia Coli	0 per 100 mL	6	6	0	Below MAC
Mar 14	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC

Date	Microbioligical Analysis MPN / 100mL	Guideline Limit	# of Samples	Pass	Fail	Guideline Comments
Mar 20	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Mar 27	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
Mar 28	Total Coliforms	0 per 100 mL	6	6	0	Below MAC
	Escherichia Coli	0 per 100 mL	6	6	0	Below MAC
Apr 3 & Apr 4	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Apr 10	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Apr 17 & Apr 18	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Apr 24 & Apr 25	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
May 1 & May 2	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
May 8 & May 9	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
May 15 & May 16	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
May 22	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
May 29 & May 30	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
June 5	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC

Date	Microbioligical Analysis MPN / 100mL	Guideline Limit	# of Samples	Pass	Fail	Guideline Comments
June 12 & June 13	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
June 19 & June 20	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
June 26	Total Coliforms	0 per 100 mL	8	8	0	Below MAC
	Escherichia Coli	0 per 100 mL	8	8	0	Below MAC
July 3 & July 4	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
July 10 & July 11	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
July 17 & July 18	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
July 24	Total Coliforms	0 per 100 mL	9	9	0	Below MAC
	Escherichia Coli	0 per 100 mL	9	9	0	Below MAC
August 1	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
Aug 7 & Aug 8	Total Coliforms	0 per 100 mL	12	12	0	Below MAC
	Escherichia Coli	0 per 100 mL	12	12	0	Below MAC
Aug 14 & Aug 15	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Aug 21 & Aug 22	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Aug 28	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
Sep 4 & Sep 5	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC

Date	Microbioligical Analysis MPN / 100mL	Guideline Limit	# of Samples	Pass	Fail	Guideline Comments
Sep 11 & Sep 12	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Sep 18 & Sep 19	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Sep 25 & Sep 26	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Oct 2 & Oct 3	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Oct 9 & Oct 10	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Oct 16	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Oct 23	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Oct 31	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Nov 13	Total Coliforms	0 per 100 mL	13	13	0	Below MAC
	Escherichia Coli	0 per 100 mL	13	13	0	Below MAC
Nov 20	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
Nov 27 & Nov 28	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Dec 4 & Dec 5	Total Coliforms	0 per 100 mL	14	14	0	Below MAC
	Escherichia Coli	0 per 100 mL	14	14	0	Below MAC
Dec 11	Total Coliforms	0 per 100 mL	6	0	0	Sample Expired - Retest
	Escherichia Coli	0 per 100 mL	6	0	0	

Date	Microbioligical Analysis MPN / 100mL	Guideline Limit	# of Samples	Pass	Fail	Guideline Comments
Dec 12	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
Dec 17	Total Coliforms	0 per 100 mL	7	7	0	Below MAC
	Escherichia Coli	0 per 100 mL	7	7	0	Below MAC
Dec 19	Total Coliforms	0 per 100 mL	10	10	0	Below MAC
	Escherichia Coli	0 per 100 mL	10	10	0	Below MAC

Metal Results 2018

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese
		mg/L	mg/L	mg/L	mg/L	mg/L
Nominal Detection Limit		**0.0001**	**0.0005**	**0.00001**	**0.004**	**0.001**
Guideline Limit		**0.010**	**1.0**	**0.01**	**0.3**	**0.05**
Customer Concern #1	18-Jan-18	0.0068	0.0049	0.00012	<0.004	0.065
Well #1	18-Jan-18	0.0071	0.0056	0.00035	<0.004	0.073
Well #2	18-Jan-18	0.0049	0.0041	<0.00001	<0.004	0.004
Well #3	18-Jan-18	0.0065	0.0005	0.00023	0.006	0.21
Well #4	18-Jan-18	0.0027	0.0048	0.00239	0.085	0.21
Well #6	18-Jan-18	0.0094	<0.0005	0.00004	<0.004	0.15
Well #7	18-Jan-18	0.0085	<0.0005	0.00114	<0.004	0.12
Well #8	18-Jan-18	0.0069	<0.0005	0.00003	0.005	0.18
Well #6	28-Feb-18	0.0089				
Well #7	28-Feb-18	0.00998				
Well #6	28-Mar-18	0.0089				
Well #7	28-Mar-18	0.0082				
Well #6	25-Apr-18	0.0097				
Well #7	25-Apr-18	0.0092				
Customer Concern #2	15-May-18	0.0056	0.0102	0.00006	0.006	0.031
Well #1	31-May-18	0.0071	0.0036	0.00010	<0.004	0.055
Well #2	31-May-18	0.0045	0.0039	0.00002	0.005	0.004
Well #3	31-May-18	0.0064	0.0009	0.00015	0.006	0.20
Well #6	31-May-18	0.0091	0.0012	0.00007	<0.004	0.14
Well #7	31-May-18	0.0085	<0.0005	0.00069	0.006	0.12
Well #8	31-May-18	0.0070	0.0012	0.00004	0.0098	0.17
Well #6	27-Jun-18	0.0087				
Well #7	27-Jun-18	0.0081				
Customer Concern #3	18-Jul-18	0.0058	0.0018	0.00017	<0.004	0.037
Well #1	25-Jul-18	0.0064	0.0044	0.00011	<0.004	0.056
Well #2	25-Jul-18	0.0043	0.0034	0.00003	0.006	0.005
Well #3	25-Jul-18	0.0055	<0.0005	0.00010	<0.004	0.16
Well #6	25-Jul-18	0.0087	0.0015	0.00005	<0.004	0.15
Well #7	25-Jul-18	0.0082	<0.0005	0.00041	<0.004	0.12
Well #8	25-Jul-18	0.0058	0.0026	0.00123	0.014	0.13
Customer Concern #4	13-Aug-18	0.0066	0.0053	0.00030	0.008	0.076
Customer Concern #5	28-Aug-18	0.0065	0.0065	0.00016	<0.004	0.14
Customer Concern #6	28-Aug-18	0.0065	0.0216	0.00004	<0.004	0.15
Customer Concern #7	29-Aug-18	0.0079	0.0086	0.00001	<0.004	0.13

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese
Well #6	29-Aug-18	0.0087				
Well #7	29-Aug-18	0.0081				
Well #4 Flow Test*	30-Aug-18	0.0021	0.0016	0.00057	0.038	0.21
Customer Concern #8	04-Sep-18	0.0085	0.0033	0.00014	<0.004	0.13
Customer Concern #9**	05-Sep-18	0.0069	0.0295	0.02118	0.014	0.14
Customer Concern #10	05-Sep-18	0.0081	0.0042	0.00010	<0.004	0.13
Customer Concern #11	06-Sep-18	0.0072	0.0081	0.00045	<0.004	0.12
Customer Concern #12	07-Sep-18	0.0070	0.0044	0.00021	<0.004	0.12
Customer Concern #9***	10-Sep-18	0.0066	0.0065	0.00021	<0.004	0.12
Customer Concern #9***	10-Sep-18	0.0065	0.0041	0.00010	<0.004	0.12
Customer Concern #9***	10-Sep-18	0.0065	0.0053	0.00018	<0.004	0.12
Customer Concern #9***	10-Sep-18	0.0066	0.0063	0.00029	<0.004	0.12
Customer Concern #13	11-Sep-18	0.0060	0.0046	0.00004	<0.004	0.11
Customer Concern #14	11-Sep-18	0.0061	0.0077	0.00006	<0.004	0.11
Customer Concern #15	12-Sep-18	0.0061	0.0090	0.00004	<0.004	0.12
Customer Concern #16	17-Sep-18	0.0059	0.0050	0.00014	<0.004	0.11
Customer Concern #17	18-Sep-18	0.0060	0.0102	0.00006	0.063	0.026
Customer Concern #18	24-Sep-18	0.0064	0.0078	<0.00001	<0.004	0.13
Well #6	26-Sep-18	0.0083				
Well #7	26-Sep-18	0.0079				
Customer Concern #19	26-Sep-18	0.0064	0.0068	0.00010	<0.004	0.12
Customer Concern #20****	01-Oct-18	0.0060	0.0020	0.00008	<0.004	0.11
Customer Concern #20****	01-Oct-18	0.0060	0.0174	0.00008	<0.004	0.11
Customer Concern #20****	01-Oct-18	0.0059	0.0121	0.00057	<0.004	0.11
Customer Concern #20****	02-Oct-18	0.0065	0.0055	0.00009	<0.004	0.12
Customer Concern #21	01-Oct-18	0.0060	0.0020	0.00008	<0.004	0.11
Customer Concern #22	04-Oct-18	0.0058	0.0215	0.00013	0.004	0.10
Customer Concern #23	10-Oct-18	0.0064	0.0162	0.00179	<0.004	0.093
Customer Concern #24	15-Oct-18	0.0064	0.0060	0.00018	0.008	0.094
Customer Concern #25	22-Oct-18	0.0083	0.0130	0.00006	0.006	0.13
Customer Concern #26	25-Oct-18	0.0087	0.0080	0.00016	0.007	0.12
Customer Concern #27	22-Nov-18	0.0054	0.0067	0.00003	<0.004	0.084
Customer Concern #28	22-Nov-18	0.0053	0.0063	0.00005	<0.004	0.080
Centennial Arena*	28-Nov-18	0.0054	0.0189	0.00010	<0.004	0.082
CAL*	28-Nov-18	0.0053	0.0440	0.00015	0.005	0.089
WR Community Centre*	28-Nov-18	0.0054	0.0449	0.00005	<0.004	0.093
City Hall - Annex*	28-Nov-18	0.0071	0.0021	0.00005	<0.004	0.12
City Hall - main*	28-Nov-18	0.0065	0.0088	0.00012	<0.004	0.11

RCMP*	28-Nov-18	0.0078	0.0466	0.00012	0.005	0.089
Sample Location	**Date Sampled**	**Arsenic**	**Copper**	**Lead**	**Iron**	**Manganese**
Fire Hall*	28-Nov-18	0.0069	0.0066	0.00009	<0.004	0.12
Evergreen Daycare*	28-Nov-18	0.0076	0.0132	0.00003	<0.004	0.11
Library*	28-Nov-18	0.0073	0.0280	0.00035	0.005	0.10
Kent Activity Center*	28-Nov-18	0.0081	0.0070	0.00005	<0.004	0.13
Operations Bldg*	28-Nov-18	0.0063	0.1286	0.00049	<0.004	0.085
Museum*	28-Nov-18	0.0067	0.0779	0.00113	<0.004	0.11
Well #6	29-Nov-18	0.0092				
Well #7	29-Nov-18	0.0086				
Customer Concern #29	04-Dec-18	0.0088	0.0038	0.00012	0.010	0.13
Customer Concern #30 Pre*****	10-Dec-18	0.0069	0.0050	0.00041	0.007	0.10
Customer Concern 30 Post*****	10-Dec-18	0.0069	0.0007	0.00021	<0.004	<0.001
Customer Concern #31	21-Dec-18	0.0085	0.0058	0.00008	<0.004	0.13
Well #6	28-Dec-18	0.0087				
Well #7	28-Dec-18	0.0083				

* Also under Non-Routine results

** 4 resamples taken immediately after results

*** Resampling results

**** 4 Samples taken from same address

***** Resident has home filter system, results pre- and post-filter

THM & HAA RESULTS 2018

Sample	Unit of Measure	Nominal Detection Limit	Sample Location						Sampled Date
			Stevens Station	Stayte Station	Roper PRV - High	Marine Station	Everall Station	Mann Park Sation	
Chloroform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	18-Jan-18
Bromodichloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	18-Jan-18
Dibromochloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	18-Jan-18
Bromoform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	18-Jan-18
Total THMs	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	18-Jan-18
Dibromofluoromethane	**%**	**50-140**	103	105	103	103	-	-	18-Jan-18
Toluene-d8	**%**	**50-140**	97	96	97	97	-	-	18-Jan-18
Bromofluorobenzene	**%**	**50-140**	96	98	98	99	-	-	18-Jan-18
Monochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Monobromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Dichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Bromochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Dibromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Trichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Total HAA6	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	18-Jan-18
Chloroform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	26-Apr-18
Bromodichloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	26-Apr-18
Dibromochloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	26-Apr-18
Bromoform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	26-Apr-18
Total THMs	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	26-Apr-18
Dibromofluoromethane	**%**	**50-140**	97	98	93	88	-	-	26-Apr-18
Toluene-d8	**%**	**50-140**	89	93	90	90	-	-	26-Apr-18
Bromofluorobenzene	**%**	**50-140**	98	101	101	105	-	-	26-Apr-18
Monochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Monobromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Dichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Bromochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Dibromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Trichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Total HAA6	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	26-Apr-18
Chloroform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	24-Jul-18
Bromodichloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	24-Jul-18
Dibromochloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	24-Jul-18
Bromoform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	24-Jul-18

Sample	Unit of Measure	Nominal Detection Limit	Stevens Station	Stayte Station	Roper PRV - High	Marine Station	Everall Station	Mann Park Sation	Sampled Date
Total THMs	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	24-Jul-18
Dibromofluoromethane	**%**	**50-140**	82	78	78	75	-	-	24-Jul-18
Toluene-d8	**%**	**50-140**	92	90	91	92	-	-	24-Jul-18
Bromofluorobenzene	**%**	**50-140**	105	106	102	103	-	-	24-Jul-18
Monochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Monobromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Dichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Bromochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Dibromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Trichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Total HAA6	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	24-Jul-18
Chloroform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	16-Oct-18
Bromodichloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	16-Oct-18
Dibromochloromethane	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	16-Oct-18
Bromoform	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	16-Oct-18
Total THMs	**mg/L**	**0.001**	<0.001	<0.001	<0.001	<0.001	-	-	16-Oct-18
Dibromofluoromethane	**%**	**50-140**	98	102	93	94	-	-	16-Oct-18
Toluene-d8	**%**	**50-140**	91	92	91	89	-	-	16-Oct-18
Bromofluorobenzene	**%**	**50-140**	98	99	99	95	-	-	16-Oct-18
Monochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18
Monobromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18
Dichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18
Bromochloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18
Dibromoacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18
Trichloroacetic Acid	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18
Total HAA6	**ug/L**	**2.0**	<2.0	<2.0	<2.0	<2.0	-	-	16-Oct-18

Non Routine Water Quality Results for Source and Distribution Water 2018

Sampling Point Name	Date Sampled	TC	E-coli	Comments
		MPN / 100 ml	MPN / 100 ml	
1500 Blk Stevens	4-Jan-18	<1.0	<1.0	Below Mac
Well 6 - Out of Service	19-Mar-18	<1.0	<1.0	Below Mac
Well 6 - Out of Service	20-Mar-18	<1.0	<1.0	Below Mac
1500 Blk Johnston	13-Jun-18	<1.0	<1.0	Below Mac
Johnston/Royal	14-Jun-18	<1.0	<1.0	Below Mac
15200 Blk Thrift	26-Jul-18	<1.0	<1.0	Below Mac
15200 Blk Thrift	27-Jul-18	<1.0	<1.0	Below Mac
Russell Ave. Station	9-Aug-18	<1.0	<1.0	Below Mac
1500 Blk Johnston	9-Aug-18	<1.0	<1.0	Below Mac
1500 Blk Johnston	15-Aug-18	<1.0	<1.0	Below Mac
Well 4 - Flow Test*	30-Aug-18	<1.0	<1.0	Below Mac
1400 Blk Oxford	4-Sep-18	<1.0	<1.0	Below Mac
Mann Park Station - NIS	25-Sep-18	<1.0	<1.0	Below Mac
14200 Blk Park	9-Oct-18	<1.0	<1.0	Below Mac
Chestnut & North Bluff	10-Oct-18	<1.0	<1.0	Below Mac
1500 Blk Parker	20-Oct-18	<1.0	<1.0	Below Mac
800 Blk Finlay	6-Nov-18	<1.0	<1.0	Below Mac
Centennial Arena*	28-Nov-18	<1.0	<1.0	Below Mac
CAL*	28-Nov-18	<1.0	<1.0	Below Mac
WR Community Centre*	28-Nov-18	<1.0	<1.0	Below Mac
City Hall - Annex*	28-Nov-18	<1.0	<1.0	Below Mac
City Hall - main*	28-Nov-18	<1.0	<1.0	Below Mac
RCMP*	28-Nov-18	<1.0	<1.0	Below Mac
Fire Hall*	28-Nov-18	<1.0	<1.0	Below Mac
Evergreen Daycare*	28-Nov-18	<1.0	<1.0	Below Mac
Library*	28-Nov-18	<1.0	<1.0	Below Mac
Kent Activity Center*	28-Nov-18	<1.0	<1.0	Below Mac
Operations Bldg*	28-Nov-18	<1.0	<1.0	Below Mac
Museum*	28-Nov-18	<1.0	<1.0	Below Mac
14900 Blk Marine	29-Nov-18	<1.0	<1.0	Below Mac
14900 Blk Marine	3-Dec-18	<1.0	<1.0	Below Mac
Everall Station**	27-Dec-18	<1.0	<1.0	Below Mac

Sampling Point Name	Date Sampled	TC	E-coli	Comments
Mann Park Station**	27-Dec-18	<1.0	<1.0	Below Mac
Marine Drive Station**	27-Dec-18	<1.0	<1.0	Below Mac
Russell Ave. Station**	27-Dec-18	<1.0	<1.0	Below Mac
Roper Reservoir**	27-Dec-18	<1.0	<1.0	Below Mac
Roper PRV**	27-Dec-18	<1.0	<1.0	Below Mac
Stevens Station**	27-Dec-18	<1.0	<1.0	Below Mac
Finlay Station**	28-Dec-18	<1.0	<1.0	Below Mac
Stayte Road Station**	28-Dec-18	<1.0	<1.0	Below Mac
Balsam & Marine Station**	28-Dec-18	<1.0	<1.0	Below Mac
Oxford & Buena Vista Station**	28-Dec-18	<1.0	<1.0	Below Mac
Merklin Low Reservoir**	28-Dec-18	<1.0	<1.0	Below Mac
Merklin New Reservoir**	28-Dec-18	<1.0	<1.0	Below Mac
Oxford Reservoir**	28-Dec-18	<1.0	<1.0	Below Mac
* Also under Metals Results				
** Also under Chlorination Results				

In-House Water Testing Results 2018

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
			µS/cm		NTU	mg/L	mg/L		
January Week 1									
Merklin Low Reservoir - 25%	5-Jan-17	11:10	278	8.46	0.34	0.01	0.68	9.2	15.1
Merklin Low Reservoir - 50%									
Everall St. Sampling Station	3-Jan-18	15:00	291	7.98	0.19	0.61	0.01	8.6	13.4
Malabar Sampling Station			276	8.08	0.22	0.55	0.02	7.4	13.3
Chestnut & N. Bluff Sample STN			276	8.16	0.21	0.44	0.00	5.9	13.3
Russell Ave. Sample Station			302	8.28	0.40	0.63	0.02	7.9	12.6
Roper Reservoir			289	8.32	0.31	0.38	0.01	5.0	13.3
Roper PRV			299	8.33	0.32	0.61	0.02	8.6	13.2
Roper Ave. Sample Station			295	8.41	0.31	0.56	0.03	6.1	10.0
Finlay St. Sampling Station			290	8.39	0.28	0.56	0.01	6.6	8.8
Stayte Sampling Station			294	8.35	0.28	0.46	0.02	6.5	8.9
Balsam & Marine			285	8.36	0.17	0.56	0.00	7.4	8.7
Oxford St. & Buena Vista STN			292	8.33	0.20	0.39	0.00	7.9	9.1
Merklin Low Reservoir			295	8.38	0.23	0.55	0.03	8.9	10.1
Merklin Reservoir (New)								9.2	
Oxford Reservoir			180	8.29	0.19	0.59	0.02	8.3	10.1
January Week 2									
Everall St. Sampling Station	9-Jan-18	9:10	284	8.29	0.09	0.60	0.04	9.7	22.1
Mann Park Sample Station	9-Jan-18	9:25	279	8.24	0.08	0.59	0.03	7.7	22.1
Marine Dr Sample Station	9-Jan-18	9:55	280	8.23	0.14	0.46	0.03	8.1	22.7
Russell Ave. Sample Station	9-Jan-18	10:35	298	8.45	0.27	0.79	0.00	9.1	20.6
Roper Reservoir	9-Jan-18	11:00	304	8.52	0.33	0.27	0.00	7.4	23.2
Roper PRV	9-Jan-18	10:50	-	-	0.22	0.63	0.00	9.3	-
Stevens Sample Station	10-Jan-18	9:10	302	8.31	0.29	0.58	0.06	9.0	23.2
Finlay St. Sampling Station	10-Jan-18	8:55	300	8.32	0.32	0.58	0.03	8.3	26.7
Stayte Sampling Station	10-Jan-18	9:25	288	8.31	0.22	0.43	0.03	8.4	22.7
Balsam & Marine	10-Jan-18	9:40	288	8.27	0.15	0.64	0.01	8.7	19.1
Oxford St. & Buena Vista STN	10-Jan-18	11:20	289	8.28	0.13	0.53	0.00	8.7	21.5
Merklin Low Reservoir	10-Jan-18	10:20	304	8.37	0.27	0.66	0.00	9.6	23.4

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Merklin Reservoir (New)	10-Jan-18	10:40	306	8.40	0.28	0.74	0.07	9.7	24.3
Oxford Reservoir	10-Jan-18	11:05	282	8.21	0.08	0.58	0.01	10.3	25.6
January Week 3									
Everall St. Sampling Station	16-Jan-18	8:45	283	8.40	0.09	0.58	0.04	9.9	21.0
Malabar Sampling Station	16-Jan-18	9:10	285	8.42	0.09	0.55	0.04	8.5	26.3
Marine Dr Sample Station	16-Jan-18	9:30	274	8.35	0.10	0.47	0.03	7.5	24.1
Russell Ave. Sample Station	16-Jan-18	9:55	309	8.53	0.19	0.56	0.06	9.2	26.4
Roper Reservoir	16-Jan-18	11:00	295	8.98	0.19	0.03	0.02	6.9	24.0
Roper PRV	16-Jan-18	11:05	-	-	0.20	0.62	0.08	9.5	-
Roper Ave. Sample Station	16-Jan-18	10:35	296	8.55	0.31	0.59	0.08	7.9	22.8
Finlay St. Sampling Station	17-Jan-18	8:55	331	8.19	0.21	0.55	0.06	8.7	22.1
Stayte Sampling Station	17-Jan-18	9:15	296	8.28	0.20	0.45	0.03	7.8	22.3
Balsam & Marine	17-Jan-18	9:35	292	8.31	0.17	0.56	0.00	8.9	21.6
Oxford St. & Buena Vista STN	17-Jan-18	9:45	285	8.35	0.19	0.41	0.03	8.9	20.8
Merklin Low Reservoir	17-Jan-18	10:20	300	8.48	0.30	0.57	0.05	9.2	21.1
Merklin Reservoir (New)	17-Jan-18	10:35	291	8.49	0.29	0.60	0.03	9.6	18.6
Oxford Reservoir	17-Jan-18	11:00	282	8.23	0.09	0.56	0.03	10.3	22.6
January Week 4									
Everall St. Sampling Station	23-Jan-18	9:00	286	8.34	0.09	0.58	0.02	10.1	26.1
Mann Park Sample Station	23-Jan-18	9:20	285	8.22	0.08	0.59	0.06	8.4	26.7
Marine Dr Sample Station	23-Jan-18	9:40	275	8.20	0.16	0.38	0.01	7.6	25.5
Russell Ave. Sample Station	23-Jan-18	10:25	301	8.30	0.22	0.72	0.05	9.4	25.0
Roper Reservoir	23-Jan-18	10:50	291	8.39	0.39	0.35	0.00	8.2	23.7
Roper PRV	23-Jan-18	10:56	-	-	0.21	0.65	0.08	9.6	-
Stevens Sample Station	23-Jan-18	11:15	303	8.39	0.19	0.37	0.09	9.4	24.3
Finlay St. Sampling Station	24-Jan-18	8:57	292	8.35	0.26	0.57	0.06	9.1	23.9
Stayte Sampling Station	24-Jan-18	9:20	300	8.27	0.19	0.46	0.03	8.4	26.0
Balsam & Marine	24-Jan-18	9:35	282	8.24	0.15	0.58	0.07	9.3	26.3
Oxford St. & Buena Vista STN	24-Jan-18	9:50	289	8.28	0.15	0.39	0.02	9.3	26.4
Merklin Low Reservoir	24-Jan-18	10:35	293	8.42	0.24	0.59	0.03	12.1	23.8
Merklin Reservoir (New)	24-Jan-18	10:47	307	8.37	0.28	0.65	0.03	9.7	25.1
Oxford Reservoir	24-Jan-18	11:15	283	8.28	0.08	0.58	0.02	10.5	26.4
January Week 5									
Everall St. Sampling Station	30-Jan-18	9:00	288	8.43	0.10	0.61	0.04	9.7	24.0
Malabar Sampling Station	30-Jan-18	9:15	280	8.31	0.11	0.56	0.02	8.7	22.8

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Chestnut & N. Bluff Sample STN	30-Jan-18	9:30	282	8.27	0.11	0.47	0.01	7.7	24.0
Russell Ave. Sample Station	30-Jan-18	9:50	307	8.51	0.26	0.61	0.00	10.0	23.6
Roper Reservoir	30-Jan-18	11:25	290	8.59	0.65	0.23	0.00	7.7	22.9
Roper PRV	30-Jan-18	11:05	-	-	0.21	0.66	0.03	9.3	-
Roper Ave. Sample Station	30-Jan-18	10:45	302	8.47	0.31	0.61	0.04	8.0	24.0
Finlay St. Sampling Station	31-Jan-18	8:35	300	8.43	0.25	0.58	0.04	8.8	26.9
Stayte Sampling Station	31-Jan-18	9:00	285	8.32	0.21	0.44	0.01	8.3	23.4
Balsam & Marine	31-Jan-18	9:20	284	8.46	0.15	0.53	0.00	18.1	25.3
Oxford St. & Buena Vista STN	31-Jan-18	9:40	282	8.31	0.11	0.41	0.07	9.9	25.6
Merklin Low Reservoir	31-Jan-18	10:35	298	8.53	0.22	0.67	0.03	9.2	24.6
Merklin Reservoir (New)	31-Jan-18	10:45	306	8.37	0.22	0.57	0.02	9.7	26.0
Oxford Reservoir	31-Jan-18	11:05	276	8.57	0.08	0.51	0.03	10.3	25.0
February Week 1									
Everall St. Sampling Station	6-Feb-18	10:00	279	8.09		0.58	0.03	9.2	17.3
Malabar Sampling Station	6-Feb-18	10:15	278	8.17		0.50	0.02	8.7	17.5
Marine Dr Sample Station	6-Feb-18	10:30	277	8.20		0.42	0.02	7.7	17.5
Russell Ave. Sample Station	6-Feb-18	10:45	311	8.35		0.58	0.03	8.7	17.4
Roper Reservoir	6-Feb-18	11:00	293	8.55		0.29	0.02	8.2	16.7
Roper PRV	6-Feb-18	11:00	307	8.40		0.57	0.02	8.9	17.2
Roper Ave. Sample Station	6-Feb-18	11:15	302	8.39		0.53	0.03	7.9	17.4
Finlay St. Sampling Station	6-Feb-18	11:30	288	8.34		0.51	0.03	8.7	17.4
Stayte Sampling Station	7-Feb-18	8:50	302	8.41	0.22	0.45	0.01	8.2	28.6
Balsam & Marine	7-Feb-18	9:10	291	8.36	0.12	0.51	0.00	9.0	28.0
Oxford St. & Buena Vista STN	7-Feb-18	9:30	301	8.52	0.16	0.43	0.02	9.2	25.4
Merklin Low Reservoir	7-Feb-18	10:30	314	8.74	0.13	0.59	0.02	8.9	25.7
Merklin Reservoir (New)	7-Feb-18	10:50	313	8.63	0.11	0.65	0.02	9.4	25.1
Oxford Reservoir	7-Feb-18	9:55	278	8.49	0.09	0.55	0.03	10.1	25.7
February Week 2									
Everall St. Sampling Station	13-Feb-18	9:00	303	8.43	0.09	0.61	0.04	9.0	24.8
Mann Park Sample Station	13-Feb-18	9:15	282	8.32	0.09	0.57	0.03	8.1	25.8
Marine Dr Sample Station	13-Feb-18	9:35	276	8.35	0.16	0.34	0.03	7.2	24.4
Russell Ave. Sample Station	13-Feb-18	9:55	311	8.50	0.10	0.67	0.05	8.7	23.6
Roper Reservoir	13-Feb-18	10:35	306	8.50	0.49	0.55	0.00	7.0	26.3
Roper PRV	13-Feb-18	10:40	-	-	0.09	0.59	0.00	9.0	-
Stevens Sample Station	13-Feb-18	11:00	310	8.56	0.12	0.66	0.04	8.8	24.2

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Finlay St. Sampling Station	14-Feb-18	8:50	311	8.51	0.12	0.58	0.02	8.4	23.6
Stayte Sampling Station	14-Feb-18	9:10	304	8.35	0.13	0.48	0.03	7.8	24.5
Balsam & Marine	14-Feb-18	9:30	283	8.38	0.12	0.50	0.02	8.5	24.2
Oxford St. & Buena Vista STN	14-Feb-18	9:50	299	8.48	0.11	0.47	0.01	8.7	25.3
Merklin Low Reservoir	14-Feb-18	10:40	315	8.48	0.09	0.70	0.01	8.7	24.5
Merklin Reservoir (New)	14-Feb-18	10:55	310	8.53	0.09	0.84	0.00	9.2	23.4
Oxford Reservoir	14-Feb-18	11:20	282	8.51	0.07	0.54	0.06	9.9	24.3
February Week 3									
Everall St. Sampling Station	20-Feb-18	7:50	296	8.42	0.11	0.58	0.02	9.3	24.4
Malabar Sampling Station	20-Feb-18	8:05	281	8.33	0.10	0.46	0.01	8.5	23.3
Chestnut & N. Bluff Sample STN	20-Feb-18	8:22	277	8.25	0.11	0.45	0.01	7.5	23.2
Russell Ave. Sample Station	20-Feb-18	8:40	290	8.63	0.17	0.52	0.00	8.7	21.6
Roper Reservoir	20-Feb-18	9:00	302	8.54	0.43	0.55	0.07	6.5	22.0
Roper PRV	20-Feb-18	8:52	-	-	0.21	0.49	0.06	8.9	-
Roper Ave. Sample Station	20-Feb-18	9:15	302	8.47	0.28	0.51	0.00	7.7	21.7
Finlay St. Sampling Station	20-Feb-18	9:40	282	8.43	0.23	0.55	0.04	8.3	18.4
Stayte Sampling Station	21-Feb-18	8:52	302	8.33	0.24	0.48	0.04	7.9	19.9
Balsam & Marine	21-Feb-18	9:05	288	8.35	0.15	0.51	0.03	8.4	19.9
Oxford St. & Buena Vista STN	21-Feb-18	9:30	296	8.37	0.17	0.35	0.00	8.4	18.9
Merklin Low Reservoir	21-Feb-18	10:35	317	8.43	0.25	0.58	0.03	9.1	20.9
Merklin Reservoir (New)	21-Feb-18	10:55	302	8.43	0.21	0.65	0.02	9.4	19.2
Oxford Reservoir	21-Feb-18	9:50	287	8.23	0.12	0.37	0.00	9.6	19.0
February Week 4									
Everall St. Sampling Station	27-Feb-18	9:15	284	8.46	0.11	0.60	0.02	9.3	16.2
Mann Park Sample Station	27-Feb-18	9:30	281	8.29	0.12	0.62	0.03	7.2	17.3
Marine Dr Sample Station	27-Feb-18	9:45	275	8.43	0.15	0.54	0.02	6.7	17.8
Russell Ave. Sample Station	27-Feb-18	11:20	305	8.45	0.26	0.64	0.03	8.7	17.3
Roper Reservoir	27-Feb-18	11:40	305	8.54	0.33	0.40	0.07	6.8	17.2
Roper PRV	27-Feb-18	11:30	-	-	0.21	0.52	0.04	8.9	-
Stevens Sample Station	27-Feb-18	11:05	288	8.43	0.17	0.52	0.04	8.2	17.8
Finlay St. Sampling Station	28-Feb-18	8:50	312	8.57	0.26	0.61	0.02	7.8	23.3
Stayte Sampling Station	28-Feb-18	9:10	298	8.45	0.21	0.53	0.06	7.2	21.6
Balsam & Marine	28-Feb-18	9:25	293	8.45	0.14	0.44	0.00	8.3	22.5
Oxford St. & Buena Vista STN	28-Feb-18	9:40	289	8.50	0.14	0.39	0.01	8.1	20.9
Merklin Low Reservoir	28-Feb-18	10:34	308	8.56	0.20	0.57	0.00	9.2	18.0

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Merklin Reservoir (New)	28-Feb-18	10:20	315	8.56	0.22	0.75	0.00	9.6	20.6
Oxford Reservoir	28-Feb-18	11:00	279	8.46	0.09	0.58	0.02	10.0	21.5
March Week 1									
Everall St. Sampling Station	6-Mar-18	7:28	282	8.36	0.09	0.62	0.02	9.6	22.4
Malabar Sampling Station	6-Mar-18	7:40	283	8.32	0.13	0.53	0.02	8.2	21.4
Marine Dr Sample Station	6-Mar-18	7:50	283	8.43	0.11	0.46	0.02	7.4	21.7
Russell Ave. Sample Station	6-Mar-18	8:05	301	8.39	0.15	0.58	0.00	8.9	22.3
Roper Reservoir	6-Mar-18	8:20	292	8.52	0.22	0.48	0.03	7.7	17.6
Roper PRV	6-Mar-18	8:15	-	-	0.19	0.57	0.00	9.1	-
Roper Ave. Sample Station	6-Mar-18	9:15	309	8.61	0.26	0.62	0.04	7.1	19.6
Finlay St. Sampling Station	6-Mar-18	8:37	307	8.45	0.24	0.56	0.05	8.2	21.3
Stayte Sampling Station	6-Mar-18	8:50	299	8.48	0.19	0.47	0.02	7.5	22.2
Balsam & Marine	6-Mar-18	9:00	273	8.33	0.10	0.42	0.05	8.8	17.7
Oxford St. & Buena Vista STN	6-Mar-18	10:45	294	8.38	0.11	0.40	0.02	8.7	20.2
Merklin Low Reservoir	6-Mar-18	9:25	298	8.48	0.19	0.59	0.07	9.1	17.6
Merklin Reservoir (New)	6-Mar-18	9:40	304	8.47	0.21	0.62	0.03	9.5	18.0
Oxford Reservoir	6-Mar-18	10:30	279	8.32	0.09	0.59	0.02	10.7	18.3
March Week 2									
Everall St. Sampling Station	13-Mar-18	8:50	275	8.39	0.09	0.62	0.03	9.9	24.4
Mann Park Sample Station	13-Mar-18	9:15	279	8.24	0.10	0.56	0.03	8.7	23.6
Marine Dr Sample Station	13-Mar-18	9:05	283	8.33	0.15	0.46	0.02	7.7	25.3
Russell Ave. Sample Station	13-Mar-18	9:30	318	8.49	0.10	0.64	0.05	9.5	25.1
Roper Reservoir	13-Mar-18	9:50	293	8.41	0.19	0.48	0.03	8.9	23.0
Roper PRV	13-Mar-18	9:40	-	-	0.09	0.64	0.02	9.9	-
Stevens Sample Station	13-Mar-18	10:30	296	8.41	0.10	0.62	0.04	9.5	23.3
Finlay St. Sampling Station	14-Mar-18	9:00	310	8.31	0.12	0.62	0.06	9.6	19.7
Stayte Sampling Station	14-Mar-18	9:20	297	8.29	0.17	0.55	0.03	8.5	18.4
Balsam & Marine	14-Mar-18	9:35	288	8.30	0.11	0.52	0.06	9.7	19.8
Oxford St. & Buena Vista STN	14-Mar-18	11:45	285	8.30	0.14	0.35	0.02	9.8	19.7
Merklin Low Reservoir	14-Mar-18	11:10	288	8.44	0.28	0.54	0.04	9.2	19.8
Merklin Reservoir (New)	14-Mar-18	10:00	298	8.47	0.21	0.62	0.00	9.8	20.3
Oxford Reservoir	14-Mar-18	8:40	280	8.36	0.10	0.63	0.03	10.7	20.4
March Week 3									
Everall St. Sampling Station	20-Mar-18	8:37	276	8.37	0.09	0.60	0.03	9.8	17.4
Malabar Sampling Station	20-Mar-18	8:48	281	8.25	0.10	0.51	0.02	9.7	16.8

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Marine Dr Sample Station	20-Mar-18	9:05	272	8.24	0.11	0.44	0.03	9.8	15.5
Russell Ave. Sample Station	20-Mar-18	9:30	283	8.29	0.10	0.58	0.03	9.6	17.6
Roper Reservoir	20-Mar-18	11:20	282	8.50	0.20	0.46	0.04	9.1	15.4
Roper PRV	20-Mar-18	11:15	-	-	0.15	0.56	0.02	9.8	-
Roper Ave. Sample Station	20-Mar-18	9:45	289	8.52	0.23	0.53	0.01	9.0	17.4
Finlay St. Sampling Station	20-Mar-18	10:00	287	8.40	0.17	0.55	0.02	10.1	18.0
Stayte Sampling Station	20-Mar-18	10:35	273	8.40	0.18	0.53	0.00	9.2	15.0
Balsam & Marine	20-Mar-18	10:50	284	8.33	0.13	0.52	0.01	9.9	18.2
Oxford St. & Buena Vista STN	20-Mar-18	11:03	274	8.34	0.10	0.29	0.01	10.4	16.0
Merklin Low Reservoir	20-Mar-18	11:30	289	8.48	0.18	0.45	0.00	9.2	17.2
Merklin Reservoir (New)	20-Mar-18	11:40	279	8.49	0.17	0.61	0.02	9.7	15.9
Oxford Reservoir	20-Mar-18	11:50	286	8.34	0.08	0.44	0.02	10.5	17.8
March Week 4									
Everall St. Sampling Station	27-Mar-18	8:30	281	8.22	0.12	0.60	0.03	9.8	20.3
Mann Park Sample Station	27-Mar-18	8:45	284	8.15	0.11	0.58	0.05	9.1	20.7
Marine Dr Sample Station	27-Mar-18	9:10	280	8.23	0.11	0.41	0.00	8.5	20.9
Russell Ave. Sample Station	27-Mar-18	9:25	279	8.19	0.11	0.62	0.06	9.6	21.1
Roper Reservoir	27-Mar-18	11:15	292	8.36	0.18	0.53	0.00	8.9	21.5
Roper PRV	27-Mar-18	11:05	302	8.33	0.09	0.67	0.07	9.8	18.5
Stevens Sample Station	27-Mar-18	10:30	325	8.35	0.11	0.63	0.00	9.8	21.6
Finlay St. Sampling Station	27-Mar-18	10:45	284	8.30	0.10	0.59	0.00	10.0	19.4
Stayte Sampling Station	28-Mar-18	9:25	395	8.38	0.13	0.45	0.03	9.6	17.8
Balsam & Marine	28-Mar-18	9:40	277	8.32	0.11	0.66	0.04	9.9	22.2
Oxford St. & Buena Vista STN	28-Mar-18	11:25	277	8.35	0.10	0.46	0.02	10.3	21.3
Merklin Low Reservoir	28-Mar-18	10:20	333	8.45	0.09	0.60	0.01	9.3	23.9
Merklin Reservoir (New)	28-Mar-18	10:35	325	8.47	0.10	0.63	0.02	9.8	22.4
Oxford Reservoir	28-Mar-18	11:10	269	8.41	0.10	0.60	0.02	10.3	20.6
April Week 1									
Everall St. Sampling Station	3-Apr-18	9:00	267	8.02	0.14	0.62	0.02	9.6	17.1
Malabar Sampling Station	3-Apr-18	9:15	266	8.33	0.15	0.55	0.02	8.9	17.3
Marine Dr Sample Station	3-Apr-18	9:45	265	8.33	0.19	0.49	0.02	8.7	17.6
Russell Ave. Sample Station	3-Apr-18	10:00	315	8.39	0.14	0.59	0.04	9.5	17.8
Roper Reservoir	3-Apr-18	10:15	291	8.38	0.14	0.43	0.00	9.1	17.4
Roper PRV	3-Apr-18	10:15	307	8.44	0.13	0.61	0.02	9.8	17.3
Roper Ave. Sample Station	4-Apr-18	7:35	320	8.30	0.11	0.56	0.03	9.8	18.0

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Finlay St. Sampling Station	4-Apr-18	7:50	290	8.30	0.11	0.57	0.02	9.7	18.0
Stayte Sampling Station	4-Apr-18	8:05	391	8.39	0.12	0.43	0.02	9.8	17.9
Balsam & Marine	4-Apr-18	8:20	384	8.27	0.13	0.60	0.02	9.8	17.9
Oxford St. & Buena Vista STN	4-Apr-18	8:30	299	8.38	0.14	0.47	0.03	9.4	10.2
Merklin Low Reservoir	4-Apr-18	8:45	317	8.40	0.11	0.56	0.04	9.1	12.3
Merklin Reservoir (New)	4-Apr-18	7:20	327	8.43	0.12	0.59	0.04	9.6	10.1
Oxford Reservoir	4-Apr-18	9:00	270	8.40	0.18	0.60	0.02	10.0	12.0
April Week 2 (WITH METALS)									
Everall St. Sampling Station	10-Apr-18	8:30	267	8.19	0.12	0.61	0.03	9.3	18.9
Mann Park Sample Station	10-Apr-18	8:45	263	8.22	0.15	0.56	0.03	9.5	18.8
Marine Dr Sample Station	10-Apr-18	9:00	263	8.26	0.15	0.41	0.03	9.6	18.8
Russell Ave. Sample Station	10-Apr-18	9:15	315	8.30	0.12	0.61	0.04	9.7	18.8
Roper Reservoir	10-Apr-18	9:30	308	8.39	0.20	0.46	0.01	9.4	18.8
Roper PRV	10-Apr-18	9:30	307	8.41	0.14	0.60	0.03	9.7	18.8
Stevens Sample Station	10-Apr-18	9:45	290	8.44	0.17	0.57	0.05	10.4	18.8
Finlay St. Sampling Station	10-Apr-18	10:00	286	8.43	0.11	0.57	0.03	10.7	18.8
Stayte Sampling Station	10-Apr-18	10:15	293	8.42	0.21	0.41	0.03	10.3	18.8
Balsam & Marine	10-Apr-18	10:30	296	8.46	0.12	0.59	0.02	10.5	18.8
Oxford St. & Buena Vista STN	10-Apr-18	10:45	284	8.45	0.10	0.40	0.03	9.6	18.7
Merklin Low Reservoir	10-Apr-18	11:00	317	8.51	0.07	0.57	0.02	9.5	18.8
Merklin Reservoir (New)	10-Apr-18	11:15	315	8.49	0.15	0.59	0.03	9.6	18.8
Oxford Reservoir	10-Apr-18	11:30	267	8.52	0.18	0.61	0.02	9.2	18.8
April Week 3 (W/O METALS)									
Everall St. Sampling Station	17-Apr-18	9:15	352	8.20	0.15	0.66	0.02	9.7	17.4
Malabar Sampling Station	17-Apr-18	9:30	255	8.19	0.11	0.65	0.02	10.7	18.0
Marine Dr Sample Station	17-Apr-18	9:45	262	8.36	0.18	0.50	0.01	10.3	18.8
Russell Ave. Sample Station	17-Apr-18	10:55	307	8.39	0.10	0.66	0.02	9.8	17.0
Roper Reservoir	17-Apr-18	11:20	312	8.45	0.16	0.57	0.02	9.9	19.5
Roper PRV	17-Apr-18	11:10	312	8.55	0.09	0.67	0.02	9.9	19.2
Roper Ave. Sample Station	17-Apr-18	11:45	311	8.43	0.12	0.64	0.03	10.5	19.2
Finlay St. Sampling Station	18-Apr-18	9:00	319	8.43	0.11	0.60	0.02	11.1	19.3
Stayte Sampling Station	18-Apr-18	9:20	297	8.39	0.18	0.41	0.02	10.8	18.4
Balsam & Marine	18-Apr-18	9:35	297	8.41	0.12	0.60	0.03	10.6	19.2
Oxford St. & Buena Vista STN	18-Apr-18	9:55	297	8.37	0.11	0.44	0.02	11.2	19.4
Merklin Low Reservoir	18-Apr-18	10:30	314	8.42	0.09	0.60	0.02	9.5	18.7

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Merklin Reservoir (New)	18-Apr-18	10:55	315	8.43	0.08	0.67	0.02	9.9	18.8
Oxford Reservoir	18-Apr-18	11:20	250	8.47	0.09	0.69	0.02	10.0	18.2
April Week 4 (WITH METALS)									
Everall St. Sampling Station	24-Apr-18	8:45	282	8.45	0.12	0.59	0.03	10.2	25.8
Malabar Sampling Station	24-Apr-18	9:00	277	8.33	0.15	0.55	0.03	11.3	25.3
Marine Dr Sample Station	24-Apr-18	9:25	267	8.34	0.16	0.48	0.04	12.5	19.4
Russell Ave. Sample Station	24-Apr-18	9:40	306	8.54	0.11	0.67	0.02	10.1	18.6
Roper Reservoir	24-Apr-18	10:05	312	8.53	0.17	0.48	0.03	10.4	20.7
Roper PRV	24-Apr-18	9:55	306	8.51	0.09	0.66	0.03	10.5	18.6
Roper Ave. Sample Station	24-Apr-18	10:40	321	8.50	0.11	0.61	0.05	12.1	21.7
Finlay St. Sampling Station	24-Apr-18	10:55	307	8.50	0.10	0.63	0.06	12.3	19.8
Stayte Sampling Station	24-Apr-18	11:05	311	8.47	0.16	0.44	0.03	11.9	21.8
Balsam & Marine	24-Apr-18	11:20	305	8.52	0.12	0.56	0.04	11.6	21.6
Oxford St. & Buena Vista STN	24-Apr-18	11:40	299	8.47	0.13	0.39	0.03	12.1	20.7
Merklin Low Reservoir	25-Apr-18	9:55	316	8.30	0.13	0.59	0.02	10.6	22.3
Merklin Reservoir (New)	25-Apr-18	10:35	316	8.34	0.10	0.67	0.03	9.8	22.7
Oxford Reservoir	25-Apr-18	11:30	279	8.23	0.12	0.55	0.03	10.3	22.7
May Week 1 (WITHOUT METALS)									
Everall St. Sampling Station	1-May-18	9:05	284	8.30	0.10	0.58	0.02	10.0	23.5
Mann Park Sample Station	1-May-18	9:20	283	8.30	0.12	0.51	0.02	11.8	24.1
Marine Dr Sample Station	1-May-18	9:40	286	8.35	0.18	0.27	0.02	12.5	23.0
Russell Ave. Sample Station	1-May-18	10:00	319	8.48	0.09	0.64	0.02	10.0	22.7
Roper Reservoir	1-May-18	10:45	316	8.52	0.17	0.48	0.03	10.8	24.3
Roper PRV	1-May-18	10:35	315	8.53	0.09	0.65	0.02	10.2	22.8
Stevens Sample Station	1-May-18	11:05	318	8.50	0.10	0.64	0.03	11.4	23.8
Finlay St. Sampling Station	2-May-18	9:20	317	8.41	0.11	0.60	0.05	13.6	24.6
Stayte Sampling Station	2-May-18	9:40	309	8.40	0.18	0.34	0.03	13.1	23.4
Balsam & Marine	2-May-18	10:00	315	8.46	0.12	0.57	0.04	12.1	23.1
Oxford St. & Buena Vista STN	2-May-18	11:40	311	8.44	0.11	0.42	0.02	12.9	24.4
Merklin Low Reservoir	2-May-18	10:35	325	8.54	0.13	0.55	0.04	9.7	25.1
Merklin Reservoir (New)	2-May-18	10:50	323	8.54	0.10	0.65	0.02	9.8	24.3
Oxford Reservoir	2-May-18	11:15	285	8.41	0.11	0.56	0.04	10.4	23.8
May Week 2 (WITH METALS)									
Everall St. Sampling Station	8-May-18	8:50	275	8.20	0.16	0.61	0.06	10.1	23.1
Mann Park Sample Station	8-May-18	9:00	279	8.26	0.12	0.52	0.04	12.5	24.1

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Marine Dr Sample Station	8-May-18	9:15	278	8.28	0.19	0.44	0.00	13.9	22.9
Russell Ave. Sample Station	8-May-18	10:40	316	8.45	0.11	0.64	0.05	10.6	23.1
Roper Reservoir	8-May-18	11:00	310	8.55	0.24	0.43	0.04	11.6	22.9
Roper PRV	8-May-18	10:50	318	8.48	0.26	0.63	0.00	10.8	23.1
Stevens Sample Station	8-May-18	9:35	315	8.54	0.11	0.64	0.05	12.1	23.4
Finlay St. Sampling Station	8-May-18	9:45	314	8.51	0.10	0.65	0.05	13.9	23.7
Stayte Sampling Station	8-May-18	11:15	305	8.46	0.14	0.40	0.05	14.2	24.6
Balsam & Marine	8-May-18	11:25	299	8.49	0.15	0.58	0.05	13.2	24.8
Oxford St. & Buena Vista STN	8-May-18	11:40	294	8.45	0.14	0.43	0.04	14.1	24.4
Merklin Low Reservoir	9-May-18	9:05	313	8.44	0.17	0.52	0.02	9.8	19.3
Merklin Reservoir (New)	9-May-18	9:20	312	8.51	0.16	0.65	0.02	10.0	18.6
Oxford Reservoir	9-May-18	9:50	274	8.42	0.11	0.57	0.03	10.3	19.8
May Week 3 (WITOUT METALS)									
Everall St. Sampling Station	15-May-18	8:35	289	8.47	0.17	0.59	0.05	10.4	29.2
Malabar Sampling Station	15-May-18	8:55	291	8.31	0.12	0.53	0.04	12.9	30.3
Marine Dr Sample Station	15-May-18	9:10	285	8.33	0.13	0.41	0.04	17.6	29.3
Russell Ave. Sample Station	15-May-18	9:25	309	8.46	0.10	0.62	0.04	10.8	29.4
Roper Reservoir	15-May-18	9:45	304	8.50	0.15	0.51	0.06	13.8	29.4
Roper PRV	15-May-18	9:35	302	7.88	0.12	0.65	0.04	11.2	28.3
Roper Ave. Sample Station	15-May-18	10:30	298	8.54	0.12	0.61	0.07	15.0	24.2
Finlay St. Sampling Station	15-May-18	10:45	304	8.52	0.16	0.63	0.07	14.6	24.5
Stayte Sampling Station	16-May-18	9:10	303	8.51	0.20	0.35	0.02	15.8	25.1
Balsam & Marine	16-May-18	9:25	305	8.28	0.16	0.55	0.03	13.6	23.4
Oxford St. & Buena Vista STN	16-May-18	9:50	301	8.57	0.47	0.49	0.06	14.7	23.0
Merklin Low Reservoir	16-May-18	10:30	302	8.66	0.12	0.59	0.02	10.0	21.5
Merklin Reservoir (New)	16-May-18	10:45	307	8.64	0.12	0.63	0.02	9.9	22.2
Oxford Reservoir	16-May-18	11:10	287	8.47	0.10	0.57	0.03	10.6	22.7
May Week 4 (WITH METALS)									
Everall St. Sampling Station	22-May-18	9:15	279	8.26	0.16	0.60	0.04	10.0	27.6
Malabar Sampling Station	22-May-18	9:30	289	8.24	0.13	0.54	0.04	15.0	29.0
Marine Dr Sample Station	22-May-18	9:55	284	8.28	0.14	0.41	0.04	17.5	26.8
Russell Ave. Sample Station	22-May-18	10:40	316	8.43	0.13	0.69	0.04	10.6	27.7
Roper Reservoir	22-May-18	11:00	307	8.45	0.17	0.51	0.03	12.5	28.9
Roper PRV	22-May-18	10:55	317	8.46	0.12	0.65	0.02	10.7	29.0
Roper Ave. Sample Station	22-May-18	11:30	316	8.46	0.11	0.64	0.05	14.8	28.8

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Finlay St. Sampling Station	23-May-18	8:58	309	8.43	0.12	0.65	0.04	14.8	22.5
Stayte Sampling Station	23-May-18	9:15	302	8.36	0.22	0.36	0.03	17.3	23.0
Balsam & Marine	23-May-18	9:35	307	8.41	0.24	0.59	0.05	14.6	22.8
Oxford St. & Buena Vista STN	23-May-18	9:55	303	8.41	0.21	0.44	0.04	15.7	22.8
Merklin Low Reservoir	23-May-18	10:30	312	8.51	0.13	0.60	0.03	10.5	22.4
Merklin Reservoir (New)	23-May-18	10:50	310	8.50	0.13	0.69	0.03	10.1	21.7
Oxford Reservoir	23-May-18	11:25	281	8.40	0.11	0.58	0.04	10.5	22.3
May Week 5 (WITHOUT METALS)									
Everall St. Sampling Station	29-May-18	8:25	291	8.54	0.12	0.59	0.05	10.1	23.7
Mann Park Sample Station	29-May-18	8:45	290	8.37	0.13	0.51	0.03	13.2	25.7
Marine Dr Sample Station	29-May-18	9:00	287	8.44	0.16	0.45	0.03	17.2	25.5
Russell Ave. Sample Station	29-May-18	9:20	315	8.59	0.15	0.66	0.03	10.7	27.7
Roper Reservoir	29-May-18	9:28	299	8.62	0.19	0.48	0.03	12.9	25.7
Roper PRV	29-May-18	9:35	311	8.61	0.15	0.63	0.04	10.9	26.0
Stevens Sample Station	29-May-18	9:55	315	8.60	0.14	0.66	0.04	12.4	27.0
Finlay St. Sampling Station	30-May-18	7:40	309	8.39	0.16	0.60	0.02	16.3	18.1
Stayte Sampling Station	30-May-18	8:10	296	8.39	0.19	0.35	0.04	17.9	18.2
Balsam & Marine	30-May-18	8:30	305	8.45	0.16	0.58	0.04	14.2	18.4
Oxford St. & Buena Vista STN	30-May-18	8:45	296	8.43	0.15	0.44	0.02	16.1	18.3
Merklin Low Reservoir	30-May-18	9:00	308	8.56	0.12	0.55	0.02	10.5	18.0
Merklin Reservoir (New)	30-May-18	9:15	309	8.56	0.12	0.67	0.02	10.0	18.0
Oxford Reservoir	30-May-18	10:55	275	8.53	0.11	0.59	0.02	10.3	18.1
June Week 1 (WITH METALS)									
Everall St. Sampling Station	5-Jun-18	8:35	282	8.51	0.11	0.60	0.04	10.4	19.6
Mann Park Sample Station	5-Jun-18	8:45	288	8.37	0.15	0.48	0.05	14.6	21.8
Marine Dr Sample Station	5-Jun-18	8:55	281	8.37	0.15	0.41	0.02	18.0	20.8
Russell Ave. Sample Station	5-Jun-18	9:10	308	8.55	0.12	0.63	0.03	10.8	20.4
Roper Reservoir	5-Jun-18	9:25	309	8.43	0.18	0.54	0.04	12.7	23.2
Roper PRV	5-Jun-18	9:20	302	8.55	0.12	0.68	0.03	10.9	18.7
Stevens Sample Station	5-Jun-18	9:38	309	8.58	0.12	0.63	0.03	12.5	19.1
Finlay St. Sampling Station	5-Jun-18	9:50	310	8.57	0.11	0.60	0.03	16.8	19.5
Stayte Sampling Station	5-Jun-18	10:52	303	8.48	0.18	0.36	0.04	18.0	23.0
Balsam & Marine	5-Jun-18	11:02	303	8.62	0.14	0.57	0.04	14.3	21.8
Oxford St. & Buena Vista STN	5-Jun-18	11:15	294	8.56	0.13	0.40	0.04	16.3	19.4
Merklin Low Reservoir	5-Jun-18	10:25	307	8.63	0.14	0.59	0.03	10.5	19.4

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Merklin Reservoir (New)	1-Jun-56	10:38	305	8.63	0.14	0.62	0.04	10.1	18.4
Oxford Reservoir	5-Jun-18	11:30	278	8.49	0.12	0.54	0.03	10.9	17.8
June Week 2									
Everall St. Sampling Station	12-Jun-18	9:15	284	8.16	0.12	0.57	0.02	10.5	22.5
Malabar Sampling Station	12-Jun-18	9:30	290	8.20	0.11	0.55	0.03	13.3	23.5
Chestnut & N. Bluff Sample STN	12-Jun-18	9:50	290	8.18	0.14	0.36	0.02	18.2	23.6
Russell Ave. Sample Station	12-Jun-18	10:55	314	8.41	0.11	0.65	0.02	11.2	23.4
Roper Reservoir	12-Jun-18	11:25	309	8.40	0.17	0.50	0.02	12.3	23.2
Roper PRV	12-Jun-18	11:15	314	8.40	0.12	0.64	0.04	11.1	22.8
Roper Ave. Sample Station	12-Jun-18	11:45	315	8.43	0.13	0.61	0.03	16.2	22.9
Finlay St. Sampling Station	13-Jun-18	8:45	315	8.41	0.14	0.61	0.03	16.0	23.5
Stayte Sampling Station	13-Jun-18	9:10	303	8.36	0.17	0.34	0.03	16.9	23.2
Balsam & Marine	13-Jun-18	9:35	309	8.45	0.16	0.57	0.03	13.4	22.8
Oxford St. & Buena Vista STN	13-Jun-18	9:55	308	8.45	0.14	0.39	0.02	14.9	22.9
Merklin Low Reservoir	13-Jun-18	10:35	312	8.54	0.15	0.62	0.04	10.3	22.2
Merklin Reservoir (New)	13-Jun-18	10:50	316	8.52	0.12	0.67	0.02	9.7	22.7
Oxford Reservoir	13-Jun-18	11:20	284	8.46	0.12	0.54	0.03	10.1	21.9
June Week 3									
Everall St. Sampling Station	19-Jun-18	8:40	289	8.25	0.18	0.58	0.06	10.3	23.8
Mann Park Sample Station	19-Jun-18	9:00	284	8.22	0.21	0.52	0.05	14.2	24.5
Chestnut & N. Bluff Sample STN	19-Jun-18	9:20	282	8.21	0.15	0.45	0.05	18.6	24.9
Russell Ave. Sample Station	19-Jun-18	9:40	310	8.39	0.14	0.69	0.05	10.9	24.2
Roper Reservoir	19-Jun-18	9:50	307	8.44	0.22	0.49	0.01	13.6	24.5
Roper PRV	19-Jun-18	10:00	309	8.44	0.20	0.60	0.00	11.1	24.0
Roper Ave. Sample Station	19-Jun-18	10:40	312	8.45	0.14	0.66	0.04	16.4	24.2
Finlay St. Sampling Station	19-Jun-18	10:55	311	8.46	0.15	0.66	0.05	16.0	24.1
Stayte Sampling Station	20-Jun-18	8:40	308	8.44	0.20	0.36	0.03	18.4	23.1
Balsam & Marine	20-Jun-18	9:00	309	8.43	0.21	0.59	0.04	14.3	23.4
Oxford St. & Buena Vista STN	20-Jun-18	9:20	306	8.42	0.21	0.50	0.02	15.2	23.2
Merklin Low Reservoir	20-Jun-18	9:35	309	8.52	0.13	0.61	0.02	10.8	22.6
Merklin Reservoir (New)	20-Jun-18	9:45	310	8.50	0.12	0.64	0.01	10.3	22.4
Oxford Reservoir	20-Jun-18	10:30	277	8.48	0.12	0.49	0.00	10.8	22.2
June Week 4 (WITH METALS)									
Everall St. Sampling Station	26-Jun-18	8:30	282	8.41	0.14	0.52	0.02	10.0	21.7

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Malabar Sampling Station	26-Jun-18	8:55	285	8.27	0.13	0.53	0.05	14.6	22.2
Chestnut & N. Bluff Sample STN	26-Jun-18	9:15	279	8.27	0.16	0.34	0.05	19.5	22.0
Russell Ave. Sample Station	26-Jun-18	9:30	307	8.48	0.16	0.65	0.03	11.1	21.0
Roper Reservoir	26-Jun-18	9:45	305	8.42	0.22	0.54	0.05	13.0	21.6
Roper PRV	26-Jun-18	9:55	310	8.46	0.15	0.67	0.04	11.2	22.0
Roper Ave. Sample Station	26-Jun-18	10:40	313	8.44	0.17	0.61	0.02	16.6	22.5
Finlay St. Sampling Station	26-Jun-18	11:00	312	8.47	0.16	0.73	0.04	16.1	22.5
Stayte Sampling Station	27-Jun-18	8:40	298	8.51	0.19	0.34	0.06	18.5	20.6
Balsam & Marine	27-Jun-18	8:55	307	8.48	0.15	0.59	0.03	14.2	20.7
Oxford St. & Buena Vista STN	27-Jun-18	9:10	305	8.47	0.17	0.45	0.05	15.6	20.7
Merklin Low Reservoir	27-Jun-18	9:30	305	8.53	0.15	0.58	0.02	10.6	19.0
Merklin Reservoir (New)	27-Jun-18	9:40	308	8.54	0.15	0.67	0.04	9.9	18.4
Oxford Reservoir	27-Jun-18	10:00	278	8.50	0.13	0.54	0.05	10.7	18.3
July Week 1									
Everall St. Sampling Station	3-Jul-18	10:30	283	8.12	0.19	0.51	0.02	11.0	21.4
Malabar Sampling Station	3-Jul-18	10:45	276	8.58	0.14	0.47	0.04	15.3	21.2
Chestnut & N. Bluff Sample STN	3-Jul-18	11:00	276	8.51	0.19	0.29	0.04	19.5	21.3
Russell Ave. Sample Station	3-Jul-18	11:15	311	8.72	0.16	0.58	0.04	11.3	21.3
Roper Reservoir	3-Jul-18	11:30	302	8.64	0.17	0.48	0.04	12.9	21.3
Roper PRV	3-Jul-18	11:30	308	8.62	0.11	0.59	0.04	11.1	21.3
Roper Ave. Sample Station	3-Jul-18	11:45	312	8.13	0.12	0.55	0.04	17.4	21.3
Finlay St. Sampling Station	4-Jul-18	8:00	311	8.63	0.09	0.58	0.03		22.3
Stayte Sampling Station	4-Jul-18	8:15	295	8.40	0.15	0.32	0.03		22.3
Balsam & Marine	4-Jul-18	8:30	299	8.63	0.16	0.49	0.02		22.2
Oxford St. & Buena Vista STN	4-Jul-18	8:45	297	8.62	0.13	0.43	0.02		21.9
Merklin Low Reservoir	4-Jul-18	9:30	311	8.57	0.16	0.51	0.05	10.7	21.5
Merklin Reservoir (New)	4-Jul-18	9:15	312	8.13	0.09	0.62	0.05	10.0	21.4
Oxford Reservoir	4-Jul-18	9:00	279	8.65	0.12	0.53	0.04		22.0
July Week 2									
Everall St. Sampling Station	10-Jul-18	7:35	289	8.31	0.16	0.60	0.03	10.3	25.7
Mann Park Sample Station	10-Jul-18	7:50	285	8.30	0.16	0.55	0.03	15.3	27.2
Marine Dr Sample Station	10-Jul-18	8:05	284	8.36	0.20	0.40	0.04	18.8	24.9
Russell Ave. Sample Station	10-Jul-18	8:25	317	8.48	0.16	0.65	0.02	11.1	25.3
Roper Reservoir	10-Jul-18	9:15	307	8.51	0.20	0.52	0.02	13.3	24.5

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Roper PRV	10-Jul-18	9:05	312	8.51	0.15	0.66	0.03	11.1	23.9
Stevens Sample Station	10-Jul-18	8:40	319	8.56	0.14	0.66	0.02	12.8	24.4
Finlay St. Sampling Station	11-Jul-18	7:50	317	8.43	0.17	0.63	0.05	16.6	25.9
Stayte Sampling Station	11-Jul-18	8:10	302	8.39	0.22	0.36	0.04	18.8	26.5
Balsam & Marine	11-Jul-18	8:35	313	8.44	0.16	0.59	0.07	14.2	26.7
Oxford St. & Buena Vista STN	11-Jul-18	8:50	305	8.43	0.16	0.46	0.03	15.7	26.0
Merklin Low Reservoir	11-Jul-18	9:15	316	8.52	0.15	0.56	0.03	10.9	25.7
Merklin Reservoir (New)	11-Jul-18	9:30	317	8.52	0.14	0.62	0.04	9.9	25.6
Oxford Reservoir	11-Jul-18	10:50	283	8.44	0.15	0.57	0.03	10.6	25.7
July Week 3									
Everall St. Sampling Station	17-Jul-18	7:40	284	8.26	0.19	0.60	0.03	10.4	25.8
Malabar Sampling Station	17-Jul-18	8:00	279	8.30	0.13	0.55	0.03	16.5	25.3
Chestnut & N. Bluff Sample STN	17-Jul-18	8:20	280	8.31	0.11	0.44	0.03	20.1	25.5
Russell Ave. Sample Station	17-Jul-18	8:40	318	8.46	0.09	0.64	0.07	10.9	25.8
Roper Reservoir	17-Jul-18	10:55	311	8.50	0.15	0.53	0.03	13.2	25.5
Roper PRV	17-Jul-18	10:45	316	8.52	0.08	0.63	0.02	11.1	25.3
Roper Ave. Sample Station	17-Jul-18	11:20	318	8.54	0.07	0.69	0.06	16.8	25.3
Finlay St. Sampling Station	18-Jul-18	8:00	317	8.40	0.09	0.63	0.04	15.5	25.1
Stayte Sampling Station	18-Jul-18	8:20	302	8.34	0.16	0.33	0.03	19.7	25.4
Balsam & Marine	18-Jul-18	9:25	311	8.44	0.12	0.59	0.03	14.5	25.3
Oxford St. & Buena Vista STN	18-Jul-18	9:45	311	8.47	0.16	0.49	0.04	16.0	24.9
Merklin Low Reservoir	18-Jul-18	10:30	316	8.51	0.09	0.58	0.02	10.9	24.7
Merklin Reservoir (New)	18-Jul-18	10:50	315	8.55	0.10	0.62	0.06	10.0	24.3
Oxford Reservoir	18-Jul-18	11:25	280	8.47	0.21	0.59	0.03	10.1	23.8
July Week 4									
Everall St. Sampling Station	24-Jul-18	8:00	284	8.44	0.09	0.66	0.02	10.0	28.7
Mann Park Sample Station	24-Jul-18	8:20	279	8.32	0.11	0.63	0.04	15.6	29.5
Marine Dr Sample Station	24-Jul-18	8:40	274	8.55	0.14	0.52	0.04	19.5	28.0
Russell Ave. Sample Station	24-Jul-18	9:05	316	8.45	0.07	0.62	0.00	10.7	29.4
Roper Reservoir	24-Jul-18	9:20	306	8.49	0.14	0.60	0.03	12.6	28.7
Roper PRV	24-Jul-18	9:25	311	8.44	0.08	0.63	0.06	11.1	28.6
Stevens Sample Station	24-Jul-18	9:50	305	8.27	0.09	0.63	0.03	12.5	26.8
Finlay St. Sampling Station	24-Jul-18	10:35	314	8.53	0.11	0.64	0.05	15.2	28.6
Stayte Sampling Station	24-Jul-18	10:55	294	8.32	0.13	0.45	0.05	19.4	29.6
Balsam & Marine	25-Jul-18	9:00	311	8.52	0.11	0.65	0.06	14.1	24.4

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Oxford St. & Buena Vista STN	25-Jul-18	9:25	306	8.37	0.11	0.52	0.03	15.4	24.1
Merklin Low Reservoir	25-Jul-18	10:25	310	8.51	0.11	0.56	0.02	11.0	23.9
Merklin Reservoir (New)	25-Jul-18	10:45	310	8.59	0.08	0.58	0.03	9.8	24.0
Oxford Reservoir	25-Jul-18	9:45	274	8.44	0.08	0.60	0.00	10.5	23.7
July Week 5									
Everall St. Sampling Station	31-Jul-18	9:10	283	8.30	0.08	0.58	0.03	10.4	27.0
Malabar Sampling Station	31-Jul-18	9:25	286	8.31	0.10	0.59	0.04	17.0	27.2
Chestnut & N. Bluff Sample STN	31-Jul-18	9:40	284	8.32	0.11	0.40	0.05	24.9	26.5
Russell Ave. Sample Station	31-Jul-18	10:35	318	8.48	0.11	0.59	0.03	11.8	27.0
Roper Reservoir	31-Jul-18	11:05	311	8.52	0.12	0.55	0.03	12.9	26.7
Roper PRV	31-Jul-18	10:55	317	8.53	0.08	0.61	0.03	11.6	26.3
Roper Ave. Sample Station	31-Jul-18	11:25	318	8.54	0.11	0.60	0.05	17.8	26.2
August Week 1									
Finlay St. Sampling Station	1-Aug-18	9:10	309	8.44	0.10	0.62	0.03	12.6	21.6
Stayte Sampling Station	1-Aug-18	9:25	296	8.34	0.14	0.36	0.04	20.0	21.9
Balsam & Marine	1-Aug-18	9:45	305	8.48	0.11	0.59	0.03	14.9	21.4
Oxford St. & Buena Vista STN	1-Aug-18	10:45	308	8.48	0.10	0.45	0.04	16.8	21.9
Merklin Low Reservoir	1-Aug-18	11:10	310	8.55	0.09	0.57	0.02	11.1	21.2
Merklin Reservoir (New)	1-Aug-18	11:20	311	8.59	0.11	0.65	0.03	10.0	21.1
Oxford Reservoir	1-Aug-18	11:40	273	8.52	0.10	0.58	0.02	10.5	20.7
August Week 2									
Everall St. Sampling Station	7-Aug-18	8:20	272	8.23	0.09	0.62	0.03	10.2	25.9
Mann Park Sample Station	7-Aug-18	8:40	277	8.26	0.12	0.59	0.04	15.1	26.4
Marine Dr Sample Station	7-Aug-18	9:00	278	8.27	0.12	0.47	0.04	19.8	26.3
Russell Ave. Sample Station	7-Aug-18	9:30	317	8.35	0.07	0.67	0.04	11.3	26.1
Roper Reservoir	7-Aug-18	10:40	309	8.39	0.17	0.58	0.04	14.0	25.7
Roper PRV	7-Aug-18	10:30	317	8.39	0.13	0.64	0.03	11.5	25.6
Stevens Sample Station	7-Aug-18	10:10	315	8.40	0.09	0.67	0.04	13.0	25.1
Finlay St. Sampling Station	8-Aug-18	8:10	318	8.42	0.09	0.67	0.04	15.0	26.1
Stayte Sampling Station	8-Aug-18	8:27	296	8.39	0.12	0.43	0.04	19.7	26.6
Balsam & Marine	8-Aug-18	8:45	308	8.45	0.15	0.61	0.06	14.1	26.6
Oxford St. & Buena Vista STN	8-Aug-18	9:15	308	8.46	0.12	0.47	0.04	16.3	26.2
Merklin Low Reservoir	8-Aug-18	10:30	317	8.52	0.08	0.62	0.03	11.2	26.1
Merklin Reservoir (New)	8-Aug-18	10:50	318	8.53	0.09	0.63	0.03	10.1	25.8
Oxford Reservoir	8-Aug-18	9:55	283	8.44	0.08	0.57	0.06	10.3	26.0

August Week 3									
Sampling Location	**Date Sampled**	**Time**	**Conductivity**	**pH**	**Turbidity**	**Total CL**	**Free Cl**	**Temp. Colltd**	**Temp. Tested**
Everall St. Sampling Station	14-Aug-18	9:45	273	8.38	0.11	0.62	0.04	10.3	23.8
Malabar Sampling Station	14-Aug-18	10:00	273	8.41	0.09	0.61	0.04	13.8	24.9
Chestnut & N. Bluff Sample STN	14-Aug-18	10:40	278	8.41	0.17	0.36	0.05	20.4	25.3
Russell Ave. Sample Station	14-Aug-18	11:50	279	8.47	0.15	0.59	0.03	11.6	24.5
Roper Reservoir	14-Aug-18	11:15	305	8.57	0.21	0.53	0.05	13.6	25.1
Roper PRV	14-Aug-18		314	8.59	0.15	0.63	0.04	11.5	24.0
Roper Ave. Sample Station	14-Aug-18	11:35	317	8.59	0.10	0.64	0.05	17.2	24.5
Finlay St. Sampling Station	15-Aug-18	9:30	317	8.47	0.18	0.63	0.04	16.9	23.7
Stayte Sampling Station	15-Aug-18	10:00	292	8.41	0.14	0.35	0.03	20.1	24.3
Balsam & Marine	15-Aug-18	10:30	303	8.48	0.17	0.61	0.05	14.5	23.1
Oxford St. & Buena Vista STN	15-Aug-18	10:50	307	8.49	0.12	0.45	0.04	16.4	22.6
Merklin Low Reservoir	15-Aug-18	11:10	316	8.58	0.16	0.60	0.02	11.2	21.5
Merklin Reservoir (New)	15-Aug-18	11:20	313	8.59	0.09	0.67	0.02	10.0	21.5
Oxford Reservoir	15-Aug-18	12:00	278	8.53	0.11	0.54	0.02	10.2	21.8
August Week 4									
Everall St. Sampling Station	21-Aug-18	9:10	272	8.30	0.08	0.62	0.05	10.2	25.4
Mann Park Sample Station	21-Aug-18	9:25	276	8.32	0.09	0.59	0.04	15.0	25.6
Marine Dr Sample Station	21-Aug-18	9:45	279	8.36	0.13	0.48	0.04	18.8	26.0
Russell Ave. Sample Station	21-Aug-18	10:25	281	8.40	0.11	0.62	0.04	11.7	25.6
Roper Reservoir	21-Aug-18	10:55	304	8.50	0.18	0.54	0.05	13.0	25.4
Roper PRV	21-Aug-18	10:40	315	8.53	0.14	0.65	0.06	11.3	25.2
Stevens Sample Station	21-Aug-18	11:15	316	8.55	0.09	0.66	0.04	13.0	25.1
Finlay St. Sampling Station	22-Aug-18	9:15	315	8.42	0.11	0.63	0.04	15.5	24.7
Stayte Sampling Station	22-Aug-18	9:35	291	8.39	0.16	0.35	0.03	19.6	24.9
Balsam & Marine	22-Aug-18	9:50	306	8.48	0.15	0.58	0.04	14.3	24.9
Oxford St. & Buena Vista STN	22-Aug-18	11:45	303	8.46	0.09	0.43	0.02	15.9	24.4
Merklin Low Reservoir	22-Aug-18	10:40	313	8.55	0.09	0.59	0.05	11.2	23.8
Merklin Reservoir (New)	22-Aug-18	11:00	315	8.58	0.08	0.66	0.04	10.0	23.9
Oxford Reservoir	22-Aug-18	11:25	274	8.49	0.09	0.55	0.03	10.3	24.2
August Week 5 (with Metals)									
Everall St. Sampling Station	28-Aug-18	9:25	259	8.31	0.10	0.64	0.03	10.1	25.2
Malabar Sampling Station	28-Aug-18	9:40	262	8.36	0.10	0.64	0.06	12.5	25.3
Chestnut & N. Bluff Sample STN	28-Aug-18	10:10	263	8.32	0.12	0.37	0.04	19.7	24.9

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Russell Ave. Sample Station	28-Aug-18	10:45	262	8.40	0.11	0.64	0.03	10.7	24.9
Roper Reservoir	28-Aug-18	11:35	296	8.43	0.15	0.52	0.03	13.0	24.5
Roper PRV	28-Aug-18		306	8.46	0.16	0.60	0.04	11.2	24.1
Roper Ave. Sample Station	28-Aug-18	11:05	309	8.46	0.12	0.59	0.03	17.1	24.9
Finlay St. Sampling Station	29-Aug-18	9:25	308	8.38	0.10	0.56	0.02	16.7	23.9
Stayte Sampling Station	29-Aug-18	9:46	278	8.37	0.14	0.36	0.03	18.6	24.1
Balsam & Marine	29-Aug-18	10:35	301	8.44	0.08	0.58	0.06	14.1	23.9
Oxford St. & Buena Vista STN	29-Aug-18	10:55	295	8.46	0.17	0.40	0.04	15.7	23.6
Merklin Low Reservoir	29-Aug-18	11:15	314	8.51	0.10	0.55	0.03	13.2	22.6
Merklin Reservoir (New)	29-Aug-18	11:30	317	8.53	0.09	0.64	0.04	10.0	22.8
Oxford Reservoir	29-Aug-18	12:10	262	8.52	0.09	0.59	0.03	10.1	23.4
September Week 1									
Everall St. Sampling Station	4-Sep-18	9:00	266	8.35	0.11	0.61	0.02	10.0	21.8
Mann Park Sample Station	4-Sep-18	9:20	268	8.40	0.11	0.56	0.04	14.7	21.7
Marine Dr Sample Station	4-Sep-18	9:50	269	8.43	0.14	0.42	0.03	18.1	22.0
Russell Ave. Sample Station	4-Sep-18	10:30	268	8.45	0.10	0.60	0.03	10.9	22.0
Roper Reservoir	4-Sep-18	11:40	293	8.54	0.15	0.54	0.03	12.6	21.8
Roper PRV	4-Sep-18	11:30	298	8.53	0.11	0.63	0.03	11.6	21.4
Stevens Sample Station	4-Sep-18	11:00	314	8.57	0.11	0.65	0.05	12.8	21.4
Finlay St. Sampling Station	5-Sep-18	9:25	304	8.43	0.13	0.60	0.05	16.4	21.9
Stayte Sampling Station	5-Sep-18	9:40	285	8.42	0.17	0.33	0.03	18.8	23.0
Balsam & Marine	5-Sep-18	10:35	302	8.49	0.11	0.60	0.04	13.9	22.6
Oxford St. & Buena Vista STN	5-Sep-18	10:00	295	8.48	0.17	0.46	0.04	15.6	22.4
Merklin Low Reservoir	5-Sep-18	10:50	315	8.55	0.11	0.59	0.02	11.2	22.3
Merklin Reservoir (New)	5-Sep-18	11:05	315	8.58	0.10	0.66	0.04	10.0	22.1
Oxford Reservoir	5-Sep-18	11:50	270	8.54	0.11	0.62	0.04	10.0	21.3
September Week 2									
Everall St. Sampling Station	12-Sep-18	8:50	308	8.54	0.15	0.70	0.03	9.8	24.8
Malabar Sampling Station	11-Sep-18	9:05	277	8.48	0.11	0.65	0.01	12.9	27.1
Chestnut & N. Bluff Sample STN	11-Sep-18	9:25	277	8.42	0.14	0.24	0.01	19.5	27.8
Russell Ave. Sample Station	12-Sep-18	9:05	276	8.52	0.12	0.65	0.03	10.7	26.0
Roper Reservoir	11-Sep-18	10:30	290	8.39	0.16	0.57	0.05	12.3	24.7
Roper PRV	11-Sep-18	9:55	297	8.61	0.14	0.60	0.04	11.5	25.8
Roper Ave. Sample Station	11-Sep-18	10:40	308	8.63	0.15	0.56	0.00	16.7	27.3
Finlay St. Sampling Station	12-Sep-18	9:30	303	8.61	0.18	0.48	0.02	18.1	23.7

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Stayte Sampling Station	12-Sep-18	9:50	285	8.60	0.15	0.67	0.00	18.4	26.3
Balsam & Marine	11-Sep-18	11:00	283	8.61	0.11	0.31	0.02	13.8	25.7
Oxford St. & Buena Vista STN	12-Sep-18	10:55	277	8.61	0.14	0.53	0.05	15.5	23.8
Merklin Low Reservoir	11-Sep-18	11:25	308	8.64	0.12	0.57	0.03	11.6	24.8
Merklin Reservoir (New)	12-Sep-18	11:10	311	8.66	0.13	0.64	0.01	10.0	24.2
Oxford Reservoir	12-Sep-18	11:30	275	8.70	0.09	0.63	0.04	10.0	25.0
September Week 3									
Everall St. Sampling Station	18-Sep-18	9:15	272	8.25	0.11	0.65	0.02	9.9	21.5
Mann Park Sample Station	18-Sep-18	9:30	271	8.28	0.13	0.61	0.02	14.4	21.4
Marine Dr Sample Station	18-Sep-18	9:50	276	8.30	0.19	0.41	0.03	17.4	21.8
Russell Ave. Sample Station	18-Sep-18	10:50	274	8.30	0.14	0.64	0.02	10.7	21.0
Roper Reservoir	18-Sep-18	11:20	291	8.37	0.16	0.53	0.02	12.1	20.9
Roper PRV	18-Sep-18	11:05	291	8.35	0.10	0.63	0.02	11.3	21.2
Stevens Sample Station	18-Sep-18	11:40	316	8.37	0.14	0.61	0.04	12.8	21.4
Finlay St. Sampling Station	19-Sep-18	9:45	312	8.36	0.19	0.50	0.03	17.9	21.6
Stayte Sampling Station	19-Sep-18	10:00	282	8.28	0.15	0.37	0.02	17.2	22.0
Balsam & Marine	19-Sep-18	11:20	289	8.37	0.14	0.57	0.02	11.2	21.9
Oxford St. & Buena Vista STN	19-Sep-18	11:35	283	8.36	0.14	0.41	0.04	15.1	22.2
Merklin Low Reservoir	19-Sep-18	10:40	318	8.45	0.11	0.57	0.04	11.2	21.7
Merklin Reservoir (New)	19-Sep-18	11:05	318	8.45	0.14	0.62	0.04	9.9	21.8
Oxford Reservoir	19-Sep-18	11:50	273	8.41	0.13	0.61	0.03	10.0	21.5
September Week 4									
Everall St. Sampling Station	25-Sep-18	8:55	275	8.26	0.11	0.69	0.02	9.8	24.9
Malabar Sampling Station	25-Sep-18	9:17	276	8.30	0.12	0.68	0.03	12.8	25.8
Chestnut & N. Bluff Sample STN	25-Sep-18	9:40	263	8.28	0.15	0.17	0.03	17.6	24.6
Russell Ave. Sample Station	25-Sep-18	10:50	275	8.36	0.12	0.68	0.02	10.5	23.9
Roper Reservoir	25-Sep-18	12:00	288	8.44	0.17	0.61	0.03	11.7	24.5
Roper PRV	25-Sep-18	11:50	302	8.46	0.15	0.63	0.02	11.1	24.8
Roper Ave. Sample Station	25-Sep-18	11:35	303	8.50	0.16	0.59	0.04	15.9	23.3
Finlay St. Sampling Station	26-Sep-18	8:45	308	8.34	0.19	0.51	0.03	17.2	23.1
Stayte Sampling Station	26-Sep-18	9:00	281	8.24	0.17	0.39	0.03	16.6	23.3
Balsam & Marine	26-Sep-18	9:15	281	8.33	0.14	0.56	0.04	13.0	22.8
Oxford St. & Buena Vista STN	26-Sep-18	11:25	282	8.38	0.14	0.56	0.05	14.0	23.0
Merklin Low Reservoir	26-Sep-18	9:55	315	8.43	0.14	0.55	0.04	11.3	22.7
Merklin Reservoir (New)	26-Sep-18	10:10	316	8.44	0.15	0.66	0.05	10.0	23.0

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Oxford Reservoir	26-Sep-18	11:00	272	8.40	0.11	0.68	0.02	10.3	22.7
October Week 1									
Everall St. Sampling Station	2-Oct-18	9:00	272	8.00	0.13	0.63	0.02	10.1	18.8
Malabar Sampling Station	2-Oct-18	9:20	270	8.19	0.13	0.58	0.02	14.6	18.1
Chestnut & N. Bluff Sample STN	2-Oct-18	9:40	272	8.24	0.18	0.45	0.03	15.8	18.0
Russell Ave. Sample Station	2-Oct-18	10:00	271	8.28	0.11	0.62	0.03	10.9	17.7
Roper Reservoir	2-Oct-18	10:20	300	8.27	0.18	0.52	0.02	12.1	17.5
Roper PRV	2-Oct-18	10:30	289	8.35	0.12	0.57	0.02	11.2	17.6
Roper Ave. Sample Station	2-Oct-18	10:50	313	8.35	0.15	0.54	0.03	15.4	17.9
Finlay St. Sampling Station	3-Oct-18	9:00	310	8.11	0.17	0.48	0.02	16.1	17.6
Stayte Sampling Station	3-Oct-18	9:20	280	8.16	0.19	0.31	0.02	14.6	16.5
Balsam & Marine	3-Oct-18	9:40	279	8.20	0.15	0.55	0.03	14.7	13.0
Oxford St. & Buena Vista STN	3-Oct-18	10:00	276	8.21	0.14	0.51	0.03	14.8	13.8
Merklin Low Reservoir	3-Oct-18	8:30	314	8.30	0.08	0.61	0.02	14.8	9.9
Merklin Reservoir (New)	3-Oct-18	8:45	318	8.33	0.10	0.57	0.02	14.7	10.0
Oxford Reservoir	3-Oct-18	10:20	272	8.22	0.14	0.64	0.02	14.8	8.0
October Week 2									
Everall St. Sampling Station	9-Oct-18	9:25	272	8.24	0.12	0.69	0.04	9.7	19.7
Malabar Sampling Station	9-Oct-18	9:45	275	8.30	0.14	0.69	0.03	11.3	20.4
Chestnut & N. Bluff Sample STN	9-Oct-18	10:00	274	8.26	0.19	0.21	0.04	15.9	20.3
Russell Ave. Sample Station	9-Oct-18	10:40	274	8.34	0.12	0.69	0.03	10.4	20.3
Roper Reservoir	9-Oct-18	11:20	293	8.43	0.17	0.58	0.02	10.9	20.5
Roper PRV	9-Oct-18	11:10	296	8.44	0.13	0.65	0.02	10.6	20.4
Roper Ave. Sample Station	9-Oct-18	10:55	310	8.47	0.12	0.57	0.03	14.3	20.5
Finlay St. Sampling Station	10-Oct-18	9:05	312	8.28	0.14	0.51	0.04	15.9	20.2
Stayte Sampling Station	10-Oct-18	9:25	285	8.20	0.16	0.36	0.02	14.9	19.7
Balsam & Marine	10-Oct-18	9:45	282	8.26	0.14	0.61	0.03	12.2	20.0
Oxford St. & Buena Vista STN	10-Oct-18	12:00	281	8.27	0.16	0.55	0.02	13.0	19.9
Merklin Low Reservoir	10-Oct-18	10:30	315	8.34	0.11	0.55	0.03	11.2	20.3
Merklin Reservoir (New)	10-Oct-18	10:45	313	8.36	0.12	0.62	0.03	9.8	20.1
Oxford Reservoir	10-Oct-18	11:20	274	8.27	0.12	0.67	0.02	9.9	19.8
October Week 3									
Everall St. Sampling Station	16-Oct-18	8:30	280	8.26	0.13	0.69	0.02	9.9	22.7
Mann Park Sample Station	16-Oct-18	8:50	275	8.23	0.15	0.54	0.02	12.6	19.1

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Marine Dr Sample Station	16-Oct-18	9:10	280	8.29	0.19	0.67	0.00	14.4	20.5
Russell Ave. Sample Station	16-Oct-18	9:25	304	8.35	0.13	0.63	0.03	10.1	16.6
Roper Reservoir	16-Oct-18	9:45	298	8.40	0.17	0.57	0.02	10.7	16.2
Roper PRV	16-Oct-18	9:35	310	8.38	0.14	0.61	0.00	10.3	17.7
Stevens Sample Station	16-Oct-18	10:40	308	8.39	0.12	0.61	0.03	11.6	16.8
Finlay St. Sampling Station	16-Oct-18	10:50	322	8.45	0.14	0.53	0.02	15.6	19.7
Stayte Sampling Station	16-Oct-18	11:00	288	8.36	0.16	0.35	0.03	15.0	17.3
Balsam & Marine	16-Oct-18	11:15	303	8.18	0.13	0.58	0.02	12.1	19.6
Oxford St. & Buena Vista STN	16-Oct-18	11:25	281	8.38	0.14	0.50	0.03	13.0	17.0
Merklin Low Reservoir	16-Oct-18	10:15	317	8.41	0.13	0.57	0.02	11.0	20.3
Merklin Reservoir (New)	16-Oct-18	10:25	303	8.44	0.12	0.67	0.02	9.9	17.3
Oxford Reservoir	16-Oct-18	11:40	279	8.35	0.16	0.60	0.01	10.1	18.2
October Week 5									
Everall St. Sampling Station	31-Oct-18	8:30	276	8.22	0.15	0.58	0.03	9.6	19.0
Mann Park Sampling Station	31-Oct-18	9:30	272	8.23	0.17	0.55	0.02	11.8	19.0
Marine Dr. Sample STN	31-Oct-18	9:45	272	8.23	0.19	0.34	0.02	13.4	18.9
Russell Ave. Sample Station	31-Oct-18	10:00	270	8.29	0.16	0.57	0.02	10.6	18.6
Roper Reservoir	31-Oct-18	10:15	302	8.38	0.28	0.48	0.03	10.5	19.9
Roper PRV	31-Oct-18	10:30	291	8.36	0.16	0.59	0.04	10.3	19.9
Roper Ave. Sample Station	31-Oct-18	10:45	306	8.30	0.12	0.58	0.03	11.2	19.7
Finlay St. Sampling Station	31-Oct-18	11:00	311	8.33	0.14	0.53	0.02	14.3	19.8
Stayte Sampling Station	31-Oct-18	11:15	290	8.29	0.17	0.27	0.03	14.1	19.5
Balsam & Marine	31-Oct-18	11:30	300	8.20	0.15	0.52	0.03	11.1	19.9
Oxford St. & Buena Vista STN	31-Oct-18	8:00	279	8.18	0.12	0.47	0.03	12.7	19.8
Merklin Low Reservoir	31-Oct-18	11:45	310	8.26	0.11	0.57	0.02	10.6	19.9
Merklin Reservoir (New)	31-Oct-18	12:00	309	8.25	0.13	0.59	0.02	9.4	20.0
Oxford Reservoir	31-Oct-18	8:15	285	8.20	0.14	0.60	0.03	9.9	18.6
November Week 1									
Everall St. Sampling Station	7-Nov-18	7:40	286	8.18	0.15	0.65	0.04	9.7	15.1
Malabar Sampling Station	7-Nov-18	8:05	287	8.22	0.17	0.61	0.03	11.4	16.3
Chestnut & N. Bluff Sample STN	7-Nov-18	8:25	291	8.22	0.19	0.40	0.02	13.3	16.7
Russell Ave. Sample Station	7-Nov-18	8:40	294	8.30	0.15	0.62	0.03	10.2	16.4
Roper Reservoir	7-Nov-18	9:05	303	8.42	0.19	0.50	0.02	10.3	16.5
Roper PRV	7-Nov-18	8:55	310	8.44	0.14	0.56	0.02	10.3	16.9
Roper Ave. Sample Station	7-Nov-18	9:30	307	8.48	0.13	0.59	0.05	12.7	15.5

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Finlay St. Sampling Station	7-Nov-18	9:50	313	8.47	0.13	0.56	0.03	13.8	16.4
Stayte Sampling Station	7-Nov-18	11:23	302	8.38	0.20	0.36	0.03	13.5	16.6
Balsam & Marine	7-Nov-18	11:38	294	8.42	0.16	0.57	0.03	11.5	16.1
Oxford St. & Buena Vista STN	7-Nov-18	11:53	294	8.43	0.18	0.52	0.02	12.1	16.1
Merklin Low Reservoir	7-Nov-18	10:40	309	8.53	0.13	0.58	0.03	10.5	15.8
Merklin Reservoir (New)	7-Nov-18	10:54	314	8.52	0.13	0.61	0.00	9.7	16.8
Oxford Reservoir	7-Nov-18	12:15	281	8.38	0.14	0.64	0.02	10.1	15.2
November Week 2									
Everall St. Sampling Station	13-Nov-18	7:55	278	8.25	0.13	0.62	0.02	9.5	14.8
Mann Park Sample Station	13-Nov-18	8:10	282	8.25	0.14	0.58	0.02	11.1	15.6
Marine Dr Sample Station	13-Nov-18	8:30	286	8.29	0.18	0.47	0.03	11.1	16.7
Russell Ave. Sample Station	13-Nov-18	8:50	290	8.36	0.12	0.63	0.05	9.7	15.5
Roper Reservoir	13-Nov-18	9:15	304	8.43	0.18	0.51	0.03	9.7	15.8
Roper PRV	13-Nov-18	9:05	313	8.43	0.13	0.64	0.03	9.8	16.3
Stevens Sample Station	13-Nov-18	11:00	314	8.44	0.46	0.66	0.03	10.3	16.6
Finlay St. Sampling Station	13-Nov-18	9:40	314	8.44	0.14	0.56	0.03	12.3	17.0
Stayte Sampling Station	13-Nov-18	11:20	296	8.35	0.17	0.33	0.02	12.3	15.8
Balsam & Marine	13-Nov-18	11:35	293	8.38	0.14	0.56	0.04	10.7	15.8
Oxford St. & Buena Vista STN	13-Nov-18	11:50	295	8.36	0.15	0.52	0.03	11.2	16.9
Merklin Low Reservoir	13-Nov-18	10:20	306	8.48	0.12	0.50	0.05	10.4	15.9
Merklin Reservoir (New)	13-Nov-18	10:37	313	8.48	0.15	0.67	0.03	9.5	16.3
Oxford Reservoir	13-Nov-18	12:05	282	8.33	0.12	0.62	0.03	9.9	16.6
November Week 3									
Everall St. Sampling Station	20-Nov-18	9:50	275	8.25	0.15	0.65	0.02	9.2	17.4
Malabar Sampling Station	20-Nov-18	9:55	280	8.30	0.20	0.61	0.05	10.3	19.4
Marine Dr Sample Station	20-Nov-18	10:05	283	8.30	0.25	0.25	0.03	11.5	18.1
Russell Ave. Sample Station	20-Nov-18	10:15	312	8.48	0.18	0.63	0.04	9.5	17.8
Roper Reservoir	20-Nov-18	12:10	303	8.48	0.21	0.49	0.02	9.2	18.1
Roper PRV	20-Nov-18	12:05	306	8.50	0.15	0.62	0.03	9.6	16.8
Roper Ave. Sample Station	20-Nov-18	10:55	318	8.53	0.16	0.58	0.02	10.6	18.6
Finlay St. Sampling Station	21-Nov-18	8:50	313	8.33	0.21	0.51	0.00	11.4	28.3
Stayte Sampling Station	21-Nov-18	8:56	298	8.32	0.28	0.19	0.02	11.5	27.2
Balsam & Marine	21-Nov-18	9:00	288	8.36	0.27	0.51	0.02	10.2	24.2
Oxford St. & Buena Vista STN	21-Nov-18	9:10	290	8.39	0.30	0.41	0.04	11.0	26.3
Merklin Low Reservoir	21-Nov-18	10:40	318	8.52	0.15	0.55	0.00	9.5	25.8

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Merklin Reservoir (New)	21-Nov-18	10:30	314	8.55	0.17	0.60	0.04	9.5	22.0
Oxford Reservoir	21-Nov-18	9:20	285	8.38	0.16	0.46	0.03	9.9	26.2
November Week 4									
Everall St. Sampling Station	27-Nov-18	8:30	274	8.27	0.20	0.63	0.05	9.8	13.5
Mann Park Sample Station	27-Nov-18	8:40	275	8.35	0.23	0.56	0.06	10.0	13.3
Marine Dr Sample Station	27-Nov-18	9:05	273	8.39	0.32	0.37	0.06	9.8	13.5
Russell Ave. Sample Station	27-Nov-18	9:25	283	8.48	0.18	0.60	0.03	9.8	13.8
Roper Reservoir	27-Nov-18	9:55	295	8.58	0.26	0.49	0.04	9.7	13.6
Roper PRV	27-Nov-18	10:00	307	8.61	0.23	0.61	0.03	9.8	14.0
Stevens Sample Station	27-Nov-18	10:45	302	8.59	0.16	0.59	0.02	10.2	14.5
Finlay St. Sampling Station	28-Nov-18	8:30	313	8.69	0.23	0.54	0.02	11.1	16.5
Stayte Sampling Station	28-Nov-18	8:40	292	8.69	0.24	0.37	0.02	11.1	16.4
Balsam & Marine	28-Nov-18	8:50	279	8.60	0.28	0.55	0.02	10.5	16.6
Oxford St. & Buena Vista STN	28-Nov-18	8:15	282	8.82	0.19	0.49	0.00	11.4	15.5
Merklin Low Reservoir	28-Nov-18	8:00	309	8.68	0.14	0.53	0.02	9.8	15.5
Merklin Reservoir (New)	28-Nov-18	8:10	310	8.79	0.20	0.61	0.01	9.7	15.3
Oxford Reservoir	28-Nov-18	9:15	280	8.68	0.16	0.55	0.00	9.9	16.5
December Week 1									
Everall St. Sampling Station	4-Dec-18	10:25	278	8.16	0.12	0.62	0.02	9.1	22.4
Malabar Sampling Station	4-Dec-18	10:35	281	8.22	0.14	0.59	0.01	10.0	21.7
Chestnut & N. Bluff Sample STN	4-Dec-18	10:45	282	8.25	0.23	0.25	0.01	10.2	23.5
Russell Ave. Sample Station	4-Dec-18	10:55	317	8.43	0.14	0.59	0.03	9.6	20.7
Roper Reservoir	4-Dec-18	11:00	306	8.45	0.18	0.45	0.02	8.9	23.8
Roper PRV	4-Dec-18	11:05	317	8.47	0.12	0.60	0.00	9.4	23.7
Roper Ave. Sample Station	4-Dec-18	11:15	317	8.48	0.15	0.56	0.02	10.5	24.4
Finlay St. Sampling Station	5-Dec-18	9:25	318	8.38	0.16	0.59	0.05	10.1	23.9
Stayte Sampling Station	5-Dec-18	9:55	295	8.30	0.17	0.20	0.02	10.3	22.8
Balsam & Marine	5-Dec-18	11:15	291	8.34	0.13	0.57	0.01	9.5	23.5
Oxford St. & Buena Vista STN	5-Dec-18	11:30	289	8.34	0.10	0.55	0.03	10.0	26.5
Merklin Low Reservoir	5-Dec-18	10:45	317	8.49	0.07	0.53	0.02	9.7	23.0
Merklin Reservoir (New)	5-Dec-18	10:55	318	8.50	0.08	0.66	0.00	9.1	25.6
Oxford Reservoir	5-Dec-18	11:55	281	8.39	0.10	0.66	0.01	9.5	21.2
December Week 2									
Everall St. Sampling Station	11-Dec-18	9:10	274	8.75	0.08	0.64	0.00	9.3	11.7
Mann Park Sample Station	11-Dec-18	9:25	276	8.72	0.12	0.59	0.01	8.4	11.3

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Marine Dr Sample Station	11-Dec-18	9:40	277	8.72	0.16	0.52	0.05	9.2	11.3
Russell Ave. Sample Station	11-Dec-18	9:55	294	8.84	0.13	0.67	0.06	9.1	11.7
Roper Reservoir	11-Dec-18	10:30	299	8.84	0.19	0.62	0.06	8.4	11.7
Roper PRV	11-Dec-18	10:20	313	8.88	0.15	0.67	0.00	9.2	12.1
Stevens Sample Station	11-Dec-18	11:05	313	8.91	0.15	0.66	0.03	9.3	12.7
Finlay St. Sampling Station	12-Dec-18	8:55	317	8.44	0.17	0.62	0.02	9.3	21.2
Stayte Sampling Station	12-Dec-18	9:40	286	8.37	0.14	0.39	0.02	9.0	19.1
Balsam & Marine	12-Dec-18	9:55	289	8.38	0.11	0.59	0.02	9.1	23.1
Oxford St. & Buena Vista STN	12-Dec-18	11:20	286	8.40	0.10	0.54	0.02	9.5	21.3
Merklin Low Reservoir	12-Dec-18	10:45	317	8.52	0.09	0.61	0.01	9.7	22.4
Merklin Reservoir (New)	12-Dec-18	11:00	316	8.55	0.12	0.51	0.00	9.2	21.2
Oxford Reservoir	12-Dec-18	11:40	278	8.38	0.08	0.64	0.03	9.6	22.3
December Week 3									
Everall St. Sampling Station	17-Dec-18	9:15	280	8.17	0.11	0.66	0.03	9.3	23.3
Malabar Sampling Station	19-Dec-18	8:50	279	8.17	0.11	0.63	0.03	9.5	24.2
Chestnut & N. Bluff Sample STN	19-Dec-18	9:05	282	8.19	0.16	0.43	0.02	9.0	24.7
Russell Ave. Sample Station	17-Dec-18	10:45	312	8.33	0.12	0.65	0.03	9.2	22.6
Roper Reservoir	17-Dec-18	11:15	301	8.32	0.17	0.55	0.02	8.6	23.7
Roper PRV	17-Dec-18	11:00	316	8.34	0.11	0.66	0.06	9.4	22.2
Roper Ave. Sample Station	19-Dec-18	10:40	318	8.33	0.15	0.62	0.05	9.1	28.9
Finlay St. Sampling Station	19-Dec-18	9:25	304	8.37	0.16	0.59	0.02	9.4	22.7
Stayte Sampling Station	19-Dec-18	9:40	297	8.29	0.14	0.38	0.03	9.3	24.2
Balsam & Marine	19-Dec-18	9:55	288	8.28	0.14	0.60	0.04	9.5	27.3
Oxford St. & Buena Vista STN	19-Dec-18	11:30	284	8.32	0.11	0.55	0.03	9.8	24.0
Merklin Low Reservoir	19-Dec-18	10:55	319	8.40	0.08	0.63	0.01	9.7	29.1
Merklin Reservoir (New)	19-Dec-18	11:10	315	8.42	0.11	0.68	0.01	9.4	26.1
Oxford Reservoir	19-Dec-18	11:45	273	8.32	0.08	0.67	0.02	9.7	22.6
December Week 4 (With Metals)									
Everall St. Sampling Station	27-Dec-18	8:55	277	8.22	0.11	0.65	0.03	9.3	16.6
Mann Park Sample Station	27-Dec-18	9:10	275	8.26	0.11	0.59	0.04	8.5	16.6
Marine Dr Sample Station	27-Dec-18	9:35	281	8.27	0.22	0.39	0.02	8.0	17.6
Russell Ave. Sample Station	27-Dec-18	10:35	307	8.44	0.11	0.65	0.05	9.0	16.2
Roper Reservoir	27-Dec-18	11:05	304	8.42	0.17	0.38	0.04	8.5	18.4
Roper PRV	27-Dec-18	10:50	312	8.46	0.10	0.64	0.04	9.2	17.3
Stevens Sample Station	27-Dec-18	11:30	314	8.48	0.10	0.63	0.03	9.4	17.1

Sampling Location	Date Sampled	Time	Conductivity	pH	Turbidity	Total CL	Free Cl	Temp. Colltd	Temp. Tested
Finlay St. Sampling Station	28-Dec-18	9:20	318	8.36	0.13	0.61	0.03	9.0	20.8
Stayte Sampling Station	28-Dec-18	9:40	301	8.34	0.13	0.43	0.03	9.0	20.4
Balsam & Marine	28-Dec-18	10:25	280	8.26	0.10	0.61	0.03	9.2	20.7
Oxford St. & Buena Vista STN	28-Dec-18	10:45	283	8.32	0.08	0.52	0.02	9.4	21.4
Merklin Low Reservoir	28-Dec-18	11:05	315	8.46	0.10	0.60	0.04	9.6	21.2
Merklin Reservoir (New)	28-Dec-18	11:20	313	8.45	0.07	0.65	0.03	9.3	21.4
Oxford Reservoir	28-Dec-18	12:05	275	8.30	0.09	0.63	0.03	9.6	19.6

Oxford & Merklin Chlorination Metal Results 2018

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
		mg/L	mg/L	mg/L	mg/L	mg/L	Colour Units	
Nominal Detection Limit		**0.0001**	**0.0005**	**0.00001**	**0.004**	**0.001**	**5**	
Guideline Limit		**0.01**	**1**	**0.01**	**0.3**	**0.05**		**6.5 - 8.5**
Everall Sample Station	02-Jan-18	0.0053	0.0011	0.00004	0.004	0.025	<5	7.90
Malabar Sample Station	02-Jan-18	0.0054	0.0030	0.00029	0.007	0.020	<5	7.95
Chestnut Sample Station	02-Jan-18	0.0053	0.0011	0.00007	0.016	0.022	<5	7.94
Russell Avenue Sample Station	02-Jan-18	0.0080	0.0009	0.000098	0.009	0.12	<5	8.03
Roper PRV	02-Jan-18	0.0078	0.0013	0.00007	0.011	0.11	<5	8.03
Roper Ave Station	03-Jan-18	0.0082	0.0023	0.00063	0.006	0.12	<5	8.00
Finlay Street Station	03-Jan-18	0.0072	0.0008	0.00005	<0.004	0.086	<5	7.99
Stayte Road Station	03-Jan-18	0.0072	0.0026	0.00031	0.008	0.080	<5	8.00
Balsam Station	03-Jan-18	0.0064	0.00099	0.00022	0.005	0.063	<5	7.97
Buena Vista Station	03-Jan-18	0.0070	0.0107	0.00048	0.010	0.092	<5	8.00
Everall Sample Station	09-Jan-18	0.0057	0.0013	0.00006	<0.004	0.021	<5	7.88
Mann Park Station	09-Jan-18	0.0057	0.0064	0.00024	0.008	0.021	<5	7.96
Marine Drive Station	09-Jan-18	0.0056	0.0029	0.00017	0.009	0.017	<5	7.99
Russell Avenue Sample Station	09-Jan-18	0.0086	0.0011	0.00010	<0.004	0.11	<5	8.05
Roper PRV	09-Jan-18	0.0080	0.0006	0.00005	0.004	0.10	<5	8.05
Stevens Station	10-Jan-18	0.0086	0.0027	0.00011	0.006	0.12	<5	8.07
Finlay Street Station	10-Jan-18	0.0084	0.0008	0.00005	0.008	0.11	<5	8.06
Stayte Road Station	10-Jan-18	0.0073	0.0038	0.00039	0.0097	0.075	<5	8.04
Balsam and Marine Station	10-Jan-18	0.0062	0.00097	0.00018	0.013	0.059	<5	8.00
Oxford & Buena Vista Station	10-Jan-18	0.0064	0.0012	0.00008	0.012	0.087	<5	8.00
Everall Sample Station	16-Jan-18	0.0055	0.0012	<0.00001	<0.004	0.023	<5	7.89
Malabar Sample Station	16-Jan-18	0.0056	0.0029	0.00013	0.008	0.023	<5	7.94
Chestnut Sample Station	16-Jan-18	0.0056	0.0008	<0.00001	0.009	0.023	<5	7.96
Russell Avenue Sample Station	16-Jan-18	0.0082	0.0009	<0.00001	0.008	0.11	<5	7.95
Roper PRV	16-Jan-18	0.0081	<0.0005	<0.00001	0.006	0.11	<5	8.02
Roper Station	16-Jan-18	0.0085	0.0023	0.00022	0.010	0.12	<5	8.00
Finlay Street Station	17-Jan-18	0.0070	0.0006	<0.00001	0.007	0.080	<5	7.84
Stayte Road Station	17-Jan-18	0.0071	0.0032	0.00027	0.009	0.079	<5	7.97

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Balsam and Marine Station	17-Jan-18	0.0073	0.0008	0.00012	0.011	0.080	<5	8.02
Oxford & Buena Vista Station	17-Jan-18	0.0071	0.0009	0.00008	0.013	0.093	<5	8.02
Everall Sample Station	23-Jan-18	0.0053	0.0013	0.00004	<0.004	0.024	<5	7.96
Mann Park Station	23-Jan-18	0.0055	0.0062	0.00016	0.005	0.023	<5	7.98
Marine Drive Station	23-Jan-18	0.0053	0.0031	0.00011	0.011	0.023	<5	8.00
Russell Avenue Sample Station	23-Jan-18	0.0082	0.0020	0.00009	0.008	0.12	<5	8.09
Roper PRV	23-Jan-18	0.0077	0.0013	0.00004	0.007	0.10	<5	8.07
Stevens Station	23-Jan-18	0.0080	0.0025	0.00009	0.007	0.12	<5	8.09
Finlay Street Station	24-Jan-18	0.0095	0.00097	0.00004	0.007	0.096	<5	7.98
Stayte Road Station	24-Jan-18	0.0072	0.0023	0.00026	0.008	0.082	<5	8.01
Balsam and Marine Station	24-Jan-18	0.0062	0.0008	0.00019	0.011	0.061	<5	7.99
Oxford & Buena Vista Station	24-Jan-18	0.0069	0.0009	0.00007	0.010	0.089	<5	8.00
Everall Sample Station	30-Jan-18	0.0058	0.0008	0.00006	<0.004	0.025	<5	7.85
Malabar Sample Station	30-Jan-18	0.0058	0.0024	0.00189	0.009	0.022	<5	7.94
Chestnut Sample Station	30-Jan-18	0.0058	0.0006	0.00012	0.009	0.021	<5	7.96
Russell Avenue Sample Station	30-Jan-18	0.0088	0.0008	0.00012	0.004	0.12	<5	8.05
Roper PRV	30-Jan-18	0.0085	0.0007	0.00005	<0.004	0.11	<5	8.05
Roper Station	30-Jan-18	0.0089	0.0025	0.00030	0.006	0.12	<5	7.93
Finlay Street Station	31-Jan-18	0.0073	0.0008	0.00004	<0.004	0.093	<5	7.97
Stayte Road Station	31-Jan-18	0.0068	0.0024	0.00025	<0.004	0.077	<5	8.01
Balsam and Marine Station	31-Jan-18	0.0058	0.0012	0.00021	<0.004	0.054	<5	7.98
Oxford & Buena Vista Station	31-Jan-18	0.0058	0.0012	0.00008	<0.004	0.077	<5	7.98
Everall Sample Station	06-Feb-18	0.0057	0.0006	0.00005	0.004	0.026	<5	7.91
Malabar Sample Station	06-Feb-18	0.0057	0.0027	0.00030	0.007	0.021	<5	7.98
Chestnut Sample Station	06-Feb-18	0.0057	0.0005	0.00009	0.009	0.022	<5	8.00
Russell Avenue Sample Station	06-Feb-18	0.0087	0.0009	0.00012	0.005	0.13	<5	8.09
Roper PRV	06-Feb-18	0.0082	0.0012	0.00008	0.004	0.11	<5	8.07
Roper Station	06-Feb-18	0.0086	0.0022	0.00031	0.008	0.13	<5	8.09
Finlay Street Station	06-Feb-18	0.0069	0.0008	0.00003	0.008	0.073	<5	8.10
Stayte Road Station	07-Feb-18	0.0071	0.0023	0.00025	0.009	0.074	<5	8.01
Balsam and Marine Station	07-Feb-18	0.0060	0.00096	0.00016	0.0097	0.055	<5	8.02
Oxford & Buena Vista Station	07-Feb-18	0.0077	0.0012	0.000095	0.012	0.10	<5	8.06
Everall Sample Station	13-Feb-18	0.0055	0.0008	0.00007	0.005	0.025	<5	7.79

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Mann Park Station	13-Feb-18	0.0055	0.0057	0.00017	0.004	0.025	<5	7.90
Marine Drive Station	13-Feb-18	0.0055	0.0023	0.00015	0.008	0.025	<5	7.93
Russell Avenue Sample Station	13-Feb-18	0.0085	0.0008	0.00009	0.007	0.14	<5	8.01
Roper PRV	13-Feb-18	0.0079	0.0015	0.00008	0.007	0.12	<5	8.01
Stevens Station	13-Feb-18	0.0085	0.0022	0.00012	0.006	0.14	<5	8.02
Finlay Street Station	14-Feb-18	0.0077	0.0006	0.00004	0.004	0.096	<5	7.87
Stayte Road Station	14-Feb-18	0.0072	0.0020	0.00024	0.005	0.077	<5	8.00
Balsam and Marine Station	14-Feb-18	0.0059	0.0009	0.00016	<0.004	0.053	<5	7.88
Oxford & Buena Vista Station	14-Feb-18	0.0068	0.0008	0.00008	0.007	0.089	<5	8.00
Everall Sample Station	20-Feb-18	0.0054	0.0016	0.00006	0.007	0.026	<5	7.72
Malabar Sample Station	20-Feb-18	0.0054	0.0030	0.00024	0.008	0.021	<5	7.86
Chestnut Sample Station	20-Feb-18	0.0054	0.0011	0.00016	0.013	0.022	<5	7.88
Russell Avenue Sample Station	20-Feb-18	0.0068	0.00099	0.00009	0.005	0.079	<5	7.93
Roper PRV	20-Feb-18	0.079	<0.0005	0.00004	0.006	0.12	<5	7.97
Roper Station	20-Feb-18	0.0082	0.0019	0.00029	0.009	0.13	<5	7.99
Finlay Street Station	20-Feb-18	0.0069	0.0017	0.00005	0.008	0.082	<5	7.95
Stayte Road Station	21-Feb-18	0.0076	0.0034	0.00035	0.009	0.086	<5	7.81
Balsam and Marine Station	21-Feb-18	0.0069	0.0013	0.00021	0.008	0.071	<5	7.86
Oxford & Buena Vista Station	21-Feb-18	0.0079	0.0012	0.000095	0.011	0.11	<5	7.95
Everall Sample Station	27-Feb-18	0.0061	0.0009	0.00006	<0.004	0.036	<5	7.81
Mann Park Station	27-Feb-18	0.0059	0.0057	0.00022	<0.004	0.030	<5	7.93
Marine Drive Station	27-Feb-18	0.0059	0.0029	0.00014	0.007	0.023	<5	7.96
Russell Avenue Sample Station	27-Feb-18	0.0086	0.0011	0.00009	0.004	0.12	<5	7.94
Roper PRV	27-Feb-18	0.0083	0.0005	0.00004	0.004	0.11	<5	8.03
Stevens Station	27-Feb-18	0.0072	0.0024	0.00011	<0.004	0.083	<5	8.01
Finlay Street Station	28-Feb-18	0.0079	0.0025	0.00006	0.008	0.11	<5	7.89
Stayte Road Station	28-Feb-18	0.0074	0.0029	0.00024	0.008	0.087	<5	7.98
Balsam and Marine Station	28-Feb-18	0.0068	0.0013	0.00020	0.007	0.075	<5	8.00
Oxford & Buena Vista Station	28-Feb-18	0.0069	0.0012	0.000097	0.011	0.10	<5	7.99
Everall Sample Station	06-Mar-18	0.0065	0.0010	0.00012	0.004	0.039	<5	7.73
Malabar Sample Station	06-Mar-18	0.0063	0.0028	0.00024	0.012	0.030	<5	7.89
Chestnut Sample Station	06-Mar-18	0.0062	0.0012	0.00010	0.009	0.026	<5	7.94
Russell Avenue Sample Station	06-Mar-18	0.0078	0.0012	0.00009	0.004	0.093	<5	7.98

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Roper PRV	06-Mar-18	0.0084	0.0008	0.00005	0.005	0.11	<5	8.01
Roper Station	06-Mar-18	0.0089	0.0036	0.00040	0.008	0.13	<5	8.01
Finlay Street Station	06-Mar-18	0.0085	0.00096	0.00006	0.006	0.12	<5	8.01
Stayte Road Station	06-Mar-18	0.0078	0.0030	0.00023	0.008	0.086	<5	7.99
Balsam and Marine Station	06-Mar-18	0.0064	0.0012	0.00019	0.008	0.060	<5	7.94
Oxford & Buena Vista Station	06-Mar-18	0.0070	0.0012	0.00011	0.010	0.095	<5	7.97
Everall Sample Station	13-Mar-18	0.0061	0.0008	0.00011	0.007	0.042	<5	7.86
Mann Park Station	13-Mar-18	0.0060	0.0057	0.00017	0.004	0.029	<5	7.97
Marine Drive Station	13-Mar-18	0.0060	0.0025	0.00019	0.012	0.026	<5	8.00
Russell Avenue Sample Station	13-Mar-18	0.0087	0.0010	0.000096	0.006	0.13	<5	8.08
Roper PRV	13-Mar-18	0.0086	0.0007	0.00003	0.005	0.12	<5	8.09
Stevens Station	13-Mar-18	0.0074	0.0027	0.00017	0.006	0.097	<5	8.06
Finlay Street Station	14-Mar-18	0.0084	0.00095	0.00005	<0.004	0.11	<5	7.83
Stayte Road Station	14-Mar-18	0.0076	0.0029	0.00023	0.004	0.081	<5	7.95
Balsam and Marine Station	14-Mar-18	0.0066	0.0012	0.00022	0.006	0.066	<5	7.95
Oxford & Buena Vista Station	14-Mar-18	0.0066	0.0010	0.00007	0.007	0.092	<5	7.97
Everall Sample Station	20-Mar-18	0.0058	0.0010	0.00012	0.004	0.035	<5	7.83
Malabar Sample Station	20-Mar-18	0.0058	0.0025	0.00021	0.009	0.027	<5	7.94
Chestnut Sample Station	20-Mar-18	0.0058	0.0013	0.00011	0.010	0.026	<5	7.97
Russell Avenue Sample Station	20-Mar-18	0.0059	0.0011	0.000097	<0.004	0.032	<5	7.98
Roper PRV	20-Mar-18	0.0075	0.0009	0.00004	0.005	0.088	<5	8.03
Roper Ave Station	20-Mar-18	0.0085	0.0027	0.00029	0.008	0.12	<5	8.08
Finlay Street Station	20-Mar-18	0.0069	0.0013	0.00005	0.006	0.074	<5	8.03
Stayte Road Station	20-Mar-18	0.0067	0.0032	0.00024	0.007	0.068	<5	8.03
Balsam and Marine Station	20-Mar-18	0.0061	0.0012	0.00024	0.008	0.052	<5	8.00
Oxford & Buena Vista Station	20-Mar-18	0.0061	0.0011	0.00009	0.009	0.072	<5	8.04
Everall Sample Station	27-Mar-18	0.0058	0.0009	0.00013	<0.004	0.033	<5	7.78
Mann Park Station	27-Mar-18	0.0056	0.0054	0.00019	<0.004	0.025	<5	8.15
Marine Drive Station	27-Mar-18	0.0056	0.0021	0.00013	0.007	0.024	<5	8.18
Russell Avenue Sample Station	27-Mar-18	0.0058	0.0010	0.00011	<0.004	0.030	<5	8.24
Roper Reservoir	27-Mar-18	0.0070	0.00099	0.00006	0.007	0.072	<5	8.29
Roper PRV	27-Mar-18	0.0076	0.0011	0.00005	0.006	0.091	<5	8.31
Stevens Station	27-Mar-18	0.0083	0.0023	0.00013	0.004	0.11	<5	8.33

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Finlay Street Station	27-Mar-18	0.0064	0.0009	0.00006	0.006	0.058	<5	8.29
Stayte Road Station	28-Mar-18	0.0066	0.0028	0.00023	0.006	0.061	<5	8.08
Balsam and Marine Station	28-Mar-18	0.0057	0.0013	0.00030	0.008	0.073	<5	8.04
Oxford & Buena Vista Station	28-Mar-18	0.0058	0.0011	0.00012	0.008	0.084	<5	8.17
Everall Sample Station	04-Apr-18	0.0061	0.0014	0.00014	<0.004	0.13	<5	7.75
Mann Park Station	04-Apr-18	0.0061	0.0048	0.00018	0.004	0.11	<5	7.89
Marine Drive Station	04-Apr-18	0.0062	0.0026	0.00018	0.009	0.076	<5	7.93
Russell Avenue Sample Station	04-Apr-18	0.0089	0.0008	0.00012	0.007	0.14	<5	8.02
Roper PRV	04-Apr-18	0.0085	0.0027	0.00026	0.005	0.14	<5	8.03
Stevens Station	04-Apr-18	0.0076	0.0023	0.00014	0.006	0.13	<5	8.03
Finlay Street Station	04-Apr-18	0.0073	0.0007	0.00005	0.006	0.13	<5	8.02
Stayte Road Station	04-Apr-18	0.0077	0.0023	0.00028	0.011	0.12	<5	8.02
Balsam and Marine Station	04-Apr-18	0.0078	0.0010	0.00027	0.007	0.13	<5	8.02
Oxford & Buena Vista Station	04-Apr-18	0.0071	0.0065	0.00032	0.011	0.13	<5	8.01
Everall Sample Station	24-Apr-18	0.0056	0.0011	0.00012	<0.004	0.033	<5	7.76
Malabar Sample Station	24-Apr-18	0.0058	0.0025	0.00028	0.009	0.053	<5	7.91
Chestnut Sample Station	24-Apr-18	0.0058	0.0013	0.00011	0.009	0.068	<5	7.96
Russell Avenue Sample Station	24-Apr-18	0.0087	0.0008	0.00011	0.005	0.13	<5	8.05
Roper PRV	24-Apr-18	0.0088	0.0007	0.00007	0.005	0.13	<5	8.07
Roper Ave Station	24-Apr-18	0.0087	0.0033	0.00043	0.006	0.13	<5	8.08
Finlay Street Station	24-Apr-18	0.0086	0.0009	0.00008	0.006	0.13	<5	8.08
Stayte Road Station	24-Apr-18	0.0079	0.0029	0.00030	0.0098	0.12	<5	7.90
Balsam and Marine Station	24-Apr-18	0.0081	0.0010	0.00028	0.009	0.11	<5	8.00
Oxford & Buena Vista Station	24-Apr-18	0.0077	0.0008	0.00010	0.011	0.13	<5	8.02
Everall Sample Station	08-May-18	0.0058	0.0015	<0.00001	0.005	0.052	<5	7.80
Mann Park Station	08-May-18	0.0058	0.0064	0.00015	0.004	0.045	<5	7.91
Marine Drive Station	08-May-18	0.0058	0.0036	0.00011	0.006	0.042	<5	7.94
Russell Avenue Sample Station	08-May-18	0.0087	0.0011	0.00002	0.006	0.14	<5	8.04
Roper PRV	08-May-18	0.0086	0.0008	<0.00001	0.005	0.14	<5	8.07
Stevens Station	08-May-18	0.0086	0.0025	0.00008	0.008	0.14	<5	8.08
Finlay Street Station	08-May-18	0.0085	0.0008	<0.00001	0.008	0.14	<5	8.08
Stayte Road Station	08-May-18	0.0076	0.0033	0.00024	0.008	0.11	<5	8.05
Balsam and Marine Station	08-May-18	0.0075	0.0012	0.00024	0.008	0.10	<5	8.05

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Oxford & Buena Vista Station	08-May-18	0.0065	0.0009	0.00003	0.008	0.12	<5	8.03
Everall Sample Station	22-May-18	0.0056	0.0018	0.00010	<0.004	0.068	<5	7.96
Malabar Sample Station	22-May-18	0.0054	0.0031	0.00039	0.007	0.049	<5	7.95
Chestnut Sample Station	22-May-18	0.0055	0.0013	0.00013	0.009	0.046	<5	7.96
Russell Avenue Sample Station	22-May-18	0.0084	0.0011	0.00011	0.007	0.14	<5	8.05
Roper PRV	22-May-18	0.0084	0.0007	0.00005	0.006	0.14	<5	8.06
Roper Ave Station	22-May-18	0.0084	0.0048	0.00063	0.007	0.14	<5	8.07
Finlay Street Station	23-May-18	0.0084	0.0009	0.00006	0.006	0.13	<5	7.84
Stayte Road Station	23-May-18	0.0072	0.0028	0.00031	0.010	0.11	<5	7.96
Balsam and Marine Station	23-May-18	0.0079	0.0009	0.00028	0.007	0.11	<5	8.02
Oxford & Buena Vista Station	23-May-18	0.0071	0.0008	0.00009	0.007	0.12	<5	8.02
Everall Sample Station	05-Jun-18	0.0056	0.0015	0.00010	<0.004	0.049	<5	7.80
Malabar Sample Station	05-Jun-18	0.0055	0.0065	0.00027	<0.004	0.042	<5	7.92
Chestnut Sample Station	05-Jun-18	0.0056	0.0039	0.00029	0.013	0.042	<5	7.96
Russell Avenue Sample Station	05-Jun-18	0.0085	0.0012	0.00012	0.005	0.14	<5	8.05
Roper PRV	05-Jun-18	0.0085	<0.0005	0.00005	0.004	0.14	<5	8.07
Roper Ave Station	05-Jun-18	0.0086	0.0028	0.00019	0.005	0.14	<5	8.08
Finlay Street Station	05-Jun-18	0.0083	0.0008	0.00008	0.006	0.14	<5	8.09
Stayte Road Station	05-Jun-18	0.0071	0.0037	0.00042	0.006	0.095	<5	8.05
Balsam and Marine Station	05-Jun-18	0.0077	0.0008	0.00037	0.008	0.11	<5	8.06
Oxford & Buena Vista Station	05-Jun-18	0.0070	0.0009	0.00018	0.008	0.11	<5	8.04
Everall Sample Station	26-Jun-18	0.0055	0.0012	0.00009	<0.004	0.053	<5	7.78
Malabar Sample Station	26-Jun-18	0.0055	0.0029	0.00035	0.005	0.040	<5	7.88
Chestnut Sample Station	26-Jun-18	0.0055	0.0014	0.00013	0.006	0.050	<5	7.95
Russell Avenue Sample Station	26-Jun-18	0.0084	0.0012	0.00011	0.006	0.13	<5	8.08
Roper PRV	26-Jun-18	0.0082	0.0005	0.00008	0.006	0.13	<5	8.11
Roper Ave Station	26-Jun-18	0.0083	0.0028	0.00045	0.005	0.14	<5	7.97
Finlay Street Station	26-Jun-18	0.0082	0.0008	0.00007	0.006	0.14	<5	8.09
Stayte Road Station	27-Jun-18	0.0067	0.0030	0.00035	0.006	0.092	<5	7.89
Balsam and Marine Station	27-Jun-18	0.0080	0.0010	0.00031	0.007	0.11	<5	8.10
Oxford & Buena Vista Station	27-Jun-18	0.0074	0.0009	0.00014	0.006	0.11	<5	8.15
Everall Sample Station	24-Jul-18	0.0059	0.0013	0.00001	<0.04	0.071	<5	7.77
Mann Park Station	24-Jul-18	0.0059	0.0066	0.00012	<0.04	0.072	<5	7.87

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Marine Drive Station	24-Jul-18	0.0059	0.0051	0.00029	<0.004	0.064	<5	7.95
Russell Avenue Sample Station	24-Jul-18	0.0085	0.0011	0.00002	<0.004	0.13	<5	8.04
Roper PRV	24-Jul-18	0.0085	0.0016	0.00001	0.004	0.13	<5	7.86
Stevens Station	24-Jul-18	0.0086	0.0031	0.00017	0.004	0.13	<5	8.01
Finlay Street Station	24-Jul-18	0.0085	0.0008	<0.00001	<0.004	0.13	<5	8.06
Stayte Road Station	24-Jul-18	0.0069	0.0031	0.00032	0.004	0.100	<5	8.04
Balsam and Marine Station	25-Jul-18	0.0080	0.0011	0.00023	0.005	0.12	<5	7.77
Oxford & Buena Vista Station	25-Jul-18	0.0079	0.0008	0.00012	<0.004	0.093	<5	8.05
Finlay Street Station	29-Aug-18	0.0082	0.0008	0.00009	0.005	0.13	<5	7.91
Stayte Road Station	29-Aug-18	0.0070	0.0034	0.00042	<0.004	0.13	<5	8.07
Balsam and Marine Station	29-Aug-18	0.0079	0.0008	0.00020	<0.004	0.14	<5	8.12
Oxford & Buena Vista Station	29-Aug-18	0.0072	0.0012	0.00009	0.006	0.15	<5	8.11
Everall Sample Station	28-Aug-18	0.0065	0.0015	0.00008	<0.004	0.16	<5	7.95
Malabar Sample Station	28-Aug-18	0.0066	0.0025	0.00035	<0.004	0.15	<5	8.07
Chestnut Sample Station	28-Aug-18	0.0065	0.0010	0.00012	0.006	0.10	<5	8.08
Russell Avenue Sample Station	28-Aug-18	0.0065	0.0010	0.00009	<0.004	0.15	<5	8.11
Roper Reservoir	28-Aug-18	0.0075	0.0014	0.00007	<0.004	0.13	<5	8.14
Roper PRV	28-Aug-18	0.0078	0.0007	0.00006	<0.004	0.13	<5	8.15
Roper Ave Station	28-Aug-18	0.0080	0.0035	0.00065	<0.004	0.13	<5	8.16
Everall Sample Station	25-Sep-18	0.0060	0.0010	0.00006	0.004	0.12	<5	8.11
Malabar Sample Station	25-Sep-18	0.0060	0.0024	0.00032	0.005	0.11	<5	8.09
Chestnut Sample Station	25-Sep-18	0.0061	0.0006	0.00006	0.008	0.10	<5	8.09
Russell Avenue Sample Station	25-Sep-18	0.0059	0.0008	0.00007	0.004	0.11	<5	8.10
Roper PRV	25-Sep-18	0.0072	0.0008	0.00004	0.008	0.12	<5	8.14
Roper Ave Station	25-Sep-18	0.0076	0.0031	0.00045	0.006	0.12	<5	8.16
Finlay Street Station	26-Sep-18	0.0080	0.0006	0.00007	0.009	0.12	<5	8.01
Stayte Road Station	26-Sep-18	0.0062	0.0026	0.00031	0.007	0.12	<5	8.10
Balsam and Marine Station	26-Sep-18	0.0063	0.0010	0.00019	0.007	0.12	<5	8.14
Oxford & Buena Vista Station	26-Sep-18	0.0063	0.0011	0.00006	0.007	0.12	<5	8.16
Everall Sample Station	27-Nov-18	0.0053	0.0010	0.00007	<0.004	0.086	<5	8.02
Mann Park Station	27-Nov-18	0.0051	0.0037	0.00010	<0.004	0.084	<5	8.13
Marine Drive Station	27-Nov-18	0.0051	0.0034	0.00021	<0.004	0.077	<5	8.16
Russell Avenue Sample Station	27-Nov-18	0.0065	0.0008	0.00008	<0.004	0.10	<5	8.19

Sample Location	Date Sampled	Arsenic	Copper	Lead	Iron	Manganese	Colour	pH
Roper Reservoir	27-Nov-18	0.0074	0.0013	0.00004	0.007	0.12	<5	8.23
Roper PRV	27-Nov-18	0.0083	0.0007	0.00002	0.007	0.13	<5	8.24
Stevens Station	27-Nov-18	0.0080	0.0022	0.00012	<0.004	0.13	<5	8.23
Finlay Street Station	28-Nov-18	0.0083	0.0006	0.00007	<0.004	0.13	<5	8.08
Stayte Road Station	28-Nov-18	0.0062	0.0030	0.00026	0.007	0.11	<5	8.13
Balsam and Marine Station	28-Nov-18	0.0056	0.0013	0.00020	<0.004	0.10	<5	8.16
Oxford & Buena Vista Station	28-Nov-18	0.0061	0.0088	0.00031	<0.004	0.10	<5	8.18
Merklin Low Reservoir	28-Nov-18	0.0083	0.0276	0.00008	<0.004	0.14	<5	8.24
Merklin New Reservoir	28-Nov-18	0.0083	<0.0005	0.00004	<0.004	0.13	<5	8.25
Oxford Reservoir	28-Nov-18	0.0052	0.0100	0.00012	0.005	0.091	<5	8.03
Everall Sample Station	27-Dec-18	0.0053	0.0011	0.00005	<0.004	0.075	<5	7.93
Mann Park Station	27-Dec-18	0.0054	0.0033	0.00008	<0.004	0.078	<5	8.04
Marine Drive Station	27-Dec-18	0.0053	00033	0.00017	<0.004	0.075	<5	8.06
Russell Avenue Sample Station	27-Dec-18	0.0083	0.0008	0.00009	<0.004	0.13	<5	8.15
Roper Reservoir	27-Dec-18	0.0073	0.0017	0.00005	<0.004	0.11	<5	8.15
Roper PRV	27-Dec-18	0.0083	0.0010	0.00004	0.005	0.13	<5	8.17
Stevens Station	27-Dec-18	0.0082	0.0024	0.00013	0.005	0.13	<5	8.18
Finlay Street Station	28-Dec-18	0.0085	0.0006	0.00005	0.005	0.13	<5	8.09
Stayte Road Station	28-Dec-18	0.0069	0.0033	0.00024	0.007	0.097	<5	8.10
Balsam and Marine Station	28-Dec-18	0.0059	0.0016	0.00010	<0.004	0.072	<5	8.09
Oxford & Buena Vista Station	28-Dec-18	0.0063	0.0010	0.00005	0.004	0.082	<5	8.11
Merklin Low Reservoir	28-Dec-18	0.0086	0.0323	0.00013	0.004	0.13	<5	8.18
Merklin New Reservoir	28-Dec-18	0.0085	<0.0005	0.00001	<0.004	0.13	<5	8.18
Oxford Reservoir	28-Dec-18	0.0056	0.0090	0.00013	<0.004	0.031	<5	7.99

Annual Samples 2018

Sample	Unit of Measure	Nominal Detection Limit	Guideline Limit	Sample Location								
				Well #1 Oct 17, 2018	Well #2 Oct 17, 2018	Well #3 Oct 17, 2018	Well #6 Oct 17, 2018	Well #7 Oct 17, 2018	Well #8 Oct 17, 2018	Chestnut Stn Oct 17, 2018	Marine Dr Stn Oct 17, 2018	Malabar Stn Oct 17, 2018
Inorganic Nonmetallic Parameters												
Organic Carbon	**mg/L**	**0.5**		<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	1.2
Ammonia - N	**mg/L**	**0.01**		0.02	<0.01	0.06	0.14	0.10	0.12	0.07	0.11	0.12
Metals Extractable												
Aluminum	**mg/L**	**0.001**	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Antimony	**mg/L**	**0.00002**	**0.006**	0.00007	0.00008	0.00006	0.00005	0.00006	0.00005	0.00006	0.00006	0.00007
Arsenic	**mg/L**	**0.0001**	**0.010**	0.0061	0.0039	0.0066	0.0090	0.0086	0.0069	0.0063	0.0064	0.0064
Barium	**mg/L**	**0.0001**	**1**	0.0167	0.0194	0.0182	0.0239	0.0189	0.0186	0.0155	0.0163	0.0167
Boron	**mg/L**	**0.002**	**5**	0.018	0.018	0.015	0.038	0.024	0.014	0.016	0.002	0.015
Cadmium	**mg/L**	**0.00001**	**0.005**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chromium	**mg/L**	**0.00005**	**0.05**	0.00030	0.00780	<0.00005	<0.00005	<0.00005	<0.00005	0.00015	0.00008	0.00018
Copper	**mg/L**	**0.0005**	**1.0**	0.0027	0.0013	0.00060	0.0012	<0.0005	0.0012	0.0008	0.0031	0.0025
Lead	**mg/L**	**0.00001**	**0.01**	0.00016	0.00013	0.00010	0.00004	0.00043	0.00003	0.00010	0.00031	0.00037
Selenium	**mg/L**	**0.0002**	**0.05**	0.0023	0.0130	0.0003	<0.0002	<0.0002	0.0003	0.0019	0.0019	0.0021
Uranium	**mg/L**	**0.00001**	**0.02**	0.00014	0.00027	0.00009	0.00015	0.00013	0.00011	0.00013	0.00013	0.00013
Vanadium	**mg/L**	**0.00005**		0.00271	0.00366	0.00300	0.00255	0.00231	0.00252	0.0026	0.00261	0.00259
Zinc	**mg/L**	**0.0005**	**5.0**	0.0040	0.0020	0.0012	0.0020	<0.0005	0.0007	0.0008	0.0019	0.0028
Metals Total												
Mercury	**mg/L**	**0.00001**	**0.001**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Physical and Aggregate Properties												
Colour	**Colour Units**	**5**		<5	<5	<5	<5	<5	<5	<5	<5	<5
Turbidity	**NTU**	**0.02**		<0.05	2.6	<0.05	<0.05	<0.05	0.05	0.11	0.09	0.06
Routine Water												
pH			**6.5-8.5**	7.83	7.82	7.83	7.92	7.90	7.86	7.79	7.80	7.79
Electrical Conductivity		**1**		263	306	242	315	265	240	270	269	272
Calcium	**mg/L**	**0.01**		23	29	21	24	23	23	23	23	23
Iron	**mg/L**	**0.004**	**0.3**	<0.004	0.14	0.010	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Mangesium	**mg/L**	**0.02**		9.4	13	8.6	10	9.6	9.2	9.5	9.5	9.6
Manganese	**mg/L**	**0.001**	**0.05**	0.0039	0.018	0.19	0.15	0.12	0.19	0.1	0.097	0.083
Potassium	**mg/L**	**0.04**	**200**	3.0	3.1	2.8	3.8	3.5	3.0	3.0	3.0	3.0
Silicon	**mg/L**	**0.005**		10	10	10	10	10	10	10	10	10
Sodium	**mg/L**	**0.1**		15	13	14	24	16	9.9	13	13	14
T-Alkalinity	**mg/L**	**5**		75	98	85	111	101	95	92	90	91
Chloride	**mg/L**	**0.05**	**250**	18.8	19.6	16.9	17.7	10.1	8.5	15.5	14.9	15.9
Fluoride	**mg/L**	**0.01**	**1.5**	0.06	0.05	0.06	0.13	0.11	0.07	0.06	0.06	0.06

Nitrate - N	**mg/L**	**0.01**	**10**	0.30	1.02	<0.01	<0.01	<0.01	<0.01	0.28	0.24	0.27
Nitrite - N	**mg/L**	**0.01**	**1**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01
Sulfate (SO4)	**mg/L**	**0.5**	**500**	14.7	21.2	10.8	20.0	14.6	12.9	15.1	14.8	15.1
Hardness	**mg/L**	**1**		96	124	89	103	97	96	97	98	98
Total Dissolved Solids	**mg/L**	**1**		157	190	153	196	166	152	165	163	165

Sample	**Unit of Measure**	**Nominal Detection Limit**	**Guideline Limit**	**Sample Location**								
				Mann Park Stn Oct 17, 2018	Balsam Stn Oct 17, 2018	Oxford Stn Oct 17, 2018	Oxford Reservoir Oct 17, 2018	Everall Stn Oct 17, 2018	Russell Stn Oct 17, 2018	Stevens Stn Oct 17, 2018	Finlay Stn Oct 17, 2018	Stayte Stn Oct 17, 2018
Inorganic Nonmetallic Parameters												
Organic Carbon	**mg/L**	**0.5**		<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	0.5	<0.5
Ammonia - N	**mg/L**	**0.01**		0.11	0.10	0.10	0.12	0.11	0.09	0.09	0.09	0.05
Metals Extractable												
Aluminum	**mg/L**	**0.001**	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Antimony	**mg/L**	**0.00002**	**0.006**	0.00008	0.00006	0.00006	0.00006	0.00007	0.00007	0.00006	0.00006	0.00007
Arsenic	**mg/L**	**0.0001**	**0.010**	0.0064	0.0077	0.0074	0.0064	0.0064	0.0089	0.0090	0.0086	0.0076
Barium	**mg/L**	**0.0001**	**1**	0.0171	0.0193	0.0187	0.0172	0.0175	0.0213	0.0213	0.0205	0.0185
Boron	**mg/L**	**0.002**	**5**	0.017	0.027	0.021	0.017	0.016	0.030	0.033	0.027	0.024
Cadmium	**mg/L**	**0.00001**	**0.005**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chromium	**mg/L**	**0.00005**	**0.05**	0.00021	0.00009	0.00011	0.00020	0.00021	<0.00005	<0.00005	<0.00005	0.00010
Copper	**mg/L**	**0.0005**	**1.0**	0.0041	0.0009	0.0009	0.0099	0.0010	0.0007	0.0021	0.0005	0.0029
Lead	**mg/L**	**0.00001**	**0.01**	0.00020	0.00020	0.00008	0.00016	0.00010	0.00012	0.00018	0.00007	0.00033
Selenium	**mg/L**	**0.0002**	**0.05**	0.0019	0.0008	0.0011	0.0018	0.0018	<0.0002	<0.0002	<0.0002	0.0009
Uranium	**mg/L**	**0.00001**	**0.02**	0.00014	0.00014	0.00013	0.00013	0.00013	0.00014	0.00014	0.00014	0.00014
Vanadium	**mg/L**	**0.00005**		0.00264	0.00251	0.00256	0.00254	0.00263	0.00241	0.00242	0.00236	0.00253
Zinc	**mg/L**	**0.0005**	**5.0**	0.0008	0.0007	<0.0005	0.0039	0.0013	0.0036	0.0024	<0.0005	0.0027
Metals Total												
Mercury	**mg/L**	**0.00001**	**0.001**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Physical and Aggregate Properties												
Colour	**Colour Units**	**5**		<5	<5	<5	<5	<5	<5	<5	<5	<5
Turbidity	**NTU**	**0.02**		0.16	0.13	0.11	<0.05	0.18	0.06	0.14	0.21	0.11
Routine Water												
pH			**6.5-8.5**	7.79	7.89	7.89	7.86	7.81	7.83	7.90	7.90	7.88
Electrical Conductivity		**1**		269	280	271	255	269	290	291	290	278
Calcium	**mg/L**	**0.01**		23	24	24	23	24	24	24	24	24
Iron	**mg/L**	**0.004**	**0.3**	<0.004	<0.004	<0.004	0.006	<0.004	<0.004	<0.004	<0.004	0.005
Mangesium	**mg/L**	**0.02**		9.6	9.7	9.7	9.7	9.6	9.9	9.9	9.8	9.7
Manganese	**mg/L**	**0.001**	**0.05**	0.093	0.12	0.11	0.096	0.095	0.13	0.14	0.13	0.12

Potassium	**mg/L**	**0.04**	**200**	3.0	3.4	3.2	3.0	3.0	3.6	3.6	3.6	3.3
Silicon	**mg/L**	**0.005**		10	10	10	11	10	10	10	10	10
Sodium	**mg/L**	**0.1**		13	18	16	13	13	20	20	20	17
T-Alkalinity	**mg/L**	**5**		92	91	72	69	92	109	94	106	73
Chloride	**mg/L**	**0.05**	**250**	15.2	14.9	15.0	15.0	14.8	14.3	14.3	14.4	14.9
Fluoride	**mg/L**	**0.01**	**1.5**	0.06	0.10	0.09	0.06	0.06	0.13	0.13	0.12	0.09
Nitrate - N	**mg/L**	**0.01**	**10**	0.25	0.10	0.16	0.23	0.23	<0.01	<0.01	<0.01	0.15
Nitrite - N	**mg/L**	**0.01**	**1**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04
Sulfate (SO4)	**mg/L**	**0.5**	**500**	14.9	16.4	15.9	14.9	14.8	17.2	17.2	17.2	16.1
Hardness	**mg/L**	**1**		98	99	99	98	99	100	100	99	99
Total Dissolved Solids	**mg/L**	**1**		163	168	155	150	163	182	174	181	158

Sample	**Unit of Measure**	**Nominal Detection Limit**	**Guideline Limit**	**Sample Location**								
				Roper Stn Oct 17, 2018	Roper PRV Oct 17, 2018	Merklin Reservoir Oct 17, 2018	Merklin Low Reservoir Oct 17, 2018	Roper Reservoir Oct 17, 2018				
Inorganic Nonmetallic Parameters												
Organic Carbon	**mg/L**	**0.5**		<0.5	<0.5	<0.5	<0.5	<0.5				
Ammonia - N	**mg/L**	**0.01**		0.09	0.09	0.10	0.09	0.08				
Metals Extractable												
Aluminum	**mg/L**	**0.001**	**0.1**	<0.001	<0.001	<0.001	<0.001	<0.001				
Antimony	**mg/L**	**0.00002**	**0.006**	0.00006	0.00006	0.00011	0.00005	0.00006				
Arsenic	**mg/L**	**0.0001**	**0.010**	0.0088	0.0086	0.0088	0.0087	0.0084				
Barium	**mg/L**	**0.0001**	**1**	0.0212	0.0206	0.0213	0.0215	0.0208				
Boron	**mg/L**	**0.002**	**5**	0.032	0.032	0.036	0.032	0.028				
Cadmium	**mg/L**	**0.00001**	**0.005**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001				
Chromium	**mg/L**	**0.00005**	**0.05**	<0.00005	<0.00005	<0.00005	<0.00005	0.00005				
Copper	**mg/L**	**0.0005**	**1.0**	0.0031	0.0007	<0.0005	0.0335	0.0011				
Lead	**mg/L**	**0.00001**	**0.01**	0.00048	0.00005	<0.00001	0.00011	0.00004				
Selenium	**mg/L**	**0.0002**	**0.05**	<0.0002	<0.0002	<0.0002	<0.0002	0.0003				
Uranium	**mg/L**	**0.00001**	**0.02**	0.00014	0.00014	0.00014	0.00014	0.00014				
Vanadium	**mg/L**	**0.00005**		0.00244	0.00241	0.00229	0.00239	0.00253				
Zinc	**mg/L**	**0.0005**	**5.0**	0.0026	0.0019	<0.0005	0.0014	0.0024				
Metals Total												
Mercury	**mg/L**	**0.00001**	**0.001**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001				
Physical and Aggregate Properties												
Colour	**Colour Units**	**5**		<5	<5	<5	<5	<5				
Turbidity	**NTU**	**0.02**		0.16	<0.05	<0.05	<0.05	0.09				
Routine Water												

pH			**6.5-8.5**	7.90	7.90	7.91	7.90	7.91				
Electrical Conductivity		**1**		292	288	291	291	283				
Calcium	**mg/L**	**0.01**		24	24	24	24	24				
Iron	**mg/L**	**0.004**	**0.3**	<0.004	<0.004	<0.004	<0.004	<0.004				
Mangesium	**mg/L**	**0.02**		9.9	9.7	9.8	9.8	9.8				
Manganese	**mg/L**	**0.001**	**0.05**	0.13	0.13	0.14	0.14	0.13				
Potassium	**mg/L**	**0.04**	**200**	3.5	3.5	3.6	3.6	3.5				
Silicon	**mg/L**	**0.005**		11	10	10	10	10				
Sodium	**mg/L**	**0.1**		21	20	20	20	18				
T-Alkalinity	**mg/L**	**5**		71	94	107	106	102				
Chloride	**mg/L**	**0.05**	**250**	14.4	14.4	14.4	14.4	14.4				
Fluoride	**mg/L**	**0.01**	**1.5**	0.12	0.12	0.13	0.12	0.10				
Nitrate - N	**mg/L**	**0.01**	**10**	<0.01	0.02	<0.01	<0.01	0.05				
Nitrite - N	**mg/L**	**0.01**	**1**	<0.01	<0.01	<0.01	<0.01	<0.01				
Sulfate (SO4)	**mg/L**	**0.5**	**500**	17.2	17.1	17.3	17.2	16.6				
Hardness	**mg/L**	**1**		100	99	100	100	99				
Total Dissolved Solids	**mg/L**	**1**		160	172	182	181	176				