Narragansett Bay Commission
2019 Data Report

Prepared by the Staff of the
Environmental Monitoring and Technical Analysis &
Compliance Sections

May 4, 2020

Narragansett Bay Commission

Figures

Tables

Introduction

The Narragansett Bay Commission

The NBC owns and operates the state's two largest WWTFs and provides quality wastewater collection and treatment services to about 360,000 persons and 7,700 commercial and industrial customers located in Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, the northern portion of East Providence, and small sections of Cranston and Smithfield.

The Narragansett Bay Commission (NBC) was created in 1980 by the Rhode Island General Assembly to reduce the amount of pollutants Providence's Field's Point Wastewater Treatment Facility (WWTF) was discharging into Narragansett Bay and its tributaries. At that time, nearly 65 million gallons of untreated sewage flowed into Rhode Island's waterways every day, resulting in temporary and permanent closures of shellfishing beds in upper Narragansett Bay, violations of federal laws, and most importantly, a serious threat to public health and the region's environmental and economic well-being.

The NBC acquired the facility from the City of Providence in 1982 and with statewide voter approval of an $87.7 million bond referendum, transformed this dilapidated facility, the third oldest WWTF in the nation, into a state-of-the-art award-winning facility. As the largest secondary WWTF in Rhode Island and the second largest in New England, the Field's Point WWTF provides preliminary and primary treatment for up to 200 million gallons per day (MGD) of wastewater, and advanced secondary treatment with nitrification and denitrification for up to 77 MGD. In 2019, the average daily flow to the facility was 46.6 MGD.

In 1992, the Rhode Island General Assembly expanded the NBC's mission by placing it in charge of the Bucklin Point WWTF in East Providence. In 1999, supervisory management of this plant was privatized to Professional Services Group (PSG) and was managed by Suez Environment/United Water. On July 1, 2015, NBC resumed full management and operations of the facility. Over the last twenty years, the Bucklin Point plant has undergone major upgrades to include new screening and grit facilities, wet weather facilities capable of providing primary treatment and disinfection, a new fine bubble-diffusion aeration system, nutrient removal facilities, and ultraviolet (UV) disinfection of wastewater, reducing the use of chemicals to disinfect and dechlorinate wastewater prior to discharge. The Bucklin Point facility is designed to provide preliminary and primary treatment for up to 116 MGD and advanced secondary treatment with nitrification and denitrification for up to 46 MGD. In 2019, the average daily flow to the facility was 22.8 MGD.

Environmental Monitoring Program Overview

The Environmental Monitoring and Data Analysis (EMDA) section evolved from the Pretreatment section, where prior to 1992, two Engineering technicians, assisted by Pretreatment staff, implemented the industrial and manhole monitoring activities. With the acquisition of the Bucklin Point WWTF in 1992, there were two separate and distinct Pretreatment programs, one

for each treatment facility. Shortly thereafter, the two Pretreatment programs were united and the EMDA section was created within the NBC Planning, Policy and Regulation Division, now known as the Environmental Science and Compliance (ESC) Division. Over the years, the EMDA section continued to evolve, and in 2019 a Division reorganization resulted in a name change to the Environmental Monitoring (EM) section. The EM section remains responsible not only for industrial and manhole monitoring activities, but for all aspects of environmental monitoring for the NBC, outlined further below. EM staff also conducts many special sampling initiatives to evaluate the effectiveness of new technologies and to better understand the potential impacts of the NBC operations on the receiving waters. To this end, the EM section works closely with the Technical Analysis and Compliance (TAC) section, formed during the same Division reorganization, which is responsible for developing special study procedures, reviewing existing protocols, and analyzing the monitoring data for trends.

In 2002, the NBC was awarded a grant from the United States Environmental Protection Agency (EPA) to develop a website to provide real-time data of the upper Narragansett Bay receiving waters of the NBC plant outfalls. A fixed-site continuous water quality monitoring station was constructed at an abandoned pier at Phillipsdale Landing in East Providence, and a state-of-the-art monitoring buoy was acquired and deployed at Bullock Reach, just north of Conimicut Point in upper Narragansett Bay. In 2005, these sites became permanently funded by the NBC. These sites continue to provide invaluable data to the Rhode Island Department of Environmental Management (DEM) and the scientific community. For example, NBC's buoy data, which contains high-resolution measurements of Bay oxygen levels, played a key role in statewide efforts to document and understand the August 2003 fish kills associated with hypoxic (low

Environmental monitor deploying the Niskin bottle sampling device onboard the NBC's research vessel, the R/V Monitor

oxygen) events in Narragansett Bay. In order to maximize the utility of the NBC monitoring program to area stakeholders, the NBC frequently works with members of the DEM, several universities, and environmental groups, and is also a valuable contributing member of the Rhode Island Environmental Monitoring Collaborative, an organization formed by the Governor in 2004. The NBC coordinates monitoring activities with other agencies performing monitoring statewide. Therefore, as water quality compliance issues become more complex, the NBC EM and TAC sections' roles in environmental monitoring and compliance issues continues to expand.

The NBC EM, TAC, and Laboratory sections work together in the Water Quality Science Building (WQSB), built in 2016 and featuring state-of-the-art laboratory space to continue and expand NBC's numerous sampling and data analysis duties. The WQSB is able to accommodate almost all sampling, monitoring, and analysis needs of the NBC.

The EM section continued to perform the following monitoring activities throughout 2019:

- Daily sampling of NBC's two WWTFs to satisfy Rhode Island Pollutant Discharge Elimination System (RIPDES) requirements;
- Sampling of each Significant Industrial User at least twice annually to satisfy and exceed EPA Pretreatment Program mandates;
- Weekly monitoring of select surveillance manholes to satisfy EPA mandates;
- Weekly monitoring of select sanitary manholes to obtain data required for local limits development;
- Weekly sampling of 23 sites on urban rivers in NBC's service area for bacteria analysis;
- Sampling of 20 locations in the estuarine NBC receiving waters (i.e., the Providence and Seekonk Rivers) for bacteria analysis every two weeks;
- Sampling of 15 sites on rivers entering the upper Bay from Massachusetts and Rhode Island for nutrients once to twice per month;
- Sampling of 8 locations at the surface and bottom of the Providence and Seekonk Rivers for nutrients once to twice per month;
- Weekly mapping of the Providence and Seekonk Rivers for surface chlorophyll, dissolved oxygen (DO), temperature, and salinity;
- Sampling at Bullock Reach for qualitative and quantitative phytoplankton analysis;
- Video surveys along three permanent transects in the Providence River to track changes in benthic algae growth, species occurrences, and other indicators of environmental health several times per year;
- Special project sampling for the NBC Engineering, Operations, and other sections to assist in facilities planning, improvements to plant operations, etc.;
- Routine maintenance of the Fixed-Site Water Quality Monitoring buoy, land-based dock station, and special study stations to ensure accurate data for state partners and the public.

The NBC EM section has always done an excellent job of implementing monitoring initiatives. This annual report serves as a streamlined public dissemination of all 2019 EM monitoring data. Previous reports, back to 2007, are publicly available on the NBC website.

Acknowledgements

This report has been prepared by the staff of the EM and TAC sections, under the general direction of Thomas P. Uva, Director of Environmental Science and Compliance (ESC). This report is a summation of the collective efforts by the Environmental Monitors and Monitoring Field Supervisors that collected 28,740 samples during 2019. It represents the countless hours of processing, compiling, analyzing, and interpreting all the data by the EM Assistant Manager, LIMS Data Coordinator, and TAC Environmental Scientists, interns, as well as data entry and general assistance by clerical staff.

The NBC Laboratory staff analyzed all of the samples collected by the EM section. In total, during 2019, the Laboratory generated 139,633 analyses from the samples it received. A special acknowledgement and thank you to the NBC EM, Laboratory, TAC, and other staff and interns that made this report possible:

John Motta
Environmental Monitoring Manager

Sara Nadeau, Rebecca Songolo, Jeffrey Tortorella
Monitoring Field Supervisors

Dan Barlow, Joe Caranci, Stephen DePasquale, Michael Golenia, Michael Giammarco, Gerard Hamel, Fern Johnson, Amanda Kezirian, Daryll Sirleaf
Environmental Monitors

Walter Palm
Laboratory Manager

Anna Stevenson
QA/QC Officer

Elizabeth Teixeira
Senior Environmental Chemist

Nora-Jean Lough
Biologist

Kim Sandbach, Kara Taglianetti
Environmental Chemists

Dionne Bigotti
Laboratory Clerk

Karen Cortes
Assistant Environmental Monitoring Manager

Ashley Petteruto
EMDA Clerk

Sean Grace
LIMS Data Coordinator

Angelina Glater
Assistant Laboratory Manager

Lauren Lessuck
Senior Organic Chemist

Jake Westfield
Lab Sample Compliance Coordinator

Elizabeth Kohr, Janet Luu, Anna Stevenson
Chemists

Leslie Ahlborg, Joseph Guerreiro, Brenna McCarthy, Elizabeth Medeiros, Robert Noonan
Laboratory Technicians

James Kelly, III
Technical Analysis & Compliance Manager

Eliza Moore
Senior Environmental Scientist

Christine Comeau, Luis Cruz, Molly Welsh
Environmental Scientists

The NBC also acknowledges the support given by the NBC Chairman, Commissioner Vincent J. Mesolella; the Board of Commissioners; the Executive Directors, Raymond Marshall and Laurie Horridge; and all of the NBC Directors.

Field's Point and Bucklin Point WWTF Sample Collection Methodology

Introduction

It is the Narragansett Bay Commission's (NBC) mission to protect and enhance the water quality of Narragansett Bay and its tributaries through careful collection and treatment of wastewater from residences, businesses, and industries in the NBC District. The Environmental Monitoring (EM)section's primary objective is to perform routine and adequate sampling of a wide variety of parameters to ensure that both the Field's Point and Bucklin Point wastewater treatment facilities (WWTF) are effectively meeting operational and Rhode Island Pollutant Discharge Elimination System (RIPDES) permit requirements. An extensive sampling schedule employing composite and grab samples within the two WWTFs at the raw influent, primary influent, primary effluent, mixed liquor, return activated sludge, final sludge, and final effluent are necessary to keep abreast of what is introduced to and discharged from each plant, and the removal efficiencies of all conventional and non-conventional pollutants. Synthesis of these data is a continuous and ongoing process with monthly evaluations required for RIPDES discharge monitoring reports as well as periodic evaluation of the local limits that the Pretreatment section uses to regulate industrial and commercial users and ensure that no upset, pollutant pass-through, process interference, or discharge permit limit violations occur. Clean sampling and sample-handling techniques, high quality laboratory measurements, and ease of access to data are the necessary ingredients to quickly identify potential problems within the plants, and to routinely reassess the removal efficiency of pollutants. All sample collection, preservation, storage, and analyses at the Field's Point and Bucklin Point WWTFs are performed with strict adherence to United States Environmental Protection Agency (EPA) protocols.

NBC's continuing goal is to improve receiving water quality by limiting the impact of WWTF effluent on Narragansett Bay. The NBC has analyzed and tracked the toxic pollutant loading trends at its treatment facilities since the creation of the agency. EMworks in conjunction with the Pretreatment, Laboratory, Operations, Engineering, and Technical Analysis and Compliance (TAC) sections of NBC to conduct sampling of wastewater from its sources, throughout its collection and treatment systems, and ultimately to its final fate as either sludge sent off-site for disposal or as effluent discharged to Narragansett Bay. In support of NBC's mission and RIDPES requirements, the EM section collected 28,740 samples and the NBC lab conducted 139,633 analyses during 2019. WWTF sampling data for 2019 are attached and can be found in Tables 1–39. Table numbers are also referenced in each section below.

Collection of Samples at Field's Point and Bucklin Point

Samples collected to evaluate the WWTF processes are either composite samples collected over a particular time period or grab samples. Composite samples are formed by combining discrete samples taken at periodic points in time. Refrigerated ISCO autosamplers are used throughout Field's Point and Bucklin Point to collect composite samples on a regular predetermined basis. All refrigerated autosamplers are kept at 4°C. Grab samples are discrete samples collected at particular time periods but placed into separate sample bottles and analyzed individually. At

Field's Point, samples are assigned to a sample date based on the "flow-day", which is generally from 07:00 AM to 06:59 AM the following day, except as described in the following paragraph. Composite sampling therefore includes some sample water from the following calendar day. At Bucklin Point, the sampled date corresponds to the calendar day for regulatory reporting.

The differences in sampling between Field's Point and Bucklin Point mainly exist in the influent sampling at the interceptors into the facility and in the retention time used to determine when influent and effluent samples are collected. Field's Point influent samples are collected on a time-paced basis at the single interceptor that feeds the facility, after bar screening and prior to grit removal tanks. When influent samples are collected at Field's Point for metals, cyanide, or nutrient analysis, the commencement of effluent sample collection is delayed by 12 hours from the start time of influent sampling, with the goal of sampling the same parcel of water as it enters the plant for treatment and after treatment to evaluate the performance of the plant. This delay in sampling for the influent and effluent with allowance for hydraulic detention time is required for the metals and cyanide samples according to the RIPDES permits. For carbonaceous biochemical oxygen demand (CBOD) and total suspended solids (TSS), the influent and effluent samples are collected without any time offset, meaning the ISCO samplers that collect the wastewater for the influent sampling and effluent sampling are programmed to collect a 24 hour composite sample

Environmental monitor checking the sampling equipment at the Bucklin Point WWTF.

at the same times. Bucklin Point influent samples are collected on a time-paced basis from the two interceptors that feed the facility, the Blackstone Valley Interceptor (BVI) and the East Providence Interceptor (EPI). Composite samples are collected from both interceptors and mixed flow-proportionally. Effluent samples are collected 17 hours after the start of the influent with the goal of sampling the same parcel of water to evaluate the performance of the plant. At both facilities, final effluent sample collections are time-paced and downstream of all treatment processes. The final effluent represents wastewater after complete treatment just prior to entering the receiving waters of the Providence or Seekonk River. Collection of the final effluent sample at Field's Point takes place after chlorination and dechlorination of the wastewater, in the outfall channel downstream of the chlorine contact tank. The final effluent sample at Bucklin Point is collected downstream of the UV chamber in the UV building. The following are more detailed descriptions of composite sampling at both WWTFs.

Composite Sampling at Field's Point

Composite sampling at Field's Point is done on a time-paced basis. All composite samplers sample the waste stream at 30-minute intervals and take a volume of 100 mL. The samples are combined into 24-hour composites of the wastewater at the sampling location. EM uses refrigerated ISCO 3700, ISCO 4700, and ISCO 6712 programmable autosamplers throughout Field's Point. The samplers are located at the influent/grit building, primary influent, primary effluent, mixed liquor east and mixed liquor west, wet weather tank influent and effluent, and final effluent. Temperatures of the samplers are maintained at 4°C (acceptable range is 1-6°C).

Two types of suction tubing are used for composite sampling at the Field's Point WWTF. Influent and effluent peristaltic samplers collecting trace metals samples use suction tubes lined with Teflon®. Teflon® has characteristics that enable it to be cleaned to trace-metal grade. Extra care is required in handling this tubing to prevent cracking due to its brittle nature. Peristaltic samplers not collecting trace metals samples use Tygon® tubing as suction lines. This tubing is much more resilient and pliable. The Teflon® and Tygon® suction lines both measure ½-inch in outer diameter and ⅜-inch in inner diameter. Sampler suction lines are changed semi-annually and pump tubing is changed every month. A dilute sodium hypochlorite solution is used to clean both the Teflon® and Tygon® suction line and pump tubing of the autosamplers weekly. This procedure takes place at the autosampler collection site. The Teflon® tubing is also acid-washed monthly.

The EPA released a report in 1994 assessing historically-used trace metals sampling procedures. The report found that the levels of contamination from the sampling/vessel cleaning process resulted in metals levels higher than the bodies of water being sampled. Following the report, the EPA developed a series of recommended techniques for clean sampling that EM follows specifically. For influent/grit building and final effluent autosamplers that collect wastewater analyzed for trace metals and nutrients, these clean sampling methods are used to reduce contamination. The method requires acid cleaning of composite containers prior to use, and acid cleaning of suction and pump tubing. Blanks are collected to monitor and verify proper cleaning. A Nalgene® polyethylene carboy is used to collect composite samples for analyses of these parameters.

Composite Sampling at Bucklin Point

Composite sampling at Bucklin Point is time-paced. The autosamplers sample the waste stream at 30-minute intervals and take a volume of 100 mL. The samples are combined into 24-hour composites of the wastewater at a sampling location.

All autosamplers used at the Bucklin Point WWTF are refrigerated peristaltic pump samplers. Autosamplers used include the ISCO sampler models 3700, 4700, 6712, and Sigma sampler model 9000. These samplers are located at BVI, EPI, primary influent, primary effluent, mixed liquor, final effluent, and wet weather effluent. Influent composite samples from the BVI and EPI are combined flow-proportionally and analyzed together for all parameters. All sample locations use the ISCO samplers, except for the primary effluent which uses the Sigma sampler. Temperatures of the refrigerated samplers are maintained at 4°C (acceptable range is 1-6°C) and their temperature is documented three times per day by EM staff. Each composite carboy container has been marked with a permanent marker to identify the sampling location at which it is used.

Influent and effluent peristaltic samplers collecting samples for trace metals use special suction tubes lined with Teflon®. Teflon® has characteristics that enable it to be cleaned to trace-metal grade. Extra care is required in handling this tubing to prevent cracking due to its brittle nature. Peristaltic samplers not collecting trace metals samples use Tygon® tubing as suction lines. This tubing is much more resilient and pliable. The Teflon® and Tygon® suction lines both measure ½-inch in outer diameter and ⅜-inch in inner diameter. Sampler suction lines are changed semi-annually and pump tubing is changed every month. A dilute sodium hypochlorite solution is used to clean both the Teflon® and Tygon® suction line and pump tubing of the autosamplers weekly. This procedure takes place at the autosampler collection site. The Teflon® tubing is also acid washed monthly.

As mentioned above for Field's Point, Bucklin Point also uses the EPA-recommended clean sampling techniques for sample collection of wastewater for metals and nutrients analyses. The clean sampling method requires acid cleaning of composite containers prior to use and acid cleaning of suction and pump tubing. Blanks are collected to monitor and verify proper cleaning. A Nalgene® polyethylene carboy is used to collect composite samples for analyses of these parameters. Cleaning and handling of samplers, pump and suction tubing, and composite carboys are also outlined in the following sections under the specific parameters analyzed.

Sample Collection for Total Suspended Solids (TSS), Carbonaceous BOD (CBOD), and Bacteria Analyses at Field's Point and Bucklin Point

NBC's RIPDES permits require sampling of TSS and CBOD daily using 24-hour composites at both the influent and effluent. As stated above, the influent and effluent samplers collect samples from the waste stream at 30-minute intervals. Carboys with collected sample water are brought to the NBC Laboratory for analysis every morning around 08:00 AM. The NBC Laboratory uses Standard Method 5210-B for CBOD analysis using a Skylar CBOD robot equipped with YSI DO probes. TSS analysis is conducted using Standard Method 2540D-E, using a drying oven,

dessicator, and analytical balance. Parameters analyzed daily alongside TSS and CBOD include pH, settleable solids, and temperature. Analysis for these parameters adheres to Standard Method 4500HB, SM2540F, EPA Method 170.1, respectively. EM staff clean sample carboys used for TSS and CBOD collections in the dishwasher after each use, and carboys are replaced as necessary.

Bacteria sampling at each WWTF includes one effluent grab sample for fecal coliform analysis and two effluent grab samples for enterococci analysis per day. EM staff collect a fecal coliform and enterococci sample at 08:00 AM; operations staff also collects an enterococci sample in the time frame of 03:00-05:00 AM. The final enterococci value for that day is a geometric mean of the two grab samples as well as any duplicate samples or extra samples collected that day. Duplicate samples are collected and analyzed for fecal coliform and enterococci once per week.

The procedure for bacteria sampling at both WWTFs requires staff to wear new, clean nitrile gloves at all times during sample collection. Sterile sample bottles are placed in a sampling device (i.e., an open-ended PVC cylinder with the bottle held in place by a small screw running through the cylinder body) and lowered six inches below the water surface in the center of the flow stream to collect the sample. At Field's Point a pellet of sodium thiosulfate in the bottle neutralizes residual chlorine if present. The sodium thiosulfate tablet is not needed at Bucklin Point since disinfection is achieve via UV disinfection. Once filled, the bottle is sealed and labeled and placed in a cooler with ice for immediate transport to the NBC Laboratory. At the Laboratory, samples are analyzed for fecal coliform using Standard Method 9221E, fecal coliform by multiple tube fermentation, and for enterococci using the IDEXX Enterolert Method 1600 with Quanti-Tray 2000 enumeration system.

TSS and CBOD daily data and enterococci and fecal coliform daily geometric mean data for 2019 can be found in the attached Tables 1 and 2. Enterococci and fecal coliform sub-daily sample results can be found in Tables 3 and 4.

Sample Collection for Trace Metals and Cyanide Analyses at Field's Point and Bucklin Point

Toxic pollutant monitoring requirements include 24-hour composite sample collections for the analysis of aluminum, arsenic, cadmium, hexavalent chromium, copper, lead, nickel, zinc, and available cyanide at Field's Point and aluminum, cadmium, hexavalent chromium, copper, lead, nickel, zinc, and available cyanide at Bucklin Point. Metals and cyanide measurements are required twice-weekly at both plants except for zinc at Field's Point and aluminum, cadmium, hexavalent chromium, and lead at each plant, which are required once per month. Other metals that are analyzed for but are not required by the RIPDES permits include arsenic and tin at Bucklin Point, and chromium, iron, mercury, molybdenum, selenium, and silver at both plants. Total cyanide is analyzed using EPA Method 335.4, while available cyanide is analyzed via Standard Method 4500-CN-G on a Lachat Quickchem 8500 Analyzer. Metals are analyzed on an Inductively Coupled Plasma Mass Spectrometer (ICPMS), using EPA Method 200.8. Hexavalent chromium is analyzed on a Hach DR 3900 Spectrophotometer, using Hach Method 8023 and Standard Methods 3500-Cr A and 3500-Cr B. Mercury is analyzed on a Cetac M-7600

Quicktrace Mercury Analyzer according to EPA Method 245.7. Metals and cyanide data for 2019 can be found in the attached Tables 5-12.

The current method for collection of cyanide at both Field's Point and Bucklin Point mandates nine grab samples to be collected over a 24-hour period, separated by a minimum of two hours. The autosamplers collect discrete samples for cyanide analysis into one-liter containers that are pre-preserved with sodium hydroxide. These samplers collect a 300 mL sample every two hours for 48 hours, once per week. At Bucklin Point, composite samples for cyanide and metals at the influent are collected from both interceptors, the BVI and EPI, and are composites of nine separate grab samples at each location. These samples are then mixed flow-proportionally. At both plants, nine of the twelve grab samples from each twenty-four hour sampling period are composited into a 2-liter HDPE bottle. The pH is tested with indicator strips to ensure it is greater than 12 standard units (s.u.) before compositing. The composite is poured off into a 500-mL brown HDPE bottle. Composite samples are checked for sulfides and chlorine residual using lead acetate and potassium iodide indicator paper, respectively, as these chemicals can interfere with cyanide measurements.

For influent and final effluent autosamplers that collect wastewater analyzed for trace metals, a special clean sampling method is used to reduce contamination. The method requires acid cleaning of composite containers prior to use, and acid cleaning of suction and pump tubing. Blanks are collected to monitor and verify proper cleaning. A 15-liter Nalgene® polyethylene carboy is used to collect composite samples. Carboy cleaning procedures and quality assurance measures are in place to ensure clean and proper sampling. Acid-washed carboys are put into place twice weekly at the influent and effluent to collect samples to be tested for trace metals s, in conjunction with the samples collected for cyanide. Monthly post-cleaning blanks are collected from the acid-washed carboys to ensure the success of the cleaning procedure. These blanks are collected by adding deionized (DI) water to a cleaned carboy, swirling the DI water in the carboy, and letting it sit overnight refrigerated. The DI water is then poured off into pre-labeled, pre-cleaned containers for analysis of parameters of interest.

Field blanks are taken each time a sample is collected for mercury at both Field's Point and Bucklin Point. The procedure for collecting a field blank consists of transporting sufficient DI water into the field and collecting a sample of that DI water using identical sampling and preserving procedures that are used in collecting the mercury sample.

Sample Collection for Nutrients Analysis at Field's Point and Bucklin Point

Permit requirements for nutrients were modified by the DEM in 2005 to reduce the amount of nitrogen discharged to Narragansett Bay. The permit requirements mandated monitoring of nitrate, nitrite, and total Kjeldahl nitrogen (TKN) three times per week. Ammonia monitoring permit requirements remained at twice weekly, but NBC has sampled all nutrient parameters three times per week since August 1, 2005. Seasonal effluent discharge limits of 5.0 ppm for total nitrogen were proposed in the 2005 RIPDES permit modification. In June 2006, a consent agreement was signed, which imposed a seasonal interim effluent permit limit of 18.2 ppm for total effluent nitrogen at Field's Point and 10.0 ppm for Bucklin Point. In May 2009, the DEM modified the consent agreement for Bucklin Point to impose a seasonal interim total effluent

nitrogen limit of 8.5 ppm. NBC worked diligently to maximize nitrogen removal at Bucklin Point and achieved significant reductions in nitrogen loading. However, NBC determined that additional modifications were required to achieve compliance with the nitrogen limit of 5.0 mg/L as set forth in the consent agreement. Major facility upgrades and renovations were necessary to implement biological nutrient removal (BNR) technology at each plant. Field's Point completed these upgrades in 2013, and the Consent Agreement effluent total nitrogen limit of 5.0 mg/L went into effect on May 1st, 2014; Bucklin Point completed upgrades and began operations under this limit on July 14th, 2014.

Nutrients are analyzed from 24-hour composite influent and effluent samples, collected three days per week. Sample collection carboys are dishwasher cleaned, acid washed, and DI water rinsed before they are placed at their sampling location. Equipment blanks are collected every other month from the acid-washed carboys and pump tubing and are used to verify the absence of sample contamination.

All nutrient samples are analyzed by the NBC Laboratory, using a Lachat Quikchem 8500 Series II Flow Injection Analyzer. The nutrients analyzed are TKN, total nitrogen (TN), nitrite, nitrate, ammonia, and total phosphorus. TKN comprises the ammonia nitrogen and organic nitrogen in a sample. Total Kjeldahl nitrogen is analyzed using EPA Method 351.2, while TN which includes both TKN and nitrate-nitrite, is determined via Standard Method 4500-NB. Nitrite+nitrate and nitrate are determined via EPA Method 353.2; nitrate is determined by difference from a combined nitrite+nitrate measurement and a nitrite measurement. Ammonia is analyzed using EPA Method 350.1. Total phosphorus is analyzed via EPA Method 365.4. NBC's Laboratory continues to update their techniques and equipment to ensure high-quality data; the nutrient autoanalyzers currently online and in use were acquired in 2017 and 2018.

Both the Bucklin Point and Field's Point facilities remained in compliance with the 5.0 mg/L total nitrogen permit limit throughout the 2019 May through October season. The seasonal effluent total nitrogen average for Field's Point was 2.7 mg/L and for Bucklin Point was 3.3 mg/L. WWTF nutrients data for 2019 can be found in Tables 13 and 14.

Sample Collection for Oil and Grease Analysis at Field's Point and Bucklin Point

The NBC RIPDES permits require effluent sampling for oil and grease by three grab samples collected over the course of a 24-hour period, with one grab sample collected per shift, once per month at each facility. The grab samples are analyzed separately and the maximum is reported on the monthly Discharge Monitoring Report (DMR), though the RIPDES permit does not set a discharge limit. The NBC conducts similar sampling of the influent for oil and grease at each facility as well, though these data are not reported on the monthly DMR.

Oil and grease samples are collected using a pre-cleaned glass bottle, which is labeled with collection time and date, site, and the parameter to be analyzed. The cap is removed, taking care to avoid contamination, and the sampler is lowered just below the surface. The bottle is filled and then recapped. Oil and grease grabs are preserved with hydrochloric acid to a pH less than 2 s.u. by EM staff as soon as possible after collection. These samples are then brought to the NBC lab

for analysis of hexane-extractable materials using EPA Method 1664, using an evaporator and a balance Oil and grease average results for 2019 can be found in the attached Table 15.

Sample Collection for Effluent Dissolved Metals Analysis at Field's Point and Bucklin Point

The NBC has been studying dissolved metals in the effluent since 2000. During 2019, monthly samples were taken in the Field's Point and Bucklin Point effluent and were analyzed for dissolved metals. The NBC and DEM use these data to better understand the fate, effect, and physical partitioning of metals discharged from the WWTFs. Metals in the dissolved form are more readily absorbed by marine life than metals associated with particles, therefore the EPA and DEM have established fresh and saltwater water quality criteria for dissolved metals concentrations. However, WWTFs are permitted for total metals only. Therefore, the DEM must use a "metal translator conversion factor" to set appropriate total metals limits for a WWTF, based upon the dissolved metals water quality criteria. By conducting monthly sampling for both total and dissolved metals, the NBC will be able to better assess the phase partitioning of metals in its effluent and in the receiving waters to inform the use of metal translators.

Effluent dissolved metals samples are split from the effluent total metals composite sample on one day per month, typically the first Tuesday of each month. The effluent total metals sample is a 24-hour composite sample taken after treatment of the wastewater is complete, just before entering the Providence River. As part of a quality assurance plan, the NBC Laboratory analyzes

Environmental monitor collecting a sample at the Field's Point WWTF

laboratory equipment blank samples along with the dissolved metals to ensure accurate results. Dissolved metals samples are filtered with a 0.45um pore diameter membrane filter prior to preservation and digestion and are analyzed according to EPA Method 200.8 via ICPMS. Effluent dissolved metals data results for 2019 can be found in Tables 16 and 17.

Collection of Final Effluent for Quarterly Bioassay Analyses

The two NBC WWTFs are required to conduct quarterly bioassay studies to determine whole effluent toxicity (WET) to test organisms. These bioassays use the response of organisms to effluent at varying dilutions to detect and measure the potential impact of substances, wastes, or environmental factors, alone or in combination as they exist in the effluent. NBC met the quarterly bioassay sampling frequency requirements during 2019 for both facilities. Effluent samples are collected only in dry weather, defined as no rain 48 hours prior to or during sampling. These samples are 195 mL composites of wastewater collected every 30 minutes over the course of 24 hours. The back-up automatic composite samplers are used for this sampling and are cleaned and maintained in the same way as those collecting samples for TSS or CBOD, with sample carboys cleaned in the dishwasher after each use and replaced yearly.

Two bioassay tests are performed as required by the NBC RIPDES permits. An acute toxicity test is conducted to examine survival of test organisms, the mysid shrimp *Americamysis bahia*, in varying concentrations of effluent. The second test is a chronic toxicity test which examines the effect of effluent on fertilization success in eggs of the sea urchin *Arbacia punctulata*. Both tests are conducted in five concentrations of effluent plus a control: 100% effluent, 50% effluent, 25% effluent, 12.5% effluent, and 6.25% effluent. Natural seawater is used for both the control treatment and dilutions of effluent.

Acute toxicity test results are summarized using the LC_{50} and the A-NOEC statistics. The LC_{50} (or lethal concentration, 50%) result is defined as the concentration of wastewater that causes mortality to 50% of the test organisms, *A. bahia;* the permit requirement of 100% or greater is defined as a sample which is composed of 100% effluent. A-NOEC or Acute-No Observable Effect Concentration is defined as the highest concentration of the effluent in which 90% or more of the test animals survive, and is monitored though there is no permit limit. The chronic test results are summarized using the C-NOEC or Chronic-No Observed Effect Concentration statistic. The permit limit for Bucklin Point is 50% or greater for this parameter while at Field's Point the permit requires only monitoring.

The WET tests are designed to supplement effluent monitoring to determine whether the combination of chemical species present in a WWTF's effluent is toxic to test organisms. The monitoring for individual pollutants is targeted towards ensuring that the concentrations of the individual pollutants are at levels which do not pose harm to aquatic organisms. The WET tests are an attempt to determine the synergistic impact of NBC effluent on organisms in the receiving waters. All bioassay analyses are performed by third party laboratories contracted by NBC and are conducted in accordance with protocols listed in the most recent edition of the EPA document: Cornelius I. Weber, et al., 1991, Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. Bioassay data results for 2019 can be found in attached Tables 18 and 19.

Sample Collection for Sludge Analysis at Field's Point and Bucklin Point

Sludge from both the Field's Point and Bucklin Point WWTFs is removed and disposed of by Synagro Northeast under contract with the NBC. As part of this contract the NBC conducts sampling and analysis of the sludge (i.e., filter cake) throughout the year. Sludge samples are collected daily for analysis by the NBC Laboratory. Grab samples are taken throughout the day by the contractor and composited into one 4-L container. At Field's Point, EM staff pours part of this composite into a 16-oz. container for delivery to the lab by 08:00 AM the next day. These containers are disposed of after a single use. At the Bucklin Point WWTF, the 4-L composite container is stored in the refrigerator until EM picks up the sample the next morning. EM staff mix the sample and pour off approximately 500 mL into a smaller container to bring to the lab for analysis. Sludge from each plant and scum from Field's Point are analyzed for total solids (TS) and volatile solids (VS), using Standard Method 2540-B. Sludge samples are also analyzed one to two times per month for metals and cyanide. Sludge samples for all metals are analyzed using EPA Method 200.7 via ICPMS, except for mercury, which is analyzed using EPA Method 7471B. Cyanide analysis is completed using Method 9012B on a Lachat Quickchem 8500

Analyzer. The Field's Point WWTF sludge is handled by an outside contractor. NBC Laboratory results from sludge sampling for 2019 can be found in attached Tables 20-23.

In addition to the daily sample analysis by the NBC Laboratory, samples of filter cake from each WWTF are sent out to a contract lab quarterly for further analysis as required by Synagro Northeast. Quarterly analyses in 2019 and the laboratory methods used (in parentheses) included ten metals, seven TCLP metals, and phosphorus (EPA 6010C); mercury (EPA 7471B); TCLP mercury (EPA 7470A); percent total solids and percent solids (gravimetric); fixed and volatile solids (SM 2540-G); pH (SM 4500-H-B); paint filter/free liquids (EPA 9095B); and PCBs (EPA 8082A). Additional analyses required once annually included TCLP VOCs (EPA 8260C); TCLP Semi-VOCs (EPA 8270D-sim); TCLP pesticides (EPA 8081B); TCLP herbicides (EPA 8151A); flash point/ignitibility (EPA 1010A-Mod); reactive sulfide and reactive cyanide (SM REACTIVITY); and percent total sulfur (EPA 6010C). These annual analyses are typically conducted on the first quarterly sample of the year. Results of the quarterly and annual filter cake testing by contract laboratory can be found in Table 24.

Sample Collection for EPA Priority Pollutants: Volatile Organic Compounds (VOCs)

Grab samples are collected monthly at the influent and effluent to be analyzed for 36 volatile organic compounds (VOCs), a subset of the EPA Priority Pollutants. Only 34 organic compounds were monitored prior to April 2019, at which time acrolein and acrylonitrile were added to the routine monitoring. The same type of glass sampling containers used for collection of oil and grease samples are used for the grab collection of VOCs. Six 40-mL glass vials are fastened to the end of a pole and dipped into the wastewater to collect the sample. A seventh vial is collected simultaneously, and checked for the presence of chlorine using a potassium iodide test strip. Sodium thiosulfate is added to the samples as necessary to reduce the presence of chlorine. The six samples are divided into three sets of two for specific preservations. The first set of vials is left unpreserved, the second set is preserved to a pH range between 4 and 5 s.u., and the third set is preserved to a pH of <2 s.u. Hydrochloric acid is added dropwise to the preserved vials to attain the appropriate pH. All samples are airtight and stored at <6°C following collection. The glass vials are then transported to a contract laboratory for analysis using EPA Methods 624 and 625.1 via gas chromatography and mass spectrometry. VOC data results for 2019 can be found in attached Tables 25 and 26.

Sanitary Manhole Sampling

EPA and RIPDES permit regulations require the NBC Pretreatment Program to periodically reevaluate local discharge limitations. In order to complete this task, the NBC must monitor sanitary manholes to evaluate pollutant loadings from residential sources upstream of any industrial or commercial facilities. These background loadings are outside the realm of regulatory control by the NBC Pretreatment Program; however, NBC must understand these loadings in order to determine acceptable loading limits for industrial users to maintain effective pollutant removal at the treatment facilities. These samples reveal the composition of what is being introduced into the collection system in a more site-specific way than the influent

composite samples. The NBC began sanitary sewer manhole sampling in 1993, and in 2000, EM began to collect samples using EPA-approved clean sampling techniques. As laboratory detection limits continue to decrease due to improved clean sampling techniques, these data become a more precise measure of the amount of uncontrolled toxic chemicals that enter the NBC collection system from residential, non-industrial sources.

To collect these samples, automated sampling devices are suspended in the sanitary manholes and are programmed to collect 100 mL of wastewater every fifteen minutes for 24 hours, starting in the early morning on a weekday. The aliquots collect into a 10-L acid-washed Nalgene® jug, and the composite sample is later poured off into specified containers for each analytical parameter including total metals, cyanide, TSS, BOD, CBOD, and mercury.

The initial pH of the composite is measured and recorded on a chain-of-custody document, and for those parameters that require preserving, the preservative used is marked and the final pH is recorded. After every use, the automated sampling device tubing and jug are acid cleaned, rinsed with DI water, and a cleaning blank is produced.

BOD, CBOD, TSS, total nitrogen, ammonia, nitrate+nitrite, TKN, cyanide, aluminum, cadmium, chromium, copper, lead, nickel, molybdenum, silver, zinc, mercury, arsenic, and selenium were measured in both Field's Point and Bucklin Point district sanitary manholes in 2019. Please note that sanitary manhole background monitoring for tin was discontinued in July 2018. These parameters were analyzed in accordance with methods for CBOD, TSS, nutrients, cyanide, and metals mentioned in the Field’s Point and Bucklin Point sample collection sections above. BOD was analyzed according to Standard Method 5210B using a Skylar CBOD robot equipped with YSI DO probes.

In addition to informing the calculation of local limits that the NBC imposes on its industrial users, sanitary manhole data is essential for providing a point of comparison and screening of collection system data to determine problem areas within the collection system. Sanitary manhole testing results for 2019 can be found in Table 27.

Industrial and Commercial User Sampling

The EPA requires that all significant industrial users (SIUs) be sampled at least once every twelve months. The NBC has established a more stringent goal to sample each SIU twice per year and also samples a subset of other industrial and commercial users annually. Information regarding user flows to NBC facilities is gathered through commercial and industrial user and industrial manhole sampling, in addition to required user self-monitoring. The industrial manhole sampling is an additional means to track chemical spills or concentrated discharges, as well as to ensure that industrial users are in compliance with the limits set by the NBC. The NBC collected 172 sets of industrial and commercial user samples in 2019. Industrial and commercial user data for 2019 can be found in Tables 28A-C.

Industrial manhole sampling activities are designed to isolate a specific business within the collection system to surreptitiously determine the typical discharge from the business. Samples are taken upstream and downstream of a significant user's discharge point via manholes. The upstream sample serves to establish a background concentration with which to compare the results from the industry, as well as confirm that the source of any contaminants is from the permitted user, not additional sources. The distance between these two sampling locations is typically 150 feet, depending on the location of the nearest manhole. Sampling of industrial

Environmental monitors conducting sanitary manhole sampling

manholes in 2019 resulted in 241 sets of data, with 1,928 individual parameters analyzed within both service districts.

As with sanitary manhole sampling, autosamplers are programmed to collect samples from each manhole location every 15 minutes for 24 hours, thereby providing a composited representation of the average discharge over that time period. Autosamplers can dispense the water collected into up to 24 sample bottles, thereby allowing for an intensive analysis of the variations within the upstream and downstream sample locations, if necessary.

A Tygon® suction line with a stainless-steel strainer attached at the end is used to collect samples from the middle of the waste stream. Samples are immediately checked for sulfides and chlorine residual using lead acetate and potassium iodide indicator paper, respectively, as these chemicals can interfere with cyanide measurements.

Cyanide sample pH is adjusted using sodium hydroxide to a pH above 12 s.u., while metals samples are acidified using trace metal grade nitric acid to a pH of less than 2 s.u. Samples are analyzed for cadmium, chromium, copper, lead, nickel, silver, zinc, and cyanide. All metals were analyzed by ICP-AES EPA Method 200.7at the NBC Laboratory, while cyanide is analyzed using EPA Method 335.3 on a Lachat Quickchem 8500 Analyzer.

The implementation of clean sampling techniques at the NBC has provided additional means of confirming that industrial discharges do not exceed treatment capacity. The EM industrial and commercial user sampling supplements self-monitoring activities of each industrial user, providing a means for enforcing local limits for pollutants.

Septage Sampling

The NBC receives septage waste (waste pumped out of septic tanks) at the Lincoln Septage Receiving Station in Lincoln, RI. The Lincoln Station input point is within the Bucklin Point service district, approximately 11 miles from the Bucklin Point facility. The septage is routinely monitored by the EM section for toxic constituents to ensure that the material received does not contain toxics in concentrations that exceed NBC's Pretreatment Industrial Discharge Limitations for the Bucklin Point WWTF, to which the waste ultimately discharges. This sampling also helps NBC evaluate the percent of metals loading received from septage into the Bucklin Point WWTF. Grit removal at the septage facility removes a portion of the metals loading prior to its introduction to the sewer system and the treatment plant. Prior to septage samples being collected, Interceptor Maintenance (IM) staff sample and screen each septage truck's waste delivery for quality by looking at the physical characteristics and by measuring pH during the pump-out at the septage facility. Septage samples are collected from each delivery truck after the sample port is flushed thoroughly, usually after the load has discharged for approximately one minute. The sample from an individual truck is screened for pH, odor, and other unusual characteristics. If any anomaly is observed, the sample is targeted for individual analysis; otherwise, it is composited with samples from each of the septage truck deliveries that day and sent to the Laboratory for analysis.

Septage samples are collected daily Monday-Saturday. All six daily composite samples are kept refrigerated until they are picked up by EM staff on Mondays at the Lincoln Septage Station and are brought to the NBC lab that same day, barring unforeseen circumstances. Three daily samples are chosen at random and analyzed by the NBC Laboratory for trace metals each week.

Revised septage sample collection techniques and equipment were introduced in June of 2004. The new equipment allowed for easier, in-line sampling during septage delivery and has helped to more quickly locate potential toxic inputs to the collection system. These more representative sampling techniques may partially explain the observed increase in septage metal loadings since 2004.

During 2019, 156 septage samples were analyzed for trace metals via methodology described in the Field's Point and Bucklin Point plant sample collection sections above. Septage sample results for 2019 can be found in Tables 29 and 30.

Stormwater Sampling

Stormwater generated at the NBC WWTFs is regulated under the RIPDES Multi-Sector General Permit (MSGP). The RIDPES MSGP was first issued in 2006 and re-issued in 2013; the 2013 MGSP expired on August 14th, 2018. In 2019, a new MSGP was generated and went into effect on May 3rd, 2019. Sampling required by this permit will start January 2020, therefore, NBC 2019 stormwater sampling results are not included in this report.

The 2019 MSGP requires stormwater to be sampled at all stormwater monitoring locations at both NBC WWTFs. Sampling will occur at eight locations at Field's Point and six locations at Bucklin Point, as compared to two locations at Field's Point and one location at Bucklin Point under the former permit. Four storm events must be sampled each year; sampling must occur twice every six-month period with at least one month between sampling events. The sampled storm event must not have been preceded by measurable rainfall within the prior 72 hours, and samples must be collected within the first 30 minutes (or as soon as practicable, with documentation) following the start of a storm event discharge. Stormwater parameters measured include fecal coliform, oil and grease, TSS, and TN (TKN and nitrate-nitrite); if the annual average for each parameter is below a parameter-specific benchmark, the NBC is allowed to discontinue the sampling on a per-parameter and per-outfall basis. The NBC will report stormwater sampling results in the 2020 EM Annual Report.

NBC Receiving Waters Monitoring Activities

Introduction

The NBC not only monitors wastewater from the sources (e.g., industries and manholes) to the WWTFs and throughout the plant process, but also monitors the receiving waters, where treated effluent and combined sewer overflows (CSO) discharges enter. Receiving waters monitoring includes sampling the surrounding urban rivers and upper Narragansett Bay as well as some of the rivers that enter the upper Bay from Massachusetts. This monitoring is vital to determining the impact of NBC effluent on the river and Bay ecosystems. The data are useful in evaluating the success of the CSO Abatement Project in the upper Bay and provide insight into the response of the receiving waters to WWTF upgrades. The EM and TAC sections' roles in environmental monitoring and compliance issues also continues to expand as these issues become ever more complex.

In 2019, EM continued sampling for nutrients at several locations in Narragansett Bay and within the watershed at both local river stations and at river stations on the Massachusetts/Rhode Island border. These measurements are aimed at effectively characterizing the magnitude, composition, and distribution of nutrient inputs to these rivers, and comparing these results to previous years to examine factors influencing nitrogen loading into the Bay. The characterization of nutrient loading dynamics is integral to understanding coastal nutrient pollution issues. Determination of background loadings, effluent discharge impacts, and fate of nutrients from the NBC facilities are necessary components of a sound environmental policy. This initiative was undertaken to provide greater insight into nutrient cycling dynamics within the rivers, and to help quantitatively define the amount of nitrogen that the WWTFs can safely discharge without adversely impacting water quality.

In addition to nutrient sampling, the NBC conducts routine field sampling for bacteria in the local freshwater rivers and the estuarine waters of the Providence and Seekonk Rivers. Specifically, fecal coliform and enterococci are monitored as indicators of potential presence of pathogens (disease-causing organisms) in these waterbodies. Generally, if bacteria counts are elevated, there is a high potential for the presence of pathogens that could be harmful to both humans and wildlife. Raw, undiluted sewage contains high levels of both fecal coliform and enterococci bacteria because this type of bacteria is found in the feces of all warm-blooded animals, including humans. The wastewater treatment process at NBC's facilities eliminates almost all of these bacteria after the waste stream passes through primary and secondary treatment and, ultimately, disinfection via chlorination or UV light. Final effluent wastewater discharged from the Field's Point and Bucklin Point WWTFs typically has very low levels of fecal coliform and enterococci bacteria.

Both fecal coliform and enterococci data are utilized by state agencies to monitor water quality in the Bay and rivers. Measurements of enterococci bacteria, considered a more accurate metric for potential human health impacts from primary contact, were adopted to replace fecal coliform as the primary bacteriological indicator for both fresh and saline waters in 2006. Fecal coliform criteria are only applied when enterococci data are not available. However, shellfishing standards

continue to be based on fecal coliform bacteria levels. Collecting data for both groups of indicator bacteria also allows the NBC and others to evaluate whether there is a consistent relationship between enterococci and fecal coliform results in the receiving waters environment.

Bacteria monitoring is particularly important for evaluating the impacts of the NBC's combined sewer system. During large rain events, the two treatment facilities use special wet weather treatment tanks to treat and disinfect the higher volumes of combined rainwater and sewage influent. However, during intense rain events when the collection system is overwhelmed, the NBC's CSOs can send untreated stormwater and sewage that the collection system cannot contain directly into the freshwater rivers and upper Bay. The NBC river bacteria monitoring stations are strategically located upstream and downstream of CSOs to regularly evaluate their impact.

EM also conducts monitoring of particular CSOs themselves during wet weather events that cause these outfalls to discharge. The NBC has embarked on an historic public works project to eliminate the negative impact that CSOs can have on water quality, with a three-phase CSO Abatement Project, of which Phase I began operation in the fall of 2008. The major achievement of Phase I was construction of a 3-mile long, 65-million-gallon storage tunnel that collects approximately 1 billion gallons of combined stormwater and sanitary sewage each year, which is then pumped to the Field's Point facility for full advanced-secondary treatment. Phase II systems, completed and online during 2015, included sewer separation projects, a constructed wetland, and additional connections to the Phase I tunnel. Phase III of the project is currently in the planning stages, and will include construction of a storage tunnel in the Bucklin Point district.

As part of monitoring the overall health of the Bay, the NBC monitors water quality and marine biota through several additional initiatives. The fixed-site monitoring initiative comprises two water quality monitoring stations, one located at a dock at Phillipsdale Landing in the Seekonk River and one on a buoy at Bullock Reach in the Providence River. EM maintains these monitoring sites to continuously collect data on temperature, dissolved oxygen, salinity, pH, chlorophyll, and turbidity. Vertical water quality profiles are collected approximately weekly (May - October) or every other week (November - April) at nine additional locations throughout the upper bay by lowering sensors through the water column, recording temperature, salinity, dissolved oxygen, density, and photosynthetically active radiation (PAR). To complement these data, a Secchi disk is deployed at each monitoring site to measure water clarity. While the research vessel is underway, an effort to conduct real-time surface water quality mapping occurs, as water is circulated through a sensor on the boat and analyzed for temperature, conductivity, dissolved oxygen, pH, and chlorophyll *a* concentration. Marine biota are monitored via monthly grab and plankton net samples for phytoplankton analysis and video surveys of the benthos several times per year.

Receiving waters monitoring activities are discussed in further detail in the sections that follow. Most data generated from the receiving waters monitoring initiatives are posted for public use on the NBC's website Snapshot of Upper Narragansett Bay (http://snapshot.narrabay.com/app/), or may be requested at any time.

River and Bay Nutrient Monitoring

The NBC has been proactive in responding to environmental concerns regarding Narragansett Bay and the state of Rhode Island. As a part of a continuing effort to both address and understand the magnitude of the impacts that facility operations have on our receiving waters, an intensive sampling program of the urban and local rivers that are part of the Narragansett Bay watershed has been developed for nutrient analysis and loading determination. This sampling program was designed to encompass two components: an evaluation of the loadings from the urban rivers that empty into Narragansett Bay just upstream of tidal influence, and an evaluation of the nutrients entering Narragansett Bay via rivers from Massachusetts. Both components are important to accurately determine the nutrient inputs to Narragansett Bay as well as a means of determining the impact of sources outside of the NBC service district. By determining the magnitude and relative importance of these loads, the NBC will be able to more accurately determine the impact of biological nutrient removal (BNR) systems at the wastewater plants sas well as plan future facility upgrades at both facilities. These data will also contribute to developing a thorough understanding of nutrient fluxes to Narragansett Bay.

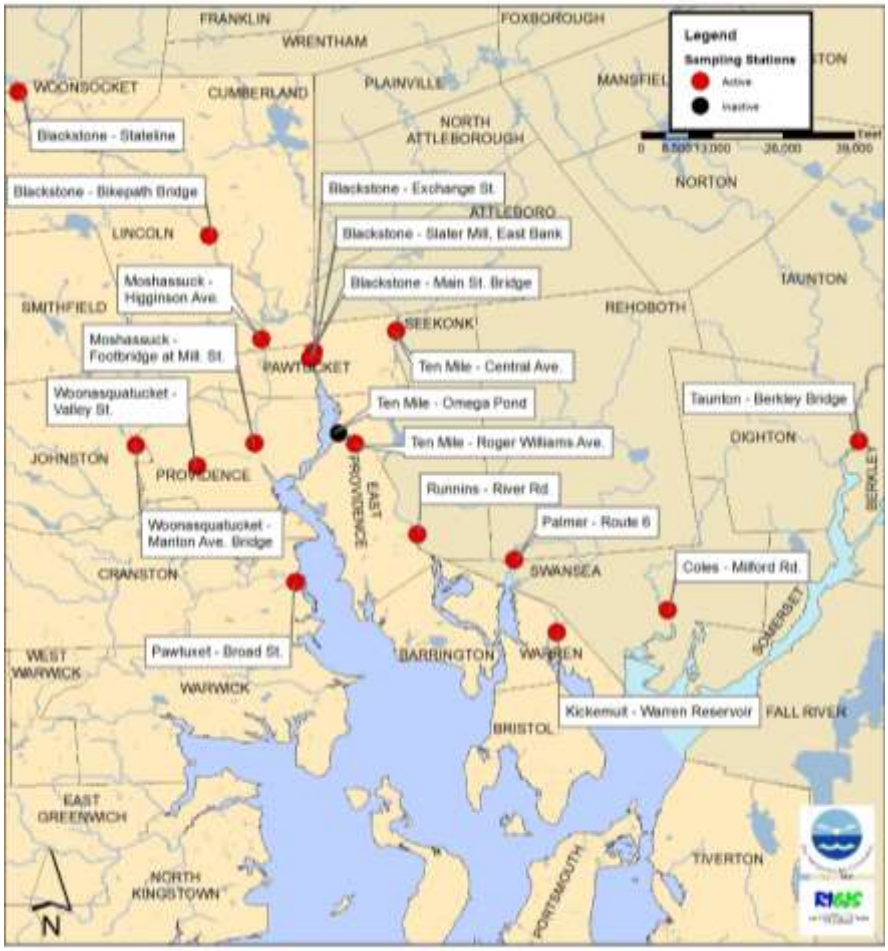
The NBC initiated nutrient monitoring of the local urban rivers in 2005 and expanded the sampling locations and increased the frequency of sampling in 2006. During these first two years of the program, sample splits were submitted to both the NBC Laboratory and the University of Rhode Island Graduate School of Oceanography Marine Ecosystems Research Laboratory (URI GSO MERL) facilities to assure data quality. An additional station was added on the Ten Mile River in December 2011 to get a better representation of nutrient loadings from Massachusetts into this river. In November 2017, the Ten Mile River @ Omega Pond site became inaccessible

Environmental monitor collecting a water sample onboard the R/V Monitor.

to NBC environmental monitoring staff; a new site, at Roger William's Ave. was initiated in August 2018 to take its place. During 2019, the Slater Mill, East Bank site was temporarily inaccessible due to dam repair work; alternate sites at Exchange St. and Main St. Bridge were sampled during this period. In 2019, there were fifteen sample stations monitored one to two times per month. The locations of sample stations can be found in Figure 1.

River nutrient samples are collected near the midpoint of the flow in the river channel, at a depth of approximately 0.5 to 1 meter below the surface, using a peristaltic pump, Tygon® tubing, and large plastic collection bottles. Samples for TSS are also collected as part of nutrients surveys. Prior to the sample day, all collection bottles, sample containers, and tubing is washed with non-phosphate detergent and acid-rinsed with 10% HCl, then rinsed with DI water. Most individual sample bottles are new and sterile at the start of this process, though ammonia bottles are washed and reused. During sampling, water is first pumped into the large (e.g., 2-liter) collection bottle, then split into individual sample bottles for each set of analyses (described below). All tubing is rinsed with DI water between sample stations. At each station, tubing is also flushed with river water prior to sample collection. As part of EM's quality assurance efforts for this program, field blanks and duplicates are collected in order to determine the accuracy and precision of sampling

Figure 1: NBC River Nutrient Sampling Stations



methods and sample handling techniques. Field blanks are collected by each team during each nutrient sampling day to measure the ability of staff to maintain clean sampling techniques, and to rule out any potential contaminants from normal "open-air" exposure. These blanks are collected using DI water in place of river water, with the same handling techniques as the actual river samples. Duplicate samples are collected by splitting the main large collection bottle of water into two sets of sample bottles for analysis. In addition to these sampling QA/QC measures, the NBC lLaboratory has a rigorous analytical QA/QC program in place for all nutrient analyses.

The water in the large collection bottle is divided among smaller bottles for individual analyses while on site. Unfiltered samples are poured into bottles for TSS and total nitrogen analysis, while the remaining sample bottles (for total dissolved nitrogen, nitrate+nitrite, nitrite, orthophosphate, silicate, and ammonia) are filled after filtering the sample water through 0.45-µm filters; the results of analyses on these filtered samples therefore represent the dissolved (or soluble) concentrations only. The filter and each individual sample bottle are rinsed with sample water prior to filling, and filters are discarded after each sample or duplicate sample is finished. Once the sample bottles have all been filled, they are labeled with site ID, sample number, date and time of collection, and collector's initials. The samples are held in a portable cooler with ice packs for transfer to the Lab. Sample bottles may be frozen for storage before analysis, except for ammonia and TSS samples which remain refrigerated. If samples exceed the holding time, they are discarded and not analyzed.

To measure any direct changes in nutrients in the upper Bay as a result of WWTF upgrades and the CSO Abatement Project, the NBC began sampling for nutrients in the Providence and Seekonk River estuaries during the summer of 2005. The direct water column nutrient measurements provide important insight regarding the amount of nutrients in the upper Bay from all sources, including river loading, surrounding WWTFs, atmospheric deposition, groundwater, runoff, failing septic systems, and nutrients from the middle and lower Bay area as well as from offshore. Original bay sampling stations in 2005 included five surface stations and one bottom station. These bay stations included Conimicut Point, Edgewood Yacht Club, Pomham Rocks, and India Point Park at the surface and Phillipsdale Landing at the surface and bottom (Figure 2). In July 2006 one additional bay station was added and NBC began collecting bottom samples periodically at all bay stations. The new bay station was located at the Bullock Reach Buoy, where the NBC fixed-site continuous water quality monitoring buoy is located. In August of 2012, a seventh site was added in Pawtuxet Cove, near the mouth of the Pawtuxet River, at the channel marker of Red Can #6. This site was added to observe the effects of the Pawtuxet River on upper Narragansett Bay. An eighth site was added in 2014, at Edgewood Shoals. As seen in

Figure 2: NBC Bay Nutrient Sampling Stations

Figure 2, the Conimicut Point, Bullock Reach Buoy, Pawtuxet Cove, Edgewood Shoals, Edgewood Yacht Club, and Pomham Rocks stations are located in the Providence River. The Phillipsdale Landing station is located in the Seekonk River at the fixed continuous water quality monitoring dock site, and the India Point Park station is located near the mouth of the Seekonk River estuary.

Bay samples are collected, filtered, and preserved on-board the NBC research vessel, the *R/V Monitor*. All surface collections in bay waters are made at a depth of approximately 0.5 to 1 meter below the surface. Bottom collections are made approximately 0.5 to 1 meter above the sediment. Samples are collected using an acid-washed and DI water-rinsed Niskin sampler, with sample water then poured off into a large collection bottle. All tubing and bottles are acid-washed and then rinsed with DI water before the sampling day, and tubing is rinsed with DI water between sample stations. The Niskin sampler and bottles are rinsed with sample water at each site prior to sample collection. Duplicate samples and DI water field blanks are collected as described above, with duplicate samples being poured from the same Niskin sample in order to determine the accuracy and precision of sampling methods and sample handling techniques. As described for the river samples, the water in the large collection bottle is divided among smaller bottles for individual analyses while on site. A chlorophyll and phaeophytin sample (not collected at river sites) is filtered using a GF/F, 0.7-µm, 47-mm diameter TCLP filter and is preserved with magnesium carbonate prior to storage in a dark cooler. Unfiltered samples are poured into bottles for TSS and total nitrogen analysis, while the remaining sample bottles (for total dissolved nitrogen, nitrate+nitrite, nitrite, orthophosphate, silicate, and ammonia) are filled after filtering the sample water through 0.45-µm filters. The filter and each individual sample bottle are rinsed with sample water prior to filling, and filters are discarded after each sample or duplicate sample is finished. Ammonia samples collected from bay sites are preserved with a few drops of chloroform, then all samples are labeled with site ID, sample number, date and time of collection, and collector's initials. The samples are held in a portable cooler with ice packs for transfer to the Lab. Sample bottles may be frozen for storage before analysis, except for ammonia and TSS samples which remain refrigerated. If samples exceed the holding time, they are discarded and not analyzed.

The NBC Laboratory analyzes both freshwater and saltwater sample sets for nitrite+nitrate, nitrite, total dissolved nitrogen, ammonia, orthophosphate, silicate, total nitrogen, TSS, and chlorophyll *a* and phaeophytin *a* (saltwater samples only). Total nitrogen, including both dissolved and particulate phases, has just been analyzed in these samples since 2012. Each of the Laboratory's methods includes rigorous analytical QA/QC procedures to ensure data quality. For all samples, the Laboratory employs methods for brackish water analysis on a Lachat Quikchem 8500 Series II Flow Injection Analyzer. Orthophosphate is analyzed via EPA Method 365.5, ammonia is analyzed via EPA Method 349.0, nitrate-nitrite is analyzed via EPA Method 353.4, and total dissolved nitrogen is analyzed via Lachat Quickchem Method 31-107-04-3-A. The Laboratory analyzes for silicate using EPA Method 366.0. TSS is analyzed using method Standard Method 2540-D. Chlorophyll *a* and phaeophytin *a* are analyzed using a Turner Designs Trilogy Laboratory Fluorometer in accordance with EPA Method 445.0. Lastly, water quality parameters, including pH, temperature, and salinity, are measured by EM at the time of sample collection using a YSI 600XLM sonde. All data from 2019 River and Bay Nutrient sampling can be found in the attached Table 31.

Urban River Pathogen Monitoring

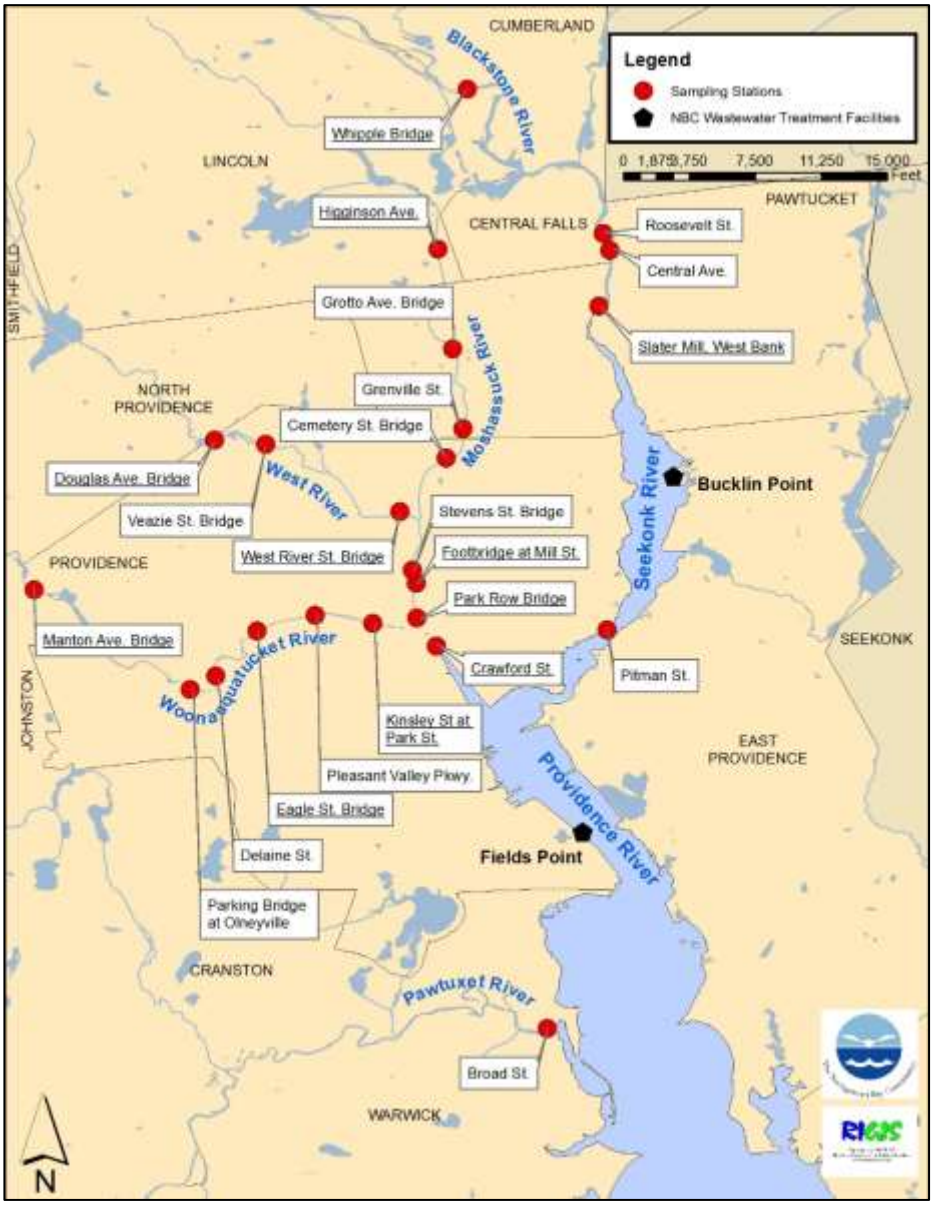
Consistent NBC monitoring for fecal coliform in the Providence area urban rivers began in 1997 and became the responsibility of EM in 1998. This monitoring was developed in conjunction with the CSO remediation stakeholder process and has developed as a tool of the IM section to check for potential problems occurring at any of the 67 CSOs the NBC owns, operates, and maintains. Since 2007, samples have also been collected for enterococci analysis at a subset of stations. Routine sample collections for analysis of fecal coliform and enterococci are made each week, with stations on the Blackstone, Woonasquatucket, Moshassuck, Seekonk, Providence, and Pawtuxet Rivers sampled on Mondays and stations on the West, Woonasquatucket, Moshassuck, and Providence Rivers on Tuesdays. In the event of a holiday or any unforeseen circumstance that would prevent sampling under the regular schedule, the sampling routine will begin the next day sampling is possible. Samples are collected by EM staff in the morning and delivered to the lab at Field's Point no later than 11:30 AM that day. All stations sampled on the same river on the same day are collected within a two-hour period. NBC's IM, Construction, EM, TAC, and Engineering sections determine locations to be added or omitted as needed.

Samples are collected regularly from six sites on the Woonasquatucket River, four sites on the Blackstone River, seven sites on the Moshassuck River, three sites on the West River, and one site each on the Pawtuxet, Providence, and Seekonk Rivers. The locations of these sites are shown in Figure 3; special sampling events may include sampling at additional sites not shown. During 2019, a total of 1,718 river bacteria samples were collected and analyzed.

In order to improve NBC's identification of dry weather overflow (DWO) discharges and to identify other sources of bacterial contamination in the rivers, in 2002 EM began resampling weekly river collections when high bacteria counts are observed. Rivers are not resampled when collections have occurred following wet weather, because high bacteria counts are expected due to the normal functioning of CSOs. When results from collections exceed the threshold of 1,000 MPN per 100 mL and there has been dry weather (i.e., less than 0.1 inches of rain in the preceding four days), EM will resample those stations a second time within the week. Resampling will also occur when results are very high (i.e., greater than 10,000 MPN/100 mL) when no rain has occurred in the preceding two days. These general resampling criteria are subject to change based on river flow, bacteria level at background stations, and staff availability.

Water samples for fecal coliform and enterococci analysis are collected from the center of a bridge or from a riverbank. A sterile, 120-mL sample container is used for the sample collection. Collections from bridges are conducted by placing the sample container in an open-ended PVC cylinder and holding it in place with a small screw running through the cylinder body. A rubber handle extends from the top of the cylinder with a line attached for lowering it into the water stream being sampled. Each sampler can hold up to 4 bottles. Samples being collected from a riverbank are taken by dipping the sample container into the water stream by gloved hand. The sample is taken from the surface as close to the center of the water flow as possible.

Figure 3: NBC River Bacteria Sampling Stations. Underlined stations are sampled for both fecal coliform and enterococci. All other stations are sampled only for fecal coliform.



Once the sample has been collected, the sample container is sealed, and labeled with site ID, sample number, date and time of collection, and collector's initials. The samples are held in a portable cooler with ice packs for transfer to the Lab. All samples are brought to the Laboratory for analysis to begin within the 8-hour holding time. If samples exceed the holding time, they are discarded and not analyzed. The analytical method used by the NBC Laboratory is the 24-hour Fecal Coliform Determination by Multiple Tube Fermentation, using A-1 broth or media. The Standard Methods reference number is 9221E for this EPA-approved methodology. Positive and negative controls are routinely run in the Laboratory; in addition, tubes of uninoculated, freshly

prepared media are incubated and analyzed in order to confirm the sterility of the media. The NBC Laboratory is Rhode Island Department of Health certified.

As part of EM's quality assurance for this program, collection and analysis of DI field blanks and duplicate samples occurs on all regular sampling days. These collections and analyses may be used to help determine analytical and sampling accuracy and precision. Field blanks are collected as described above for nutrients sampling. Duplicate samples are collected from specific sampling locations on each regular sampling day. These sampling locations are Eagle St. Bridge (W7C) in Providence on the Woonasquatucket River, Footbridge at Mill St. (M5) in Providence on the Moshassuck River, and Grenville St. (M4A) on the Moshassuck River. The Eagle St. Bridge sampling is conducted from a bridge in the center of the main current flow. The Footbridge at Mill St. site sampling is conducted from the center of the main current flow from the private footbridge near Mill Street. Sampling at the Grenville St. site is conducted from the road, using a telescoping pole device to reach the center of the main current flow. The duplicate samples are taken simultaneously with the sampling device, by securing two bottles into the device at the same time. Fecal coliform data for the sampling stations located in the urban rivers can be found in the attached Tables 32 and 33. Enterococci data for the urban rivers can be found in Table 34. For the purpose of this report, duplicate sample results are shown as the geometric mean of the two samples. Where results were less than or greater than detection limits, the detection limit was substituted prior to calculating a geometric mean. Individual sample results for these duplicates are available upon request.

Bay Pathogen Monitoring

Fecal coliform sampling in the estuarine Providence and Seekonk Rivers began in 2003 in response to the need to understand the spatial and temporal impacts that discharges within these waterbodies have on Narragansett Bay as a whole; sampling for enterococci at a subset of bay sites began in 2011. Routine sample collections for the analysis of bacteria are made every other week, usually on Wednesdays or Thursdays, throughout the year, dependent on weather. All station samples are collected within a three-hour period on the same day. In the event of a holiday or any other unforeseen circumstance that would prevent sampling under the regular schedule, the sampling will resume on the next possible regular workday. Samples are collected by EM staff and delivered to the NBC Lab no later than 12:00 PM on the day of sampling.

Bay bacteria samples are collected from the NBC research vessel the *R/V Monitor* at six sites in the Seekonk River, four sites in the Providence River north of the Field's Point WWTF, and ten sites in the Providence River south of the Field's Point WWTF; these sampling locations are shown in Figure 4. Under special circumstances, including after some heavy rain storms, special sampling may take place that includes collecting bay bacteria samples consecutively over several days in the Seekonk and/or Providence River as well as in the conditional shellfishing areas just south of the Providence River. Depending on the circumstances, the sample stations may include all or some of the usual stations and/or additional stations further down the bay.

Bay water samples for bacteria are collected by placing a sterile, 120-mL sample container in an open-ended plastic cylinder which is held in place with a small screw running through the cylinder body. A metal handle extends from the top of the cylinder with a vinyl line attached for

lowering it into the water being sampled. The sample is collected from just below the surface, then the sample container is sealed and a label with site ID, sample number, date and time of collection, and preservation method is placed on the container. The samples are held in a portable cooler with ice packs for transfer to the Lab. All samples are brought to the Laboratory for analysis within the 8-hour holding time period. If samples exceed the holding time, they are discarded and not analyzed. Duplicate samples are taken at the Conimicut Point and Phillipsdale Landing stations. The duplicate samples for each site are collected simultaneously using a second 120-mL sample bottle. A blank sample using DI water is also collected and brought to the Lab along with the bacteria samples for quality assurance purposes. Bay bacteria are analyzed according to methodology described in the above section on freshwater river bacteria analysis. During 2019, 486 bay fecal coliform samples and 167 bay enterococci samples were collected and analyzed. 2019 bay fecal coliform and enterococci data are shown in the attached Tables 35 and 36, respectively.

Figure 4: NBC Bay Bacteria Sampling Stations. Underlined stations are sampled for both fecal coliform and enterococci. All other stations are sampled only for fecal coliform.

Combined Sewer Overflow Monitoring

In support of the NBC's mission to protect Narragansett Bay and its tributary rivers, and to fulfill the requirements of the EPA and DEM Nine Minimum Controls Program (which implements technology-based measures to reduce the impact of CSOs on receiving water quality), the EM staff samples CSO wet weather overflows several times per year. The aim of such wet weather sampling is to characterize the water quality of CSO discharges and to evaluate the success of the NBC Pretreatment and Pollution Prevention programs at controlling the discharge of pollutants through CSOs. In addition to the Pretreatment and Pollution Prevention programs, the NBC CSO

Abatement Project, once fully implemented, will further reduce CSO impacts by eliminating 98% of CSO discharges. Until both the CSO Abatement Project and the EPA's Capacity, Management, Operations, and Maintenance program (an element of the Nine Minimum Controls Program) for the NBC are fully implemented, all other feasible controls of CSO discharge are expected to be utilized.

In 2019, wet weather monitoring was conducted at two different CSOs: Outfall 002A (Bucklin Point North Diversion Structure) and Outfall 23A (Pitman St.). Sampling at Outfall 002A took place on July 23rd, during 1.00 inch of rainfall as measured by the National Weather Service at T.F. Green Airport (1.04 inches measured at Field's Point). Outfall 002A is located in the Bucklin Point service district, and discharges to the Seekonk River. Sampling at Outfall 23A took place on December 30th, during 1.68 inches of rainfall as measured by the National Weather Service at T.F. Green Airport (1.66 inches measured at Field's Point); note that this rainstorm began on December 29th and continued into December 31st. Outfall 23A is located in the Field's Point service district, discharging into the Seekonk River.

The sampling plan was designed to collect three samples at each outfall throughout the overflow event. The first sample is collected during the initial overflow, or first flush, stage and is expected to contain wastewater with the least degree of rain water dilution and the highest concentrations of materials washed from street and land surfaces into the combined sewer system. A second sample is then taken during the stage of highest overflow rate and a third sample taken near the conclusion of the event. Sampling of Outfalls 002A and 23A successfully included all three phases. Each sample was tested for BOD, TSS, metals, bacteria, nutrients, and VOCs, with a few exceptions: the second and third samples for the event surveyed at CSO 23A were not tested for BOD due to insufficient lab diluent volume; the specific list of VOCs analyzed for each survey event differed; and enterococci analysis for the CSO 23A sampling event was conducted in duplicate for each sample, using two dilutions to prevent censorship of the data as greater than or less than detection. The data for CSO 23A can be found in Table 37, and data for CSO 002A can be found in Table 38.

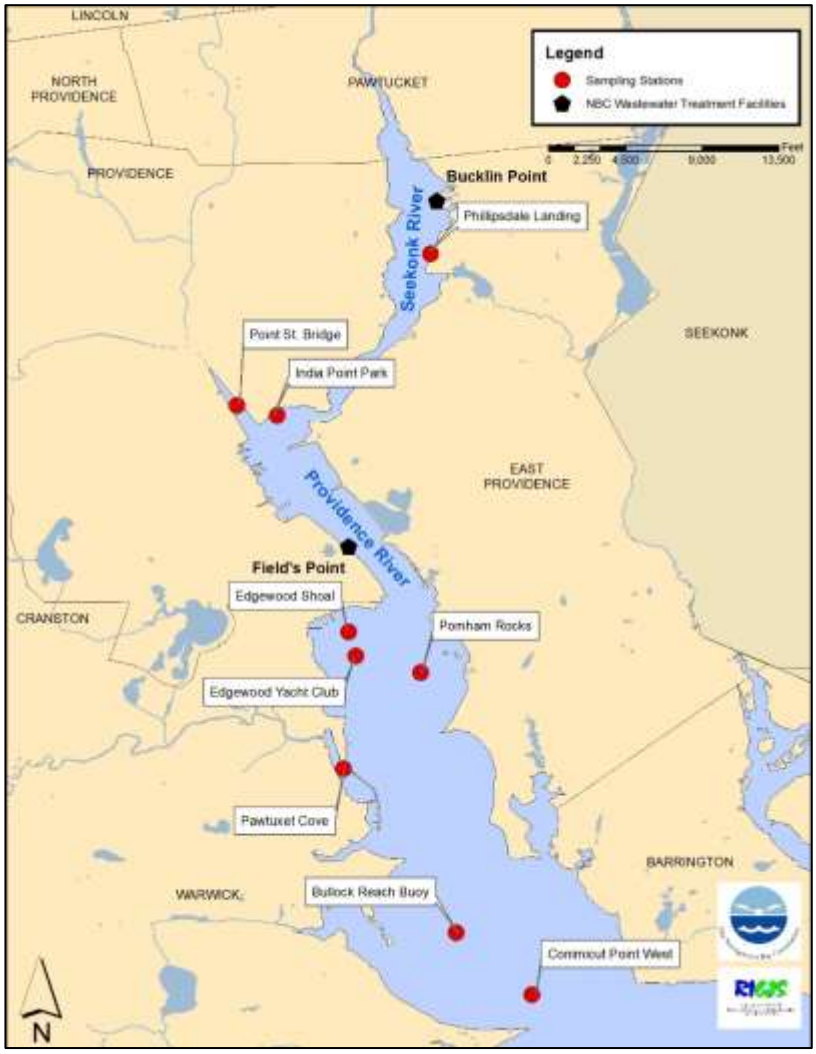
Water Column Profile Monitoring

In 2007, the NBC began measuring water quality profiles at bay sites using a Seabird Electronics profiler (SBE 19 plus). This instrument measures depth, temperature, salinity, dissolved oxygen, density, and photosynthetically active radiation (PAR) four times per second as it is lowered through the water column at each site, providing valuable information on how water quality varies with depth. In particular, the data are evaluated to identify areas of stratification, where the surface and bottom waters are poorly mixed. Such conditions are normal in estuaries, particularly near freshwater inputs and in the summer, when surface waters are warmed by the sun and winds tend to be low. Stratified conditions are monitored as they can contribute to hypoxia in estuarine waters by preventing dissolved oxygen mixing from the surface to the bottom waters. These profiles also provide valuable information on water clarity, through measurements of PAR, or the amount of sunlight, at depth. The PAR measurements on the profiler are coupled with data from a PAR sensor on deck, measuring ambient sunlight strength above water. Deployment of the profiler includes a "surface soak" of several minutes well below the surface to ensure the instrument temperature equilibrates to the ambient water temperature and all air has been purged

from the flow path tubing. Following the surface soak, the profiler is brought up to the surface before dropping for the full downcast. The Seabird instrument is cleaned and maintained after each deployment by trained NBC monitoring staff and sent back to the manufacturer every two years for servicing.

All data downloaded off the profiler are analyzed using a suite of programs recommended and provided by the manufacturer to align data based upon known sensor time response differences, filter out digital “noise”, correct for thermal impacts on salinity data, and derive calculated parameters. Data are visually inspected by the NBC LIMS Data Coordinator to exclude the surface soak data before bin-averaging the downcast by 0.25 meter increments. This bin-averaging interpolates a smooth profile and produces a more manageable amount of data for public presentation on the Snapshot website, where the 2019 data and all historical data are available for download. Stations that are monitored for water column profiles are shown in Figure 5.

Figure 5: NBC Water Column Profile and Secchi Depth Monitoring Stations



Secchi Depth Monitoring

The NBC has been conducting Secchi depth water clarity monitoring at sites in the Providence and Seekonk Rivers since 2009. This monitoring consists of lowering a black and white disk through the water column and noting the depth at which it is no longer visible, then lifting slowly and noting the depth at which it becomes visible. These steps are repeated three times per site and averaged. The measured depth varies depending on the turbidity of the water column, or the amount of suspended materials in the water. Suspended materials may include soil particles (clay, silt, and sand), algae, and materials from anthropogenic sources including waste discharge and urban runoff. High turbidity reduces the amount of light available for photosynthesis by algae and submerged aquatic plants and can ultimately lead to decreased oxygen levels in the water. Suspended materials can also affect aquatic organisms by clogging fish gills, impacts to egg and larval development, lowering growth rates, and reducing disease resistance. The NBC

conducts Secchi depth monitoring weekly on the same days and at the same sites as Bay Nutrients (Figure 2) monitoring and Bay Pathogen (Figure 4) monitoring boat trips. In 2019, the NBC collected 209 Secchi depth measurements in the Providence and Seekonk Rivers. These data can be found in Table 39.

Benthic Video Monitoring

In 2011, the NBC purchased a SeaViewer Sea-Drop analog underwater video camera for the purposes of viewing and monitoring the benthic conditions in the Providence River in relation to plant upgrades and improved effluent water quality coming out of WWTFs. A specialized sled mount was created to enable smooth towing of the camera and provide a consistent field of view for observations. In late 2014 the NBC designated three permanent transects to target in benthic surveys to be conducted monthly, weather permitting. The locations of these transects can be seen in Figure 6.

In 2019, the NBC collected approximately nine hours of underwater footage along these three transects, continually improving field methods and refining this monitoring initiative. These videos revealed a diverse community of estuarine organisms living in the Providence River including fish, crustaceans (e.g., mantis shrimp, spider crabs, hermit crabs), horseshoe crabs, sea stars, tube-building worms, and mollusks (e.g., soft-shelled clams, mud snails, slipper snails). In addition, variable habitat types were documented, including mudflats, zones covered in shell hash and shell rubble, and areas of rafting macroalgae.

Video footage collected along these transects will increase the NBC's understanding of changes to the biological conditions in the upper Bay in relation to changes in effluent and related receiving waters monitoring. Summaries of each survey, with screenshot of interesting observations, are made available to the public via the NBC's Snapshot website after analysis. Additional detail and video files are available upon request.

Phytoplankton Monitoring

The NBC began monitoring of the phytoplankton community at the Bullock Reach site in the Providence River in 2012. Phytoplankton are microscopic plant-like organisms that form the base of the marine and estuarine food web. These organisms use nutrients in the water column and sunlight to photosynthesize, producing dissolved oxygen in the process. The NBC initiated this monitoring program to measure changes to this important community that may be related to the drastic nitrogen reductions made by NBC and other WWTFs in the Narragansett Bay watershed. Monitoring is conducted every two weeks as weather and staffing allows and includes a whole water sample to measure the density of various phytoplankton groups as well as a concentrated sample collected using a plankton net to identify the diversity of phytoplankton in the sample. From the whole water sample, a single milliliter is extracted and all phytoplankton are identified and counted. From the concentrated sample, a subsample is examined under the microscope with each different group recorded. All identifications are made by the NBC's trained biologist. In 2019, the NBC collected 12 sets of phytoplankton samples. Data from this sampling may be found on the NBC Snapshot website, discussed below.

Figure 6: NBC Benthic Video Transect Locations

Narragansett Bay Fixed-Site Water Quality Monitoring

The NBC routinely maintains two fixed-site water quality monitoring stations, one in the Providence River and one in the Seekonk River. These stations were established in 2000 as part of a former EPA-grant-funded "Environmental Monitoring for Public Access and Community Tracking" (EMPACT) Project. NBC has maintained full funding of these sites since federal grant funding ceased in 2002. The stations were established in proximity to the Field's Point and Bucklin Point WWTF outfalls. The Bullock Reach station is a floating buoy located between Gaspee Point and Conimicut Point in the Providence River and the Phillipsdale Landing station is affixed to a dock located in the Seekonk River in East Providence. During the summer of 2019, two additional temporary sites were maintained, one in the Seekonk River located near the East Providence Yacht Club and one in the Providence River on the western side of Bullock Shoal. These sites were added to support data collection for the URI and NBC collaborative Regional Ocean Modeling System (ROMS) project, which models bay circulation and nutrient

transport to predict algal bloom dynamics and oxygen levels in the Bay. The locations of these fixed sites are shown in Figure 7. These monitoring stations directly benefit Narragansett Bay research by collecting continuous, real-time water quality monitoring data in the more urbanized portions of the upper Bay facilitating bay researchers to consistently track changes in the estuaries from remote locations. These data also provide a baseline of water quality data across seasons and reveal yearly trends. The two routine locations are part of the Narragansett Bay Fixed-Site Monitoring Network (Fixed-Site Network) of water quality instruments deployed throughout the entire Bay and maintained by multiple agencies.

The NBC historically used 6600-series YSI water quality sondes to collect measurements of depth, temperature, salinity, pH, dissolved oxygen, turbidity, and fluorescence (a proxy for

Figure 7: NBC Fixed-Site Station Locations

chlorophyll and phytoplankton activity) at each fixed site since the project began. In 2018, the sondes at Bullock Reach were upgraded from the 6600-series equipment to the newest YSI EXO technology; Phillipsdale sondes were upgraded to EXO technology in 2019. Both of the 2019 temporary fixed sites utilized the older 6600-series equipment.

YSI sondes (EXO and 6600-series) are typically calibrated the day before deployment for each site at the EM lab in the Water Quality Sciences Building (WQSB) at Field's Point. All sondes are calibrated using YSI-recommended methods in the YSI Operations Manual as well as agreed-upon protocols from the Fixed-Site Network. All calibrations use YSI standards and are conducted by trained EM staff. Sondes are designated for each specific site, deployed, and then retrieved after approximately two weeks in the water. Upon returning to the EM lab, sondes undergo post-deployment checks, which consist of placing the sonde probes in each calibration solution, as done during calibration, to check readings in that solution of known concentration. These data can be used in assessing how closely the sonde is reading to the actual solution levels, and therefore how far it has drifted from the original calibration or if there has been a probe failure. After the post-deployment check, sondes are cleaned and stored, then re-calibrated just before the next deployment period. Calibration and post-deployment check results are recorded and kept for reference and data editing purposes.

Once at the deployment site, the first readings of the newly deployed sondes are observed for any suspect readings. If any problems are observed in the data, an attempt is made to troubleshoot and replace the sonde if necessary. Summer deployments are kept to a maximum of two weeks in the water due to fouling concerns. All field work information is recorded on a field sheet to aid in any troubleshooting during data editing.

Data measurements by the water quality instruments at both the Bullock Reach buoy and Phillipsdale Landing stations are recorded every 15 minutes and transmitted via cellular communications from Bullock Reach and via LAN-line connection from Phillipsdale Landing to a base station at Field's Point every hour. Data at the temporary sites were also collected every 15-minutes, though they were not transmitted, rather they remained saved to the instruments until download at the EM lab upon retrieval.

The EM and TAC staff are continually making improvements to equipment, infrastructure, and the QA/QC protocols to ensure the reliability of data collected. As part of the Fixed-Site Network, EM and TAC currently work in partnership with the DEM, URI, and the Narragansett Bay National Estuarine Research Reserve (NBNERR) under a Quality Assurance Project Plan (QAPP) that sets standard operating procedures for calibration and maintenance of the sondes as well as data handling to maintain consistency between organizations. The DEM maintains a website which allows easy access to data from each of the fixed sites in one central location (http://www.dem.ri.gov/programs/emergencyresponse/bart/stations.php). The DEM Bay Awareness and Response Team (BART) website currently displays a map showing station locations, weekly summaries of data from all network sites, and historical Fixed-Site Network data in raw, edited, and corrected formats (note data from recent years are not always available if review is still underway). In addition to the DEM BART website, the NBC also shares the data from Bullock Reach and Phillipsdale on its Snapshot website. Raw data are available on Snapshot in near real-time in an easy-to-use and easy-to-understand format, including

downloadable data tables. The raw and edited data are also packaged and sent to the Fixed-Site Network Quality Control Officer annually, following an internal NBC data review. Fixed-site data are not included in this Environmental Monitoring Data annual report due to the extensive nature of this sampling, but they are easily accessible via the websites named above.

As WWTFs reduce nitrogen input into the Bay, monitoring water quality can help researchers better understand ecological responses to these reductions. For instance, nitrogen is often associated with eutrophication and hypoxia. Hypoxia is the condition where dissolved oxygen concentrations fall below a critical level, negatively affecting marine or aquatic organisms. As part of the Fixed-Site Network, the NBC supports the understanding of the overall health of NBC's receiving waters and contributes to monitoring the response of these waters to nitrogen reductions from WWTFs. The water quality instruments (sondes) that NBC and the other agencies use at these fixed sites are continuously monitoring dissolved oxygen via optical sensors. With the NBC receiving the data in real-time from its two fixed sites, NBC staff can immediately determine when hypoxia is occurring and for how long. These data are extremely helpful for the NBC, DEM, and other organizations in studying the dynamics of these events and how the organisms in the Bay respond.

Phillipsdale Landing Dock Site

The Phillipsdale Landing site is located on the east side of the estuarine Seekonk River in East Providence. The monitoring location is very close to large freshwater river sources and is also open to the tidal estuarine Providence River. This makes the Seekonk River a tidal estuary, defined as a place of fresh and saltwater mixing, in the truest sense. The freshwater rivers feeding the Seekonk River include the Blackstone River at the northern terminus, and the Ten Mile River, which enters the Seekonk River just south of the Phillipsdale Landing station. The Phillipsdale Landing site is located in about 3.5 meters (11.5 feet) of water, just south of the Bucklin Point WWTF. YSI sondes collect water quality data from two depths, one near the surface at approximately 0.6 m, and one just off the bottom at approximately 2 m. With these instruments attached to a dock, staff has easy access to the instruments from shore, allowing them to get to the instruments quickly in the event of any problems. The surface sonde measures depth (m), water temperature (°C), specific conductance (and salinity; mS/cm and ppt), pH (s.u.), dissolved oxygen (% and mg/L), and chlorophyll *a* (µg/L). The bottom sonde measures depth, water temperature, specific conductance, pH, and dissolved oxygen. For the 2019 season, the sondes were first deployed on March 19th and continued collecting data the rest of the year; they remained in place through winter 2019/2020 due to relatively warm temperatures and low risk of ice damage.

Bullock Reach Site

The Bullock Reach site is situated on a floating buoy that is anchored near the edge of the shipping channel in the southern section of the Providence River. This location is in deeper, more saline waters than the Phillipsdale Landing station and is further from freshwater sources. The nearest freshwater source is the Pawtuxet River, located to the northwest of the buoy site. The position of the buoy is north of Conimicut Point in about 8 meters (26 feet) of water, west of the Providence River channel and south of the Field's Point WWTF. There are three water quality instruments at this site, deployed at the surface (approximately 1 m), mid-water (approximately 4 m), and bottom (approximately 8 m). The surface YSI sonde is deployed in a PVC tube that is integrated into the buoy. The bottom and mid-depth sondes are attached to the buoy on one line with a mushroom anchor at the bottom and a float just above each sonde to keep them in an upright position. Each of the three sondes measure depth, water temperature, specific conductance (and derived salinity), pH, dissolved oxygen, chlorophyll *a*, turbidity, and total dissolved solids. The buoy is also outfitted with meteorological instrumentation, collecting data on wind speed and direction, temperature, and humidity. Power to the buoy is maintained by a solar-powered battery. For the 2019 season, the buoy was deployed in the water in mid May; data collection began on May 22nd until the sondes were removed for the season on November 19th.

Environmental Monitoring staff servicing the Bullock Reach fixed-site

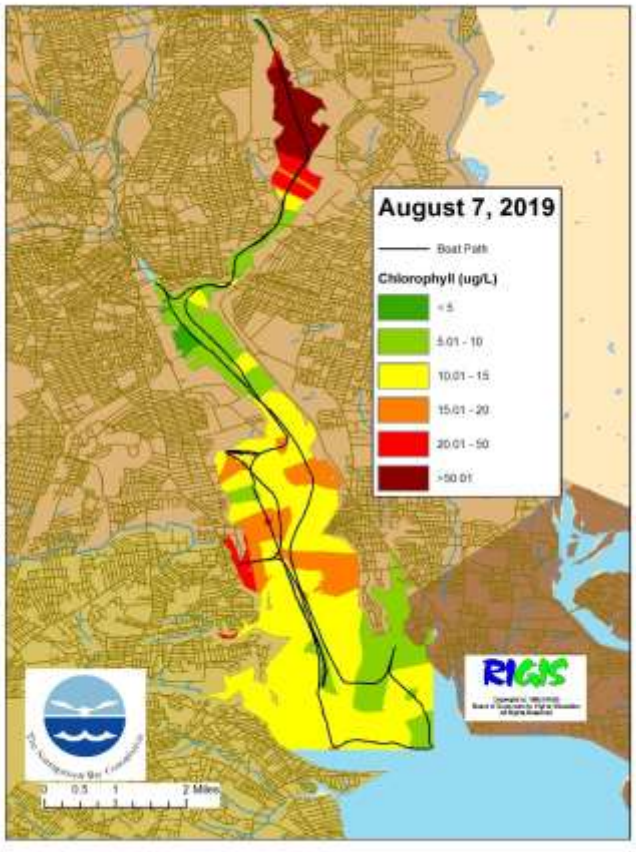
2019 Temporary Sites

Two temporary water quality monitoring locations were active during 2019 in order to provide further site-specific data to inform the URI and NBC ROMS project. One temporary site was operational in the Seekonk River, south/downstream of the Phillipsdale Landing location, from June 26th until September 4th. The same site was monitored temporarily in 2018. This site consisted of two YSI sondes, surface and bottom, that internally logged data every 15 minutes. These sondes were changed out for maintenance every two weeks, at which time the logged data were downloaded at the EM lab. The surface sonde was located at an approximate depth of 0.5 m, while the bottom sonde was at an approximate depth of 7.1 m. The parameters measured included water temperature, specific conductance, salinity, depth, pH, chlorophyll (surface only), and dissolved oxygen.

The second temporary site was operational in the Providence River, south-southwest of the Bullock Reach location, from September 10th until November 19th. As with the temporary Seekonk River site, this site consisted of two YSI sondes, surface and bottom, that internally logged data every 15 minutes. These sondes were changed out for maintenance every two weeks, at which time the logged data were downloaded at the EM lab. The surface sonde was located at an approximate depth of 1.3 m, while the bottom sonde was at an approximate depth of 4.5 m. The parameters measured included water temperature, specific conductance, salinity, depth, pH, chlorophyll (surface only) and dissolved oxygen.

Bay Surface Mapping

In 2010, the NBC began a receiving waters monitoring effort to map surface water quality as the research vessel conducts bay monitoring throughout the Seekonk and Providence Rivers. As the boat is underway, a pump draws surface water up and through a water quality YSI XLM650 sonde on the deck, which collects data every four seconds. This sonde is calibrated and maintained as described above for the fixed-site monitoring sondes. The sonde collects data on temperature, conductivity, dissolved oxygen, pH, and chlorophyll *a* concentration. The current focus of the monitoring effort is on the chlorophyll data, as a proxy for phytoplankton abundance. The data are analyzed to create maps of chlorophyll concentration along the boat track to illustrate presence and distribution of phytoplankton blooms. Chlorophyll *a* data are processed and mapped using the ArcGIS suite, interpolating values using an inverse distance weighted methodology looking at the 12 nearest neighbors. The interpolation of data all the way to the shoreline is for visual clarity, though is also highly artificial. In 2019, the NBC mapped surface water quality on 29 days. Surface maps of chlorophyll data are posted to the Snapshot website, while the full datasets are available upon request.

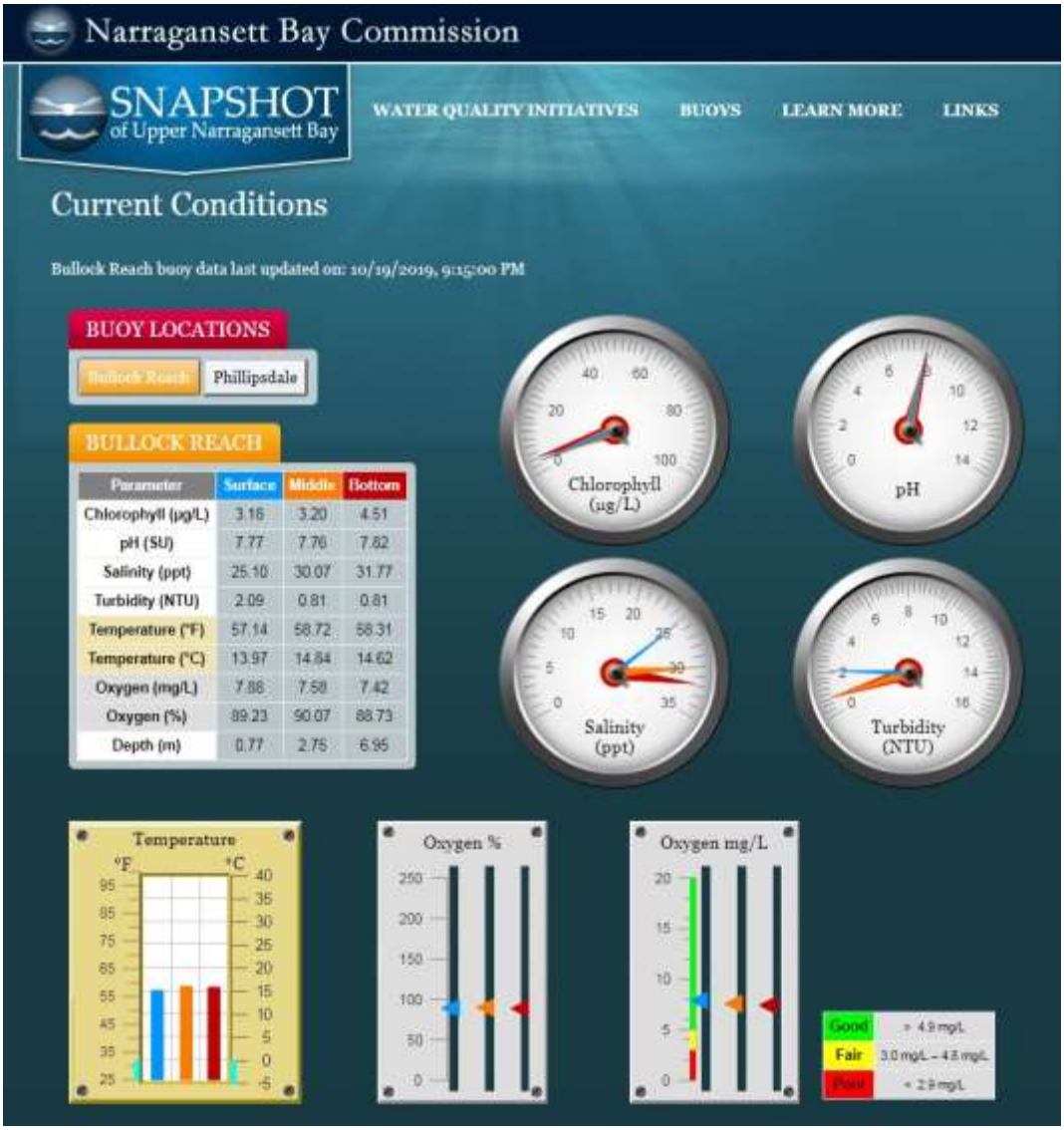


An example of a chlorophyll a *map from surface mapping on August 7, 2019*

NBC Snapshot of Upper Narragansett Bay Website

As discussed in several sections above, the NBC hosts a webpage, launched in 2011, called "Snapshot of Upper Narragansett Bay" (http://snapshot.narrabay.com/app/), where almost all of the results of receiving waters monitoring are shared with the public. This site was continually updated through 2019 with data postings and a blog that is updated weekly with the most recent results of sampling events. Sampling procedures are described for each monitoring initiative and tables with up-to-date monitoring results can be downloaded. The most recent data at the fixed-site water quality monitoring stations is displayed through dials and gauges as shown in Figure 8 below. This display allows users to quickly assess current water quality conditions. An interactive interface allows users to choose fixed-site parameters to display in table format, which can then be downloaded. The NBC Snapshot website represents a comprehensive look at water quality in upper Narragansett Bay by providing the general public with near real-time data and a wide range of information regarding water quality in Narragansett Bay. In 2012, the NBC received a National Association of Clean Water Agencies (NACWA) National Environmental Achievement Award for Excellence in Public Information and Education for the Snapshot website. NACWA's Public Information and Education Awards are presented for outstanding programs in video, printed publications, educational programs, or e-media.

Figure 8: Fixed-Site Dashboard view on the NBC's "Snapshot of Upper Narragansett Bay" Website.



Field's Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL)	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
1/1/2019	10.1	1.8	72.61	83.000	84.26	72.61	3.4500	4.46
1/2/2019	11.4	2.0	73.26	113.00	122.49	73.26	3.7000	3.77
1/3/2019	7.1	2.0	58.24	85.500	102.42	58.24	2.3500	5.20
1/4/2019	5.0	2.0	52.59	115.00	118.69	52.59	2.8500	4.95
1/5/2019	5.0	2.0	75.14	97.000	78.95	75.14	<2.0000	4.46
1/6/2019	8.7	4.5	76.33	59.500	78.04	76.33	3.6000	4.20
1/7/2019	8.8	2.0	72.43	78.000	108.32	72.43	4.7500	4.57
1/8/2019	36.6	2.0	75.59	77.500	119.19	75.59	3.3000	5.33
1/9/2019	7.2	3.0	62.38	94.500	108.14	62.38	2.5000	5.29
1/10/2019	5.0	2.0	53.04	93.000	92.49	53.04	2.4500	4.19
1/11/2019	5.0	2.0	47.12	86.000	127.84	47.12	2.7500	4.39
1/12/2019	10.1	2.0	46.26	103.50	134.84	46.26	3.3500	4.71
1/13/2019	13.7	2.0	52.72	110.00	109.63	52.72	<2.0000	3.66
1/14/2019	11.4	2.0	45.21	118.50	146.58	45.21	2.5500	5.45
1/15/2019	19.7	2.0	43.40	124.00	149.13	43.40	2.8000	4.16
1/16/2019	18.5	2.0	42.46	106.50	133.12	42.46	2.2000	4.34
1/17/2019	16.1	2.0	51.76	130.00	125.95	51.76	2.3500	3.44
1/18/2019	14.3	2.0	40.91	119.00	132.71	40.91	2.5000	4.06
1/19/2019	14.3	2.0	48.39	128.00	136.26	48.39	2.4000	3.92
1/20/2019	76.9	2.0	73.57	98.000	72.58	73.57	10.400	7.44
1/21/2019	254.1	2.0	68.44	67.000	115.99	68.44	15.100	11.93
1/22/2019	243.5	6.8	69.36	77.000	118.45	69.36	13.000	10.36
1/23/2019	134.5	3.0	65.97	109.00	132.98	65.97	6.1500	8.90
1/24/2019	13.7	2.0	80.91	106.50	52.33	75.24	6.9000	6.07
1/25/2019	17.3	2.0	74.51	60.500	80.37	74.51	4.5000	4.01
1/26/2019	23.1	2.0	75.56	50.000	81.26	75.56	4.7500	3.92
1/27/2019	28.6	2.0	73.54	55.000	72.07	73.54	3.2500	3.39
1/28/2019	41.1	2.0	73.18	61.000	98.16	73.18	2.6500	3.87
1/29/2019	30.7	2.0	60.02	116.00	124.89	60.02	2.7500	4.12
1/30/2019	59.1	2.0	58.54	139.00	135.86	58.54	3.6000	4.23
1/31/2019	62.1	2.0	49.42	82.000	127.01	49.42	4.0000	4.60
2/1/2019	16.1	2.0	46.16	106.00	123.44	46.16	4.8000	4.67
2/2/2019	14.3	2.0	44.27	98.500	130.27	44.27	3.9000	4.03
2/3/2019	33.2	2.0	54.16	139.00	114.92	54.16	4.5000	4.71
2/4/2019	25.4	2.0	42.92	115.50	157.67	42.92	3.5500	4.94
2/5/2019	10.1	2.0	46.30	109.50	143.76	46.30	3.4500	5.39
2/6/2019	11.6	2.0	55.22	185.00	180.19	55.22	3.2500	4.40
2/7/2019	39.7	2.0	52.85	126.50	141.14	52.85	2.8500	3.86
2/8/2019	17.7	2.0	44.58	119.00	175.73	44.58	3.0500	3.85
2/9/2019	8.8	2.0	42.49	112.00	123.76	42.49	3.9000	2.98
2/10/2019	10.1	2.0	46.56	108.00	102.21	46.56	2.4500	2.55
2/11/2019	17.8	2.0	42.92	121.00	163.34	42.92	2.9000	3.29
2/12/2019	19.0	4.5	56.63	144.00	157.99	56.63	3.0000	3.15
2/13/2019	26.4	5.5	68.86	96.000	106.26	68.86	11.300	6.45
2/14/2019	17.7	2.0	54.05	97.000	124.70	54.05	4.1000	3.32
2/15/2019	5.0	2.0	51.71	110.00	129.36	51.71	3.0500	3.92
2/16/2019	10.0	2.0	51.06	82.000	111.86	51.06	2.9500	3.00
2/17/2019	15.2	2.0	47.78	93.000	134.11	47.78	2.9000	3.39
2/18/2019	7.1	2.0	45.54	123.00	151.77	45.54	3.2500	3.27
2/19/2019	10.0	2.0	44.81	98.000	148.52	44.81	3.5500	3.51
2/20/2019	10.9	2.0	47.29	104.00	151.13	47.29	2.3500	3.13
2/21/2019	17.8	2.0	56.83	117.00	143.60	56.83	4.9500	4.90
2/22/2019	7.1	2.0	51.75	87.000	136.10	51.75	3.4000	3.62
2/23/2019	8.8	2.0	49.54	91.000	146.21	49.54	2.8500	3.27
2/24/2019	15.0	2.0	67.64	109.00	97.97	67.64	3.5500	2.92
2/25/2019	16.1	2.0	68.73	78.000	107.26	68.73	3.9000	2.73
2/26/2019	5.0	2.0	45.78	101.00	134.00	45.78	4.3000	3.17
2/27/2019	10.8	2.0	48.46	122.00	139.76	48.46	3.0500	2.83
2/28/2019	12.5	2.0	47.99	119.50	142.40	47.99	2.5000	2.61
3/1/2019	14.3	2.0	45.58	123.50	165.12	45.58	3.6500	3.42
3/2/2019	27.5	4.5	49.48	117.00	148.44	49.48	4.7500	2.77
3/3/2019	10.1	2.0	50.75	106.00	98.15	50.75	3.8000	2.34
3/4/2019	10.0	2.0	49.60	101.50	140.72	49.60	3.9000	3.01
3/5/2019	7.1	2.0	45.04	120.00	160.88	45.04	3.5500	2.42
3/6/2019	8.0	2.0	42.83	117.50	163.43	42.83	4.0000	3.00
3/7/2019	13.4	2.0	49.42	124.00	149.88	49.42	3.2000	2.89
3/8/2019	5.0	2.0	41.46	126.00	162.85	41.46	3.2000	2.68
3/9/2019	8.8	2.0	47.53	133.00	136.83	47.53	2.8000	2.70
3/10/2019	10.1	2.0	62.27	125.00	149.39	62.27	5.0000	3.30
3/11/2019	5.0	2.0	66.63	83.000	114.61	66.63	4.1500	3.45
3/12/2019	7.1	2.0	50.16	115.00	152.77	50.16	2.8000	2.40
3/13/2019	5.0	2.0	47.11	110.00	143.83	47.11	2.7000	2.49
3/14/2019	8.8	2.0	51.92	111.50	143.89	51.92	2.0500	2.10
3/15/2019	7.1	2.0	56.62	129.00	144.43	56.62	2.9000	2.76
3/16/2019	8.8	2.0	50.18	79.000	112.82	50.18	2.4500	2.47
3/17/2019	5.0	2.0	56.43	88.500	123.76	56.43	2.4500	2.49
3/18/2019	5.0	4.5	49.63	99.000	137.69	49.63	3.0000	3.34
3/19/2019	5.0	2.0	50.92	106.00	144.05	50.92	2.5000	3.04
3/20/2019	5.0	2.0	47.37	116.00	144.82	47.37	2.4500	2.64
3/21/2019	8.8	2.0	57.16	131.50	151.46	57.16	2.3500	3.05
3/22/2019	12.2	2.0	69.04	88.000	119.35	69.04	2.8500	3.18
3/23/2019	7.1	2.0	71.15	64.000	88.04	71.15	3.0000	2.79
3/24/2019	5.0	2.0	58.30	82.000	125.86	58.30	2.8000	3.15
3/25/2019	7.1	2.0	47.52	105.00	127.14	47.52	2.8000	3.60

Field's Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL)	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
3/26/2019	5.0	2.0	49.74	108.50	148.11	49.74	2.4500	3.08
3/27/2019	5.0	2.0	45.78	128.00	146.09	45.78	2.4500	3.21
3/28/2019	8.8	2.0	46.31	122.50	148.90	46.31	2.7500	3.09
3/29/2019	5.0	2.0	44.44	126.50	139.36	44.44	2.5000	3.92
3/30/2019	7.1	2.0	44.25	109.00	115.61	44.25	<2.0000	5.18
3/31/2019	5.0	2.0	49.92	130.00	142.03	49.92	<2.0000	4.05
4/1/2019	8.8	2.0	43.23	109.00	162.93	43.23	2.2500	4.10
4/2/2019	5.0	2.0	51.88	137.50	165.71	51.88	2.8000	4.91
4/3/2019	7.9	2.0	58.60	122.50	133.94	58.60	<2.0000	6.07
4/4/2019	8.8	2.0	42.35	119.50	162.19	42.35	2.5500	4.36
4/5/2019	5.0	2.0	49.23	141.00	167.60	49.23	2.2500	4.24
4/6/2019	5.0	2.0	42.18	317.00	177.42	42.18	2.0500	6.79
4/7/2019	5.0	2.0	44.97	134.00	150.02	44.97	<2.0000	6.32
4/8/2019	5.0	2.0	69.38	105.00	122.60	69.38	3.0000	4.51
4/9/2019	5.0	2.0	65.73	83.000	124.91	65.73	2.9500	4.46
4/10/2019	8.7	2.0	45.15	109.00	132.03	45.15	2.1000	4.44
4/11/2019	5.0	2.0	42.30	109.50	151.20	42.30	2.2000	3.81
4/12/2019	5.0	2.0	49.40	132.00	146.86	49.40	<2.0000	3.96
4/13/2019	5.0	2.0	66.45	96.000	129.10	66.45	2.3000	6.68
4/14/2019	5.0	2.0	53.85	120.00	146.78	53.85	2.2500	6.07
4/15/2019	5.0	2.0	69.24	115.00	116.29	69.24	2.5500	4.89
4/16/2019	10.1	2.0	53.76	84.000	148.00	53.76	2.7500	3.89
4/17/2019	12.7	2.0	46.02	120.00	144.50	46.02	<2.0000	3.06
4/18/2019	14.3	2.0	46.56	117.00	153.26	46.56	2.2000	2.93
4/19/2019	8.8	2.0	49.55	117.50	170.89	49.55	<2.0000	3.30
4/20/2019	7.1	2.0	65.02	119.00	138.99	65.02	2.7000	3.27
4/21/2019	5.0	2.0	51.67	90.500	118.89	51.67	<2.0000	3.42
4/22/2019	5.0	2.0	67.90	104.00	87.45	67.90	2.3500	3.30
4/23/2019	5.0	2.0	70.77	80.000	91.68	70.77	<2.0000	3.72
4/24/2019	5.0	2.0	71.07	61.500	122.68	71.07	<2.0000	5.35
4/25/2019	5.0	4.0	66.97	79.000	107.88	66.97	<2.0000	4.17
4/26/2019	5.0	2.0	77.11	115.00	116.88	66.83	2.3000	3.78
4/27/2019	8.8	13.0	74.96	69.000	91.25	76.21	2.3000	3.29
4/28/2019	5.0	4.0	73.47	65.000	97.09	73.47	<2.0000	3.45
4/29/2019	7.1	2.0	71.74	76.000	105.83	71.74	2.5500	4.34
4/30/2019	7.1	4.5	70.84	75.000	111.15	70.84	2.2000	3.67
5/1/2019	7.2	2.0	71.74	80.000	89.28	71.74	2.2000	3.90
5/2/2019	7.1	2.0	71.99	72.500	94.68	71.99	2.3000	3.52
5/3/2019	5.0	2.0	54.98	102.50	115.69	54.98	2.2000	4.10
5/4/2019	5.0	2.0	53.27	94.500	115.85	53.27	<2.0000	6.02
5/5/2019	5.0	2.0	67.54	101.00	110.13	67.54	2.2500	4.09
5/6/2019	5.0	4.5	54.75	99.500	116.47	54.75	<2.0000	4.18
5/7/2019	5.0	2.0	49.57	121.50	134.47	49.57	<2.0000	5.21
5/8/2019	5.0	2.0	49.67	108.00	133.16	49.67	<2.0000	4.64
5/9/2019	5.0	2.0	47.01	117.50	145.18	47.01	<2.0000	4.06
5/10/2019	5.0	4.5	46.87	155.00	157.66	46.87	2.1000	3.82
5/11/2019	5.0	2.0	46.73	123.50	149.40	46.73	<2.0000	4.66
5/12/2019	5.0	2.0	67.34	113.00	113.42	67.34	2.7500	3.27
5/13/2019	5.0	2.0	62.87	107.00	125.53	62.87	2.1500	3.09
5/14/2019	5.0	2.0	69.76	84.000	101.18	69.76	2.6500	2.67
5/15/2019	5.0	2.0	49.21	108.50	114.31	49.21	2.2500	2.55
5/16/2019	5.0	2.0	47.75	112.00	125.95	47.75	2.0000	3.76
5/17/2019	5.0	2.0	45.54	107.00	139.19	45.54	2.0500	3.37
5/18/2019	5.0	2.0	45.26	110.00	153.95	45.26	2.6000	3.91
5/19/2019	7.1	2.0	50.81	115.00	148.91	50.81	<2.0000	2.96
5/20/2019	5.0	2.0	57.03	145.00	138.86	57.03	5.0500	4.81
5/21/2019	5.0	2.0	55.82	90.000	116.18	55.82	2.1000	2.73
5/22/2019	5.0	2.0	42.66	92.000	149.49	42.66	<2.0000	2.14
5/23/2019	5.0	2.0	48.76	139.00	182.56	48.76	2.4000	2.06
5/24/2019	5.0	2.0	44.53	138.00	167.84	44.53	2.5500	2.77
5/25/2019	5.0	2.0	41.77	121.00	143.52	41.77	<2.0000	3.33
5/26/2019	5.0	2.0	39.79	123.00	132.96	39.79	<2.0000	4.46
5/27/2019	5.0	2.0	43.38	111.00	144.18	43.38	<2.0000	3.82
5/28/2019	5.0	2.0	46.49	168.00	163.90	46.49	3.5000	2.92
5/29/2019	5.0	2.0	49.17	118.00	138.13	49.17	2.5500	2.68
5/30/2019	7.1	11.0	48.94	110.50	120.96	48.94	2.6000	3.05
5/31/2019	5.0	4.5	37.61	92.000	149.58	37.61	2.2000	4.16
6/1/2019	5.0	2.0	38.75	104.00	140.61	38.75	2.2000	4.41
6/2/2019	7.1	2.0	45.54	126.00	157.38	45.54	2.5500	3.33
6/3/2019	5.0	2.0	38.30	115.00	167.62	38.30	2.1000	3.71
6/4/2019	5.0	4.5	38.71	148.00	146.00	38.71	2.1500	3.22
6/5/2019	5.0	2.0	38.30	162.50	175.49	38.30	2.5000	3.63
6/6/2019	5.0	2.0	40.78	136.00	141.87	40.78	2.5500	3.63
6/7/2019	5.0	2.0	37.69	152.00	185.66	37.69	4.0000	4.11
6/8/2019	5.0	2.0	36.82	112.50	147.89	36.82	3.1500	4.67
6/9/2019	5.0	2.0	37.62	116.00	143.70	37.62	3.4500	4.18
6/10/2019	12.5	2.0	51.33	190.00	179.94	51.33	4.4500	4.52
6/11/2019	8.8	13.0	73.93	103.00	87.74	71.25	4.7143	3.68
6/12/2019	5.0	2.0	66.28	87.000	97.74	66.28	4.4286	3.50
6/13/2019	5.0	2.0	67.33	95.000	101.63	67.33	3.5333	3.08
6/14/2019	5.0	2.0	65.24	73.000	107.64	65.24	4.7500	3.28
6/15/2019	5.0	2.0	48.32	118.50	127.82	48.32	4.4000	3.78
6/16/2019	5.0	2.0	41.25	115.00	136.06	41.25	4.1429	3.23
6/17/2019	5.0	2.0	41.47	136.00	154.99	41.47	5.4000	5.46

Field's Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL)	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
6/18/2019	5.0	2.0	45.91	126.00	136.48	45.91	3.2000	3.17
6/19/2019	5.0	2.0	40.43	132.00	152.07	40.43	2.6500	3.35
6/20/2019	5.0	2.0	50.91	144.00	146.41	50.91	2.6000	3.80
6/21/2019	5.0	4.5	43.64	128.00	155.72	43.64	2.6000	4.52
6/22/2019	5.0	2.0	38.65	121.00	157.50	38.65	2.4500	5.47
6/23/2019	5.0	2.0	42.10	105.00	130.82	42.10	<2.0000	6.35
6/24/2019	5.0	2.0	37.95	162.00	166.48	37.95	2.4000	6.27
6/25/2019	5.0	2.0	49.94	161.00	164.44	49.94	4.3500	4.65
6/26/2019	5.0	3.0	37.35	118.50	156.35	37.35	2.7500	5.37
6/27/2019	5.0	2.0	38.00	119.00	154.25	38.00	2.4000	4.93
6/28/2019	5.0	2.0	37.16	141.00	170.51	37.16	3.4500	5.51
6/29/2019	5.0	2.0	42.54	142.00	156.07	42.54	4.0500	4.80
6/30/2019	5.0	2.0	52.82	108.00	115.25	52.82	4.2500	4.51
7/1/2019	5.0	2.0	47.24	116.00	139.45	47.24	3.6428	4.60
7/2/2019	5.0	2.0	37.06	122.00	158.36	37.06	3.1111	4.89
7/3/2019	5.0	2.0	35.98	136.50	166.29	35.98	3.1500	5.74
7/4/2019	5.0	2.0	34.41	129.50	148.91	34.41	3.6500	5.72
7/5/2019	5.0	2.0	35.87	157.00	171.76	35.87	3.4500	5.38
7/6/2019	5.0	2.0	42.13	143.00	142.31	42.13	5.2000	5.75
7/7/2019	5.0	2.0	36.35	117.00	112.68	36.35	5.2000	4.45
7/8/2019	5.0	2.0	34.74	148.50	155.74	34.74	3.8000	4.20
7/9/2019	5.0	2.0	32.73	145.00	164.19	32.73	3.8000	4.71
7/10/2019	5.0	2.0	32.08	142.00	147.79	32.08	5.4666	4.98
7/11/2019	10.0	2.0	43.98	160.50	167.49	43.98	4.2000	3.87
7/12/2019	10.0	11.0	55.67	109.00	124.63	55.67	5.6000	4.33
7/13/2019	5.0	2.0	51.19	106.00	115.20	51.19	3.9500	3.73
7/14/2019	5.0	2.0	34.58	117.00	136.99	34.58	3.0500	4.43
7/15/2019	5.0	2.0	34.52	132.00	159.09	34.52	2.8500	3.64
7/16/2019	5.0	2.0	35.85	152.00	159.42	35.85	3.3000	3.87
7/17/2019	6.3	2.0	37.10	172.50	167.93	37.10	4.0667	4.03
7/18/2019	5.0	2.0	35.71	127.00	167.84	35.71	3.2500	2.54
7/19/2019	5.0	2.0	33.83	163.00	170.20	33.83	3.7500	3.67
7/20/2019	5.0	2.0	36.81	128.00	151.09	36.81	3.4500	4.02
7/21/2019	5.0	2.0	34.17	115.00	145.89	34.17	3.5500	4.34
7/22/2019	16.2	2.0	53.22	161.00	135.16	53.22	10.400	5.75
7/23/2019	5.0	4.5	69.09	154.00	78.25	66.85	3.4000	2.66
7/24/2019	6.3	4.5	62.41	81.000	101.07	62.41	3.2500	2.43
7/25/2019	5.0	4.5	60.97	83.500	88.99	60.97	3.4666	2.51
7/26/2019	7.1	2.0	35.58	268.00	149.55	35.58	<2.0000	3.18
7/27/2019	5.0	2.0	34.84	128.00	152.78	34.84	2.6500	3.31
7/28/2019	5.0	2.0	38.64	117.00	149.81	38.64	2.6500	3.81
7/29/2019	5.0	2.0	39.48	163.00	161.03	39.48	3.1000	3.84
7/30/2019	5.0	2.0	35.96	126.00	150.12	35.96	2.9000	4.02
7/31/2019	5.0	2.0	34.06	132.00	162.10	34.06	2.7500	3.18
8/1/2019	5.0	4.5	32.54	142.50	170.70	32.54	2.2000	4.13
8/2/2019	5.0	4.5	33.40	135.00	169.17	33.40	2.7500	4.45
8/3/2019	5.0	4.5	33.02	136.00	178.15	33.02	2.3000	4.94
8/4/2019	5.0	7.8	34.80	124.00	143.41	34.80	<2.0000	4.08
8/5/2019	7.1	2.0	32.99	158.50	166.07	32.99	2.4500	2.18
8/6/2019	7.1	2.0	33.50	148.00	200.54	33.50	2.1000	2.03
8/7/2019	5.0	5.9	43.17	197.00	166.32	43.17	3.1500	4.80
8/8/2019	7.1	2.0	50.62	94.500	115.10	50.62	3.4500	4.99
8/9/2019	5.0	4.5	32.55	118.00	165.04	32.55	2.3000	5.04
8/10/2019	5.0	2.0	32.49	136.00	193.95	32.49	2.3500	4.60
8/11/2019	5.0	11.0	33.43	131.00	139.61	33.43	<2.0000	4.82
8/12/2019	5.0	7.8	31.60	141.50	175.51	31.60	3.2000	5.60
8/13/2019	5.0	2.0	32.16	148.00	189.56	32.16	2.6000	4.82
8/14/2019	5.0	3.0	30.24	149.00	184.80	30.24	2.2000	5.24
8/15/2019	5.0	2.0	34.03	171.00	189.22	34.03	2.1500	5.09
8/16/2019	7.1	4.5	31.60	159.00	185.08	31.60	2.6428	5.46
8/17/2019	5.0	4.5	34.23	167.00	179.48	34.23	3.1000	4.96
8/18/2019	8.7	2.0	33.92	122.00	140.95	33.92	2.6500	4.82
8/19/2019	5.0	2.0	43.41	310.00	140.71	43.41	4.4000	4.78
8/20/2019	16.1	13.0	35.23	117.00	145.16	35.23	2.8000	4.26
8/21/2019	7.9	3.0	43.14	154.00	138.46	43.14	3.9333	2.85
8/22/2019	5.0	2.0	37.90	113.00	146.79	37.90	2.5000	3.04
8/23/2019	5.0	4.5	33.55	128.00	173.63	33.55	<2.0000	3.16
8/24/2019	5.0	2.0	31.81	128.00	159.94	31.81	2.9500	3.09
8/25/2019	7.1	2.0	29.00	129.00	153.75	29.00	2.5500	2.90
8/26/2019	5.0	2.0	31.17	149.50	158.18	31.17	<2.0000	2.92
8/27/2019	5.0	7.8	31.19	158.00	188.53	31.19	2.6500	3.93
8/28/2019	33.9	5.9	55.56	168.00	141.65	55.56	4.3125	5.55
8/29/2019	5.0	17.0	46.01	104.50	137.88	46.01	2.6000	5.22
8/30/2019	5.0	2.0	31.15	150.00	185.77	31.15	3.1500	5.76
8/31/2019	7.1	2.0	30.80	126.00	162.90	30.80	3.0500	5.25
9/1/2019	5.0	2.0	31.86	152.00	153.02	31.86	2.3000	4.58
9/2/2019	7.1	2.0	46.57	161.00	163.58	46.57	5.9285	5.44
9/3/2019	7.1	2.0	52.80	98.500	105.61	52.80	3.2000	4.09
9/4/2019	6.3	7.6	36.68	301.00	163.48	36.68	3.2000	4.09
9/5/2019	5.0	2.0	22.91	173.00	230.47	22.91	2.8125	3.89
9/6/2019	5.0	2.0	42.46	240.00	176.86	42.46	2.4000	3.53
9/7/2019	5.0	2.0	31.48	138.00	173.00	31.48	3.2500	3.67
9/8/2019	5.0	2.0	32.16	160.00	171.85	32.16	4.1250	3.43
9/9/2019	5.0	2.0	31.84	196.50	203.42	31.84	3.9000	3.67

Field's Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL)	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
9/10/2019	5.0	2.0	29.12	180.00	185.00	29.12	4.3000	3.57
9/11/2019	5.0	2.8	32.16	165.00	213.91	32.16	3.2142	3.86
9/12/2019	7.1	2.0	44.33	173.00	179.55	44.33	3.8000	3.13
9/13/2019	7.1	2.0	31.05	144.00	207.22	31.05	2.8000	3.09
9/14/2019	5.0	2.0	36.17	180.00	177.76	36.17	3.7500	3.36
9/15/2019	7.1	2.0	33.00	116.00	140.11	33.00	3.0000	4.39
9/16/2019	5.0	2.0	31.46	168.50	205.36	31.46	5.0000	9.02
9/17/2019	7.1	2.0	30.03	154.00	190.37	30.03	2.2000	2.13
9/18/2019	6.3	2.0	31.14	158.00	198.57	31.14	<2.0000	2.15
9/19/2019	5.0	2.0	30.03	178.50	200.94	30.03	<2.0000	2.08
9/20/2019	5.0	2.0	31.61	184.00	181.34	31.61	<2.0000	3.49
9/21/2019	5.0	2.0	29.12	150.00	185.62	29.12	2.2000	3.74
9/22/2019	7.1	2.0	30.98	147.00	166.17	30.98	2.4000	2.83
9/23/2019	8.8	2.0	40.75	196.00	196.32	40.75	6.5714	6.44
9/24/2019	7.1	2.0	53.85	97.500	119.71	53.85	3.6000	3.12
9/25/2019	5.0	2.0	29.79	185.50	187.26	29.79	2.5000	3.36
9/26/2019	7.1	2.0	44.53	164.50	162.73	44.53	4.2000	3.58
9/27/2019	5.0	2.0	30.98	159.00	217.30	30.98	3.1000	3.40
9/28/2019	5.0	2.0	29.49	142.00	151.24	29.49	3.1500	3.82
9/29/2019	5.0	2.0	32.44	141.00	174.23	32.44	2.7500	2.88
9/30/2019	7.1	2.0	30.23	147.00	203.69	30.23	2.8000	3.47
10/1/2019	5.0	2.0	28.90	143.00	175.19	28.90	<2.0000	3.19
10/2/2019	5.0	2.0	34.83	164.00	190.00	34.83	2.7500	3.43
10/3/2019	7.1	2.0	32.83	144.00	185.44	32.83	2.6000	2.36
10/4/2019	7.1	2.0	29.22	134.00	182.94	29.22	2.2000	2.55
10/5/2019	5.0	2.0	28.79	144.00	198.66	28.79	2.9000	2.73
10/6/2019	5.0	2.0	31.91	137.00	175.97	31.91	2.1500	2.83
10/7/2019	7.1	2.0	31.71	179.00	216.58	31.71	3.3000	3.26
10/8/2019	5.0	2.0	31.60	152.00	185.74	31.60	2.2000	2.67
10/9/2019	5.0	3.0	55.65	123.00	128.92	55.65	2.4000	2.78
10/10/2019	5.0	6.8	40.43	84.000	83.41	40.43	2.8000	2.08
10/11/2019	5.0	4.5	30.20	152.00	188.89	30.20	3.2000	2.49
10/12/2019	5.0	2.0	27.48	122.00	177.81	27.48	2.5000	2.40
10/13/2019	5.0	2.0	32.26	151.00	173.08	32.26	2.8500	2.60
10/14/2019	5.0	2.0	29.12	162.00	166.01	29.12	2.3000	2.35
10/15/2019	7.1	2.0	30.57	152.00	198.75	30.57	3.0000	2.31
10/16/2019	5.0	2.0	58.61	221.00	185.47	52.13	3.8500	2.55
10/17/2019	5.0	2.0	62.16	69.000	115.89	62.16	3.6500	2.89
10/18/2019	10.1	2.0	56.93	78.000	113.72	56.93	2.9000	2.67
10/19/2019	5.0	2.0	47.45	99.000	145.18	47.45	2.2500	2.64
10/20/2019	5.0	2.0	33.24	137.00	144.73	33.24	2.9500	3.24
10/21/2019	5.0	2.0	31.63	133.00	190.33	31.63	4.0500	4.90
10/22/2019	7.1	2.0	36.28	181.00	185.87	36.28	3.4000	2.73
10/23/2019	7.3	5.9	45.93	179.50	155.28	45.93	2.5000	2.31
10/24/2019	5.0	2.0	31.82	135.00	176.97	31.82	2.3000	2.49
10/25/2019	7.1	2.0	31.33	173.00	206.87	31.33	2.8500	3.39
10/26/2019	5.0	2.0	33.50	132.00	172.71	33.50	2.4500	3.82
10/27/2019	5.0	2.0	58.24	120.00	75.67	58.24	3.6000	3.09
10/28/2019	5.0	2.0	58.97	87.000	123.24	58.97	2.7000	2.94
10/29/2019	7.1	2.0	38.22	135.00	157.49	38.22	2.8500	3.52
10/30/2019	5.0	2.0	38.50	129.00	173.21	38.50	2.3000	4.20
10/31/2019	5.0	2.0	42.66	129.50	141.96	42.66	2.9000	4.49
11/1/2019	5.0	2.0	33.80	125.00	181.01	33.80	2.1500	2.93
11/2/2019	5.0	2.0	34.77	128.00	167.26	34.77	2.8000	3.00
11/3/2019	8.8	2.0	34.39	115.00	173.79	34.39	2.7000	2.91
11/4/2019	7.1	2.0	32.22	183.00	188.57	32.22	3.3000	3.11
11/5/2019	5.0	2.0	50.95	138.00	131.09	50.95	2.4000	3.07
11/6/2019	5.0	2.0	33.07	111.00	162.86	33.07	2.3500	2.66
11/7/2019	5.0	2.0	37.90	135.00	158.52	37.90	2.8000	2.79
11/8/2019	7.1	2.0	31.58	105.00	151.76	31.58	2.4500	2.49
11/9/2019	5.0	2.0	31.51	114.00	183.09	31.51	2.5000	2.54
11/10/2019	5.0	2.0	32.94	131.00	161.18	32.94	2.4500	2.19
11/11/2019	5.0	2.0	33.46	139.00	174.91	33.46	2.3000	2.53
11/12/2019	7.1	2.0	32.40	153.00	180.16	32.40	2.9000	2.29
11/13/2019	6.3	2.0	31.63	125.00	174.11	31.63	2.9500	2.31
11/14/2019	5.0	2.0	32.62	125.00	175.51	32.62	2.5000	2.30
11/15/2019	5.0	2.0	30.91	128.00	184.37	30.91	3.1500	2.52
11/16/2019	5.0	2.0	30.41	147.00	195.92	30.41	3.0000	2.35
11/17/2019	5.0	2.0	34.87	179.00	194.67	34.87	3.2500	2.42
11/18/2019	5.0	2.0	34.49	171.00	190.67	34.49	3.2500	2.78
11/19/2019	22.1	33.0	35.86	294.00	184.20	35.86	3.4000	2.45
11/20/2019	7.2	2.0	31.21	160.00	184.96	31.21	3.8000	2.73
11/21/2019	5.0	2.0	32.60	109.00	170.07	32.60	3.8000	3.42
11/22/2019	10.1	4.0	35.18	167.00	205.06	35.18	4.8000	3.69
11/23/2019	12.5	4.5	33.82	154.00	176.60	33.82	3.1875	2.67
11/24/2019	14.3	2.0	66.09	112.00	105.25	66.09	4.0000	2.70
11/25/2019	29.5	2.0	60.16	90.000	107.57	60.16	<2.0000	2.20
11/26/2019	20.0	2.0	53.74	85.000	131.44	53.74	3.4000	2.80
11/27/2019	8.7	2.0	38.86	140.00	175.01	38.86	4.1500	3.69
11/28/2019	7.1	2.0	34.55	112.00	163.50	34.55	4.0500	2.99
11/29/2019	8.8	2.0	31.29	134.00	174.41	31.29	3.4000	2.85
11/30/2019	8.7	2.0	30.91	122.00	179.08	30.91	3.4500	3.43
12/1/2019	12.2	2.0	40.02	231.00	153.56	40.02	3.5000	3.03
12/2/2019	38.4	4.0	61.90	122.00	125.85	61.90	4.0000	3.19

Field's Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL)	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
12/3/2019	7.1	2.0	35.35	112.00	161.34	35.35	2.9500	2.73
12/4/2019	5.0	2.0	37.32	123.00	174.46	37.32	5.1000	3.61
12/5/2019	5.0	2.0	38.19	130.00	159.09	38.19	4.1000	3.19
12/6/2019	5.0	2.0	34.77	114.00	170.95	34.77	3.2500	2.59
12/7/2019	7.1	2.0	35.17	121.00	163.18	35.17	3.4000	2.84
12/8/2019	5.0	2.0	37.08	166.00	170.73	37.08	3.4500	3.12
12/9/2019	10.1	2.0	69.19	106.00	100.14	69.19	6.1250	3.44
12/10/2019	16.1	2.0	69.92	85.000	110.70	69.92	4.6250	2.85
12/11/2019	16.2	2.0	61.53	86.500	119.33	61.53	6.8125	3.91
12/12/2019	34.1	2.0	67.78	92.500	112.87	67.78	6.2000	3.05
12/13/2019	10.1	2.0	62.27	156.00	133.95	59.74	3.4000	2.45
12/14/2019	5.0	2.0	84.59	61.500	65.13	73.27	4.4000	3.05
12/15/2019	30.1	2.0	71.53	61.000	98.91	71.53	4.2500	2.71
12/16/2019	16.4	2.0	68.55	78.000	112.68	68.55	4.5625	3.23
12/17/2019	15.5	2.0	67.58	76.500	66.48	67.58	8.5000	3.18
12/18/2019	25.6	2.0	62.23	78.500	104.36	62.23	5.6666	2.76
12/19/2019	19.7	2.0	60.29	79.000	104.94	60.29	5.4000	3.25
12/20/2019	17.7	2.0	60.42	98.000	113.44	60.42	4.8500	2.59
12/21/2019	11.4	2.0	43.90	101.00	141.13	43.90	3.3000	3.58
12/22/2019	10.0	2.0	44.67	112.00	108.14	44.67	4.7500	3.18
12/23/2019	7.1	2.0	44.25	120.00	154.19	44.25	4.0625	3.08
12/24/2019	8.7	2.0	41.34	140.00	159.05	41.34	4.0000	2.70
12/25/2019	6.3	2.0	39.00	106.00	101.02	39.00	3.6000	3.03
12/26/2019	14.3	2.0	40.64	141.00	133.38	40.64	3.4000	2.72
12/27/2019	7.1	2.0	38.14	154.00	151.00	38.14	3.3000	2.93
12/28/2019	5.0	2.0	37.39	128.00	161.62	37.39	3.0000	3.21
12/29/2019	15.6	4.5	53.76	149.00	152.62	53.76	4.1250	3.12
12/30/2019	43.5	4.5	72.85	78.000	95.67	72.85	6.0000	3.50
12/31/2019	19.4	2.0	68.27	60.000	113.36	68.27	4.6500	3.28

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
1/1/2019	5.0	4.0	43.94	87.000	118.53	29.90	7.3333	<2.00
1/2/2019	8.7	5.9	25.34	80.000	198.56	25.34	7.4666	<2.00
1/3/2019	10.1	110.0	25.79	91.000	156.19	25.79	5.7500	<2.00
1/4/2019	5.0	2.0	24.71	90.000	165.19	24.71	5.7000	<2.00
1/5/2019	14.3	21.0	61.31	91.000	132.50	37.18	10.000	2.39
1/6/2019	5.0	4.5	30.67	60.000	78.73	30.67	7.4000	2.73
1/7/2019	5.0	2.0	28.15	76.500	136.83	28.15	8.4667	2.19
1/8/2019	5.0	6.8	28.81	76.000	167.80	28.81	7.4375	2.05
1/9/2019	10.0	7.6	30.10	98.000	167.66	30.10	7.3125	2.11
1/10/2019	5.0	2.0	26.85	67.000	142.35	26.85	4.5000	<2.00
1/11/2019	5.0	4.5	25.22	89.000	149.29	25.22	5.5500	<2.00
1/12/2019	5.0	4.5	24.55	89.000	187.23	24.55	5.9375	<2.00
1/13/2019	5.0	2.0	24.84	76.000	142.68	24.84	5.7333	<2.00
1/14/2019	5.0	11.0	24.80	104.00	160.32	24.80	4.4000	<2.00
1/15/2019	5.0	23.0	23.83	116.00	152.01	23.83	5.4500	<2.00
1/16/2019	9.2	3.9	23.56	108.00	168.65	23.56	5.7500	2.02
1/17/2019	5.0	2.0	22.21	112.00	156.65	22.21	6.1000	<2.00
1/18/2019	5.0	2.0	22.66	112.00	171.24	22.66	5.2500	<2.00
1/19/2019	5.0	2.0	22.46	108.50	176.12	22.46	5.5500	<2.00
1/20/2019	8.8	11.0	59.29	120.00	135.71	35.20	9.7000	2.48
1/21/2019	5.0	2.0	24.57	68.500	121.46	24.57	8.1250	2.88
1/22/2019	5.0	7.8	23.41	84.500	152.97	23.41	6.6000	<2.00
1/23/2019	6.3	31.8	26.32	85.000	203.61	26.32	6.0000	<2.00
1/24/2019	5.0	7.8	69.79	111.00	111.50	41.56	11.250	2.20
1/25/2019	8.7	7.8	39.36	69.000	79.67	39.36	14.000	2.93
1/26/2019	7.1	2.0	32.12	54.000	114.99	32.12	9.2001	2.29
1/27/2019	5.0	7.8	30.23	70.000	89.99	30.23	5.5000	<2.00
1/28/2019	5.0	3.7	27.94	74.000	115.95	27.94	4.8000	<2.00
1/29/2019	8.7	1.8	28.00	83.000	216.69	28.00	7.1500	2.14
1/30/2019	5.0	3.0	31.11	101.00	170.64	31.11	7.6000	2.09
1/31/2019	10.0	7.8	25.47	76.000	161.78	25.47	6.0000	<2.00
2/1/2019	6.0	2.0	25.07	73.000	152.43	25.07	4.9500	<2.00
2/2/2019	12.7	6.8	24.97	83.500	143.66	24.97	5.2500	<2.00
2/3/2019	7.1	4.5	25.44	83.500	174.21	25.44	5.1428	<2.00
2/4/2019	5.0	4.5	23.98	96.500	157.95	23.98	3.8571	<2.00
2/5/2019	5.0	4.5	23.30	109.00	212.71	23.30	3.6875	<2.00
2/6/2019	6.3	2.0	24.12	107.00	173.04	24.12	7.0000	<2.00
2/7/2019	8.7	6.8	31.49	109.00	174.31	31.49	5.0500	<2.00
2/8/2019	5.0	4.5	27.27	120.00	167.73	27.27	5.4000	<2.00
2/9/2019	5.0	2.0	23.08	88.000	165.11	23.08	5.2000	<2.00
2/10/2019	5.0	7.8	22.95	87.500	163.55	22.95	4.5000	<2.00
2/11/2019	5.0	2.0	22.52	92.500	196.07	22.52	4.6429	<2.00
2/12/2019	5.0	2.0	23.93	114.00	209.16	23.93	7.5000	<2.00
2/13/2019	7.6	3.0	47.81	132.00	189.42	38.03	8.6000	2.28
2/14/2019	9.3	2.0	23.81	85.000	163.55	23.81	5.6000	<2.00
2/15/2019	6.0	9.2	29.09	104.00	167.25	29.09	6.0500	<2.00
2/16/2019	6.0	4.5	23.68	96.000	152.58	23.68	4.6000	<2.00
2/17/2019	7.1	2.0	23.06	79.500	184.25	23.06	4.5000	<2.00
2/18/2019	10.0	2.0	25.12	88.500	182.28	25.12	3.8571	<2.00
2/19/2019	5.0	4.5	22.97	95.000	206.75	22.97	5.6429	<2.00
2/20/2019	8.7	5.6	23.80	109.00	204.79	23.80	4.7143	<2.00
2/21/2019	20.1	2.0	31.31	150.00	195.76	31.31	5.4000	<2.00
2/22/2019	7.1	2.0	23.96	90.000	152.47	23.96	7.7000	2.02
2/23/2019	5.0	4.5	23.13	98.500	223.07	23.13	5.2142	<2.00
2/24/2019	5.0	2.0	42.20	117.00	172.90	32.56	6.0000	<2.00
2/25/2019	5.0	2.0	25.54	98.000	144.92	25.54	5.3000	2.05
2/26/2019	5.0	2.0	24.14	95.500	150.97	24.14	4.9285	<2.00
2/27/2019	5.0	2.0	24.11	107.50	166.94	24.11	5.2857	<2.00

Table 2: Bucklin Point TSS, CBOD, and Bacteria Data

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
2/28/2019	5.0	4.0	24.05	107.00	175.54	24.05	4.2000	<2.00
3/1/2019	5.0	2.0	22.80	98.500	194.10	22.80	5.4000	<2.00
3/2/2019	8.8	6.8	25.45	104.50	175.22	25.45	5.3000	<2.00
3/3/2019	5.0	4.5	24.15	85.000	156.86	24.15	6.7000	<2.00
3/4/2019	7.1	2.0	25.87	94.000	161.10	25.87	5.0500	2.01
3/5/2019	8.8	4.5	22.54	93.000	167.67	22.54	6.1000	2.07
3/6/2019	5.0	3.0	22.21	97.000	165.06	22.21	5.8000	2.16
3/7/2019	8.8	2.0	21.65	98.000	191.72	21.65	5.0500	<2.00
3/8/2019	7.1	2.0	21.29	123.00	197.16	21.29	5.1500	<2.00
3/9/2019	5.0	7.8	21.63	119.00	145.82	21.63	4.3000	<2.00
3/10/2019	5.0	2.0	34.10	115.00	157.25	30.29	6.6428	2.14
3/11/2019	10.0	7.8	29.86	103.50	140.68	29.86	8.2857	3.36
3/12/2019	5.0	7.8	24.04	80.000	132.42	24.04	6.0833	2.19
3/13/2019	6.3	5.9	23.57	91.500	148.17	23.57	6.0000	<2.00
3/14/2019	5.0	2.0	25.41	89.000	160.19	25.41	5.3000	2.08
3/15/2019	5.0	2.0	29.38	105.50	196.91	29.38	5.7500	2.52
3/16/2019	5.0	4.5	27.55	128.00	212.88	27.55	6.7857	2.18
3/17/2019	7.1	2.0	25.32	76.000	177.11	25.32	6.5000	2.41
3/18/2019	7.1	7.8	24.67	86.500	168.60	24.67	5.2857	2.06
3/19/2019	5.0	2.0	24.39	102.50	183.86	24.39	5.3572	2.06
3/20/2019	6.3	4.2	24.33	105.50	174.68	24.33	6.2500	2.21
3/21/2019	5.0	6.8	24.49	106.00	179.12	24.49	7.6000	2.84
3/22/2019	12.2	4.0	51.47	135.00	159.05	34.32	10.800	2.82
3/23/2019	5.0	4.5	26.58	72.500	117.13	26.58	8.6000	2.36
3/24/2019	7.1	11.0	25.44	84.500	165.44	25.44	5.6429	2.16
3/25/2019	5.0	23.0	24.54	81.000	156.95	24.54	6.2143	2.31
3/26/2019	5.0	2.0	23.62	108.50	191.04	23.62	5.3572	<2.00
3/27/2019	9.2	4.9	23.08	116.00	184.12	23.08	5.0500	<2.00
3/28/2019	5.0	4.5	23.44	109.50	134.40	23.44	4.6500	<2.00
3/29/2019	5.0	6.8	24.78	117.50	137.58	24.78	4.1500	<2.00
3/30/2019	5.0	4.5	22.67	105.00	120.30	22.67	5.8000	<2.00
3/31/2019	12.4	2.0	25.16	99.000	220.71	25.16	6.8000	2.04
4/1/2019	7.1	4.5	21.64	120.00	205.40	21.64	4.8500	<2.00
4/2/2019	5.0	4.0	21.70	126.00	183.69	21.70	5.5500	<2.00
4/3/2019	10.2	12.0	33.37	122.00	178.05	28.43	4.7857	2.04
4/4/2019	10.0	7.8	21.07	110.00	188.71	21.07	4.8000	<2.00
4/5/2019	7.1	4.5	21.84	145.00	234.11	21.84	5.2500	<2.00
4/6/2019	5.0	4.5	24.96	111.00	192.44	24.96	4.4286	<2.00
4/7/2019	5.0	10.0	21.22	97.000	183.84	21.23	5.3000	<2.00
4/8/2019	10.1	17.0	38.38	118.00	185.25	30.43	4.8500	2.56
4/9/2019	12.2	2.0	25.76	105.00	193.17	25.76	5.2000	2.61
4/10/2019	9.1	5.9	22.13	97.000	188.20	22.13	4.2500	<2.00
4/11/2019	7.1	2.0	22.11	109.00	210.09	22.11	4.8000	<2.00
4/12/2019	5.0	7.8	23.34	123.00	228.85	23.34	6.2000	2.51
4/13/2019	8.8	23.0	37.31	130.00	187.66	33.28	5.7142	2.36
4/14/2019	7.1	2.0	25.00	96.500	185.18	25.00	6.5833	2.54
4/15/2019	7.1	17.0	35.28	136.00	179.89	33.08	8.0000	3.02
4/16/2019	5.0	4.5	24.06	110.00	216.33	24.06	4.0500	<2.00
4/17/2019	5.0	5.9	23.06	85.000	204.73	23.06	2.8500	2.07
4/18/2019	7.1	7.8	24.58	108.00	190.16	24.58	4.0500	<2.00
4/19/2019	5.0	2.0	24.46	122.00	198.60	24.46	5.0714	2.22
4/20/2019	8.8	2.0	33.76	161.00	255.66	33.76	9.9000	2.73
4/21/2019	8.8	13.0	29.73	92.500	135.87	27.25	6.1667	2.12
4/22/2019	7.1	2.0	50.64	95.000	176.28	33.79	10.200	2.65
4/23/2019	5.0	110.0	41.22	84.000	98.82	34.56	7.5000	2.25
4/24/2019	7.9	3.0	31.83	91.000	149.76	31.83	10.300	2.95
4/25/2019	7.1	7.8	28.75	81.000	147.51	28.75	7.2000	2.31

Table 2: Bucklin Point TSS, CBOD, and Bacteria Data

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
4/26/2019	5.0	4.5	40.04	96.000	146.10	35.07	8.9000	2.34
4/27/2019	5.0	13.0	50.64	126.00	126.76	39.11	9.7000	2.38
4/28/2019	6.0	4.5	35.54	55.000	124.97	35.54	6.6667	2.94
4/29/2019	10.1	20.0	32.81	63.000	123.89	32.81	7.0666	2.49
4/30/2019	7.1	2.0	35.94	73.000	120.39	35.94	7.7000	2.75
5/1/2019	12.9	3.0	31.83	82.000	128.02	31.83	7.0833	2.31
5/2/2019	14.7	4.5	30.94	95.000	149.05	30.94	7.1667	2.12
5/3/2019	5.0	4.0	29.12	95.000	147.04	29.12	6.8750	2.15
5/4/2019	5.0	2.0	29.66	107.00	151.30	29.66	6.2143	<2.00
5/5/2019	5.0	7.8	32.46	88.000	147.70	32.46	6.8000	2.16
5/6/2019	8.7	2.0	34.34	102.50	145.81	34.34	6.1666	<2.00
5/7/2019	5.0	4.5	28.98	95.000	167.43	28.98	4.9286	<2.00
5/8/2019	5.0	3.9	26.28	118.50	164.59	26.28	4.3572	<2.00
5/9/2019	5.0	4.5	25.80	119.00	173.23	25.80	6.1250	<2.00
5/10/2019	5.0	2.0	26.01	127.00	175.74	26.01	3.7500	<2.00
5/11/2019	17.6	2.0	23.72	108.00	166.69	23.72	3.5416	<2.00
5/12/2019	5.0	2.0	40.36	120.00	188.37	34.48	6.0000	2.16
5/13/2019	5.0	2.0	38.89	86.000	120.81	31.98	5.8666	2.05
5/14/2019	5.0	13.0	29.59	96.000	125.84	29.01	7.9000	2.32
5/15/2019	6.3	2.0	26.52	95.000	159.46	26.52	3.5500	<2.00
5/16/2019	7.1	2.0	24.98	108.00	173.61	24.98	3.6000	<2.00
5/17/2019	6.0	2.0	25.13	118.00	181.15	25.13	3.9000	<2.00
5/18/2019	5.0	2.0	23.28	104.00	172.03	23.28	4.3500	<2.00
5/19/2019	5.0	2.0	24.16	111.00	163.83	24.16	3.9000	<2.00
5/20/2019	5.0	4.5	34.23	105.00	159.60	30.51	5.8333	<2.00
5/21/2019	8.8	2.0	24.56	134.00	141.93	24.56	4.3333	<2.00
5/22/2019	5.0	3.0	22.51	122.00	172.44	22.51	3.8500	<2.00
5/23/2019	5.0	2.0	23.43	128.00	185.12	23.43	4.5000	<2.00
5/24/2019	5.0	2.0	26.51	165.00	179.71	26.51	6.5000	<2.00
5/25/2019	5.0	4.5	21.23	112.00	174.06	21.23	5.1667	<2.00
5/26/2019	5.0	2.0	20.68	123.00	211.20	20.68	5.8125	2.07
5/27/2019	5.0	2.0	20.25	99.000	241.59	20.25	8.1000	2.49
5/28/2019	5.0	2.0	24.74	117.00	192.94	24.74	9.2857	3.30
5/29/2019	6.3	7.8	23.99	161.00	167.26	23.99	8.6000	3.27
5/30/2019	7.1	13.0	25.40	129.00	198.21	25.40	9.8000	4.00
5/31/2019	5.0	33.0	22.95	116.00	212.64	22.95	7.2000	3.22
6/1/2019	5.0	4.5	20.49	129.00	184.72	20.49	7.4000	2.89
6/2/2019	5.0	2.0	20.93	132.00	193.32	20.93	9.5000	3.51
6/3/2019	10.0	7.8	21.23	143.00	233.29	21.23	11.200	3.59
6/4/2019	5.0	7.8	19.89	121.00	199.66	19.89	10.200	4.23
6/5/2019	7.9	10.4	20.24	125.00	184.42	20.24	5.1500	3.49
6/6/2019	5.0	2.0	19.96	148.00	189.51	19.96	8.3000	3.95
6/7/2019	5.0	2.0	19.11	184.00	230.49	19.11	6.1333	3.89
6/8/2019	5.0	2.0	18.64	131.00	201.79	18.64	7.2857	3.81
6/9/2019	5.0	2.0	18.50	123.00	217.84	18.50	8.7000	3.74
6/10/2019	5.0	2.0	20.65	148.00	214.07	20.65	8.8000	3.90
6/11/2019	7.1	2.0	50.22	154.00	141.37	34.00	6.7000	2.72
6/12/2019	5.0	3.0	20.91	130.00	169.10	20.91	4.5714	2.60
6/13/2019	5.0	2.0	35.40	121.00	163.09	29.86	6.4000	2.21
6/14/2019	5.0	4.5	21.91	104.00	142.51	21.91	5.1000	2.09
6/15/2019	5.0	2.0	20.74	117.00	208.37	20.74	3.9285	2.09
6/16/2019	5.0	2.0	21.25	121.00	203.46	21.25	3.9285	2.22
6/17/2019	5.0	4.5	19.87	150.00	229.56	19.87	4.3000	2.30
6/18/2019	5.0	17.0	22.21	150.00	257.06	22.21	5.5500	2.30
6/19/2019	5.0	3.9	19.96	138.00	267.59	19.96	5.0625	2.46
6/20/2019	5.0	7.8	23.73	163.00	244.13	23.73	5.7000	2.42
6/21/2019	5.0	6.8	25.90	140.00	208.23	25.90	6.3000	2.30

Table 2: Bucklin Point TSS, CBOD, and Bacteria Data

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
6/22/2019	5.0	4.5	19.79	124.00	216.71	19.79	3.6428	<2.00
6/23/2019	5.0	4.5	18.86	115.00	302.22	18.86	3.6500	<2.00
6/24/2019	5.0	2.0	18.35	137.00	255.14	18.35	3.8500	<2.00
6/25/2019	7.1	2.0	22.87	145.00	233.21	22.87	5.7857	<2.00
6/26/2019	6.3	3.0	18.95	150.00	216.25	18.95	3.8750	<2.00
6/27/2019	5.0	17.0	18.06	118.00	206.03	18.06	3.7333	<2.00
6/28/2019	5.0	7.8	17.45	142.00	208.53	17.45	3.4000	<2.00
6/29/2019	5.0	2.0	22.60	141.00	207.36	22.60	5.0000	2.26
6/30/2019	5.0	13.0	21.18	137.00	184.20	21.18	4.0000	2.04
7/1/2019	5.0	2.0	18.30	119.50	190.69	18.30	3.5625	<2.00
7/2/2019	5.0	2.0	17.65	135.00	233.84	17.65	3.6111	<2.00
7/3/2019	5.0	2.0	16.57	162.00	251.84	16.57	4.5625	2.06
7/4/2019	5.0	23.0	15.83	137.00	234.46	15.83	4.2000	2.05
7/5/2019	7.1	2.0	16.73	128.00	206.51	16.73	4.6500	2.22
7/6/2019	5.0	4.5	21.50	157.00	239.52	21.50	2.6000	2.27
7/7/2019	14.3	11.0	16.94	122.00	145.18	16.94	5.1000	2.06
7/8/2019	7.1	23.0	16.68	137.00	221.64	16.68	4.4500	2.27
7/9/2019	34.6	33.0	16.19	162.00	301.41	16.19	4.4000	2.15
7/10/2019	5.0	10.1	16.34	153.00	262.87	16.34	2.9500	2.17
7/11/2019	5.0	17.0	17.23	152.00	222.55	17.23	6.1333	3.10
7/12/2019	10.0	13.0	30.89	175.00	208.27	27.08	5.8666	2.22
7/13/2019	5.0	23.0	16.85	125.00	238.33	16.85	7.4000	<2.00
7/14/2019	5.0	4.5	15.93	110.00	193.84	15.93	3.0000	<2.00
7/15/2019	5.0	17.0	15.80	121.00	207.19	15.80	4.8000	<2.00
7/16/2019	5.0	79.0	16.04	164.00	248.13	16.04	4.5625	2.02
7/17/2019	5.0	50.3	22.05	167.00	225.01	22.05	6.0000	2.56
7/18/2019	17.6	31.0	17.74	136.00	199.97	17.74	5.2000	2.01
7/19/2019	5.0	17.0	16.48	147.00	222.62	16.48	3.6000	<2.00
7/20/2019	7.1	2.0	15.26	146.00	224.59	15.26	4.9375	2.07
7/21/2019	5.0	4.5	15.22	134.00	261.74	15.22	5.8125	2.17
7/22/2019	5.0	4.0	28.65	147.00	255.59	22.18	9.4000	3.28
7/23/2019	7.1	17.0	37.05	123.00	112.03	27.56	7.9000	3.03
7/24/2019	5.0	9.3	18.23	114.00	210.18	18.23	6.4000	2.57
7/25/2019	7.1	2.0	16.91	127.00	211.79	16.91	6.7000	2.66
7/26/2019	5.0	4.5	16.67	148.00	230.97	16.67	6.5000	2.42
7/27/2019	5.0	4.5	16.37	154.00	256.24	16.37	5.5714	2.33
7/28/2019	5.0	2.0	16.39	129.00	266.31	16.39	5.3572	2.16
7/29/2019	5.0	2.0	16.61	159.00	235.95	16.61	5.0000	2.10
7/30/2019	5.0	11.0	16.28	160.00	240.88	16.28	3.6000	2.23
7/31/2019	5.0	5.5	16.74	165.00	239.33	16.74	4.5333	2.08
8/1/2019	10.1	49.0	15.39	155.00	298.24	15.39	4.1000	2.12
8/2/2019	5.0	11.0	15.27	174.00	291.09	15.27	4.4000	2.15
8/3/2019	5.0	2.0	15.91	156.00	303.45	15.91	4.0000	2.18
8/4/2019	5.0	4.5	14.75	147.00	194.86	14.75	3.6000	<2.00
8/5/2019	7.1	17.0	15.10	153.00	256.09	15.10	3.7500	<2.00
8/6/2019	23.8	27.6	16.10	184.00	270.40	16.10	4.3000	<2.00
8/7/2019	14.1	119.1	17.47	194.00	265.92	17.47	4.0000	2.17
8/8/2019	7.1	33.0	23.76	200.00	215.09	23.23	3.6666	<2.00
8/9/2019	5.0	17.0	15.62	137.00	226.83	15.62	2.7000	<2.00
8/10/2019	5.0	4.5	15.59	140.00	264.07	15.59	3.3500	<2.00
8/11/2019	5.0	6.8	14.62	142.00	240.95	14.62	3.4666	<2.00
8/12/2019	5.0	4.5	14.81	141.00	233.69	14.81	3.2500	<2.00
8/13/2019	5.0	4.5	16.23	176.00	287.06	16.23	3.2222	<2.00
8/14/2019	5.0	13.4	15.20	159.00	284.30	15.20	2.7000	2.01
8/15/2019	5.0	33.0	14.84	180.00	296.78	14.84	2.4000	<2.00
8/16/2019	11.4	70.0	14.98	185.00	242.69	14.98	3.0000	<2.00
8/17/2019	5.0	7.8	16.15	126.00	276.07	16.15	2.3500	2.09

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
8/18/2019	12.2	17.0	14.65	163.00	195.98	14.65	2.8000	<2.00
8/19/2019	5.0	49.0	18.71	143.00	243.48	18.71	3.4000	2.44
8/20/2019	7.1	23.0	14.53	174.00	207.56	14.53	3.3000	2.07
8/21/2019	6.3	40.2	25.34	164.00	212.81	22.79	4.6667	2.27
8/22/2019	5.0	7.8	17.74	139.00	171.47	17.55	3.1000	2.13
8/23/2019	5.0	27.0	16.03	162.00	251.33	16.03	3.1875	2.05
8/24/2019	5.0	23.0	14.64	140.00	216.81	14.64	3.3500	<2.00
8/25/2019	5.0	23.0	14.67	134.00	199.90	14.67	2.6500	<2.00
8/26/2019	5.0	14.0	14.67	171.00	200.29	14.67	2.5500	<2.00
8/27/2019	5.0	7.8	14.89	194.00	274.68	14.89	2.9000	<2.00
8/28/2019	5.0	4.7	28.55	177.00	239.93	24.38	5.7500	<2.00
8/29/2019	7.1	14.0	23.49	118.00	142.09	23.22	3.2500	<2.00
8/30/2019	5.0	13.0	15.48	164.00	223.80	15.48	9.4500	2.74
8/31/2019	5.0	13.0	14.46	162.00	228.46	14.46	3.3750	<2.00
9/1/2019	5.0	4.5	14.27	170.00	224.12	14.27	2.6000	<2.00
9/2/2019	5.0	14.0	25.52	154.00	175.16	23.30	3.9000	<2.00
9/3/2019	5.0	4.5	16.04	168.00	182.56	16.04	2.9000	<2.00
9/4/2019	6.3	23.0	16.07	155.00	222.42	16.07	6.9375	<2.00
9/5/2019	5.0	23.0	15.25	156.00	222.18	15.25	3.6111	<2.00
9/6/2019	7.1	31.0	16.08	177.00	231.43	16.08	3.3000	<2.00
9/7/2019	5.0	7.8	15.41	167.00	252.25	15.41	3.2500	<2.00
9/8/2019	5.0	7.8	14.84	145.00	197.80	14.84	2.4500	<2.00
9/9/2019	5.0	9.3	14.55	146.00	236.88	14.55	3.1250	<2.00
9/10/2019	7.1	6.8	14.93	203.00	210.01	14.93	3.6250	<2.00
9/11/2019	5.0	11.5	14.97	213.00	249.86	14.97	3.4000	<2.00
9/12/2019	5.0	7.8	19.03	223.00	266.89	19.03	4.1666	<2.00
9/13/2019	5.0	2.0	14.17	166.00	253.53	14.17	3.6500	<2.00
9/14/2019	5.0	49.0	16.14	161.00	233.59	16.14	4.4500	<2.00
9/15/2019	13.7	33.0	18.21	159.00	184.51	18.21	3.5000	<2.00
9/16/2019	5.0	22.0	14.26	142.00	229.08	14.26	2.9000	<2.00
9/17/2019	5.0	6.8	14.39	150.00	230.54	14.39	2.8000	2.20
9/18/2019	5.0	8.7	14.51	183.00	227.25	14.51	3.3000	<2.00
9/19/2019	5.0	11.0	13.94	149.00	254.00	13.94	3.6500	<2.00
9/20/2019	5.0	4.0	13.69	178.00	212.98	13.69	2.8000	<2.00
9/21/2019	5.0	6.8	13.79	172.00	240.46	13.79	3.5000	<2.00
9/22/2019	5.0	4.5	14.15	151.00	233.97	14.15	3.4500	2.05
9/23/2019	5.0	2.0	14.41	142.00	233.57	14.41	4.0000	<2.00
9/24/2019	7.1	27.0	23.90	163.00	200.92	21.82	5.5000	2.37
9/25/2019	5.0	27.5	13.95	163.00	225.10	13.95	5.2500	2.54
9/26/2019	5.0	170.0	19.35	182.00	236.79	19.35	6.0500	3.09
9/27/2019	7.1	7.8	14.00	177.00	240.08	14.00	7.0000	3.42
9/28/2019	7.1	49.0	14.24	172.00	217.67	14.24	6.6666	2.71
9/29/2019	7.1	33.0	13.50	133.00	227.78	13.50	6.4138	2.54
9/30/2019	7.1	33.0	13.54	137.00	233.46	13.54	5.1333	2.85
10/1/2019	5.0	7.8	14.88	201.00	226.80	14.88	5.5333	2.76
10/2/2019	5.0	23.7	18.88	176.00	221.24	18.88	6.9000	2.77
10/3/2019	7.1	49.0	15.46	189.00	200.89	15.46	5.6666	2.83
10/4/2019	11.4	49.0	14.41	169.00	190.52	14.41	4.9000	2.08
10/5/2019	5.0	33.0	13.36	160.00	232.87	13.36	5.5000	2.14
10/6/2019	5.0	4.5	14.51	140.00	219.08	14.51	4.5333	<2.00
10/7/2019	5.0	7.8	15.84	167.00	264.05	15.84	5.0500	2.32
10/8/2019	5.0	33.0	14.97	185.00	254.94	14.97	5.3500	2.77
10/9/2019	6.3	27.5	28.84	195.00	252.51	25.25	6.3500	3.28
10/10/2019	7.1	12.0	16.59	112.00	175.49	16.59	4.7000	3.05
10/11/2019	13.6	23.0	14.56	161.00	270.78	14.56	4.3500	2.40
10/12/2019	5.0	23.0	14.25	171.00	237.21	14.25	3.7500	2.40
10/13/2019	14.5	13.0	13.20	163.00	236.16	13.20	3.5333	2.12

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
10/14/2019	7.1	13.0	14.22	157.00	197.91	14.22	3.6000	2.16
10/15/2019	5.0	33.0	14.05	160.00	257.92	14.05	3.9500	2.10
10/16/2019	5.0	85.2	21.76	159.00	283.14	21.15	5.2500	3.08
10/17/2019	7.1	49.0	36.05	166.00	249.19	23.72	3.7000	3.00
10/18/2019	5.0	33.0	15.85	149.00	282.65	15.85	3.3000	<2.00
10/19/2019	5.0	23.0	14.62	128.00	229.66	14.62	2.8000	<2.00
10/20/2019	7.1	7.8	15.52	125.00	201.26	15.52	2.5000	<2.00
10/21/2019	5.0	2.0	15.81	156.00	217.70	15.81	3.2000	<2.00
10/22/2019	5.0	23.0	16.18	160.00	211.30	16.18	3.0500	<2.00
10/23/2019	7.3	40.0	22.29	199.00	213.07	22.29	4.2000	<2.00
10/24/2019	5.0	17.0	14.88	145.00	222.29	14.88	2.7500	<2.00
10/25/2019	5.0	2.0	15.12	157.00	228.68	15.12	2.2000	<2.00
10/26/2019	10.1	230.0	14.26	174.00	251.66	14.26	2.4500	<2.00
10/27/2019	5.0	7.8	37.04	146.00	142.94	27.25	5.4000	<2.00
10/28/2019	7.1	9.3	17.09	94.000	171.90	17.09	3.4000	<2.00
10/29/2019	7.1	4.5	17.14	132.00	230.96	17.14	3.2500	<2.00
10/30/2019	5.0	3.9	18.12	143.00	226.69	18.12	2.8000	<2.00
10/31/2019	7.1	13.0	19.28	175.00	196.30	19.28	3.2000	<2.00
11/1/2019	5.0	13.0	18.00	149.00	200.30	18.00	2.8000	<2.00
11/2/2019	5.0	11.0	14.90	167.00	216.16	14.90	2.6000	<2.00
11/3/2019	5.0	7.8	15.79	133.00	238.96	15.79	3.0500	<2.00
11/4/2019	5.0	2.0	15.96	143.00	204.42	15.96	2.8500	<2.00
11/5/2019	5.0	2.0	26.16	201.00	225.82	24.42	2.6500	<2.00
11/6/2019	6.3	3.9	16.17	128.00	172.32	16.17	3.3500	<2.00
11/7/2019	5.0	4.0	18.65	138.00	234.45	18.65	4.0000	<2.00
11/8/2019	5.0	4.5	15.67	146.00	212.36	15.67	3.6000	<2.00
11/9/2019	5.0	2.0	15.42	151.00	225.62	15.42	6.0714	<2.00
11/10/2019	7.1	2.0	16.11	142.00	246.89	16.11	4.2000	<2.00
11/11/2019	7.1	2.0	16.44	146.00	215.72	16.44	4.1500	<2.00
11/12/2019	7.1	6.8	16.39	155.00	209.73	16.39	3.3500	<2.00
11/13/2019	5.0	3.9	14.99	158.00	222.19	14.99	4.1000	<2.00
11/14/2019	5.0	4.5	16.05	170.00	162.65	16.05	4.1333	<2.00
11/15/2019	10.1	4.5	15.37	166.00	242.65	15.37	4.3000	<2.00
11/16/2019	5.0	6.8	14.64	158.00	236.37	14.64	4.5000	<2.00
11/17/2019	7.1	11.0	15.50	140.00	214.96	15.50	4.0000	<2.00
11/18/2019	7.1	4.5	16.22	151.00	127.03	16.22	5.1000	<2.00
11/19/2019	33.5	26.0	20.85	229.00	247.14	20.85	5.6000	2.09
11/20/2019	6.3	7.3	15.77	171.00	241.79	15.77	5.2500	<2.00
11/21/2019	16.1	23.0	14.43	150.00	235.76	14.43	4.4000	<2.00
11/22/2019	23.1	22.0	17.81	154.00	259.14	17.81	8.5000	2.03
11/23/2019	12.4	7.8	14.47	188.00	246.63	14.47	4.5714	<2.00
11/24/2019	8.8	6.8	45.38	124.00	195.82	31.31	18.571	3.58
11/25/2019	10.0	11.0	17.11	102.00	181.80	17.11	5.6000	<2.00
11/26/2019	12.4	23.0	16.52	141.00	216.90	16.52	4.6000	<2.00
11/27/2019	6.3	2.8	19.61	140.00	234.64	19.61	5.9000	<2.00
11/28/2019	7.1	13.0	17.59	153.00	241.79	17.59	3.1000	<2.00
11/29/2019	5.0	4.5	14.79	103.00	230.77	14.79	3.3500	<2.00
11/30/2019	8.8	7.8	14.85	148.00	257.98	14.85	3.8125	<2.00
12/1/2019	7.1	33.0	16.02	135.00	235.51	16.02	5.0000	<2.00
12/2/2019	8.8	4.5	32.12	150.00	202.63	32.12	9.6000	<2.00
12/3/2019	8.7	7.8	18.03	118.00	215.35	18.03	4.5500	<2.00
12/4/2019	5.0	3.0	17.69	124.00	229.40	17.69	4.1875	<2.00
12/5/2019	5.0	9.3	17.42	130.00	247.70	17.42	3.7500	<2.00
12/6/2019	5.0	4.5	17.26	124.00	217.56	17.26	3.5000	<2.00
12/7/2019	5.0	4.5	16.13	130.00	224.37	16.13	3.6875	<2.00
12/8/2019	5.0	7.8	17.20	138.00	235.10	17.20	4.1500	<2.00
12/9/2019	5.0	6.8	51.39	164.00	212.86	32.22	15.200	3.01

Table 2: Bucklin Point TSS, CBOD, and Bacteria Data

Bucklin Point 2019 Wastewater Treatment Plant
TSS, CBOD, and Bacteria Data

Date	Enterococci Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL	Influent Flow (MGD)	Raw Influent TSS (mg/L)	Raw Influent CBOD (mg/L)	Final Effluent Flow (MGD)	Final Effluent TSS (mg/L)	Final Effluent CBOD (mg/L)
12/10/2019	7.1	6.8	30.60	75.000	116.30	28.49	12.400	3.36
12/11/2019	18.5	9.4	26.80	100.00	181.85	26.80	7.8125	2.46
12/12/2019	7.1	2.0	20.30	91.000	230.75	20.30	4.0625	<2.00
12/13/2019	7.1	2.0	22.37	134.00	223.15	22.37	5.8750	<2.00
12/14/2019	7.1	4.5	62.58	108.00	126.11	38.86	8.2143	<2.00
12/15/2019	7.1	2.0	27.17	65.000	164.41	27.17	10.800	2.53
12/16/2019	7.1	2.0	25.52	76.500	192.11	25.52	10.400	2.19
12/17/2019	7.1	13.0	36.60	125.00	169.33	33.70	14.600	3.01
12/18/2019	10.1	12.2	24.87	72.000	196.21	24.87	9.5625	4.07
12/19/2019	7.1	17.0	23.15	93.000	208.12	23.15	7.8000	<2.00
12/20/2019	5.0	2.0	22.44	104.00	191.32	22.44	6.5625	<2.00
12/21/2019	10.0	2.0	22.88	107.00	180.14	22.88	5.8125	<2.00
12/22/2019	7.1	4.5	22.59	49.000	113.74	22.59	5.0625	<2.00
12/23/2019	7.1	2.0	21.91	47.500	140.56	21.91	4.5000	<2.00
12/24/2019	10.0	2.0	21.51	127.00	206.84	21.51	4.9375	<2.00
12/25/2019	9.1	2.0	20.28	128.00	192.72	20.28	3.0500	<2.00
12/26/2019	5.0	2.0	20.58	87.500	154.34	20.58	7.1875	<2.00
12/27/2019	10.0	2.0	20.62	146.00	214.03	20.62	8.6250	<2.00
12/28/2019	7.1	4.5	19.57	143.00	207.72	19.57	5.5000	<2.00
12/29/2019	7.1	4.5	19.25	92.500	223.48	19.25	9.8000	2.29
12/30/2019	17.6	7.8	55.94	159.00	217.31	39.73	22.200	4.01
12/31/2019	14.1	2.0	28.05	80.000	122.93	28.05	9.8000	2.28

Table 2: Bucklin Point TSS, CBOD, and Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
1/1/2019	Tuesday	1.8		20.5		
1/2/2019	Wednesday	2.0	2.0	15.0	10.0	
1/3/2019	Thursday	2.0		<5.0		
1/4/2019	Friday	<2.0		5.0		<5.0
1/5/2019	Saturday	2.0		<5.0		
1/6/2019	Sunday	4.5		15.0		
1/7/2019	Monday	<2.0		15.5		<5.0
1/8/2019	Tuesday	<2.0		31.5		<5.0
1/9/2019	Wednesday	4.5	<2.0	15.0	<5.0	
1/10/2019	Thursday	2.0		<5.0		
1/11/2019	Friday	<2.0		5.0		<5.0
1/12/2019	Saturday	2.0		20.5		
1/13/2019	Sunday	<2.0		37.5		<5.0
1/14/2019	Monday	<2.0		26.0		<5.0
1/15/2019	Tuesday	<2.0		26.0		<5.0
1/16/2019	Wednesday	2.0	<2.0	20.5	15.0	
1/17/2019	Thursday	<2.0		26.0		<5.0
1/18/2019	Friday	2.0		10.0		
1/19/2019	Saturday	<2.0		20.5		<5.0
1/20/2019	Sunday	<2.0		98.5		<5.0
1/21/2019	Monday	2.0		698.0		
1/22/2019	Tuesday	6.8		277.0		
1/23/2019	Wednesday	4.5	2.0	126.5	184.0	
1/24/2019	Thursday	<2.0		5.0		<5.0
1/25/2019	Friday	2.0		60.0		
1/26/2019	Saturday	<2.0		20.5		<5.0
1/27/2019	Sunday	<2.0		31.5		<5.0
1/28/2019	Monday	2.0		53.5		
1/29/2019	Tuesday	<2.0		94.5		<5.0
1/30/2019	Wednesday	<2.0	<2.0	104.5	53.5	<5.0
1/31/2019	Thursday	<2.0		103.0		<5.0
2/1/2019	Friday	<2.0		26.0		<5.0
2/2/2019	Saturday	<2.0		20.5		<5.0
2/3/2019	Sunday	2.0		42.5		
2/4/2019	Monday	<2.0		31.5		<5.0
2/5/2019	Tuesday	<2.0		5.0		<5.0
2/6/2019	Wednesday	<2.0	<2.0	31.5	<5.0	<5.0
2/7/2019	Thursday	<2.0		42.5		<5.0
2/8/2019	Friday	<2.0		31.5		<5.0
2/9/2019	Saturday	<2.0		<5.0		<5.0
2/10/2019	Sunday	<2.0		20.5		<5.0
2/11/2019	Monday	2.0		20.5		
2/12/2019	Tuesday	4.5		72.0		
2/13/2019	Wednesday	4.5	6.8	60.0	20.5	
2/14/2019	Thursday	<2.0		10.0		<5.0
2/15/2019	Friday	<2.0		5.0		<5.0
2/16/2019	Saturday	<2.0		10.0		<5.0
2/17/2019	Sunday	<2.0		15.5		<5.0
2/18/2019	Monday	2.0		10.0		
2/19/2019	Tuesday	<2.0		10.0		<5.0
2/20/2019	Wednesday	<2.0	<2.0	26.0	<5.0	<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
2/21/2019	Thursday	<2.0		20.5		<5.0
2/22/2019	Friday	<2.0		<5.0		<5.0
2/23/2019	Saturday	<2.0		15.5		<5.0
2/24/2019	Sunday	<2.0		15.0		<5.0
2/25/2019	Monday	<2.0		26.0		<5.0
2/26/2019	Tuesday	<2.0		5.0		<5.0
2/27/2019	Wednesday	<2.0	<2.0	25.5	10.0	<5.0
2/28/2019	Thursday	<2.0		31.5		<5.0
3/1/2019	Friday	<2.0		10.0		<5.0
3/2/2019	Saturday	4.5		37.0		
3/3/2019	Sunday	<2.0		5.0		<5.0
3/4/2019	Monday	<2.0		10.0		<5.0
3/5/2019	Tuesday	<2.0		5.0		<5.0
3/6/2019	Wednesday	<2.0	<2.0	20.5	5.0	<5.0
3/7/2019	Thursday	2.0		36.0		
3/8/2019	Friday	<2.0		<5.0		<5.0
3/9/2019	Saturday	<2.0		<5.0		<5.0
3/10/2019	Sunday	<2.0		20.5		<5.0
3/11/2019	Monday	<2.0		5.0		<5.0
3/12/2019	Tuesday	<2.0		10.0		<5.0
3/13/2019	Wednesday	<2.0	<2.0	5.0	<5.0	<5.0
3/14/2019	Thursday	<2.0		15.5		<5.0
3/15/2019	Friday	<2.0		10.0		<5.0
3/16/2019	Saturday	<2.0		<5.0		<5.0
3/17/2019	Sunday	<2.0		5.0		<5.0
3/18/2019	Monday	4.5		<5.0		
3/19/2019	Tuesday	<2.0		5.0		<5.0
3/20/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
3/21/2019	Thursday	<2.0		15.5		<5.0
3/22/2019	Friday	<2.0		10.0		<5.0
3/23/2019	Saturday	<2.0		10.0		<5.0
3/24/2019	Sunday	<2.0		<5.0		<5.0
3/25/2019	Monday	<2.0		10.0		<5.0
3/26/2019	Tuesday	<2.0		5.0		<5.0
3/27/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
3/28/2019	Thursday	<2.0		15.5		<5.0
3/29/2019	Friday	<2.0		<5.0		<5.0
3/30/2019	Saturday	<2.0		10.0		<5.0
3/31/2019	Sunday	<2.0		<5.0		<5.0
4/1/2019	Monday	<2.0		15.5		<5.0
4/2/2019	Tuesday	2.0		5.0		
4/3/2019	Wednesday	<2.0	<2.0	10.0	10.0	<5.0
4/4/2019	Thursday	<2.0		15.5		<5.0
4/5/2019	Friday	<2.0		<5.0		<5.0
4/6/2019	Saturday	2.0		<5.0		
4/7/2019	Sunday	<2.0		5.0		<5.0
4/8/2019	Monday	<2.0		5.0		<5.0
4/9/2019	Tuesday	2.0		5.0		
4/10/2019	Wednesday	<2.0	<2.0	26.0	5.0	<5.0
4/11/2019	Thursday	<2.0		5.0		<5.0
4/12/2019	Friday	<2.0		5.0		<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
4/13/2019	Saturday	2.0		<5.0		
4/14/2019	Sunday	2.0		<5.0		
4/15/2019	Monday	<2.0		<5.0		<5.0
4/16/2019	Tuesday	<2.0		20.5		<5.0
4/17/2019	Wednesday	<2.0	<2.0	10.0	20.5	<5.0
4/18/2019	Thursday	<2.0		20.5		<5.0
4/19/2019	Friday	<2.0		5.0		<5.0
4/20/2019	Saturday	2.0		10.0		
4/21/2019	Sunday	<2.0		5.0		<5.0
4/22/2019	Monday	<2.0		<5.0		<5.0
4/23/2019	Tuesday	<2.0		<5.0		<5.0
4/24/2019	Wednesday	2.0	<2.0	5.0	<5.0	
4/25/2019	Thursday	4.0		<5.0		
4/26/2019	Friday	<2.0		<5.0		<5.0
4/27/2019	Saturday	13.0		15.5		
4/28/2019	Sunday	4.0		<5.0		
4/29/2019	Monday	2.0		10.0		
4/30/2019	Tuesday	4.5		10.0		
5/1/2019	Wednesday	<2.0	2.0	15.0	<5.0	<5.0
5/2/2019	Thursday	2.0		10.0		
5/3/2019	Friday	2.0		<5.0		
5/4/2019	Saturday	<2.0		5.0		<5.0
5/5/2019	Sunday	<2.0		<5.0		<5.0
5/6/2019	Monday	4.5		<5.0		
5/7/2019	Tuesday	<2.0		<5.0		<5.0
5/8/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
5/9/2019	Thursday	<2.0		<5.0		<5.0
5/10/2019	Friday	4.5		5.0		
5/11/2019	Saturday	<2.0		<5.0		<5.0
5/12/2019	Sunday	2.0		<5.0		
5/13/2019	Monday	2.0		<5.0		
5/14/2019	Tuesday	<2.0		5.0		<5.0
5/15/2019	Wednesday	<2.0	2.0	<5.0	<5.0	<5.0
5/16/2019	Thursday	2.0		<5.0		
5/17/2019	Friday	2.0		<5.0		
5/18/2019	Saturday	<2.0		<5.0		<5.0
5/19/2019	Sunday	2.0		10.0		
5/20/2019	Monday	2.0		<5.0		
5/21/2019	Tuesday	<2.0		5.0		<5.0
5/22/2019	Wednesday	<2.0	2.0	<5.0	<5.0	<5.0
5/23/2019	Thursday	<2.0		<5.0		<5.0
5/24/2019	Friday	2.0		<5.0		
5/25/2019	Saturday	<2.0		<5.0		<5.0
5/26/2019	Sunday	<2.0		<5.0		<5.0
5/27/2019	Monday	<2.0		<5.0		<5.0
5/28/2019	Tuesday	2.0		<5.0		
5/29/2019	Wednesday	2.0	<2.0	5.0	<5.0	
5/30/2019	Thursday	11.0		10.0		
5/31/2019	Friday	4.5		5.0		
6/1/2019	Saturday	2.0		<5.0		
6/2/2019	Sunday	<2.0		10.0		<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
6/3/2019	Monday	<2.0		<5.0		<5.0
6/4/2019	Tuesday	4.5		<5.0		
6/5/2019	Wednesday	<2.0	<2.0	<5.0	5.0	<5.0
6/6/2019	Thursday	2.0		<5.0		
6/7/2019	Friday	<2.0		<5.0		<5.0
6/8/2019	Saturday	2.0		<5.0		
6/9/2019	Sunday	2.0		<5.0		
6/10/2019	Monday	<2.0		31.5		<5.0
6/11/2019	Tuesday	13.0		<5.0		
6/12/2019	Wednesday	2.0	2.0	<5.0	<5.0	
6/13/2019	Thursday	2.0		<5.0		
6/14/2019	Friday	2.0		<5.0		
6/15/2019	Saturday	2.0		<5.0		
6/16/2019	Sunday	<2.0		<5.0		<5.0
6/17/2019	Monday	<2.0		<5.0		<5.0
6/18/2019	Tuesday	2.0		<5.0		
6/19/2019	Wednesday	<2.0	2.0	5.0	<5.0	<5.0
6/20/2019	Thursday	<2.0		<5.0		<5.0
6/21/2019	Friday	4.5		<5.0		
6/22/2019	Saturday	<2.0		5.0		<5.0
6/23/2019	Sunday	2.0		<5.0		
6/24/2019	Monday	2.0		<5.0		
6/25/2019	Tuesday	2.0		<5.0		
6/26/2019	Wednesday	4.5	2.0	5.0	5.0	
6/27/2019	Thursday	<2.0		<5.0		<5.0
6/28/2019	Friday	<2.0		<5.0		<5.0
6/29/2019	Saturday	<2.0		<5.0		<5.0
6/30/2019	Sunday	<2.0		<5.0		<5.0
7/1/2019	Monday	2.0		<5.0		
7/2/2019	Tuesday	<2.0		<5.0		<5.0
7/3/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
7/4/2019	Thursday	2.0		<5.0		
7/5/2019	Friday	<2.0		5.0		<5.0
7/6/2019	Saturday	2.0		5.0		
7/7/2019	Sunday	<2.0		<5.0		<5.0
7/8/2019	Monday	<2.0		<5.0		<5.0
7/9/2019	Tuesday	<2.0		<5.0		<5.0
7/10/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
7/11/2019	Thursday	<2.0		20.0		<5.0
7/12/2019	Friday	11.0		<5.0		
7/13/2019	Saturday	2.0		<5.0		
7/14/2019	Sunday	<2.0		<5.0		<5.0
7/15/2019	Monday	<2.0		5.0		<5.0
7/16/2019	Tuesday	<2.0		<5.0		<5.0
7/17/2019	Wednesday	<2.0	2.0	<5.0	10.0	<5.0
7/18/2019	Thursday	<2.0		<5.0		<5.0
7/19/2019	Friday	2.0		5.0		
7/20/2019	Saturday	<2.0		<5.0		<5.0
7/21/2019	Sunday	<2.0		<5.0		<5.0
7/22/2019	Monday	<2.0		<5.0		<5.0
7/23/2019	Tuesday	4.5		<5.0		

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
7/24/2019	Wednesday	4.5	4.5	10.0	<5.0	
7/25/2019	Thursday	4.5		5.0		
7/26/2019	Friday	2.0		10.0		
7/27/2019	Saturday	2.0		5.0		
7/28/2019	Sunday	<2.0		<5.0		<5.0
7/29/2019	Monday	<2.0		<5.0		<5.0
7/30/2019	Tuesday	<2.0		5.0		<5.0
7/31/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
8/1/2019	Thursday	4.5		<5.0		
8/2/2019	Friday	4.5		<5.0		
8/3/2019	Saturday	4.5		<5.0		
8/4/2019	Sunday	7.8		<5.0		
8/5/2019	Monday	<2.0		10.0		<5.0
8/6/2019	Tuesday	2.0		<10.0		
8/7/2019	Wednesday	7.8	4.5	5.0	<5.0	
8/8/2019	Thursday	<2.0		5.0		<5.0
8/9/2019	Friday	4.5		<5.0		
8/10/2019	Saturday	<2.0		<5.0		<5.0
8/11/2019	Sunday	11.0		<5.0		
8/12/2019	Monday	7.8		<5.0		
8/13/2019	Tuesday	2.0		<5.0		
8/14/2019	Wednesday	2.0	4.5	<5.0	<5.0	
8/15/2019	Thursday	<2.0		<5.0		<5.0
8/16/2019	Friday	4.5		<5.0		
8/17/2019	Saturday	4.5		<5.0		
8/18/2019	Sunday	<2.0		<5.0		<5.0
8/19/2019	Monday	<2.0		<5.0		<5.0
8/20/2019	Tuesday	13.0		26.0		
8/21/2019	Wednesday	4.5	2.0	5.0	<10.0	
8/22/2019	Thursday	2.0		5.0		
8/23/2019	Friday	4.5		<5.0		
8/24/2019	Saturday	<2.0		<5.0		<5.0
8/25/2019	Sunday	2.0		<5.0		
8/26/2019	Monday	<2.0		<5.0		<5.0
8/27/2019	Tuesday	7.8		<5.0		
8/28/2019	Wednesday	7.8	4.5	1,565.0	<5.0	
8/29/2019	Thursday	17.0		<5.0		
8/30/2019	Friday	<2.0		<5.0		<5.0
8/31/2019	Saturday	<2.0		5.0		<5.0
9/1/2019	Sunday	<2.0		<5.0		<5.0
9/2/2019	Monday	<2.0		5.0		<5.0
9/3/2019	Tuesday	2.0		10.0		
9/4/2019	Wednesday	13.0	4.5	10.0	<5.0	
9/5/2019	Thursday	<2.0		<5.0		<5.0
9/6/2019	Friday	<2.0		5.0		<5.0
9/7/2019	Saturday	<2.0		5.0		<5.0
9/8/2019	Sunday	2.0		5.0		
9/9/2019	Monday	<2.0		<5.0		<5.0
9/10/2019	Tuesday	<2.0		<5.0		<5.0
9/11/2019	Wednesday	4.0	2.0	<5.0	5.0	
9/12/2019	Thursday	<2.0		10.0		<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
9/13/2019	Friday	<2.0		10.0		<5.0
9/14/2019	Saturday	<2.0		5.0		<5.0
9/15/2019	Sunday	<2.0		10.0		<5.0
9/16/2019	Monday	2.0		<5.0		
9/17/2019	Tuesday	<2.0		<5.0		<5.0
9/18/2019	Wednesday	2.0	<2.0	10.0	<5.0	
9/19/2019	Thursday	<2.0		<5.0		<5.0
9/20/2019	Friday	<2.0		<5.0		<5.0
9/21/2019	Saturday	<2.0		5.0		<5.0
9/22/2019	Sunday	<2.0		10.0		<5.0
9/23/2019	Monday	2.0		15.5		
9/24/2019	Tuesday	<2.0		<5.0		<5.0
9/25/2019	Wednesday	<2.0	2.0	<5.0	<5.0	<5.0
9/26/2019	Thursday	<2.0		10.0		<5.0
9/27/2019	Friday	<2.0		<5.0		<5.0
9/28/2019	Saturday	<2.0		<5.0		<5.0
9/29/2019	Sunday	<2.0		<5.0		<5.0
9/30/2019	Monday	<2.0		10.0		<5.0
10/1/2019	Tuesday	<2.0		5.0		<5.0
10/2/2019	Wednesday	<2.0	<2.0	<5.0	5.0	<5.0
10/3/2019	Thursday	<2.0		<5.0		<5.0
10/4/2019	Friday	<2.0		10.0		<5.0
10/5/2019	Saturday	<2.0		<5.0		<5.0
10/6/2019	Sunday	<2.0		5.0		<5.0
10/7/2019	Monday	<2.0		10.0		<5.0
10/8/2019	Tuesday	<2.0		<5.0		<5.0
10/9/2019	Wednesday	<2.0	4.5	<5.0	<5.0	<5.0
10/10/2019	Thursday	6.8		5.0		
10/11/2019	Friday	4.5		<5.0		
10/12/2019	Saturday	<2.0		<5.0		<5.0
10/13/2019	Sunday	<2.0		5.0		<5.0
10/14/2019	Monday	<2.0		<5.0		<5.0
10/15/2019	Tuesday	<2.0		10.0		<5.0
10/16/2019	Wednesday	<2.0	<2.0	5.0	<5.0	<5.0
10/17/2019	Thursday	2.0		5.0		
10/18/2019	Friday	<2.0		<5.0		<5.0
10/19/2019	Saturday	<2.0		<5.0		<5.0
10/20/2019	Sunday	<2.0		<5.0		<5.0
10/21/2019	Monday	<2.0		<5.0		<5.0
10/22/2019	Tuesday	<2.0		10.0		<5.0
10/23/2019	Wednesday	7.8	4.5	5.0	5.0	
10/24/2019	Thursday	<2.0		<5.0		<5.0
10/25/2019	Friday	<2.0		10.0		<5.0
10/26/2019	Saturday	<2.0		<5.0		<5.0
10/27/2019	Sunday	<2.0		<5.0		<5.0
10/28/2019	Monday	<2.0		5.0		<5.0
10/29/2019	Tuesday	<2.0		10.0		<5.0
10/30/2019	Wednesday	<2.0	2.0	<5.0	<5.0	<5.0
10/31/2019	Thursday	<2.0		5.0		<5.0
11/1/2019	Friday	2.0		<5.0		
11/2/2019	Saturday	<2.0		<5.0		<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
11/3/2019	Sunday	<2.0		15.5		<5.0
11/4/2019	Monday	<2.0		10.0		<5.0
11/5/2019	Tuesday	2.0		<5.0		
11/6/2019	Wednesday	<2.0	<2.0	<5.0	<5.0	<5.0
11/7/2019	Thursday	<2.0		<5.0		<5.0
11/8/2019	Friday	<2.0		10.0		<5.0
11/9/2019	Saturday	<2.0		<5.0		<5.0
11/10/2019	Sunday	<2.0		5.0		<5.0
11/11/2019	Monday	<2.0		<5.0		<5.0
11/12/2019	Tuesday	<2.0		<5.0		<5.0
11/13/2019	Wednesday	<2.0	<2.0	10.0	5.0	<5.0
11/14/2019	Thursday	<2.0		5.0		<5.0
11/15/2019	Friday	<2.0		5.0		<5.0
11/16/2019	Saturday	<2.0		5.0		<5.0
11/17/2019	Sunday	<2.0		<5.0		<5.0
11/18/2019	Monday	<2.0		5.0		<5.0
11/19/2019	Tuesday	33.0		15.5		10.0
11/20/2019	Wednesday	<2.0	<2.0	15.0	<5.0	<5.0
11/21/2019	Thursday	<2.0		<5.0		<5.0
11/22/2019	Friday	4.0		5.0		
11/23/2019	Saturday	4.5		31.5		
11/24/2019	Sunday	2.0		20.5		
11/25/2019	Monday	<2.0		42.5		<5.0
11/26/2019	Tuesday	2.0		5.0		
11/27/2019	Wednesday	<2.0	<2.0	26.0	<5.0	<5.0
11/28/2019	Thursday	<2.0		<5.0		<5.0
11/29/2019	Friday	<2.0		15.5		<5.0
11/30/2019	Saturday	<2.0		15.0		<5.0
12/1/2019	Sunday	<2.0		15.0		<5.0
12/2/2019	Monday	4.0		72.0		
12/3/2019	Tuesday	<2.0		5.0		<5.0
12/4/2019	Wednesday	<2.0	2.0	5.0	<5.0	<5.0
12/5/2019	Thursday	<2.0		<5.0		<5.0
12/6/2019	Friday	<2.0		5.0		<5.0
12/7/2019	Saturday	2.0		10.0		
12/8/2019	Sunday	<2.0		5.0		<5.0
12/9/2019	Monday	<2.0		5.0		<5.0
12/10/2019	Tuesday	<2.0		52.0		<5.0
12/11/2019	Wednesday	<2.0	<2.0	42.5	10.0	<5.0
12/12/2019	Thursday	2.0		37.0		
12/13/2019	Friday	<2.0		20.5		<5.0
12/14/2019	Saturday	<2.0		<5.0		<5.0
12/15/2019	Sunday	<2.0		60.5		<5.0
12/16/2019	Monday	2.0		54.0		
12/17/2019	Tuesday	<2.0		15.5		<5.0
12/18/2019	Wednesday	<2.0	<2.0	31.5	20.5	<5.0
12/19/2019	Thursday	<2.0		77.5		<5.0
12/20/2019	Friday	<2.0		10.0		<5.0
12/21/2019	Saturday	2.0		26.0		
12/22/2019	Sunday	2.0		10.0		
12/23/2019	Monday	<2.0		5.0		<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2019

all results are in MPN/100 mL

Date	Day of the Week	Fecal Coliform		Enterococci		
		Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
12/24/2019	Tuesday	2.0		<5.0		
12/25/2019	Wednesday	2.0	<2.0	10.0	5.0	
12/26/2019	Thursday	<2.0		20.5		<5.0
12/27/2019	Friday	<2.0		10.0		<5.0
12/28/2019	Saturday	<2.0		<5.0		<5.0
12/29/2019	Sunday	4.5		48.5		
12/30/2019	Monday	4.5		60.0		
12/31/2019	Tuesday	<2.0		37.5		<5.0

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
1/1/2019	Tuesday	4.0			5.0	<5.0		
1/2/2019	Wednesday	7.8	4.5		26.0	<5.0	5.0	
1/3/2019	Thursday	110.0			5.0	20.5		
1/4/2019	Friday	2.0			<5.0	5.0		
1/5/2019	Saturday	21.0			10.0	20.5		
1/6/2019	Sunday	4.5			<5.0	<5.0		
1/7/2019	Monday	<2.0			<5.0	5.0		
1/8/2019	Tuesday	6.8			5.0	<5.0		
1/9/2019	Wednesday	13.0	4.5		10.0	10.0	10.0	
1/10/2019	Thursday	2.0			<5.0	5.0		
1/11/2019	Friday	4.5			<5.0	<5.0		
1/12/2019	Saturday	4.5			<5.0	5.0		
1/13/2019	Sunday	<2.0			<5.0	<5.0		
1/14/2019	Monday	11.0			<5.0	5.0		
1/15/2019	Tuesday	23.0			5.0	5.0		
1/16/2019	Wednesday	2.0	7.8		15.5	10.0	<5.0	
1/17/2019	Thursday	2.0			5.0	<5.0		
1/18/2019	Friday	<2.0			<5.0	<5.0		
1/19/2019	Saturday	<2.0			5.0	<5.0		
1/20/2019	Sunday	11.0			5.0	15.5		
1/21/2019	Monday	2.0			5.0	<5.0		
1/22/2019	Tuesday	7.8			<5.0	<5.0		
1/23/2019	Wednesday	130.0	7.8		5.0	10.0	5.0	
1/24/2019	Thursday	7.8			5.0	5.0		
1/25/2019	Friday	7.8			5.0	15.0		
1/26/2019	Saturday	2.0			5.0	10.0	<5.0	
1/27/2019	Sunday	7.8			5.0	5.0		
1/28/2019	Monday	3.7			<5.0	5.0		
1/29/2019	Tuesday	1.8			<5.0	15.0		
1/30/2019	Wednesday	2.0	4.5		5.0	<5.0	<5.0	
1/31/2019	Thursday	7.8			10.0	10.0		
2/1/2019	Friday	2.0			7.1	<5.0		
2/2/2019	Saturday	6.8			32.4	5.0		
2/3/2019	Sunday	4.5			5.0	10.0		
2/4/2019	Monday	4.5			<5.0	<5.0		
2/5/2019	Tuesday	4.5			<5.0	5.0		
2/6/2019	Wednesday	<2.0	<2.0		<5.0	10.0	<5.0	
2/7/2019	Thursday	6.8			15.0	<5.0		
2/8/2019	Friday	4.5			5.0	<5.0		
2/9/2019	Saturday	2.0			<5.0	5.0		
2/10/2019	Sunday	7.8			<5.0	<5.0		
2/11/2019	Monday	<2.0			<5.0	5.0		
2/12/2019	Tuesday	<2.0			<5.0	<5.0		
2/13/2019	Wednesday	4.5	2.0		17.7	<5.0	5.0	
2/14/2019	Thursday	2.0			5.0	17.3		
2/15/2019	Friday	9.2			<5.0	7.1		
2/16/2019	Saturday	4.5			7.1	<5.0		
2/17/2019	Sunday	2.0			<5.0	10.0		
2/18/2019	Monday	<2.0			10.0	10.0		
2/19/2019	Tuesday	4.5			5.0	<5.0		
2/20/2019	Wednesday	7.8	4.0		5.0	26.0	5.0	
2/21/2019	Thursday	2.0			15.5	26.0		
2/22/2019	Friday	<2.0			5.0	10.0		
2/23/2019	Saturday	4.5			5.0	<5.0		
2/24/2019	Sunday	<2.0			<5.0	5.0		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
2/25/2019	Monday	<2.0			5.0	5.0		
2/26/2019	Tuesday	2.0			5.0	5.0		
2/27/2019	Wednesday	<2.0	2.0		<5.0	5.0	5.0	
2/28/2019	Thursday	4.0			<5.0	<5.0		
3/1/2019	Friday	2.0			5.0	5.0		
3/2/2019	Saturday	6.8			5.0	15.5		
3/3/2019	Sunday	4.5			5.0	<5.0		
3/4/2019	Monday	2.0			5.0	10.0		
3/5/2019	Tuesday	4.5			15.5	<5.0		
3/6/2019	Wednesday	4.5	2.0		<5.0	5.0	5.0	
3/7/2019	Thursday	<2.0			15.5	<5.0		
3/8/2019	Friday	<2.0			10.0	<5.0		
3/9/2019	Saturday	7.8			<5.0	<5.0		
3/10/2019	Sunday	2.0			<5.0	<5.0		
3/11/2019	Monday	7.8			14.1	7.1		
3/12/2019	Tuesday	7.8			5.0	5.0		
3/13/2019	Wednesday	4.5	7.8		<5.0	10.0	5.0	
3/14/2019	Thursday	<2.0			<5.0	5.0		
3/15/2019	Friday	2.0			<5.0	5.0		
3/16/2019	Saturday	4.5			5.0	5.0		
3/17/2019	Sunday	<2.0			10.0	<5.0		
3/18/2019	Monday	7.8			10.0	5.0		
3/19/2019	Tuesday	2.0			<5.0	<5.0		
3/20/2019	Wednesday	4.5	4.0		5.0	10.0	5.0	
3/21/2019	Thursday	6.8			5.0	<5.0		
3/22/2019	Friday	4.0			15.0	10.0		
3/23/2019	Saturday	4.5			5.0	<5.0		
3/24/2019	Sunday	11.0			<5.0	10.0		
3/25/2019	Monday	23.0			5.0	<5.0		
3/26/2019	Tuesday	<2.0			<5.0	<5.0		
3/27/2019	Wednesday	6.1	4.0		15.5	5.0	10.0	
3/28/2019	Thursday	4.5			<5.0	5.0		
3/29/2019	Friday	6.8			<5.0	<5.0		
3/30/2019	Saturday	4.5			<5.0	<5.0		
3/31/2019	Sunday	2.0			10.0	15.5		
4/1/2019	Monday	4.5			10.0	<5.0		
4/2/2019	Tuesday	4.0			<5.0	5.0		
4/3/2019	Wednesday	23.0	6.8	11.0	42.5	5.0	10.0	5.0
4/4/2019	Thursday	7.8			10.0	10.0		
4/5/2019	Friday	4.5			5.0	10.0		
4/6/2019	Saturday	4.5			<5.0	5.0		
4/7/2019	Sunday	10.0			<5.0	5.0		
4/8/2019	Monday	17.0			<5.0	20.5		
4/9/2019	Tuesday	2.0			15.0	10.0		
4/10/2019	Wednesday	4.5	7.8		5.0	10.0	15.0	
4/11/2019	Thursday	<2.0			10.0	5.0		
4/12/2019	Friday	7.8			<5.0	5.0		
4/13/2019	Saturday	23.0			<5.0	15.5		
4/14/2019	Sunday	2.0			10.0	5.0		
4/15/2019	Monday	17.0			5.0	10.0		
4/16/2019	Tuesday	4.5			<5.0	5.0		
4/17/2019	Wednesday	7.8	4.5		<5.0	<5.0	5.0	
4/18/2019	Thursday	7.8			<5.0	10.0		
4/19/2019	Friday	2.0			<5.0	<5.0		
4/20/2019	Saturday	<2.0			<5.0	15.5		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
4/21/2019	Sunday	13.0			15.5	<5.0		
4/22/2019	Monday	<2.0			10.0	<5.0		
4/23/2019	Tuesday	110.0			<5.0	<5.0		
4/24/2019	Wednesday	4.5	2.0		5.0	10.0	10.0	
4/25/2019	Thursday	7.8			10.0	<5.0		
4/26/2019	Friday	4.5			5.0	<5.0		
4/27/2019	Saturday	13.0			<5.0	<5.0		
4/28/2019	Sunday	4.5			7.1	<5.0		
4/29/2019	Monday	20.0			20.5	5.0		
4/30/2019	Tuesday	<2.0			10.0	5.0		
5/1/2019	Wednesday	2.0	4.5		10.0	<5.0	42.5	
5/2/2019	Thursday	4.5			5.0	43.0		
5/3/2019	Friday	4.0			<5.0	<5.0		
5/4/2019	Saturday	2.0			<5.0	5.0		
5/5/2019	Sunday	7.8			<5.0	<5.0		
5/6/2019	Monday	2.0			5.0	15.0		
5/7/2019	Tuesday	4.5			5.0	<5.0		
5/8/2019	Wednesday	7.8	<2.0		5.0	<5.0	<5.0	
5/9/2019	Thursday	4.5			<5.0	<5.0		
5/10/2019	Friday	<2.0			<5.0	<5.0		
5/11/2019	Saturday	2.0			10.0	31.0		
5/12/2019	Sunday	2.0			5.0	5.0		
5/13/2019	Monday	<2.0			<5.0	<5.0		
5/14/2019	Tuesday	13.0			<5.0	<5.0		
5/15/2019	Wednesday	<2.0	<2.0		10.0	<5.0	5.0	
5/16/2019	Thursday	<2.0			10.0	5.0		
5/17/2019	Friday	<2.0			<5.0	7.1		
5/18/2019	Saturday	<2.0			<5.0	<5.0		
5/19/2019	Sunday	<2.0			<5.0	<5.0		
5/20/2019	Monday	4.5			<5.0	<5.0		
5/21/2019	Tuesday	<2.0			<5.0	15.5		
5/22/2019	Wednesday	<2.0	4.5		<5.0	<5.0	<5.0	
5/23/2019	Thursday	2.0			5.0	<5.0		
5/24/2019	Friday	2.0			<5.0	5.0		
5/25/2019	Saturday	4.5			<5.0	<5.0		
5/26/2019	Sunday	<2.0			<5.0	<5.0		
5/27/2019	Monday	<2.0			<5.0	<5.0		
5/28/2019	Tuesday	2.0			5.0	5.0		
5/29/2019	Wednesday	7.8	7.8		<10.0	5.0	5.0	
5/30/2019	Thursday	13.0			<10.0	<5.0		
5/31/2019	Friday	33.0			<5.0	<5.0		
6/1/2019	Saturday	4.5			<5.0	<5.0		
6/2/2019	Sunday	<2.0			<5.0	<5.0		
6/3/2019	Monday	7.8			<10.0	10.0		
6/4/2019	Tuesday	7.8			5.0	<5.0		
6/5/2019	Wednesday	14.0	7.8		<5.0	10.0	<10.0	
6/6/2019	Thursday	2.0			<5.0	5.0		
6/7/2019	Friday	<2.0			5.0	5.0		
6/8/2019	Saturday	<2.0			<5.0	<5.0		
6/9/2019	Sunday	2.0			<5.0	<5.0		
6/10/2019	Monday	2.0			<5.0	<5.0		
6/11/2019	Tuesday	2.0			10.0	<5.0		
6/12/2019	Wednesday	2.0	4.5		5.0	<5.0	<5.0	
6/13/2019	Thursday	2.0			<5.0	<5.0		
6/14/2019	Friday	4.5			5.0	<5.0		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
6/15/2019	Saturday	2.0			<5.0	<5.0		
6/16/2019	Sunday	<2.0			<5.0	<5.0		
6/17/2019	Monday	4.5			<5.0	<5.0		
6/18/2019	Tuesday	17.0			<5.0	<5.0		
6/19/2019	Wednesday	7.8	2.0		<5.0	<5.0	<5.0	
6/20/2019	Thursday	7.8			<5.0	<5.0		
6/21/2019	Friday	6.8			<5.0	5.0		
6/22/2019	Saturday	4.5			<5.0	<5.0		
6/23/2019	Sunday	4.5			<5.0	<5.0		
6/24/2019	Monday	2.0			<5.0	5.0		
6/25/2019	Tuesday	<2.0			10.0	<5.0		
6/26/2019	Wednesday	<2.0	4.5		<10.0	5.0	<5.0	
6/27/2019	Thursday	17.0			<5.0	<5.0		
6/28/2019	Friday	7.8			<5.0	<5.0		
6/29/2019	Saturday	<2.0			<5.0	<5.0		
6/30/2019	Sunday	13.0			5.0	5.0		
7/1/2019	Monday	2.0			<5.0	5.0		
7/2/2019	Tuesday	2.0			<5.0	<5.0		
7/3/2019	Wednesday	2.0	<2.0		<5.0	<5.0	<5.0	
7/4/2019	Thursday	23.0			<5.0	<5.0		
7/5/2019	Friday	2.0			10.0	<5.0		
7/6/2019	Saturday	4.5			<5.0	<5.0		
7/7/2019	Sunday	11.0			41.0	<5.0		
7/8/2019	Monday	23.0			10.0	<5.0		
7/9/2019	Tuesday	33.0			<5.0	240.0		
7/10/2019	Wednesday	7.8	13.0		<5.0	<5.0	5.0	
7/11/2019	Thursday	17.0			5.0	<5.0		
7/12/2019	Friday	13.0			<10.0	<10.0		
7/13/2019	Saturday	23.0			<5.0	<5.0		
7/14/2019	Sunday	4.5			<5.0	<5.0		
7/15/2019	Monday	17.0			<5.0	<5.0		
7/16/2019	Tuesday	79.0			5.0	5.0		
7/17/2019	Wednesday	110.0	23.0		5.0	<5.0	<5.0	
7/18/2019	Thursday	31.0			20.0	15.5		
7/19/2019	Friday	17.0			5.0	5.0		
7/20/2019	Saturday	<2.0			10.0	5.0		
7/21/2019	Sunday	4.5			<5.0	5.0		
7/22/2019	Monday	4.0			<5.0	5.0		
7/23/2019	Tuesday	17.0			10.0	5.0		
7/24/2019	Wednesday	11.0	7.8		<5.0	5.0	<5.0	
7/25/2019	Thursday	2.0			10.0	<5.0		
7/26/2019	Friday	4.5			<5.0	<5.0		
7/27/2019	Saturday	4.5			<5.0	<5.0		
7/28/2019	Sunday	<2.0			5.0	<5.0		
7/29/2019	Monday	2.0			<5.0	<5.0		
7/30/2019	Tuesday	11.0			5.0	<5.0		
7/31/2019	Wednesday	4.5	6.8		<5.0	5.0	5.0	
8/1/2019	Thursday	49.0			<5.0	20.5		
8/2/2019	Friday	11.0			<5.0	<5.0		
8/3/2019	Saturday	2.0			<5.0	<5.0		
8/4/2019	Sunday	4.5			<5.0	<5.0		
8/5/2019	Monday	17.0			<5.0	10.0		
8/6/2019	Tuesday	27.6			5.0	113.0		
8/7/2019	Wednesday	430.0	33.0		15.0	37.5	5.0	
8/8/2019	Thursday	33.0			<10.0	<5.0		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
8/9/2019	Friday	17.0			<5.0	5.0		
8/10/2019	Saturday	4.5			5.0	<5.0		
8/11/2019	Sunday	6.8			5.0	<5.0		
8/12/2019	Monday	4.5			<5.0	<5.0		
8/13/2019	Tuesday	4.5			<5.0	5.0		
8/14/2019	Wednesday	7.8	23.0		<5.0	<5.0	<5.0	
8/15/2019	Thursday	33.0			<5.0	<5.0		
8/16/2019	Friday	70.0			5.0	26.0		
8/17/2019	Saturday	7.8			<5.0	<5.0		
8/18/2019	Sunday	17.0			15.0	10.0		
8/19/2019	Monday	49.0			<5.0	5.0		
8/20/2019	Tuesday	23.0			<5.0	10.0		
8/21/2019	Wednesday	49.0	33.0		10.0	<5.0	<5.0	
8/22/2019	Thursday	7.8			<5.0	<5.0		
8/23/2019	Friday	27.0			<5.0	5.0		
8/24/2019	Saturday	23.0			<5.0	<5.0		
8/25/2019	Sunday	23.0			<5.0	<5.0		
8/26/2019	Monday	14.0			<5.0	<5.0		
8/27/2019	Tuesday	7.8			<5.0	<5.0		
8/28/2019	Wednesday	11.0	2.0		<5.0	<5.0	<5.0	
8/29/2019	Thursday	14.0			<10.0	5.0		
8/30/2019	Friday	13.0			<5.0	5.0		
8/31/2019	Saturday	13.0			5.0	5.0		
9/1/2019	Sunday	4.5			<5.0	<5.0		
9/2/2019	Monday	14.0			<5.0	<5.0		
9/3/2019	Tuesday	4.5			<5.0	<5.0		
9/4/2019	Wednesday	23.0	23.0		<5.0	<5.0	10.0	
9/5/2019	Thursday	23.0			<5.0	<5.0		
9/6/2019	Friday	31.0			5.0	10.0		
9/7/2019	Saturday	7.8			<5.0	5.0		
9/8/2019	Sunday	7.8			5.0	<5.0		
9/9/2019	Monday	9.3			5.0	<5.0		
9/10/2019	Tuesday	6.8			10.0	<5.0		
9/11/2019	Wednesday	7.8	17.0		5.0	5.0	<5.0	
9/12/2019	Thursday	7.8			<5.0	<5.0		
9/13/2019	Friday	2.0			5.0	<5.0		
9/14/2019	Saturday	49.0			<5.0	<5.0		
9/15/2019	Sunday	33.0			5.0	37.5		
9/16/2019	Monday	22.0			<5.0	<5.0		
9/17/2019	Tuesday	6.8			<5.0	<5.0		
9/18/2019	Wednesday	4.5	17.0		<5.0	<5.0	<5.0	
9/19/2019	Thursday	11.0			5.0	<5.0		
9/20/2019	Friday	4.0			<5.0	<5.0		
9/21/2019	Saturday	6.8			<5.0	5.0		
9/22/2019	Sunday	4.5			<5.0	<5.0		
9/23/2019	Monday	2.0			<5.0	<5.0		
9/24/2019	Tuesday	27.0			10.0	<5.0		
9/25/2019	Wednesday	23.0	33.0		5.0	<5.0	<5.0	
9/26/2019	Thursday	170.0			<5.0	<5.0		
9/27/2019	Friday	7.8			10.0	<5.0		
9/28/2019	Saturday	49.0			<10.0	<5.0		
9/29/2019	Sunday	33.0			<10.0	5.0		
9/30/2019	Monday	33.0			<10.0	<5.0		
10/1/2019	Tuesday	7.8			5.0	5.0		
10/2/2019	Wednesday	33.0	17.0		<5.0	5.0	<5.0	

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
10/3/2019	Thursday	49.0			<5.0	10.0		
10/4/2019	Friday	49.0			<5.0	26.0		
10/5/2019	Saturday	33.0			<5.0	<5.0		
10/6/2019	Sunday	4.5			<5.0	5.0		
10/7/2019	Monday	7.8			5.0	<5.0		
10/8/2019	Tuesday	33.0			<5.0	<5.0		
10/9/2019	Wednesday	23.0	33.0		5.0	5.0	10.0	
10/10/2019	Thursday	12.0			10.0	5.0		
10/11/2019	Friday	23.0			<5.0	37.0		
10/12/2019	Saturday	23.0			5.0	<5.0		
10/13/2019	Sunday	13.0			5.0	42.0		
10/14/2019	Monday	13.0			10.0	<5.0		
10/15/2019	Tuesday	33.0			<5.0	<5.0		
10/16/2019	Wednesday	220.0	33.0		5.0	<5.0	<5.0	
10/17/2019	Thursday	49.0			<10.0	<5.0		
10/18/2019	Friday	33.0			5.0	<5.0		
10/19/2019	Saturday	23.0			<5.0	<5.0		
10/20/2019	Sunday	7.8			10.0	<5.0		
10/21/2019	Monday	2.0			<5.0	<5.0		
10/22/2019	Tuesday	23.0			5.0	<5.0		
10/23/2019	Wednesday	94.0	17.0		15.5	<5.0	5.0	
10/24/2019	Thursday	17.0			<5.0	<5.0		
10/25/2019	Friday	<2.0			<5.0	<5.0		
10/26/2019	Saturday	230.0			<5.0	20.5		
10/27/2019	Sunday	7.8			<5.0	<5.0		
10/28/2019	Monday	9.3			<10.0	5.0		
10/29/2019	Tuesday	4.5			10.0	<5.0		
10/30/2019	Wednesday	7.8	2.0		<5.0	<5.0	<5.0	
10/31/2019	Thursday	13.0			10.0	<5.0		
11/1/2019	Friday	13.0			<5.0	<5.0		
11/2/2019	Saturday	11.0			<5.0	<5.0		
11/3/2019	Sunday	7.8			5.0	5.0		
11/4/2019	Monday	2.0			<5.0	<5.0		
11/5/2019	Tuesday	<2.0			<5.0	5.0		
11/6/2019	Wednesday	2.0	7.8		10.0	<5.0	<5.0	
11/7/2019	Thursday	4.0			<5.0	<5.0		
11/8/2019	Friday	4.5			<5.0	<5.0		
11/9/2019	Saturday	<2.0			5.0	<5.0		
11/10/2019	Sunday	2.0			5.0	10.0		
11/11/2019	Monday	2.0			5.0	10.0		
11/12/2019	Tuesday	6.8			10.0	5.0		
11/13/2019	Wednesday	2.0	7.8		5.0	<5.0	<5.0	
11/14/2019	Thursday	4.5			<5.0	<5.0		
11/15/2019	Friday	4.5			<5.0	20.5		
11/16/2019	Saturday	6.8			5.0	5.0		
11/17/2019	Sunday	11.0			<5.0	10.0		
11/18/2019	Monday	4.5			10.0	<5.0		
11/19/2019	Tuesday	26.0			15.5	72.5		
11/20/2019	Wednesday	7.8	6.8		<10.0	<5.0	5.0	
11/21/2019	Thursday	23.0			<10.0	26.0		
11/22/2019	Friday	22.0			26.0	20.5		
11/23/2019	Saturday	7.8			<10.0	15.5		
11/24/2019	Sunday	6.8			15.5	<5.0		
11/25/2019	Monday	11.0			<10.0	10.0		
11/26/2019	Tuesday	23.0			10.0	15.5		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2019

all results are in MPN/100 mL

		Fecal Coliform			Enterococci			
Date	**Day of the Week**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**	**Grab 1 (04:00*)**	**Grab 2 (08:00*)**	**Grab 2 Duplicate (08:00*)**	**Non-Routine Grab**
11/27/2019	Wednesday	4.0	2.0		10.0	5.0	5.0	
11/28/2019	Thursday	13.0			<10.0	<5.0		
11/29/2019	Friday	4.5			<5.0	<5.0		
11/30/2019	Saturday	7.8			5.0	15.5		
12/1/2019	Sunday	33.0			5.0	10.0		
12/2/2019	Monday	4.5			15.5	5.0		
12/3/2019	Tuesday	7.8			15.0	5.0		
12/4/2019	Wednesday	4.5	2.0		<5.0	<5.0	<5.0	
12/5/2019	Thursday	9.3			5.0	<5.0		
12/6/2019	Friday	4.5			<5.0	<5.0		
12/7/2019	Saturday	4.5			<5.0	<5.0		
12/8/2019	Sunday	7.8			<5.0	<5.0		
12/9/2019	Monday	6.8			5.0	5.0		
12/10/2019	Tuesday	6.8			<10.0	5.0		
12/11/2019	Wednesday	6.8	13.0		<10.0	<10.0	63.0	
12/12/2019	Thursday	2.0			<10.0	5.0		
12/13/2019	Friday	2.0			<10.0	<5.0		
12/14/2019	Saturday	4.5			<10.0	5.0		
12/15/2019	Sunday	<2.0			10.0	5.0		
12/16/2019	Monday	<2.0			<10.0	<5.0		
12/17/2019	Tuesday	13.0			<10.0	<5.0		
12/18/2019	Wednesday	4.5	33.0		<10.0	20.5	<5.0	
12/19/2019	Thursday	17.0			<10.0	5.0		
12/20/2019	Friday	2.0			<5.0	<5.0		
12/21/2019	Saturday	2.0			20.0	<5.0		
12/22/2019	Sunday	4.5			<10.0	<5.0		
12/23/2019	Monday	2.0			<10.0	<5.0		
12/24/2019	Tuesday	<2.0			20.0	5.0		
12/25/2019	Wednesday	<2.0	<2.0		<10.0	15.0	<5.0	
12/26/2019	Thursday	2.0			<5.0	<5.0		
12/27/2019	Friday	<2.0			<10.0	10.0		
12/28/2019	Saturday	4.5			<10.0	5.0		
12/29/2019	Sunday	4.5			<10.0	<5.0		
12/30/2019	Monday	7.8			20.0	15.5		
12/31/2019	Tuesday	<2.0			20.0	10.0		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Field's Point Influent Metals (Cd-Zn) and Cyanide, 2019
all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/1/2019	Tuesday	72.61	0.2224	3.498		14.93	14.62		7.038	0.2337	59.78	<4.000	<4.000
1/2/2019	Wednesday	73.26	0.2954	4.806		23.50	9.788		23.61	1.002	62.68	8.20	<4.000
1/8/2019	Tuesday	75.59	0.2282	2.827	14.0	30.02	4.424	0.00956	20.45	0.5250	59.52	8.11	<4.000
1/9/2019	Wednesday	62.38	0.2662	3.355		24.82	13.64		21.49	0.4596	70.12	9.39	<4.000
1/15/2019	Tuesday	43.40	0.4472	4.859		37.48	2.595		27.39	0.4556	73.80	9.39	<4.000
1/16/2019	Wednesday	42.46	0.5923	3.726		30.29	2.882		37.90	0.4465	70.79	6.66	<4.000
1/22/2019	Tuesday	69.36	0.2619	5.027		21.98	4.049		20.25	1.474	66.86	13.4	<4.000
1/23/2019	Wednesday	65.97	0.4337	3.727		24.92	9.293		24.14	0.4120	80.05	11.8	<4.000
1/29/2019	Tuesday	60.02	0.2678	5.137		24.27	14.74		25.64	0.4801	95.11	7.58	<4.000
1/30/2019	Wednesday	58.54	0.3181	7.060		33.42	29.65		21.25	0.7604	119.3	9.43	<4.000
2/5/2019	Tuesday	46.30	0.2389	4.927	22.0	20.99	5.422	0.0187	19.32	0.7554	66.93	7.56	<4.000
2/6/2019	Wednesday	55.22	0.3226	4.538		31.93	12.09		18.80	0.7905	101.5	7.90	<4.000
2/12/2019	Tuesday	56.63	0.2655	5.348		26.94	10.72		39.35	1.042	93.28	17.9	<4.000
2/13/2019	Wednesday	68.86	0.1998	3.924		25.38	9.472		30.50	0.6282	70.77	18.0	<4.000
2/19/2019	Tuesday	44.81	0.2062	6.985		21.59	3.202		22.63	0.6679	74.61	7.61	<4.000
2/20/2019	Wednesday	47.29	0.2533	7.113		26.38	5.130		23.77	1.791	86.11	11.7	<4.000
2/26/2019	Tuesday	45.78	0.2092	4.034		34.99	2.560		41.39	0.3715	63.47		
2/27/2019	Wednesday	48.46	0.2340	20.51		29.86	10.30		27.92	0.3912	96.53	9.00	<4.000
2/28/2019	Thursday	47.99										12.4	<4.000
3/5/2019	Tuesday	45.04	0.2366	5.334	21.0	27.77	3.057	0.0481	22.90	0.8286	81.91	12.6	<4.000
3/6/2019	Wednesday	42.83	0.2467	4.882		31.18	3.260		23.95	0.3448	72.60	12.7	<4.000
3/12/2019	Tuesday	50.16	0.2307	5.133		34.61	5.235		17.03	5.288	69.52	12.4	<4.000
3/13/2019	Wednesday	47.11	0.2202	4.745		29.84	3.320		26.36	1.101	71.47	10.7	<4.000
3/19/2019	Tuesday	50.92	0.2228	2.908		19.60	4.508		17.01	0.4940	66.82	13.6	<4.000
3/20/2019	Wednesday	47.37	0.2479	3.172		24.10	6.060		17.84	0.4157	72.46	8.70	<4.000
3/26/2019	Tuesday	49.74	0.2196	4.466		56.05	4.013		18.76	0.3968	73.42	9.68	<4.000
3/27/2019	Wednesday	45.78	0.2325	4.904		22.84	4.240		19.92	0.9531	69.83	8.44	<4.000
4/2/2019	Tuesday	51.88	0.2443	3.978	33.0	34.97	8.238	0.0252	31.33	0.4892	100.5	7.19	<4.000
4/3/2019	Wednesday	58.60	0.2080	5.729		30.90	12.09		35.33	0.5131	80.23	7.08	<4.000
4/9/2019	Tuesday	65.73	0.2017	3.839		24.59	8.493		19.37	0.5420	81.85	6.94	<4.000
4/10/2019	Wednesday	45.15	0.2031	3.911		55.15	3.899		21.64	0.6486	87.94	6.32	<4.000
4/16/2019	Tuesday	53.76	0.1842	4.295		19.04	4.160		20.81	0.3242	64.00	6.45	<4.000
4/17/2019	Wednesday	46.02	0.1818	3.458		29.46	3.733		20.24	0.5531	78.87	5.95	<4.000
4/23/2019	Tuesday	70.77	0.1813	4.557		27.25	10.84		16.04	0.3177	75.21	20.4	6.70
4/24/2019	Wednesday	71.07	0.1552	2.508		16.05	3.886		13.04	0.2794	49.94	8.55	<4.000
4/30/2019	Tuesday	70.84	0.1766	2.345		21.33	3.332		20.13	0.5373	48.81	5.12	<4.000
5/1/2019	Wednesday	71.74	0.1655	3.255		15.87	3.835		16.46	0.2507	61.50	5.48	<4.000
5/7/2019	Tuesday	49.57	0.1919	3.204		20.24	2.947	0.0196	27.64	0.3290	68.22	6.33	<4.000
5/8/2019	Wednesday	49.67	0.2185	2.928		21.51	3.464		28.98	0.5061	72.86	6.40	<4.000
5/14/2019	Tuesday	69.76	0.2056	2.617	<10.000	19.61	7.161		14.69	0.2916	73.28	8.14	<4.000
5/15/2019	Wednesday	49.21	0.1925	2.187		18.93	2.951		17.18	0.3284	68.42	<8.000	<4.000
5/21/2019	Tuesday	55.82	0.1963	2.957		17.58	7.603		14.85	0.2651	66.55	5.70	<4.000

Table 5: Field's Point Influent Metals (Cd-Zn) and Cyanide

Field's Point Influent Metals (Cd-Zn) and Cyanide, 2019
all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
5/22/2019	Wednesday	42.66	0.1962	2.939		16.92	3.220		17.27	0.4239	66.31	7.10	<4.000
5/28/2019	Tuesday	46.49	0.3824	5.586		45.13	12.55		23.08	0.5610	111.6	5.79	<4.000
5/29/2019	Wednesday	49.17	0.1923	4.414		21.57	7.832		18.65	0.4361	83.44	13.1	<4.000
6/4/2019	Tuesday	38.71	0.2071	3.741	15.0	27.52	3.520	0.00962	19.71	1.362	79.85	9.57	<4.000
6/5/2019	Wednesday	38.30	0.2052	3.369		38.79	3.720		18.88	0.7151	88.47	8.12	<4.000
6/11/2019	Tuesday	73.93	0.2181	6.059		27.15	23.74		16.99	0.8043	92.57	4.24	<4.000
6/12/2019	Wednesday	66.28	0.1781	3.093		18.11	13.23		18.29	0.3847	70.88	<4.000	<4.000
6/18/2019	Tuesday	45.91	0.2052	3.617		24.63	8.210		15.05	0.5362	88.14	4.30	<4.000
6/19/2019	Wednesday	40.43	0.2022	4.315		23.87	4.954		22.52	0.4239	85.99	<4.000	<4.000
6/25/2019	Tuesday	49.94	0.2505	4.673		28.76	15.40		16.38	0.3444	98.65	5.75	<4.000
6/26/2019	Wednesday	37.35	0.1875	4.966		30.15	4.188		86.96	0.5726	82.67	8.15	<4.000
7/2/2019	Tuesday	37.06	0.1788	3.500		21.62	4.084		20.81	0.1933	73.55	5.86	<4.000
7/3/2019	Wednesday	35.98	0.1745	5.053		24.46	4.121		21.60	0.2393	92.54	4.09	<4.000
7/9/2019	Tuesday	32.73	0.2238	4.699	23.0	21.90	5.528	0.0270	19.07	1.077	99.04	<4.000	<4.000
7/10/2019	Wednesday	32.08	0.1957	3.368		25.00	4.457		11.86	0.4655	87.54	<4.000	<4.000
7/16/2019	Tuesday	35.85	0.2511	10.32		35.45	21.46		28.92	0.6392	129.4	4.17	<4.000
7/17/2019	Wednesday	37.10	0.2247	6.540		34.30	14.96		36.14	0.6118	135.5	7.02	<4.000
7/23/2019	Tuesday	69.09	0.1711	3.958		28.61	11.28		15.67	0.4212	91.63	<4.000	<4.000
7/24/2019	Wednesday	62.41	0.1331	3.021		17.20	6.535		11.38	0.4365	62.65	<4.000	<4.000
7/30/2019	Tuesday	35.96	0.2123	2.509		28.24	5.362		21.46	0.6480	79.11	8.86	<4.000
7/31/2019	Wednesday	34.06	0.1589	2.317		28.08	4.212		22.45	0.3469	77.36	6.30	<4.000
8/6/2019	Tuesday	33.50	0.1912	5.127	39.0	34.25	6.123	0.0305	24.22	0.7016	101.4	5.10	<4.000
8/7/2019	Wednesday	43.17	0.2049	4.205		43.14	12.64		17.92	0.4899	122.9	6.11	<4.000
8/13/2019	Tuesday	32.16	0.1905	4.274		36.85	6.345		31.14	0.3977	102.5	<4.000	<4.000
8/14/2019	Wednesday	30.24	0.2265	4.090		67.40	6.223		25.95	0.4904	103.5	<4.000	<4.000
8/20/2019	Tuesday	35.23	0.1488	2.907		22.22	4.663		19.75	0.3178	83.34	<4.000	<4.000
8/21/2019	Wednesday	43.14	0.2424	5.148		45.70	24.65		25.79	0.5895	158.5	4.82	<4.000
8/27/2019	Tuesday	31.19	0.1970	5.503		37.80	5.279		20.17	0.4329	100.8	10.5	<4.000
8/28/2019	Wednesday	55.56	0.2414	4.936		38.70	13.50		17.88	1.007	109.5	<8.000	<4.000
9/3/2019	Tuesday	52.80	0.1450	3.091		25.81	8.667		14.68	0.4417	85.47	<4.000	<4.000
9/4/2019	Wednesday	36.68	0.5388	13.59		90.89	115.0		28.15	1.388	310.4	4.98	<4.000
9/10/2019	Tuesday	29.12	0.2090	4.522	30.0	35.67	5.165	0.0415	37.08	0.5900	124.3	6.16	<4.000
9/11/2019	Wednesday	32.16	0.1941	3.110		31.54	6.722		20.01	0.5556	100.7	4.84	<4.000
9/17/2019	Tuesday	30.03	0.2143	4.084		28.74	3.882		18.94	0.5124	95.32	<8.000	<4.000
9/18/2019	Wednesday	31.14	0.1896	3.781		28.98	3.711		21.84	1.282	94.29	4.86	<4.000
9/24/2019	Tuesday	53.85	0.1669	5.398		29.06	14.65		18.36	1.134	86.66	<4.000	<4.000
9/25/2019	Wednesday	29.79	0.2057	3.443		27.71	4.683		17.47	0.7241	85.93	4.85	<4.000
10/1/2019	Tuesday	28.90	0.1929	3.526		26.98	8.148		16.27	0.5279	84.19	5.13	<4.000
10/2/2019	Wednesday	34.83	0.2134	4.800		32.22	17.80		15.71	0.5821	109.7	4.22	<4.000
10/8/2019	Tuesday	31.60	0.1794	5.637	31.0	37.59	7.474	0.0114	25.86	0.4753	95.37	<4.000	<4.000
10/9/2019	Wednesday	55.65	0.1911	5.967		27.99	16.81		20.21	0.4950	100.4	<4.000	<4.000
10/15/2019	Tuesday	30.57	0.1809	3.310		24.68	4.684		13.91	0.9680	88.56	<4.000	<4.000

Table 5: Field's Point Influent Metals (Cd-Zn) and Cyanide

Field's Point Influent Metals (Cd-Zn) and Cyanide, 2019
all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
10/16/2019	Wednesday	58.61	0.2192	3.967		41.51	19.38		21.99	0.7672	135.3	8.50	<4.000
10/22/2019	Tuesday	36.28	0.2193	5.627		30.51	7.834		20.39	0.5778	103.4	<4.000	<4.000
10/23/2019	Wednesday	45.93	0.1854	3.105		25.17	14.05		14.40	0.4518	87.97	<4.000	<4.000
10/29/2019	Tuesday	38.22	0.2150	2.329		27.96	8.997		14.83	0.4603	72.62	4.45	<4.000
10/30/2019	Wednesday	38.50	0.1966	2.700		36.52	5.546		12.66	0.4899	67.33	4.65	<4.000
11/5/2019	Tuesday	50.95	0.1933	3.652	11.0	39.36	12.26	0.0358	12.44	0.6973	87.55	<4.000	<4.000
11/6/2019	Wednesday	33.07	0.1767	2.702		54.74	3.499		17.72	1.455	71.13	5.21	<4.000
11/12/2019	Tuesday	32.40	0.2189	3.319		40.20	4.499		15.71	0.9147	96.29	5.79	<4.000
11/13/2019	Wednesday	31.63	0.1743	3.244		37.97	3.163		20.12	0.5098	75.63	8.77	<4.000
11/19/2019	Tuesday	35.86	0.2192	3.938		45.68	6.601		18.33	1.040	102.8	<4.000	<4.000
11/20/2019	Wednesday	31.21	0.2053	3.432		45.03	4.726		19.93	1.002	98.08	4.06	<4.000
11/26/2019	Tuesday	53.74	0.1839	3.960		30.68	5.134		14.75	0.3923	66.04	9.66	<4.000
11/27/2019	Wednesday	38.86	0.2236	2.777		24.87	5.532		14.25	0.5208	76.03	8.08	<4.000
12/3/2019	Tuesday	35.35	0.2742	2.612	23.0	26.66	4.231	0.0274	20.17	0.6783	76.76	6.55	<4.000
12/4/2019	Wednesday	37.32	0.2111	2.838		28.36	3.682		25.41	0.3630	76.44	<4.000	<4.000
12/10/2019	Tuesday	69.92	0.1598	2.364		19.52	8.938		10.09	0.3350	62.52	6.27	<4.000
12/11/2019	Wednesday	61.53	0.1684	2.728		15.78	5.089		12.50	0.2192	58.88	10.3	<4.000
12/17/2019	Tuesday	67.58	0.1750	2.477		16.44	6.093		9.310	0.3465	58.52	11.6	<4.000
12/18/2019	Wednesday	62.23	0.1613	2.109		14.09	2.717		11.88	0.1891	47.06	6.74	<4.000
12/24/2019	Tuesday	41.34	0.1766	2.362		26.42	3.382		7.418	0.6680	59.26	4.66	<4.000
12/25/2019	Wednesday	39.00	0.1691	1.599		11.65	2.571		7.056	0.1916	46.22	4.52	<4.000
12/31/2019	Tuesday	68.27	0.1342	2.149		12.75	4.937		6.932	0.1157	49.69	5.57	<4.000

Table 5: Field's Point Influent Metals (Cd-Zn) and Cyanide

Field's Point Influent Metals, Al-Mo, 2019
all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo
1/1/2019	Tuesday	72.61	353.8		<1.000	2.663	1.965
1/2/2019	Wednesday	73.26	268.5		1.418	2.723	2.956
1/8/2019	Tuesday	75.59	175.2	1125	2.733	2.581	3.522
1/9/2019	Wednesday	62.38	378.7		1.205	2.432	2.271
1/15/2019	Tuesday	43.40	139.1		3.623	3.533	4.733
1/16/2019	Wednesday	42.46	151.5		2.370	3.523	3.352
1/22/2019	Tuesday	69.36	238.5		1.125	2.797	2.907
1/23/2019	Wednesday	65.97	340.1		1.287	2.853	7.760
1/29/2019	Tuesday	60.02	448.9		1.999	3.161	4.723
1/30/2019	Wednesday	58.54	846.5		1.591	3.696	3.955
2/5/2019	Tuesday	46.30	201.5	1394	1.739	3.802	14.93
2/6/2019	Wednesday	55.22	380.3		3.642	3.827	12.82
2/12/2019	Tuesday	56.63	414.5		1.276	3.491	4.505
2/13/2019	Wednesday	68.86	382.3		1.487	2.709	2.836
2/19/2019	Tuesday	44.81	158.0		1.635	3.288	3.680
2/20/2019	Wednesday	47.29	239.2		3.816	3.459	5.879
2/26/2019	Tuesday	45.78	132.4		1.972	2.946	3.707
2/27/2019	Wednesday	48.46	336.0		1.298	3.093	3.198
3/5/2019	Tuesday	45.04	155.3	1499	2.226	3.209	4.959
3/6/2019	Wednesday	42.83	161.0		2.270	3.264	4.103
3/12/2019	Tuesday	50.16	236.9		2.240	2.990	5.236
3/13/2019	Wednesday	47.11	156.7		3.932	2.588	6.029
3/19/2019	Tuesday	50.92	200.6		1.688	2.362	6.902
3/20/2019	Wednesday	47.37	235.0		2.098	2.728	3.795
3/26/2019	Tuesday	49.74	162.7		2.837	3.183	5.652
3/27/2019	Wednesday	45.78	194.4		2.386	3.847	4.468
4/2/2019	Tuesday	51.88	260.1	1472	<4.000	2.862	3.818
4/3/2019	Wednesday	58.60	366.3		2.130	2.037	10.81
4/9/2019	Tuesday	65.73	298.4		1.469	2.639	4.570
4/10/2019	Wednesday	45.15	185.5		1.832	3.111	8.626
4/16/2019	Tuesday	53.76	161.2		1.610	2.413	5.729
4/17/2019	Wednesday	46.02	147.4		1.981	2.503	5.262
4/23/2019	Tuesday	70.77	353.4		1.115	2.056	2.198
4/24/2019	Wednesday	71.07	142.0		1.133	1.687	2.173
4/30/2019	Tuesday	70.84	122.1		2.344	1.672	3.195
5/1/2019	Wednesday	71.74	137.9		1.071	1.849	2.524
5/7/2019	Tuesday	49.57	144.7	1258	1.702	2.336	4.211
5/8/2019	Wednesday	49.67	153.7		3.081	2.463	6.800
5/14/2019	Tuesday	69.76	284.5		1.622	2.296	6.264
5/15/2019	Wednesday	49.21	169.1		1.819	2.145	15.86
5/21/2019	Tuesday	55.82	264.6		<1.000	1.968	6.751
5/22/2019	Wednesday	42.66	181.9		1.260	2.020	4.731
5/28/2019	Tuesday	46.49	373.3		1.376	2.616	5.284
5/29/2019	Wednesday	49.17	279.4		1.477	2.410	5.676
6/4/2019	Tuesday	38.71	223.6	2015	1.343	2.630	8.076
6/5/2019	Wednesday	38.30	189.5		1.389	2.427	6.515
6/11/2019	Tuesday	73.93	510.5		1.096	2.335	4.003
6/12/2019	Wednesday	66.28	330.5		<1.000	1.980	3.941
6/18/2019	Tuesday	45.91	240.3		1.378	2.439	5.597
6/19/2019	Wednesday	40.43	208.8		1.792	2.544	5.546
6/25/2019	Tuesday	49.94	346.0		1.170	2.378	5.487
6/26/2019	Wednesday	37.35	230.4		1.553	2.474	5.419
7/2/2019	Tuesday	37.06	179.4		<1.000	2.213	8.974
7/3/2019	Wednesday	35.98	182.9		<1.000	2.229	4.025
7/9/2019	Tuesday	32.73	250.4	1386	1.225	2.690	4.934
7/10/2019	Wednesday	32.08	193.4		1.210	2.490	6.606
7/16/2019	Tuesday	35.85	847.0		3.509	2.744	9.969

Table 6: Field's Point Influent Metals (Al-Mo)

Field's Point Influent Metals, Al-Mo, 2019
all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo
7/17/2019	Wednesday	37.10	313.9		1.422	2.575	7.231
7/23/2019	Tuesday	69.09	274.4		<1.000	1.993	3.981
7/24/2019	Wednesday	62.41	178.3		1.165	1.557	4.553
7/30/2019	Tuesday	35.96	203.1		1.323	2.220	5.597
7/31/2019	Wednesday	34.06	208.1		1.609	1.771	8.894
8/6/2019	Tuesday	33.50	225.4	1380	1.572	2.479	7.770
8/7/2019	Wednesday	43.17	384.0		1.547	2.358	7.015
8/13/2019	Tuesday	32.16	257.2		1.553	2.608	7.452
8/14/2019	Wednesday	30.24	228.7		1.809	2.345	7.426
8/20/2019	Tuesday	35.23	172.9		1.530	2.008	7.068
8/21/2019	Wednesday	43.14	596.9		1.726	2.559	8.199
8/27/2019	Tuesday	31.19	339.8		2.074	2.421	6.298
8/28/2019	Wednesday	55.56	668.7		1.472	2.333	4.263
9/3/2019	Tuesday	52.80	245.1		1.480	2.075	4.081
9/4/2019	Wednesday	36.68	2747		1.723	4.632	5.271
9/10/2019	Tuesday	29.12	247.5	1466	1.873	2.196	5.697
9/11/2019	Wednesday	32.16	220.3		1.897	2.525	5.722
9/17/2019	Tuesday	30.03	214.0		2.514	2.466	11.40
9/18/2019	Wednesday	31.14	209.3		1.588	2.786	5.111
9/24/2019	Tuesday	53.85	350.5		1.860	2.412	5.863
9/25/2019	Wednesday	29.79	231.2		3.553	2.622	10.25
10/1/2019	Tuesday	28.90	260.6		1.301	2.423	6.630
10/2/2019	Wednesday	34.83	466.7		2.541	2.368	12.13
10/8/2019	Tuesday	31.60	275.2	1465	3.047	2.690	9.784
10/9/2019	Wednesday	55.65	436.9		1.349	1.779	5.608
10/15/2019	Tuesday	30.57	226.1		1.075	2.640	7.512
10/16/2019	Wednesday	58.61	526.8		1.375	2.605	9.223
10/22/2019	Tuesday	36.28	242.4		1.054	2.613	6.751
10/23/2019	Wednesday	45.93	381.3		1.849	2.254	7.376
10/29/2019	Tuesday	38.22	227.9		1.164	2.211	4.860
10/30/2019	Wednesday	38.50	198.9		1.050	1.761	4.016
11/5/2019	Tuesday	50.95	353.1	1525	2.415	2.367	7.270
11/6/2019	Wednesday	33.07	159.6		3.545	2.829	13.33
11/12/2019	Tuesday	32.40	203.1		2.293	2.826	32.62
11/13/2019	Wednesday	31.63	150.3		2.284	2.350	10.44
11/19/2019	Tuesday	35.86	272.5		1.473	2.403	9.256
11/20/2019	Wednesday	31.21	212.0		2.143	2.386	8.884
11/26/2019	Tuesday	53.74	186.8		1.397	2.161	7.230
11/27/2019	Wednesday	38.86	216.3		<1.000	2.713	3.484
12/3/2019	Tuesday	35.35	196.2	1380	2.347	2.270	11.66
12/4/2019	Wednesday	37.32	168.8		1.013	2.026	7.969
12/10/2019	Tuesday	69.92	273.3		1.034	1.794	5.962
12/11/2019	Wednesday	61.53	190.1		1.066	1.867	7.031
12/17/2019	Tuesday	67.58	285.8		1.216	1.896	5.177
12/18/2019	Wednesday	62.23	127.5		2.084	1.908	8.700
12/24/2019	Tuesday	41.34	148.5		<1.000	2.907	5.743
12/25/2019	Wednesday	39.00	119.3		<1.000	2.761	4.083
12/31/2019	Tuesday	68.27	182.1		<1.000	2.373	3.342

Table 6: Field's Point Influent Metals (Al-Mo)

Field's Point Effluent Metals (Cd-Zn) and Cyanide, 2019
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/1/2019	Tuesday	72.61	<0.020	0.7168		1.972	0.3797		5.888	<0.020	18.48	8.32	<4.000
1/2/2019	Wednesday	73.26	0.02289	0.7809		2.398	0.3746		11.31	0.02404	21.76	7.73	<4.000
1/8/2019	Tuesday	75.59	0.02358	0.8656	<10.000	2.526	0.4052	0.00205	13.42	0.02925	22.01	6.77	<4.000
1/9/2019	Wednesday	62.38	0.04207	0.7565		2.185	0.3234		14.34	0.02085	19.88	7.87	<4.000
1/15/2019	Tuesday	43.40	0.03677	1.495		3.171	0.3393		19.55	0.02456	20.51	6.64	<4.000
1/16/2019	Wednesday	42.46	0.04072	1.352		2.748	<0.300		25.83	0.02305	23.77	5.05	<4.000
1/22/2019	Tuesday	69.36	0.1229	1.860		6.265	1.129		15.90	0.08574	38.62	7.40	<4.000
1/23/2019	Wednesday	65.97	0.09646	1.283		4.526	0.7720		18.61	0.05029	38.16	11.7	<4.000
1/29/2019	Tuesday	60.02	0.02403	1.027		2.171	0.3893		13.04	0.02030	21.93	6.90	<4.000
1/30/2019	Wednesday	58.54	0.02163	1.045		2.216	0.4395		13.60	0.02384	22.26	6.82	<4.000
2/5/2019	Tuesday	46.30	0.02335	1.266	<10.000	2.377	0.4056	0.00270	13.69	0.06287	22.77	6.49	<4.000
2/6/2019	Wednesday	55.22	0.02529	1.229		2.167	0.4144		12.57	0.05078	22.80	7.66	<4.000
2/12/2019	Tuesday	56.63	0.03217	1.149		3.520	0.6530		18.19	0.06667	23.98	10.7	<4.000
2/13/2019	Wednesday	68.86	0.03577	1.045		3.071	0.6887		20.77	0.05888	27.55	8.61	<4.000
2/19/2019	Tuesday	44.81	0.04573	1.351		2.838	0.3686		16.88	0.04151	33.91	7.89	<4.000
2/20/2019	Wednesday	47.29	0.03122	1.153		3.123	0.3229		16.66	0.03414	27.84	9.01	<4.000
2/26/2019	Tuesday	45.78	0.02572	1.249		2.823	0.3442		13.76	0.02610	27.69		
2/27/2019	Wednesday	48.46	0.02201	1.463		2.659	<0.300		16.51	0.02716	26.98	7.63	<4.000
2/28/2019	Thursday	47.99										7.30	<4.000
3/5/2019	Tuesday	45.04	0.02110	1.258	<10.000	2.356	0.3547	0.00261	17.90	0.02022	29.67	6.13	<4.000
3/6/2019	Wednesday	42.83	<0.020	1.241		2.606	0.3057		19.16	0.02071	28.00	6.66	<4.000
3/12/2019	Tuesday	50.16	<0.020	1.112		2.685	0.3079		14.01	0.09304	27.59	8.03	<4.000
3/13/2019	Wednesday	47.11	<0.020	1.117		2.504	<0.300		17.26	0.04905	26.23	7.00	<4.000
3/19/2019	Tuesday	50.92	0.02069	0.7907		2.125	<0.300		12.16	0.02382	23.54	9.00	<4.000
3/20/2019	Wednesday	47.37	<0.020	0.8379		1.987	<0.300		12.74	0.02285	23.43	10.7	<4.000
3/26/2019	Tuesday	49.74	0.02256	0.8609		2.285	<0.300		11.16	<0.020	23.71	6.34	<4.000
3/27/2019	Wednesday	45.78	0.02598	0.8732		2.503	<0.300		12.69	<0.020	23.44	5.89	<4.000
4/2/2019	Tuesday	51.88	<0.020	1.053	<10.000	2.733	<0.300	0.00180	16.18	0.02323	24.56	5.85	<4.000
4/3/2019	Wednesday	58.60	<0.020	0.6482		2.447	<0.300		20.30	0.02996	25.34	6.05	<4.000
4/9/2019	Tuesday	65.73	<0.020	0.9220		2.476	0.3231		13.10	0.04457	27.73	6.44	<4.000
4/10/2019	Wednesday	45.15	0.02874	1.328		2.695	<0.300		14.64	0.03108	28.91	5.61	<4.000
4/16/2019	Tuesday	53.76	<0.020	1.008		2.245	<0.300		14.12	0.02617	25.76	4.58	<4.000
4/17/2019	Wednesday	46.02	0.02045	1.223		2.282	<0.300		14.50	0.02313	28.01	6.00	<4.000
4/23/2019	Tuesday	70.77	<0.020	0.7664		2.290	<0.300		9.520	<0.020	24.53	4.61	4.61
4/24/2019	Wednesday	71.07	<0.020	0.8225		2.317	<0.300		10.64	<0.020	24.62	5.11	5.11
4/30/2019	Tuesday	70.84	<0.020	0.6165		2.401	0.3232		13.93	<0.020	22.47	5.94	<4.000
5/1/2019	Wednesday	71.74	<0.020	0.6360		2.075	<0.300		11.69	<0.020	21.19	4.00	<4.000
5/7/2019	Tuesday	49.57	0.02349	1.007	<10.000	2.185	<0.300	0.00194	15.12	<0.020	23.30	4.25	<4.000
5/8/2019	Wednesday	49.67	0.02363	0.8967		1.813	<0.300		15.60	<0.020	22.09	6.74	<4.000
5/14/2019	Tuesday	69.76	<0.020	0.7132	<10.000	1.754	<0.300		10.82	<0.020	25.69	6.23	<4.000
5/15/2019	Wednesday	49.21	<0.020	0.7828		1.789	<0.300		12.95	<0.020	25.31	6.22	<4.000

Table 7: Field's Point Effluent Metals (Cd-Zn) and Cyanide

Field's Point Effluent Metals (Cd-Zn) and Cyanide, 2019
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
5/21/2019	Tuesday	55.82	<0.020	1.113		1.621	<0.300		11.11	<0.020	20.09	6.87	<4.000
5/22/2019	Wednesday	42.66	<0.020	1.100		1.600	<0.300		12.98	<0.020	22.23	7.60	<4.000
5/28/2019	Tuesday	46.49	<0.020	0.9541		1.998	0.3087		11.80	<0.020	21.91	7.09	<4.000
5/29/2019	Wednesday	49.17	<0.020	0.9821		2.099	<0.300		11.96	<0.020	22.87	6.09	<4.000
6/4/2019	Tuesday	38.71	<0.020	0.9750	<10.000	1.834	<0.300	0.00159	13.58	<0.020	23.34	4.58	<4.000
6/5/2019	Wednesday	38.30	<0.020	1.098		1.868	<0.300		15.12	0.04117	24.27	8.16	<4.000
6/11/2019	Tuesday	71.25	<0.020	1.450		1.661	<0.300		10.19	<0.020	19.53	4.60	<4.000
6/12/2019	Wednesday	66.28	<0.020	0.9261		1.625	0.3822		11.06	<0.020	19.21	5.04	<4.000
6/18/2019	Tuesday	45.91	<0.020	0.7737		1.655	0.3046		12.14	<0.020	20.38	4.77	<4.000
6/19/2019	Wednesday	40.43	<0.020	1.031		1.430	<0.300		12.35	<0.020	19.64	5.81	<4.000
6/25/2019	Tuesday	49.94	<0.020	0.7656		2.154	0.4719		15.16	<0.020	27.67	5.30	<4.000
6/26/2019	Wednesday	37.35	<0.020	0.9249		1.830	<0.300		24.70	<0.020	17.58	5.38	<4.000
7/2/2019	Tuesday	37.06	<0.020	0.9025		1.511	0.3060		16.41	<0.020	19.02	5.03	<4.000
7/3/2019	Wednesday	35.98	<0.020	0.7846		1.620	0.3069		16.31	<0.020	23.74	<4.000	<4.000
7/9/2019	Tuesday	32.73	<0.020	1.085	<10.000	1.329	<0.300	0.00297	13.13	<0.020	18.25	<4.000	<4.000
7/10/2019	Wednesday	32.08	<0.020	0.9434		1.236	<0.300		11.08	<0.020	18.01	4.71	<4.000
7/16/2019	Tuesday	35.85	<0.020	3.178		1.162	0.3184		22.72	<0.020	18.46	4.50	<4.000
7/17/2019	Wednesday	37.10	<0.020	1.645		1.462	0.3297		23.46	<0.020	18.95	4.92	<4.000
7/23/2019	Tuesday	66.85	<0.020	0.7471		1.586	0.3306		10.43	<0.020	23.38	5.78	<4.000
7/24/2019	Wednesday	62.41	<0.020	0.6248		1.697	0.3126		9.943	<0.020	17.35	5.37	<4.000
7/30/2019	Tuesday	35.96	<0.020	0.8229		2.048	0.3897		14.11	<0.020	22.59	6.72	<4.000
7/31/2019	Wednesday	34.06	<0.020	0.9610		1.374	0.3058		14.52	<0.020	22.45	4.46	<4.000
8/6/2019	Tuesday	33.50	<0.020	0.8671	<10.000	1.519	0.3208	0.00207	16.17	<0.020	24.54	5.52	<4.000
8/7/2019	Wednesday	43.17	<0.020	0.8377		1.709	0.3645		12.64	<0.020	20.51	6.03	<4.000
8/13/2019	Tuesday	32.16	<0.020	0.9534		1.639	0.3187		15.83	<0.020	23.07	6.54	<4.000
8/14/2019	Wednesday	30.24	<0.020	0.7913		1.684	0.3018		16.10	<0.020	24.18	5.74	<4.000
8/20/2019	Tuesday	35.23	<0.020	0.6538		1.408	<0.300		14.79	<0.020	23.62	26.3	20.8
8/21/2019	Wednesday	43.14	<0.020	0.7301		1.803	0.3773		16.01	<0.020	21.16	8.38	<4.000
8/27/2019	Tuesday	31.19	<0.020	0.7708		1.948	<0.300		16.50	<0.020	27.23	7.54	<4.000
8/28/2019	Wednesday	55.56	<0.020	0.6770		2.768	0.5185		12.62	0.02016	21.40	6.10	<4.000
9/3/2019	Tuesday	52.80	<0.020	0.6427		1.403	<0.300		10.38	<0.020	16.52	4.49	<4.000
9/4/2019	Wednesday	36.68	<0.020	0.8292		1.056	0.3145		13.27	<0.020	20.99	4.59	<4.000
9/10/2019	Tuesday	29.12	<0.020	0.6935	<10.000	1.491	0.3659	<0.001	17.34	<0.020	22.79	5.81	<4.000
9/11/2019	Wednesday	32.16	<0.020	0.7213		1.948	0.4137		17.12	<0.020	27.05	4.25	<4.000
9/17/2019	Tuesday	30.03	<0.020	1.061		1.779	<0.300		14.77	<0.020	25.48	20.6	15.5
9/18/2019	Wednesday	31.14	<0.020	0.8031		1.588	<0.300		14.63	<0.020	24.43	<4.000	<4.000
9/24/2019	Tuesday	53.85	<0.020	2.247		1.511	0.3857		10.60	0.02084	20.07	<4.000	<4.000
9/25/2019	Wednesday	29.79	<0.020	1.079		1.876	0.3660		12.94	0.02141	24.50	4.07	4.07
10/1/2019	Tuesday	28.90	<0.020	0.7999		1.864	0.3529		13.04	<0.020	21.83	5.03	<4.000
10/2/2019	Wednesday	34.83	<0.020	0.8138		1.802	0.3994		11.57	0.02080	19.65	<4.000	<4.000
10/8/2019	Tuesday	31.60	<0.020	1.358	<10.000	2.051	0.3422	0.00149	17.50	<0.020	20.71	<4.000	<4.000

Table 7: Field's Point Effluent Metals (Cd-Zn) and Cyanide

Field's Point Effluent Metals (Cd-Zn) and Cyanide, 2019
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
10/9/2019	Wednesday	55.65	<0.020	3.025		1.786	0.3582		10.50	<0.020	18.15	<4.000	<4.000
10/15/2019	Tuesday	30.57	<0.020	0.8548		2.023	0.3298		10.32	0.02076	23.20	4.59	<4.000
10/16/2019	Wednesday	52.13	<0.020	0.6028		1.985	0.3513		9.353	0.02486	17.51	<4.000	<4.000
10/22/2019	Tuesday	36.28	<0.020	1.942		2.058	0.3697		14.10	0.02374	22.71	16.0	11.5
10/23/2019	Wednesday	45.93	<0.020	0.8119		1.783	0.3114		11.93	<0.020	22.05	<4.000	<4.000
10/29/2019	Tuesday	38.22	0.02111	0.7286		1.827	0.3512		10.83	<0.020	23.12	<4.000	<4.000
10/30/2019	Wednesday	38.50	<0.020	0.7447		2.156	0.3669		10.81	0.02244	21.75	<4.000	<4.000
11/5/2019	Tuesday	50.95	<0.020	0.9384	<10.000	2.021	0.3507	0.00197	9.418	<0.020	20.83	<4.000	<4.000
11/6/2019	Wednesday	33.07	0.02015	0.9954		2.433	0.3802		12.72	0.02730	26.84	4.63	<4.000
11/12/2019	Tuesday	32.40	0.02380	1.193		2.352	0.3284		10.56	0.02056	23.86	<4.000	<4.000
11/13/2019	Wednesday	31.63	<0.020	1.112		2.865	0.3230		13.20	0.02270	25.26	7.33	<4.000
11/19/2019	Tuesday	35.86	<0.020	1.081		2.771	0.3589		12.06	0.04437	26.81	15.1	7.84
11/20/2019	Wednesday	31.21	<0.020	1.144		3.767	0.3924		13.85	0.04759	24.24	<4.000	<4.000
11/26/2019	Tuesday	53.74	<0.020	1.061		2.731	0.4333		11.51	0.02870	26.81	<4.000	<4.000
11/27/2019	Wednesday	38.86	<0.020	1.020		2.515	0.4761		12.47	0.02564	28.74	8.09	<4.000
12/3/2019	Tuesday	35.35	0.02134	0.9136	<10.000	2.578	0.4542	0.00532	14.25	0.06856	28.67	<4.000	<4.000
12/4/2019	Wednesday	37.32	<0.020	0.8699		2.436	0.4410		17.20	0.02985	27.46	7.53	<4.000
12/10/2019	Tuesday	69.92	0.02412	0.6710		2.797	0.6102		7.863	0.03433	24.08	4.42	<4.000
12/11/2019	Wednesday	61.53	0.02564	0.7403		3.194	0.7528		8.755	0.03154	26.85	6.23	<4.000
12/17/2019	Tuesday	67.58	0.02862	0.8999		3.148	0.7760		6.929	0.03633	24.54	13.0	5.55
12/18/2019	Wednesday	62.23	0.02246	0.9537		2.734	0.5120		9.034	0.03142	24.46	<4.000	<4.000
12/24/2019	Tuesday	41.34	<0.020	0.8612		1.633	0.3393		7.241	<0.020	19.96	5.20	<4.000
12/25/2019	Wednesday	39.00	<0.020	0.8531		1.424	<0.300		6.483	<0.020	16.45	4.16	<4.000
12/31/2019	Tuesday	68.27	<0.020	0.8173		1.904	0.4138		5.462	<0.020	19.49	<4.000	<4.000

Table 7: Field's Point Effluent Metals (Cd-Zn) and Cyanide

Field's Point Effluent Metals, Al - Mo, 2019
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Al	Fe	Se	As	Mo
1/1/2019	Tuesday	72.61	12.12		<1.000	1.480	1.827
1/2/2019	Wednesday	73.26	11.05		1.295	1.935	2.458
1/8/2019	Tuesday	75.59	12.22	100.4	1.155	1.798	2.110
1/9/2019	Wednesday	62.38	10.33		<1.000	1.483	1.806
1/15/2019	Tuesday	43.40	9.280		2.021	2.922	4.267
1/16/2019	Wednesday	42.46	9.047		1.685	2.538	3.250
1/22/2019	Tuesday	69.36	50.49		<1.000	2.396	2.848
1/23/2019	Wednesday	65.97	29.99		1.014	2.332	8.613
1/29/2019	Tuesday	60.02	10.48		1.314	1.882	3.502
1/30/2019	Wednesday	58.54	12.11		<1.000	1.750	2.823
2/5/2019	Tuesday	46.30	20.99	114.3	1.034	2.847	11.72
2/6/2019	Wednesday	55.22	10.13		2.927	2.651	9.961
2/12/2019	Tuesday	56.63	20.95		<1.000	2.570	3.168
2/13/2019	Wednesday	68.86	21.74		1.435	1.916	2.827
2/19/2019	Tuesday	44.81	10.02		1.310	2.586	3.745
2/20/2019	Wednesday	47.29	9.903		1.342	2.643	4.041
2/26/2019	Tuesday	45.78	9.962		1.036	2.334	3.438
2/27/2019	Wednesday	48.46	7.502		<1.000	2.166	2.878
3/5/2019	Tuesday	45.04	9.768	94.77	<1.000	2.199	4.215
3/6/2019	Wednesday	42.83	8.494		1.264	2.205	3.550
3/12/2019	Tuesday	50.16	9.390		1.525	1.907	5.160
3/13/2019	Wednesday	47.11	8.370		2.184	1.872	5.195
3/19/2019	Tuesday	50.92	9.256		1.329	1.747	6.331
3/20/2019	Wednesday	47.37	8.082		1.420	1.671	3.547
3/26/2019	Tuesday	49.74	7.188		1.872	2.005	4.084
3/27/2019	Wednesday	45.78	8.845		1.649	1.804	3.775
4/2/2019	Tuesday	51.88	7.995	85.64	1.537	2.206	4.006
4/3/2019	Wednesday	58.60	7.238		1.520	1.371	8.013
4/9/2019	Tuesday	65.73	8.131		<1.000	1.678	4.370
4/10/2019	Wednesday	45.15	7.114		1.206	1.985	7.075
4/16/2019	Tuesday	53.76	8.684		1.045	1.772	4.378
4/17/2019	Wednesday	46.02	17.55		1.100	1.789	4.231
4/23/2019	Tuesday	70.77	8.542		<1.000	1.468	1.627
4/24/2019	Wednesday	71.07	7.953		<1.000	1.488	1.990
4/30/2019	Tuesday	70.84	8.328		<1.000	1.405	2.052
5/1/2019	Wednesday	71.74	6.728		<1.000	1.196	1.784
5/7/2019	Tuesday	49.57	6.780	63.75	1.366	1.984	4.215
5/8/2019	Wednesday	49.67	5.689		2.074	1.752	4.958
5/14/2019	Tuesday	69.76	7.919		<1.000	1.334	5.057
5/15/2019	Wednesday	49.21	6.442		1.013	1.318	10.53
5/21/2019	Tuesday	55.82	6.820		<1.000	1.403	5.241
5/22/2019	Wednesday	42.66	6.201		<1.000	1.417	4.224
5/28/2019	Tuesday	46.49	8.328		<1.000	1.933	4.985
5/29/2019	Wednesday	49.17	6.984		<1.000	1.831	4.891
6/4/2019	Tuesday	38.71	6.038	97.58	<1.000	2.159	6.776
6/5/2019	Wednesday	38.30	5.741		<1.000	2.087	6.532
6/11/2019	Tuesday	71.25	6.373		<1.000	1.397	3.222

Table 8: Field's Point Effluent Metals (Al-Mo)

Field's Point Effluent Metals, Al - Mo, 2019
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Al	Fe	Se	As	Mo
6/12/2019	Wednesday	66.28	9.067		<1.000	1.501	3.478
6/18/2019	Tuesday	45.91	5.397		<1.000	1.650	5.377
6/19/2019	Wednesday	40.43	5.950		<1.000	1.757	4.822
6/25/2019	Tuesday	49.94	8.367		<1.000	1.764	4.081
6/26/2019	Wednesday	37.35	5.215		<1.000	1.842	6.048
7/2/2019	Tuesday	37.06	5.480		<1.000	1.532	6.751
7/3/2019	Wednesday	35.98	5.987		<1.000	1.731	4.161
7/9/2019	Tuesday	32.73	5.240	143.3	<1.000	1.919	3.762
7/10/2019	Wednesday	32.08	<5.000		<1.000	1.730	4.470
7/16/2019	Tuesday	35.85	6.725		1.019	1.709	7.209
7/17/2019	Wednesday	37.10	7.404		<1.000	1.826	6.742
7/23/2019	Tuesday	66.85	7.409		<1.000	1.698	3.510
7/24/2019	Wednesday	62.41	6.868		<1.000	1.460	3.708
7/30/2019	Tuesday	35.96	6.764		<1.000	1.735	5.294
7/31/2019	Wednesday	34.06	5.670		<1.000	1.798	7.613
8/6/2019	Tuesday	33.50	6.260	175.4	<1.000	1.773	5.826
8/7/2019	Wednesday	43.17	7.890		<1.000	1.723	5.649
8/13/2019	Tuesday	32.16	6.497		<1.000	1.937	7.009
8/14/2019	Wednesday	30.24	5.807		<1.000	1.932	6.824
8/20/2019	Tuesday	35.23	5.511		<1.000	1.744	5.779
8/21/2019	Wednesday	43.14	7.933		<1.000	1.772	6.842
8/27/2019	Tuesday	31.19	6.330		<1.000	1.899	5.603
8/28/2019	Wednesday	55.56	14.36		<1.000	1.483	3.454
9/3/2019	Tuesday	52.80	6.708		<1.000	1.543	3.180
9/4/2019	Wednesday	36.68	6.784		<1.000	1.989	3.717
9/10/2019	Tuesday	29.12	6.390	187.8	<1.000	1.737	4.644
9/11/2019	Wednesday	32.16	7.316		<1.000	1.922	5.139
9/17/2019	Tuesday	30.03	6.210		1.044	1.894	8.387
9/18/2019	Wednesday	31.14	5.907		<1.000	1.862	6.154
9/24/2019	Tuesday	53.85	6.533		<1.000	1.481	4.518
9/25/2019	Wednesday	29.79	7.037		1.387	1.950	8.200
10/1/2019	Tuesday	28.90	6.544		<1.000	1.989	5.601
10/2/2019	Wednesday	34.83	8.318		1.700	1.900	10.34
10/8/2019	Tuesday	31.60	7.947	159.0	1.595	1.908	7.580
10/9/2019	Wednesday	55.65	8.205		<1.000	1.364	4.423
10/15/2019	Tuesday	30.57	18.87		<1.000	1.676	6.018
10/16/2019	Wednesday	52.13	8.398		<1.000	1.459	5.614
10/22/2019	Tuesday	36.28	7.878		<1.000	1.653	5.711
10/23/2019	Wednesday	45.93	6.470		<1.000	1.563	6.055
10/29/2019	Tuesday	38.22	7.985		<1.000	1.364	3.794
10/30/2019	Wednesday	38.50	6.865		<1.000	1.570	4.240
11/5/2019	Tuesday	50.95	8.101	110.1	1.590	1.779	6.522
11/6/2019	Wednesday	33.07	16.09		1.526	2.315	10.89
11/12/2019	Tuesday	32.40	9.992		1.320	2.156	19.11
11/13/2019	Wednesday	31.63	7.476		1.252	2.031	13.39
11/19/2019	Tuesday	35.86	8.360		<1.000	1.821	7.718
11/20/2019	Wednesday	31.21	9.134		<1.000	2.042	8.711

Table 8: Field's Point Effluent Metals (Al-Mo)

Field's Point Effluent Metals, Al - Mo, 2019
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Al	Fe	Se	As	Mo
11/26/2019	Tuesday	53.74	9.858		<1.000	1.892	6.520
11/27/2019	Wednesday	38.86	11.16		<1.000	2.082	3.997
12/3/2019	Tuesday	35.35	13.51	147.6	<1.000	2.079	8.839
12/4/2019	Wednesday	37.32	11.30		<1.000	1.916	7.773
12/10/2019	Tuesday	69.92	19.95		<1.000	1.504	5.747
12/11/2019	Wednesday	61.53	24.72		<1.000	1.325	6.549
12/17/2019	Tuesday	67.58	27.31		<1.000	1.227	4.652
12/18/2019	Wednesday	62.23	16.63		1.672	1.663	8.747
12/24/2019	Tuesday	41.34	8.293		<1.000	2.045	4.718
12/25/2019	Wednesday	39.00	8.608		<1.000	1.408	4.245
12/31/2019	Tuesday	68.27	13.20		<1.000	1.833	2.597

Table 8: Field's Point Effluent Metals (Al-Mo)

Bucklin Point Influent Metals (Cd-Zn) and Cyanide, 2019

all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/1/2019	Tuesday	43.94	0.1189	1.541		24.10	4.723		5.812	0.2807	52.99	5.22	<4.000
1/2/2019	Wednesday	25.34	0.1300	0.8902		18.80	1.662		3.347	0.1782	46.11	4.73	<4.000
1/8/2019	Tuesday	28.81	0.1218	1.764	14.0	22.72	2.096	0.00634	4.420	0.6650	50.30	6.77	<4.000
1/9/2019	Wednesday	30.10	0.1374	3.115		23.77	3.813		6.229	0.5999	57.20	6.47	<4.000
1/15/2019	Tuesday	23.83	0.1236	2.547		48.20	1.967		5.249	0.5371	60.58	6.21	<4.000
1/16/2019	Wednesday	23.56	0.1477	2.136		35.92	1.989		5.373	0.5950	64.28	4.93	<4.000
1/22/2019	Tuesday	23.41	0.1181	1.845		25.74	1.691		6.440	0.5377	51.21		
1/23/2019	Wednesday	26.32	0.1251	1.687		26.16	2.129		5.566	0.6396	55.51	13.4	<4.000
1/24/2019	Thursday	69.79										19.3	<4.000
1/29/2019	Tuesday	28.00	0.1466	2.436		29.65	1.904		4.974	0.4813	59.25	6.40	<4.000
1/30/2019	Wednesday	31.11	0.1485	1.983		28.45	3.135		6.920	0.5353	66.89	5.75	<4.000
2/5/2019	Tuesday	23.30	0.1176	3.191	21.0	30.94	1.862	0.0132	7.294	0.9634	57.73	6.16	<4.000
2/6/2019	Wednesday	24.12	0.2343	2.934		34.43	3.371		5.461	0.8750	82.68	6.49	<4.000
2/12/2019	Tuesday	23.93	0.2216	2.110		35.26	9.800		8.669	0.6953	96.28	6.17	<4.000
2/13/2019	Wednesday	47.81	0.2796	3.635		30.61	11.79		6.492	0.9238	112.4	15.4	<4.000
2/19/2019	Tuesday	22.97	0.1295	2.446		27.84	1.964		7.861	0.7259	63.69	7.68	<4.000
2/20/2019	Wednesday	23.80	0.1775	2.879		31.82	5.251		9.842	0.8276	79.01	5.56	<4.000
2/26/2019	Tuesday	24.14	0.1944	2.506		52.08	2.739		30.03	1.106	62.05	5.62	<4.000
2/27/2019	Wednesday	24.11	0.2018	2.069		32.30	4.682		9.388	0.5432	73.85	6.72	<4.000
3/5/2019	Tuesday	22.54	0.1321	1.913	32.0	26.01	2.943	0.00744	4.280	0.3292	71.86	8.84	<4.000
3/6/2019	Wednesday	22.21	0.1305	4.271		34.79	1.686		8.356	0.7415	63.51	5.76	<4.000
3/12/2019	Tuesday	24.04	0.1445	11.17		28.58	4.142		17.45	0.7112	64.30	9.79	<4.000
3/13/2019	Wednesday	23.57	0.1309	86.61		51.81	2.482		97.07	0.9764	61.75	4.05	<4.000
3/19/2019	Tuesday	24.39	0.1609	59.32		49.82	2.338		64.82	1.164	71.25	5.30	<4.000
3/20/2019	Wednesday	24.33	0.1384	5.837		33.51	2.248		8.573	0.6528	68.21	5.51	<4.000
3/26/2019	Tuesday	23.62	0.1646	2.166		44.50	2.187		8.184	1.091	83.29	5.95	<4.000
3/27/2019	Wednesday	23.08	0.1404	2.827		35.93	1.982		6.685	1.066	71.53	6.67	<4.000
4/2/2019	Tuesday	21.70	0.1695	2.045	23.0	41.94	2.622	0.0240	8.982	1.069	82.10	5.58	<4.000
4/3/2019	Wednesday	33.37	0.1375	2.456		36.28	4.976		6.562	0.7277	83.15	6.13	<4.000
4/9/2019	Tuesday	25.76	0.1523	2.239		40.39	3.255		7.485	0.6280	82.09	5.30	<4.000
4/10/2019	Wednesday	22.13	0.1383	4.341		46.24	3.459		18.90	0.5710	80.08	5.98	<4.000
4/16/2019	Tuesday	24.06	0.1643	2.573		34.07	3.811		10.48	0.8079	77.79	6.07	<4.000
4/17/2019	Wednesday	23.06	0.1295	1.492		33.24	2.149		10.34	1.385	83.81	4.74	<4.000
4/23/2019	Tuesday	41.22	0.1130	7.845		27.66	8.146		7.168	0.9882	61.54	4.38	<4.000
4/24/2019	Wednesday	31.83	0.1363	1.879		28.13	3.314		7.181	0.5361	67.34	4.40	<4.000
4/30/2019	Tuesday	35.94	0.1347	2.797		23.11	2.608		6.947	0.5681	59.42	5.02	<4.000
5/1/2019	Wednesday	31.83	0.1406	1.303		27.07	2.224		4.593	0.4119	62.98	<4.000	<4.000
5/7/2019	Tuesday	28.98	0.1328	1.977		35.05	2.415	0.0402	7.032	0.8452	71.18	5.61	<4.000
5/8/2019	Wednesday	26.28	0.1428	2.101		34.76	3.010		6.645	0.5168	73.30	<4.000	<4.000
5/14/2019	Tuesday	29.59	0.1401	3.569	12.0	36.97	5.997		6.857	0.9915	76.34	5.74	<4.000
5/15/2019	Wednesday	26.52	0.1265	1.528		33.29	2.087		7.315	0.5913	69.55	5.83	<4.000
5/21/2019	Tuesday	24.56	0.1941	4.212		45.85	15.98		10.09	1.935	109.3	5.26	<4.000
5/22/2019	Wednesday	22.51	0.1329	2.914		49.20	3.006		5.782	0.9693	78.03	5.27	<4.000

Table 9: Bucklin Point Influent Metals (Cd-Zn) and Cyanide

Bucklin Point Influent Metals (Cd-Zn) and Cyanide, 2019

all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
5/28/2019	Tuesday	24.74	0.1261	1.257		31.39	2.324		2.882	0.3241	93.38	5.74	<4.000
5/29/2019	Wednesday	23.99	0.3572	2.770		41.43	5.512		6.736	1.293	99.38	7.36	<4.000
6/4/2019	Tuesday	19.89	0.1438	2.983	23.0	43.20	2.555	0.00942	6.610	0.4370	78.15	5.03	<4.000
6/5/2019	Wednesday	20.24	0.1253	1.995		31.63	2.455		5.834	0.3366	73.57	5.63	<4.000
6/11/2019	Tuesday	50.22	0.1829	13.24		46.10	16.43		22.73	3.153	112.3	<4.000	<4.000
6/12/2019	Wednesday	20.91	0.1811	2.201		36.71	3.188		6.799	0.8733	94.11	4.59	<4.000
6/18/2019	Tuesday	22.21	0.1420	2.461		40.47	3.163		7.268	0.9923	90.66	<4.000	<4.000
6/19/2019	Wednesday	19.96	0.1532	4.504		38.29	4.003		6.057	0.9232	93.65	<4.000	<4.000
6/25/2019	Tuesday	22.87	0.1423	2.327		42.13	3.024		7.515	1.007	86.33	4.06	<4.000
6/26/2019	Wednesday	18.95	0.1558	3.244		54.59	4.922		10.01	0.5911	107.4	<4.000	<4.000
7/2/2019	Tuesday	17.65	0.1386	1.718		40.83	3.524		8.986	1.629	81.32	<4.000	<4.000
7/3/2019	Wednesday	16.57	0.1490	1.620		42.11	3.273		9.360	0.5951	85.35	<4.000	<4.000
7/9/2019	Tuesday	16.19	0.1411	1.643	28.0	44.65	3.716	0.0490	16.73	0.7023	96.34	4.08	<4.000
7/10/2019	Wednesday	16.34	0.1565	2.112		52.84	3.858		9.423	0.8681	107.9	4.38	<4.000
7/16/2019	Tuesday	16.04	0.1969	2.073		57.73	4.846		10.44	1.042	127.8	<4.000	<4.000
7/17/2019	Wednesday	22.05	0.1699	2.042		53.78	3.470		16.37	1.252	120.2	<4.000	<4.000
7/23/2019	Tuesday	37.05	0.1295	4.475		39.55	13.48		13.88	0.9916	95.46	<4.000	<4.000
7/24/2019	Wednesday	18.23	0.1478	2.842		40.53	3.895		13.89	0.8961	91.99	<4.000	<4.000
7/30/2019	Tuesday	16.28	0.1745	5.174		64.02	5.557		8.751	1.466	130.7	<4.000	<4.000
7/31/2019	Wednesday	16.74	0.2414	25.31		44.66	5.436		9.603	1.117	123.1	4.29	<4.000
8/6/2019	Tuesday	16.10	0.1969	4.620	45.0	63.88	5.234	0.0870	10.44	1.107	141.5	<4.000	<4.000
8/7/2019	Wednesday	17.47	0.1716	11.02		123.6	5.905		100.7	1.309	124.4	<4.000	<4.000
8/13/2019	Tuesday	16.23	0.1334	2.500		41.00	3.681		6.735	0.5376	98.22	<4.000	<4.000
8/14/2019	Wednesday	15.20	0.1511	3.285		48.80	8.597		12.14	0.6727	106.4	<4.000	<4.000
8/20/2019	Tuesday	14.53	0.1703	50.22		95.15	8.806		77.15	2.405	146.1	<4.000	<4.000
8/21/2019	Wednesday	25.34	0.1414	3.028		57.21	4.237		17.99	0.9248	117.7		
8/22/2019	Thursday	17.74										<4.000	<4.000
8/27/2019	Tuesday	14.89	0.1583	3.318		55.34	3.795		6.701	2.095	118.6	<4.000	<4.000
8/28/2019	Wednesday	28.55	0.1471	2.382		64.38	3.845		12.60	1.255	109.9	<4.000	<4.000
9/3/2019	Tuesday	16.04	0.1547	2.394		43.63	11.35		5.076	0.7665	110.1	4.43	<4.000
9/4/2019	Wednesday	16.07	0.1884	3.169		69.89	4.453		9.674	1.797	110.0	<4.000	<4.000
9/10/2019	Tuesday	14.93	0.2153	6.061	47.0	67.80	4.869	0.0529	9.627	1.235	123.6	<4.000	<4.000
9/11/2019	Wednesday	14.97	0.1938	5.313		100.7	7.097		11.97	1.421	138.0	4.64	<4.000
9/17/2019	Tuesday	14.39	0.1515	4.483		72.70	3.495		26.59	1.624	104.6	<4.000	<4.000
9/18/2019	Wednesday	14.51	0.1608	5.034		62.23	3.376		17.14	1.859	117.4	4.20	<4.000
9/24/2019	Tuesday	23.90	0.2048	6.498		64.59	9.589		15.86	1.498	128.0	<4.000	<4.000
9/25/2019	Wednesday	13.95	0.1407	5.250		52.56	4.198		11.27	2.144	105.9	5.69	<4.000
10/1/2019	Tuesday	14.88	0.1660	3.484		61.47	4.388		11.60	1.724	115.3	<4.000	<4.000
10/2/2019	Wednesday	18.88	0.1537	3.195		49.56	3.811		12.07	2.109	109.5	4.41	<4.000
10/8/2019	Tuesday	14.97	0.1796	3.358	33.0	62.84	6.864	0.0654	11.78	1.332	135.4	<4.000	<4.000
10/9/2019	Wednesday	28.84	0.1831	3.029		57.34	5.968		10.29	1.533	127.5	<4.000	<4.000
10/15/2019	Tuesday	14.05	0.1299	1.472		34.23	3.647		4.800	0.4935	90.61	<4.000	<4.000
10/16/2019	Wednesday	21.76	0.1636	3.346		69.56	5.941		29.08	2.046	102.3	4.07	<4.000

Table 9: Bucklin Point Influent Metals (Cd-Zn) and Cyanide

Bucklin Point Influent Metals (Cd-Zn) and Cyanide, 2019

all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
10/22/2019	Tuesday	16.18	0.1535	3.334		64.37	3.797		16.77	3.028	102.1	<4.000	<4.000
10/23/2019	Wednesday	22.29	0.1990	6.128		86.79	9.312		37.23	2.665	129.7	<4.000	<4.000
10/29/2019	Tuesday	17.14	0.1681	2.331		49.09	5.104		11.48	2.109	88.61	4.34	<4.000
10/30/2019	Wednesday	18.12	0.1556	2.118		51.95	3.009		14.14	1.433	80.19	<4.000	<4.000
11/5/2019	Tuesday	26.16	0.1840	3.506	38.0	57.61	3.618	0.0673	10.73	1.290	110.8	15.2	15.2
11/6/2019	Wednesday	16.17	0.1243	4.544		38.78	6.531		7.028	1.387	94.12	<4.000	<4.000
11/12/2019	Tuesday	16.39	0.2317	6.126		52.32	5.682		10.31	1.431	100.8	<4.000	<4.000
11/13/2019	Wednesday	14.99	0.1847	28.03		70.00	7.972		61.39	2.252	109.6	<4.000	<4.000
11/19/2019	Tuesday	20.85	0.2012	7.133		65.18	9.391		22.14	3.494	148.6	26.2	9.70
11/20/2019	Wednesday	15.77	0.1298	2.730		49.55	3.131		13.05	3.316	90.59	5.24	<4.000
11/26/2019	Tuesday	16.52	0.1391	2.797		53.43	2.845		27.44	2.038	90.19	6.33	<4.000
11/27/2019	Wednesday	19.61	0.1469	2.525		57.91	2.627		20.15	2.485	98.49	4.77	<4.000
12/3/2019	Tuesday	18.03	0.1766	3.796	19.0	35.87	3.394	0.0258	11.94	1.436	77.51	6.55	<4.000
12/4/2019	Wednesday	17.69	0.1540	5.427		58.29	2.964		12.26	1.349	90.42	8.32	<4.000
12/10/2019	Tuesday	30.60	0.09583	2.854		25.97	8.963		6.456	0.7814	66.92	6.26	<4.000
12/11/2019	Wednesday	26.80	0.1578	5.621		41.43	4.966		21.79	32.48	92.67	8.29	<4.000
12/17/2019	Tuesday	36.60	0.1663	2.746		41.50	3.544		15.49	1.652	81.64	6.98	<4.000
12/18/2019	Wednesday	24.87	0.1285	2.944		26.10	3.299		11.36	0.9573	56.71	7.20	<4.000
12/24/2019	Tuesday	21.51	0.1462	1.813		35.52	2.400		5.613	1.105	78.70	<4.000	<4.000
12/25/2019	Wednesday	20.28	0.1284	1.092		26.71	1.987		4.452	1.481	63.62	<4.000	<4.000
12/31/2019	Tuesday	28.05	0.09725	1.693		22.80	3.953		4.331	1.025	56.53	5.51	<4.000

Table 9: Bucklin Point Influent Metals (Cd-Zn) and Cyanide

Bucklin Point Influent Metals, Al-Sn, 2019

all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo	Sn
1/1/2019	Tuesday	43.94	191.8		<1.000	0.6535	0.8453	
1/2/2019	Wednesday	25.34	118.1		<1.000	0.6162	0.7458	
1/8/2019	Tuesday	28.81	140.8	598	<1.000	0.6097	2.670	<5.000
1/9/2019	Wednesday	30.10	467.1		<1.000	0.6167	2.980	
1/15/2019	Tuesday	23.83	186.6		<1.000	0.6010	3.812	
1/16/2019	Wednesday	23.56	183.8		<1.000	0.6568	2.036	
1/22/2019	Tuesday	23.41	144.8		<1.000	0.6158	2.015	
1/23/2019	Wednesday	26.32	139.9		<1.000	0.6055	1.472	
1/29/2019	Tuesday	28.00	157.5		<1.000	0.6599	2.729	
1/30/2019	Wednesday	31.11	241.5		<1.000	0.6706	3.956	
2/5/2019	Tuesday	23.30	513.2	828.5	<1.000	0.6666	1.797	<5.000
2/6/2019	Wednesday	24.12	365.7		<1.000	0.7793	2.454	
2/12/2019	Tuesday	23.93	340.7		<1.000	0.9420	3.565	
2/13/2019	Wednesday	47.81	691.6		<1.000	1.386	2.817	
2/19/2019	Tuesday	22.97	161.2		<1.000	0.7644	3.625	
2/20/2019	Wednesday	23.80	415.5		<1.000	1.049	4.455	
2/26/2019	Tuesday	24.14	189.1		<1.000	0.7408	2.144	
2/27/2019	Wednesday	24.11	213.5		<1.000	0.7863	3.247	
3/5/2019	Tuesday	22.54	278.1	939.2	<1.000	0.7865	1.991	<5.000
3/6/2019	Wednesday	22.21	159.9		<1.000	0.6396	1.212	
3/12/2019	Tuesday	24.04	280.1		<1.000	0.7707	4.460	
3/13/2019	Wednesday	23.57	159.9		<1.000	0.6477	1.492	
3/19/2019	Tuesday	24.39	221.9		<1.000	0.7906	2.269	
3/20/2019	Wednesday	24.33	184.7		<1.000	0.7099	1.999	
3/26/2019	Tuesday	23.62	202.5		<1.000	0.7325	3.087	
3/27/2019	Wednesday	23.08	168.3		<1.000	0.7743	4.597	
4/2/2019	Tuesday	21.70	229.2	939.5	<1.000	0.6907	2.140	<5.000
4/3/2019	Wednesday	33.37	296.0		<1.000	0.7473	3.370	
4/9/2019	Tuesday	25.76	228.6		<1.000	0.8993	7.572	
4/10/2019	Wednesday	22.13	235.5		<1.000	0.7495	1.887	
4/16/2019	Tuesday	24.06	246.3		<1.000	0.8186	3.520	
4/17/2019	Wednesday	23.06	159.1		<1.000	0.6956	1.946	
4/23/2019	Tuesday	41.22	578.0		<1.000	0.8401	3.893	
4/24/2019	Wednesday	31.83	249.5		<1.000	0.6732	1.393	
4/30/2019	Tuesday	35.94	340.9		<1.000	0.6591	2.977	
5/1/2019	Wednesday	31.83	196.4		<1.000	0.6080	3.204	
5/7/2019	Tuesday	28.98	211.8	781.5	<1.000	0.6661	2.583	<5.000
5/8/2019	Wednesday	26.28	214.8		<1.000	0.7345	2.603	
5/14/2019	Tuesday	29.59	333.0		<1.000	0.7946	3.090	
5/15/2019	Wednesday	26.52	187.4		<1.000	0.6933	1.994	

Table 10: Bucklin Point Influent Metals (Al-Sn)

Bucklin Point Influent Metals, Al-Sn, 2019

all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo	Sn
5/21/2019	Tuesday	24.56	634.5		<1.000	1.168	6.478	
5/22/2019	Wednesday	22.51	219.7		<1.000	0.7702	3.555	
5/28/2019	Tuesday	24.74	179.4		<1.000	0.6837	1.579	
5/29/2019	Wednesday	23.99	324.4		<1.000	0.7626	3.411	
6/4/2019	Tuesday	19.89	200.7	871.8	<1.000	0.7764	6.729	<5.000
6/5/2019	Wednesday	20.24	203.4		<1.000	0.7536	4.140	
6/11/2019	Tuesday	50.22	579.4		<1.000	0.9542	2.504	
6/12/2019	Wednesday	20.91	254.0		<1.000	0.8046	3.297	
6/18/2019	Tuesday	22.21	227.1		<1.000	0.9333	5.871	
6/19/2019	Wednesday	19.96	249.8		<1.000	0.8074	2.973	
6/25/2019	Tuesday	22.87	196.0		<1.000	0.9608	6.603	
6/26/2019	Wednesday	18.95	294.7		<1.000	0.9966	7.663	
7/2/2019	Tuesday	17.65	249.3		<1.000	0.8224	2.765	
7/3/2019	Wednesday	16.57	194.3		<1.000	0.7908	4.733	
7/9/2019	Tuesday	16.19	245.9	900.8	<1.000	0.7934	3.126	<5.000
7/10/2019	Wednesday	16.34	225.1		<1.000	0.8184	3.383	
7/16/2019	Tuesday	16.04	256.2		<1.000	0.9322	3.899	
7/17/2019	Wednesday	22.05	244.2		<1.000	0.7977	7.042	
7/23/2019	Tuesday	37.05	755.3		<1.000	1.092	5.916	
7/24/2019	Wednesday	18.23	247.6		<1.000	0.9854	3.521	
7/30/2019	Tuesday	16.28	434.0		<1.000	0.9665	3.292	
7/31/2019	Wednesday	16.74	657.0		<1.000	1.015	3.855	
8/6/2019	Tuesday	16.10	305.0	1060	<1.000	0.9252	8.608	<5.000
8/7/2019	Wednesday	17.47	309.3		<1.000	0.8932	2.752	
8/13/2019	Tuesday	16.23	262.1		<1.000	0.8712	2.729	
8/14/2019	Wednesday	15.20	283.0		<1.000	0.9747	12.56	
8/20/2019	Tuesday	14.53	471.0		<1.000	1.034	5.938	
8/21/2019	Wednesday	25.34	286.2		<1.000	0.8928	4.510	
8/27/2019	Tuesday	14.89	354.0		<1.000	0.8475	2.783	
8/28/2019	Wednesday	28.55	328.0		<1.000	0.8192	4.215	
9/3/2019	Tuesday	16.04	512.4		<1.000	1.191	3.248	
9/4/2019	Wednesday	16.07	263.4		<1.000	0.9535	9.082	
9/10/2019	Tuesday	14.93	642.3	1139	<1.000	0.8906	5.778	<5.000
9/11/2019	Wednesday	14.97	1268		<1.000	1.082	9.051	
9/17/2019	Tuesday	14.39	264.2		<1.000	0.9234	4.485	
9/18/2019	Wednesday	14.51	300.5		<1.000	0.9161	3.773	
9/24/2019	Tuesday	23.90	443.5		<1.000	0.9850	3.205	
9/25/2019	Wednesday	13.95	286.7		<1.000	0.8658	7.051	
10/1/2019	Tuesday	14.88	275.1		<1.000	0.8034	3.461	

Table 10: Bucklin Point Influent Metals (Al-Sn)

Bucklin Point Influent Metals, Al-Sn, 2019

all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo	Sn
10/2/2019	Wednesday	18.88	282.7		<1.000	0.8240	2.770	
10/8/2019	Tuesday	14.97	346.6	993.4	<1.000	0.8533	5.993	<5.000
10/9/2019	Wednesday	28.84	343.9		<1.000	0.8774	7.900	
10/15/2019	Tuesday	14.05	238.9		<1.000	0.7238	1.829	
10/16/2019	Wednesday	21.76	285.9		<1.000	0.8751	5.331	
10/22/2019	Tuesday	16.18	358.5		<1.000	0.8515	3.353	
10/23/2019	Wednesday	22.29	593.6		<1.000	0.8980	3.323	
10/29/2019	Tuesday	17.14	260.8		<1.000	0.8770	5.244	
10/30/2019	Wednesday	18.12	220.2		<1.000	0.8660	5.637	
11/5/2019	Tuesday	26.16	280.0	1064	<1.000	0.9088	9.189	<5.000
11/6/2019	Wednesday	16.17	328.1		<1.000	0.8484	5.485	
11/12/2019	Tuesday	16.39	296.0		<1.000	0.8840	3.397	
11/13/2019	Wednesday	14.99	340.0		<1.000	0.8958	4.346	
11/19/2019	Tuesday	20.85	443.3		<1.000	0.9593	6.323	
11/20/2019	Wednesday	15.77	239.0		<1.000	0.8468	2.643	
11/26/2019	Tuesday	16.52	225.1		<1.000	0.8016	6.597	
11/27/2019	Wednesday	19.61	231.8		<1.000	0.7471	5.277	
12/3/2019	Tuesday	18.03	246.2	885.1	<1.000	0.8318	3.989	<5.000
12/4/2019	Wednesday	17.69	247.7		<1.000	0.7421	2.225	
12/10/2019	Tuesday	30.60	389.5		<1.000	0.8805	2.540	
12/11/2019	Wednesday	26.80	386.6		<1.000	0.8764	1.895	
12/17/2019	Tuesday	36.60	339.4		<1.000	0.8330	1.976	
12/18/2019	Wednesday	24.87	251.6		<1.000	0.7234	2.012	
12/24/2019	Tuesday	21.51	191.7		<1.000	0.7353	1.483	
12/25/2019	Wednesday	20.28	141.9		<1.000	0.7062	1.019	
12/31/2019	Tuesday	28.05	226.8		<1.000	0.6621	3.526	

Table 10: Bucklin Point Influent Metals (Al-Sn)

Bucklin Point Effluent Metals (Cd-Zn) and Cyanide, 2019

all analyses in ppb

Date	Day of the Week	Effluent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/1/2019	Tuesday	29.90	0.04400	0.3950		5.000	0.4623		3.347	0.05202	30.46	6.11	<4.000
1/2/2019	Wednesday	25.34	0.04074	0.3848		4.670	0.4944		3.601	0.04299	32.70	<4.000	<4.000
1/8/2019	Tuesday	28.81	0.04354	0.4969	<10.000	5.157	0.5486	0.00263	3.631	0.04352	32.02	7.37	<4.000
1/9/2019	Wednesday	30.10	0.04700	0.5418		4.878	0.6012		3.669	0.04797	33.76	4.49	<4.000
1/15/2019	Tuesday	23.83	0.05607	0.5468		8.008	0.4623		4.157	0.03602	34.07	5.67	<4.000
1/16/2019	Wednesday	23.56	0.05514	0.5915		7.831	0.4249		4.363	0.04699	36.08	5.24	<4.000
1/22/2019	Tuesday	23.41	0.06357	0.6395		7.510	0.5210		4.507	0.05286	38.79		
1/23/2019	Wednesday	26.32	0.05814	0.6825		6.103	0.4814		4.259	0.04231	38.20	8.68	<4.000
1/24/2019	Thursday	41.56										9.42	<4.000
1/29/2019	Tuesday	28.00	0.04521	0.5484		4.429	0.5537		3.754	0.05003	34.12	6.12	<4.000
1/30/2019	Wednesday	31.11	0.04150	0.5335		4.690	0.5465		4.288	0.04733	32.86	8.29	<4.000
2/5/2019	Tuesday	23.30	0.04895	0.5175	<10.000	5.549	0.4583	<0.001	5.256	0.03456	35.44	8.88	<4.000
2/6/2019	Wednesday	24.12	0.05364	0.6696		5.684	0.5020		4.911	0.04680	35.46	4.47	<4.000
2/12/2019	Tuesday	23.93	0.3125	0.5232		4.892	0.6154		4.910	0.05094	34.71	9.44	<4.000
2/13/2019	Wednesday	38.03	0.04145	0.5016		4.952	0.5721		3.390	0.06633	29.58	8.27	<4.000
2/19/2019	Tuesday	22.97	0.05067	0.6140		5.107	0.6628		5.980	0.04054	39.03	7.38	<4.000
2/20/2019	Wednesday	23.80	0.04735	0.6294		4.754	0.6266		6.520	0.03577	35.65	8.54	<4.000
2/26/2019	Tuesday	24.14	0.05900	0.4944		4.259	0.5097		4.915	0.03907	33.24	5.62	<4.000
2/27/2019	Wednesday	24.11	0.04726	0.4996		4.608	0.5613		6.616	0.03596	35.45	6.25	<4.000
3/5/2019	Tuesday	22.54	0.03969	0.3921	<10.000	5.802	0.5429	0.00481	3.226	0.03379	36.68	8.02	<4.000
3/6/2019	Wednesday	22.21	0.03956	0.6568		5.628	0.5231		4.441	0.03269	38.72	5.61	<4.000
3/12/2019	Tuesday	24.04	0.03331	0.5612		4.551	0.5293		6.405	0.04795	39.29	6.89	<4.000
3/13/2019	Wednesday	23.57	0.03395	0.6990		4.567	0.4535		9.784	0.03958	38.35	<8.00	<4.000
3/19/2019	Tuesday	24.39	0.02630	0.9379		3.935	0.5419		7.435	0.04380	33.95	5.92	<4.000
3/20/2019	Wednesday	24.33	0.02218	0.8903		3.825	0.5187		7.418	0.03819	33.30	5.53	<4.000
3/26/2019	Tuesday	23.62	0.02903	0.6922		3.658	0.4777		6.032	0.05433	34.11	8.04	<4.000
3/27/2019	Wednesday	23.08	0.02880	0.6705		3.651	0.4648		6.948	0.04203	34.93	5.80	<4.000
4/2/2019	Tuesday	21.70	0.04844	0.5710	<10.000	4.376	0.5004	0.00244	5.998	0.04811	41.35	5.50	<4.000
4/3/2019	Wednesday	28.43	0.03145	0.5470		4.117	0.4173		5.261	0.03526	38.14	<4.000	<4.000
4/9/2019	Tuesday	25.76	0.04831	0.7959		4.702	0.5339		5.649	0.04614	36.03	<4.000	<4.000
4/10/2019	Wednesday	22.13	0.02873	0.7636		4.120	0.4947		7.944	0.03535	37.06	<4.000	<4.000
4/16/2019	Tuesday	24.06	0.02198	0.5674		3.509	0.4985		8.156	0.05030	32.02	4.17	<4.000
4/17/2019	Wednesday	23.06	0.03395	0.4866		3.029	0.4947		10.21	0.03685	32.79	5.01	<4.000
4/23/2019	Tuesday	34.56	<0.020	0.5585		3.786	0.5455		5.030	0.06723	30.22	<4.000	<4.000
4/24/2019	Wednesday	31.83	0.02207	0.6692		4.346	0.6278		5.135	0.07206	28.91	4.42	<4.000
4/30/2019	Tuesday	35.94	0.02462	0.5591		3.884	0.5282		4.765	0.05029	30.05	<4.000	<4.000
5/1/2019	Wednesday	31.83	0.02160	0.4904		3.709	0.5129		4.652	0.04609	30.23	4.97	4.97
5/7/2019	Tuesday	28.98	0.02426	0.4360		3.086	0.5403	0.00262	4.872	0.04270	30.97	<4.000	<4.000
5/8/2019	Wednesday	26.28	0.02384	0.5084		3.282	0.4571		5.406	0.02870	32.33	4.62	<4.000
5/14/2019	Tuesday	29.01	0.02207	0.5033	<10.000	3.636	0.5052		3.440	0.04817	31.01	<4.000	<4.000
5/15/2019	Wednesday	26.52	<0.020	0.4051		2.339	0.3471		4.283	0.02828	30.12	4.60	<4.000
5/21/2019	Tuesday	24.56	0.02146	0.5125		3.953	0.4093		7.167	0.07843	34.38	6.53	<4.000
5/22/2019	Wednesday	22.51	0.03066	0.5064		4.689	0.4153		7.697	0.05467	38.47	5.56	<4.000
5/28/2019	Tuesday	24.74	0.03662	0.5963		5.788	0.6608		4.944	0.08449	40.29	6.42	<4.000
5/29/2019	Wednesday	23.99	0.03379	0.5696		5.904	0.6043		5.467	0.07653	40.06	6.70	<4.000

Table 11: Bucklin Point Effluent Metals (Cd-Zn) and Cyanide

Bucklin Point Effluent Metals (Cd-Zn) and Cyanide, 2019

all analyses in ppb

Date	Day of the Week	Effluent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
6/4/2019	Tuesday	19.89	0.04250	0.7166	<10.000	6.305	0.6757	0.00572	6.440	0.07452	40.26	7.46	<4.000
6/5/2019	Wednesday	20.24	0.03629	0.7509		5.437	0.6413		7.587	0.05963	38.45	8.28	<4.000
6/11/2019	Tuesday	34.00	<0.020	0.5812		3.166	0.4603		3.878	0.04752	27.74	5.98	<4.000
6/12/2019	Wednesday	20.91	0.02003	0.4975		2.755	0.4048		5.133	0.03253	34.48	<4.000	<4.000
6/18/2019	Tuesday	22.21	<0.020	0.5893		2.874	0.4577		4.576	0.03103	31.96	<4.000	<4.000
6/19/2019	Wednesday	19.96	<0.020	0.7426		2.472	0.5057		4.813	0.03016	30.94	<4.000	<4.000
6/25/2019	Tuesday	22.87	<0.020	0.5524		2.847	0.4617		6.916	0.03082	30.43	<4.000	<4.000
6/26/2019	Wednesday	18.95	<0.020	0.4811		2.615	0.3840		9.731	0.02432	32.58	<4.000	<4.000
7/2/2019	Tuesday	17.65	0.02640	0.4354		3.489	0.5492		6.893	0.04469	41.51	<4.000	<4.000
7/3/2019	Wednesday	16.57	0.02907	0.4945		3.297	0.5378		7.613	0.03333	42.42	<4.000	<4.000
7/9/2019	Tuesday	16.19	0.03268	0.4522	<10.000	3.723	0.6125	0.00294	10.20	0.03326	39.94	<4.000	<4.000
7/10/2019	Wednesday	16.34	0.02903	0.5087		3.586	0.6137		8.417	0.03617	38.13	<4.000	<4.000
7/16/2019	Tuesday	16.04	0.04093	0.5602		4.926	0.7726		7.863	0.05120	47.94	<4.000	<4.000
7/17/2019	Wednesday	22.05	0.03799	0.6888		4.744	0.6718		10.92	0.06033	40.55	<4.000	<4.000
7/23/2019	Tuesday	27.56	0.02434	0.7661		6.043	0.6761		8.390	0.07159	34.18	<4.000	<4.000
7/24/2019	Wednesday	18.23	0.03487	0.7828		5.399	0.6385		9.958	0.07053	37.21	<4.000	<4.000
7/30/2019	Tuesday	16.28	0.03923	1.268		5.184	0.6722		6.514	0.07075	50.07	<4.000	<4.000
7/31/2019	Wednesday	16.74	0.03551	2.184		4.277	0.6296		7.296	0.04303	43.70	<4.000	<4.000
8/6/2019	Tuesday	16.10	0.04090	0.9005	<10.000	4.505	0.6572	0.00223	12.75	0.03106	45.73	4.01	<4.000
8/7/2019	Wednesday	17.47	0.02774	1.141		4.547	0.6274		23.80	0.03318	40.04	4.57	<4.000
8/13/2019	Tuesday	16.23	0.04586	0.8147		4.227	0.5458		7.196	0.02464	47.76	<4.000	<4.000
8/14/2019	Wednesday	15.20	0.04827	0.6715		4.357	0.5707		8.665	0.02626	48.22	<4.000	<4.000
8/20/2019	Tuesday	14.53	0.03542	0.5921		4.726	0.4867		10.68	0.02793	41.20	<4.000	<4.000
8/21/2019	Wednesday	22.79	0.03484	0.6627		5.097	0.4976		11.96	0.03457	39.15		
8/22/2019	Thursday	17.55										<4.000	<4.000
8/27/2019	Tuesday	14.89	0.03444	0.5970		4.524	0.4957		5.056	0.03187	45.93	<4.000	<4.000
8/28/2019	Wednesday	24.38	0.03240	0.7027		6.159	0.5408		7.266	0.05234	39.60	<4.000	<4.000
9/3/2019	Tuesday	16.04	0.03817	0.4173		5.443	0.4208		3.557	0.03794	40.17	<4.000	<4.000
9/4/2019	Wednesday	16.07	0.04397	0.6760		5.761	0.5014		4.786	0.03695	46.25	4.58	<4.000
9/10/2019	Tuesday	14.93	0.05191	0.6892	<10.000	6.941	0.5907	0.00183	6.463	0.03070	41.15	4.21	<4.000
9/11/2019	Wednesday	14.97	0.03636	0.6223		4.767	0.4999		7.511	0.04103	39.86	4.13	<4.000
9/17/2019	Tuesday	14.39	0.03749	0.7988		5.314	0.5367		9.163	0.03440	40.15	<4.000	<4.000
9/18/2019	Wednesday	14.51	0.03213	0.8805		4.581	0.5308		7.994	0.03807	40.16	<4.000	<4.000
9/24/2019	Tuesday	21.82	0.02967	1.019		5.525	0.5789		9.133	0.05686	35.00	<4.000	<4.000
9/25/2019	Wednesday	13.95	0.03251	1.291		5.819	0.5930		10.84	0.06076	39.63	4.37	<4.000
10/1/2019	Tuesday	14.88	0.04909	1.291		6.796	0.6865		7.827	0.07279	46.13	<4.000	<4.000
10/2/2019	Wednesday	18.88	0.04061	0.9237		6.414	0.6532		7.356	0.08870	45.25	<4.000	<4.000
10/8/2019	Tuesday	14.97	0.03597	0.6514	<10.000	4.803	0.6464	0.00248	6.173	0.06537	42.66	<4.000	<4.000
10/9/2019	Wednesday	25.25	0.03104	0.8045		4.809	0.6405		6.652	0.06738	38.12	<4.000	<4.000
10/15/2019	Tuesday	14.05	0.04588	0.5986		4.551	0.6912		5.438	0.04237	46.98	<8.00	<4.000
10/16/2019	Wednesday	21.15	0.03138	0.6755		4.771	0.7715		9.683	0.06828	43.21	10.5	<4.000
10/22/2019	Tuesday	16.18	0.03857	0.6238		4.990	0.6047		10.16	0.05004	40.09	<4.000	<4.000
10/23/2019	Wednesday	22.29	0.04468	0.5994		5.097	0.4787		11.38	0.05377	32.34	<4.000	<4.000
10/29/2019	Tuesday	17.14	0.04497	0.5206		4.041	0.4411		9.100	0.04786	38.84	<4.000	<4.000
10/30/2019	Wednesday	18.12	0.05493	0.5499		4.993	0.4848		10.29	0.04674	40.33	<4.000	<4.000

Table 11: Bucklin Point Effluent Metals (Cd-Zn) and Cyanide

Bucklin Point Effluent Metals (Cd-Zn) and Cyanide, 2019

all analyses in ppb

Date	Day of the Week	Effluent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
11/5/2019	Tuesday	24.42	0.05833	0.5570	<10.000	7.533	0.4328	0.00162	6.420	0.04000	37.19	<4.000	<4.000
11/6/2019	Wednesday	16.17	0.02751	0.8833		7.294	0.3418		5.957	0.05192	32.72	<4.000	<4.000
11/12/2019	Tuesday	16.39	0.04616	0.4562		6.703	0.4234		5.594	0.04708	39.09	6.37	<4.000
11/13/2019	Wednesday	14.99	0.03386	1.563		8.174	0.4726		12.96	0.05843	40.26	<4.000	<4.000
11/19/2019	Tuesday	20.85	0.02761	0.6662		5.629	0.4027		10.65	0.06605	37.87	<4.000	<4.000
11/20/2019	Wednesday	15.77	0.03105	0.7701		6.035	0.4205		10.78	0.06606	54.32	7.31	<4.000
11/26/2019	Tuesday	16.52	0.02752	0.6323		6.156	0.3901		17.99	0.05484	36.26	<4.000	<4.000
11/27/2019	Wednesday	19.61	0.03140	0.6239		7.282	0.4501		17.90	0.06267	43.97	4.38	<4.000
12/3/2019	Tuesday	18.03	0.03647	0.8137	<10.000	6.794	0.3649	0.00256	6.421	0.06119	43.31	<4.000	<4.000
12/4/2019	Wednesday	17.69	0.04399	0.9574		7.421	0.4119		8.887	0.06516	42.29	<4.000	<4.000
12/10/2019	Tuesday	28.49	0.03224	0.6976		7.773	0.5604		6.345	0.3008	35.26	4.19	<4.000
12/11/2019	Wednesday	26.80	0.03367	1.046		5.745	0.4912		10.75	0.2588	41.90	4.21	<4.000
12/17/2019	Tuesday	33.70	0.03050	0.7596		6.924	0.6564		9.895	0.2464	36.62	<4.000	<4.000
12/18/2019	Wednesday	24.87	0.02378	0.5824		5.018	0.4682		9.617	0.1453	33.24	<4.000	<4.000
12/24/2019	Tuesday	21.51	0.04392	0.4926		5.365	0.4864		5.183	0.08214	40.10	<4.000	<4.000
12/25/2019	Wednesday	20.28	0.03411	0.3372		4.244	0.3929		4.287	0.05670	34.72	<4.000	<4.000
12/31/2019	Tuesday	28.05	0.02685	0.4424		5.469	0.4569		3.782	0.1785	34.69	4.24	<4.000

Table 11: Bucklin Point Effluent Metals (Cd-Zn) and Cyanide

Bucklin Point Effluent Metals, Al-Sn, 2019

all analyses in ppb

Date	Day of the Week	Effluent Flow	Al	Fe	Se	As	Mo	Sn
1/1/2019	Tuesday	29.90	18.88		<1.000	<0.500	0.5426	
1/2/2019	Wednesday	25.34	20.43		<1.000	<0.500	0.6132	
1/8/2019	Tuesday	28.81	23.59	90.77	<1.000	0.5475	2.578	<5.000
1/9/2019	Wednesday	30.10	24.51		<1.000	0.5519	2.032	
1/15/2019	Tuesday	23.83	21.47		<1.000	0.5435	2.494	
1/16/2019	Wednesday	23.56	25.34		<1.000	0.5603	1.666	
1/22/2019	Tuesday	23.41	26.04		<1.000	0.5833	1.539	
1/23/2019	Wednesday	26.32	22.09		<1.000	0.5511	1.456	
1/29/2019	Tuesday	28.00	22.66		<1.000	0.5253	1.602	
1/30/2019	Wednesday	31.11	25.33		<1.000	0.5204	3.308	
2/5/2019	Tuesday	23.30	19.51	60.55	<1.000	0.5463	1.302	<5.000
2/6/2019	Wednesday	24.12	27.12		<1.000	0.5542	1.630	
2/12/2019	Tuesday	23.93	24.00		<1.000	0.5352	2.881	
2/13/2019	Wednesday	38.03	30.11		<1.000	0.5200	2.486	
2/19/2019	Tuesday	22.97	24.63		<1.000	0.5620	3.288	
2/20/2019	Wednesday	23.80	21.76		<1.000	0.5362	3.016	
2/26/2019	Tuesday	24.14	19.21		<1.000	0.5334	1.309	
2/27/2019	Wednesday	24.11	22.27		<1.000	0.5616	2.930	
3/5/2019	Tuesday	22.54	23.53	97.43	<1.000	0.5042	1.269	<5.000
3/6/2019	Wednesday	22.21	20.17		<1.000	0.5156	1.267	
3/12/2019	Tuesday	24.04	24.32		<1.000	0.5552	2.887	
3/13/2019	Wednesday	23.57	21.29		<1.000	0.5801	1.517	
3/19/2019	Tuesday	24.39	19.07		<1.000	0.5634	1.848	
3/20/2019	Wednesday	24.33	19.48		<1.000	0.5802	1.604	
3/26/2019	Tuesday	23.62	19.55		<1.000	0.5970	1.916	
3/27/2019	Wednesday	23.08	18.51		<1.000	0.6107	2.935	
4/2/2019	Tuesday	21.70	20.67	86.99	<1.000	0.5478	1.325	<5.000
4/3/2019	Wednesday	28.43	18.84		<1.000	0.5537	1.917	
4/9/2019	Tuesday	25.76	22.65		<1.000	0.6601	3.884	
4/10/2019	Wednesday	22.13	18.54		<1.000	0.6305	2.119	
4/16/2019	Tuesday	24.06	16.70		<1.000	0.5951	2.546	
4/17/2019	Wednesday	23.06	13.68		<1.000	0.5694	1.524	
4/23/2019	Tuesday	34.56	25.47		<1.000	0.5530	2.943	
4/24/2019	Wednesday	31.83	32.58		<1.000	0.5439	1.422	
4/30/2019	Tuesday	35.94	26.27		<1.000	0.6126	2.907	
5/1/2019	Wednesday	31.83	25.23		<1.000	0.6270	2.820	
5/7/2019	Tuesday	28.98	14.93	82.63	<1.000	0.5927	1.972	<5.000
5/8/2019	Wednesday	26.28	15.96		<1.000	0.5854	2.074	
5/14/2019	Tuesday	29.01	24.76		<1.000	0.5478	2.108	
5/15/2019	Wednesday	26.52	13.47		<1.000	<0.500	1.417	
5/21/2019	Tuesday	24.56	15.20		<1.000	0.6516	4.193	
5/22/2019	Wednesday	22.51	14.85		<1.000	0.5900	3.191	
5/28/2019	Tuesday	24.74	28.43		<1.000	0.5899	1.407	
5/29/2019	Wednesday	23.99	25.28		<1.000	0.6091	2.924	
6/4/2019	Tuesday	19.89	31.68	141.7	<1.000	0.7055	6.054	<5.000
6/5/2019	Wednesday	20.24	27.79		<1.000	0.6931	5.589	
6/11/2019	Tuesday	34.00	16.56		<1.000	0.5880	2.335	
6/12/2019	Wednesday	20.91	13.67		<1.000	0.5848	2.371	
6/18/2019	Tuesday	22.21	14.16		<1.000	0.6696	3.947	
6/19/2019	Wednesday	19.96	13.49		<1.000	0.6087	2.349	
6/25/2019	Tuesday	22.87	13.55		<1.000	0.6932	3.950	
6/26/2019	Wednesday	18.95	11.53		<1.000	0.7193	6.790	
7/2/2019	Tuesday	17.65	12.28		<1.000	0.6402	2.220	
7/3/2019	Wednesday	16.57	26.10		<1.000	0.6163	3.196	
7/9/2019	Tuesday	16.19	15.29	76.15	<1.000	0.6250	2.469	<5.000
7/10/2019	Wednesday	16.34	13.62		<1.000	0.6048	2.302	
7/16/2019	Tuesday	16.04	15.76		<1.000	0.6863	4.274	
7/17/2019	Wednesday	22.05	17.53		<1.000	0.6711	4.762	
7/23/2019	Tuesday	27.56	29.63		<1.000	0.7472	4.220	
7/24/2019	Wednesday	18.23	27.45		<1.000	0.7775	2.720	
7/30/2019	Tuesday	16.28	23.60		<1.000	0.6885	2.376	
7/31/2019	Wednesday	16.74	18.73		<1.000	0.6610	2.389	
8/6/2019	Tuesday	16.10	17.74	85.47	<1.000	0.6024	5.588	<5.000
8/7/2019	Wednesday	17.47	22.07		<1.000	0.6167	3.256	
8/13/2019	Tuesday	16.23	15.96		<1.000	0.5320	2.812	

Table 12: Bucklin Point Effluent Metals (Al-Sn)

Bucklin Point Effluent Metals, Al-Sn, 2019

all analyses in ppb

Date	Day of the Week	Effluent Flow	Al	Fe	Se	As	Mo	Sn
8/14/2019	Wednesday	15.20	17.23		<1.000	0.5972	7.447	
8/20/2019	Tuesday	14.53	15.59		<1.000	0.5773	3.766	
8/21/2019	Wednesday	22.79	17.43		<1.000	0.6147	3.233	
8/27/2019	Tuesday	14.89	14.49		<1.000	0.6205	2.779	
8/28/2019	Wednesday	24.38	22.56		<1.000	0.6506	2.647	
9/3/2019	Tuesday	16.04	14.73		<1.000	0.5437	1.786	
9/4/2019	Wednesday	16.07	16.88		<1.000	0.5765	4.646	
9/10/2019	Tuesday	14.93	20.64	67.94	<1.000	0.5762	5.732	<5.000
9/11/2019	Wednesday	14.97	17.08		<1.000	0.6056	5.749	
9/17/2019	Tuesday	14.39	14.52		<1.000	0.6775	2.903	
9/18/2019	Wednesday	14.51	15.81		<1.000	0.7451	2.691	
9/24/2019	Tuesday	21.82	18.50		<1.000	0.6567	3.988	
9/25/2019	Wednesday	13.95	19.09		<1.000	0.7137	5.208	
10/1/2019	Tuesday	14.88	19.41		<1.000	0.6652	3.398	
10/2/2019	Wednesday	18.88	21.64		<1.000	0.6846	2.745	
10/8/2019	Tuesday	14.97	17.07	92.40	<1.000	0.6017	5.022	<5.000
10/9/2019	Wednesday	25.25	19.30		<1.000	0.5747	5.218	
10/15/2019	Tuesday	14.05	14.21		<1.000	0.5446	1.423	
10/16/2019	Wednesday	21.15	18.32		<1.000	0.5437	2.644	
10/22/2019	Tuesday	16.18	15.24		<1.000	0.6323	2.111	
10/23/2019	Wednesday	22.29	17.03		<1.000	0.6281	2.309	
10/29/2019	Tuesday	17.14	12.25		<1.000	0.6136	3.191	
10/30/2019	Wednesday	18.12	12.78		<1.000	0.6523	3.713	
11/5/2019	Tuesday	24.42	13.89	62.17	<1.000	0.6182	5.860	<5.000
11/6/2019	Wednesday	16.17	14.42		<1.000	0.6478	4.609	
11/12/2019	Tuesday	16.39	13.12		<1.000	0.5634	1.846	
11/13/2019	Wednesday	14.99	15.77		<1.000	0.5798	3.021	
11/19/2019	Tuesday	20.85	20.74		<1.000	0.5490	3.976	
11/20/2019	Wednesday	15.77	19.78		<1.000	0.5437	2.750	
11/26/2019	Tuesday	16.52	15.23		<1.000	0.6006	4.140	
11/27/2019	Wednesday	19.61	18.24		<1.000	0.6095	4.350	
12/3/2019	Tuesday	18.03	16.46	72.01	<1.000	0.5460	2.286	<5.000
12/4/2019	Wednesday	17.69	17.58		<1.000	0.5554	2.114	
12/10/2019	Tuesday	28.49	32.33		<1.000	0.5633	1.824	
12/11/2019	Wednesday	26.80	23.21		<1.000	0.5929	1.844	
12/17/2019	Tuesday	33.70	36.47		<1.000	0.5539	1.249	
12/18/2019	Wednesday	24.87	24.85		<1.000	<0.500	1.500	
12/24/2019	Tuesday	21.51	17.16		<1.000	0.5578	0.8634	
12/25/2019	Wednesday	20.28	13.15		<1.000	0.5368	0.6178	
12/31/2019	Tuesday	28.05	25.85		<1.000	0.5468	3.006	

Table 12: Bucklin Point Effluent Metals (Al-Sn)

Field's Point Influent and Effluent Nutrients 2019

Field's Point Influent Nutrients

Date	Nitrite $N\text{-}NO_2$ ppm	Nitrate $N\text{-}NO_3$ ppm	Nitrate+Nitrite $N\text{-}NO_3NO_2$ ppm	Ammonia $N\text{-}NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
01/01/19	0.305	2.39	2.70	7.19	14.8	1.70	17.5
01/02/19	0.321	2.30	2.62	8.08	17.7		20.3
01/07/19	0.195	2.37	2.57	7.77	16.2		18.8
01/08/19	0.178	2.33	2.51	7.96	17	1.89	19.5
01/09/19	0.241	2.26	2.50	9.27	18.6		21.1
01/14/19	0.368	1.59	1.96	12.8	24.3		26.3
01/15/19	0.383	1.75	2.13	13.6	24.2	3.30	26.3
01/16/19	0.349	1.71	2.06	14.1	27.2		29.3
01/21/19	0.151	2.44	2.59	9.44	19.7		22.3
01/22/19	0.162	2.32	2.48	10	21	2.16	23.5
01/23/19	0.197	1.98	2.18	11.3	21.9		24.1
01/28/19	0.239	2.11	2.35	9.55	19.8		22.1
01/29/19	0.306	2.51	2.82	10.2	21.6	2.42	24.4
01/30/19	0.346	2.73	3.08	10.4	24.3		27.4
02/04/19	0.374	2.79	3.16	13.6	25.5		28.7
02/05/19	0.402	2.60	3	13.6	23.6	3.04	26.6
02/06/19	0.312	2.42	2.73	12.3	19.9		22.6
02/11/19	0.406	2.23	2.64	13.5	22.9		25.5
02/12/19	0.276	1.84	2.12	11.8	21.4	3.20	23.5
02/13/19	0.159	1.85	2.01	7.36	15		17
02/18/19	0.389	1.47	1.86	11.7	21.1		23
02/19/19	0.404	1.71	2.11	12.1	22.4	2.92	24.5
02/20/19	0.308	1.41	1.72	12.8	22.8		24.5
02/25/19	0.149	1.20	1.35	9.58	23.5		24.8
02/26/19	0.140	1.35	1.49	11.5	23.2	2.46	24.7
02/27/19	0.133	1.26	1.39	11.9	25.7		27.1
03/04/19	0.142	0.948	1.09	10.9	23.1		24.2
03/05/19	0.152	0.898	1.05	12	25.2	2.75	26.2
03/06/19	0.131	0.909	1.04	13.2	26.7		27.7
03/11/19	0.110	1.13	1.24	8.55	18.9		20.1
03/12/19	0.119	1.17	1.29	10.8	22.9	2.67	24.2
03/13/19	0.110	1.05	1.16	11	19.1		20.3
03/18/19	0.102	0.882	0.984	11.1	21.9		22.9
03/19/19	0.123	0.803	0.926	11.6	21	2.34	21.9
03/20/19	0.144	0.856	1	11.6	21		22
03/25/19	0.134	1.04	1.17	10.7	20.8		22
03/26/19	0.114	0.828	0.942	11.3	21.2	2.56	22.1
03/27/19	0.117	0.691	0.808	12	23		23.8
04/01/19	0.174	0.746	0.920	14.3	27		27.9
04/02/19	0.139	0.703	0.842	13.5	28.7	3.06	29.5
04/03/19	0.124	0.665	0.789	10.8	19.6		20.4
04/08/19	0.0858	0.691	0.777	7.98	16.8		17.6
04/09/19	0.0949	0.757	0.852	9.67	18.5	2.03	19.4
04/10/19	0.151	0.823	0.974	12.9	21.8		22.8
04/15/19	0.125	0.631	0.756	7.59	14.7		15.5
04/16/19	0.187	0.749	0.936	10	20.4	2.58	21.3
04/17/19	0.183	0.746	0.929	11.4	22.2		23.1
04/22/19	0.143	0.677	0.820	7.41	15.1		15.9
04/23/19	0.171	0.969	1.14	7.93	16.1	1.99	17.2
04/24/19	0.142	0.613	0.755	8.30	15.2		16
04/29/19	0.301	1.03	1.33	7.71	15.7		17
04/30/19	0.282	0.928	1.21	8.18	15	2.02	16.2
05/01/19	0.279	0.791	1.07	8.50	15.7		16.8
05/06/19	0.286	0.744	1.03	9.90	19.1		20.1
05/07/19	0.245	0.442	0.687	10.8	20.9	2.56	21.6
05/08/19	0.161	0.277	0.438	12.4	21.7		22.1
05/13/19	0.0987	0.570	0.669	9.34	18.6		19.3
05/14/19	0.123	0.644	0.767	9.36	17.2	2.10	18
05/15/19	0.138	0.497	0.635	11.6	23.2		23.8
05/20/19	0.134	0.233	0.367	10.8	19.2		19.6
05/21/19	0.199	0.489	0.688	11.2	20.9	2.14	21.6
05/22/19	0.234	0.218	0.452	12.8	25.7		26.2
05/27/19	0.240	0.114	0.354	13.1	24.5		24.9
05/28/19	0.234	0.167	0.401	11.6	23.7	3	24.1
05/29/19	0.297	0.312	0.609	12.6	20.8		21.4
06/03/19	0.0652	0.115	0.180	14.7	25.7		25.9
06/04/19	0.0251	<0.100	0.120	14.9	26	2.96	26.1
06/05/19	0.0313	0.115	0.146	14.5	29.7		29.8
06/10/19	0.0424	0.113	0.155	12.9	28		28.2
06/11/19	0.0767	0.507	0.584	7.10	14.7	1.67	15.3
06/12/19	0.109	0.287	0.396	8.93	15.9		16.3
06/17/19	0.0334	0.104	0.137	14	25.7		25.8
06/18/19	0.0497	<0.100	0.134	13	23.8	2.72	23.9
06/19/19	0.0459	0.109	0.155	14.3	23.9		24.1
06/24/19	0.0924	<0.100	0.179	15.1	37.2		37.4
06/25/19	0.117	<0.100	0.201	12.1	22.9	3.06	23.1
06/26/19	0.114	0.103	0.217	14.6	26.5		26.7
07/01/19	0.346	<0.100	0.445	12.4	23.2		23.6
07/02/19	0.348	0.100	0.448	14.5	27.5	3.21	27.9
07/03/19	0.256	<0.100	0.355	13.7	27.7		28.1
07/08/19	0.0376	<0.100	0.131	16.1	27.2		27.3
07/09/19	0.0136	<0.100	<0.100	15.5	25.2	3.41	25.2
07/10/19	0.0140	<0.100	<0.100	16	30.7		30.7
07/15/19	0.0249	<0.100	<0.100	15.6	30.5		30.5

Field's Point Effluent Nutrients

Date	Nitrite $N\text{-}NO_2$ ppm	Nitrate $N\text{-}NO_3$ ppm	Nitrate+Nitrite $N\text{-}NO_3NO_2$ ppm	Ammonia $N\text{-}NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
01/01/19	0.110	4.74	4.85	1.30	2.44		7.29
01/02/19	0.158	3.91	4.07	1.30	2.74		6.81
01/07/19	0.158	3.82	3.98	1.38	2.77	0.746	6.75
01/08/19	0.161	3.66	3.82	1.39	2.31		6.13
01/09/19	0.166	2.30	2.47	1.45	2.56		5.03
01/14/19	0.202	2.85	3.05	2.26	3.81	1.56	6.86
01/15/19	0.261	3.36	3.62	3.26	4.79		8.41
01/16/19	0.189	2.38	2.57	2.52	4.02		6.59
01/21/19	0.348	4.74	5.09	6.12	8.55	2.18	13.6
01/22/19	0.377	4.29	4.67	5.34	7.73		12.4
01/23/19	0.414	3.35	3.76	4.64	6.85		10.6
01/28/19	0.470	1.02	1.49	4.22	5.56	0.707	7.05
01/29/19	0.314	0.846	1.16	4.57	6.23		7.39
01/30/19	0.362	0.808	1.17	4.74	6.26		7.43
02/04/19	0.120	0.497	0.617	4.69	6.42	1.14	7.04
02/05/19	0.143	1.12	1.26	5.39	6.26		7.52
02/06/19	0.155	1.83	1.99	4.98	6.21		8.20
02/11/19	0.144	0.821	0.965	4.57	5.92	1.74	6.88
02/12/19	0.167	1.86	2.03	4.66	5.98		8.01
02/13/19	0.213	2.70	2.91	3.57	4.81		7.72
02/18/19	0.166	0.444	0.610	3.67	4.63	1.30	5.24
02/19/19	0.184	0.541	0.725	3.80	5		5.72
02/20/19	0.200	0.721	0.921	5.03	6.80		7.72
02/25/19	0.296	1.16	1.46	3.69	5.18	0.797	6.64
02/26/19	0.157	0.390	0.547	4.01	5.23		5.78
02/27/19	0.152	0.345	0.497	4.46	5.60		6.10
03/04/19	0.118	0.475	0.593	3.78	5.18	1.40	5.77
03/05/19	0.122	0.485	0.607	3.80	5.25		5.86
03/06/19	0.107	0.491	0.598	4.34	5.76		6.36
03/11/19	0.216	1.99	2.21	2.04	3.37	1.02	5.58
03/12/19	0.253	1.34	1.59	1.67	2.90		4.49
03/13/19	0.262	1.13	1.39	2.01	3.11		4.50
03/18/19	0.245	1.29	1.54	1.84	2.81	1.10	4.35
03/19/19	0.279	1.71	1.99	2.12	3.10		5.09
03/20/19	0.248	1.69	1.94	1.73	2.70		4.64
03/25/19	0.138	1.18	1.32	1.35	2.69	0.942	4.01
03/26/19	0.257	1.42	1.68	1.72	2.99		4.67
03/27/19	0.174	1.49	1.66	1.29	2.81		4.47
04/01/19	0.224	1.31	1.53	1.83	3.04	1.50	4.57
04/02/19	0.205	2.03	2.24	2.49	3.62		5.86
04/03/19	0.289	1.78	2.07	2.02	2.94		5.01
04/08/19	0.189	2.65	2.84	0.815	2.26	0.949	5.10
04/09/19	0.282	1.38	1.66	1.89	2.61		4.27
04/10/19	0.227	0.783	1.01	1.56	2.68		3.69
04/15/19	0.0703	2.05	2.12	0.589	1.67	1.17	3.79
04/16/19	0.125	1.32	1.45	1.06	2.28		3.73
04/17/19	0.0779	1.89	1.97	0.766	2.15		4.12
04/22/19	0.0639	2.87	2.93	1.13	2.13	0.868	5.06
04/23/19	0.0643	3.05	3.11	0.943	1.97		5.08
04/24/19	0.0817	2.88	2.96	0.756	1.75		4.71
04/29/19	0.0674	2.99	3.06	0.732	1.70	0.869	4.76
04/30/19	0.0638	3.11	3.17	0.551	1.66		4.83
05/01/19	0.0659	3.86	3.93	0.744	1.57		5.50
05/06/19	0.0326	3.61	3.64	<0.100	1.31	1.10	4.95
05/07/19	0.0222	2.97	2.99	0.270	1.43		4.42
05/08/19	<0.010	3.02	3.02	<0.100	1.17		4.19
05/13/19	0.115	2.99	3.11	0.759	1.97	1.24	5.08
05/14/19	0.124	2.52	2.64	0.640	1.57		4.21
05/15/19	0.0178	1.73	1.75	0.165	1.38		3.13
05/20/19	0.0387	1.17	1.21	0.472	1.83	1.33	3.04
05/21/19	0.0806	0.894	0.975	0.534	1.76		2.73
05/22/19	<0.010	1.13	1.13	0.153	1.37		2.50
05/27/19	<0.010	1.35	1.35	<0.100	1.25	1.81	2.60
05/28/19	0.0417	1.30	1.34	0.445	1.67		3.01
05/29/19	0.0502	2.41	2.46	0.446	1.62		4.08
06/03/19	<0.010	1.15	1.15	0.114	1.57	1.37	2.72
06/04/19	0.0364	0.634	0.670	0.667	1.90		2.57
06/05/19	0.0282	0.629	0.657	0.462	1.76		2.42
06/10/19	0.0354	1.11	1.15	0.734	2.27	2.08	3.42
06/11/19	0.0333	2.33	2.36	0.380	1.27		3.63
06/12/19	0.0683	1.67	1.74	0.740	1.68		3.42
06/17/19	0.0300	0.863	0.893	0.681	1.85	1.59	2.74
06/18/19	0.0256	0.629	0.655	0.718	1.63		2.28
06/19/19	0.0226	1.10	1.12	0.562	1.53		2.65
06/24/19	0.0122	0.552	0.564	0.370	1.55	1.91	2.11
06/25/19	0.0283	0.307	0.335	0.862	2.33		2.66
06/26/19	0.0146	0.290	0.305	0.335	1.62		1.92
07/01/19	0.0240	0.168	0.192	0.955	2.29	1.90	2.48
07/02/19	<0.010	0.110	0.110	0.666	2.09		2.20
07/03/19	<0.010	<0.100	<0.100	0.444	1.93		1.93
07/08/19	0.0154	0.125	0.140	0.859	1.89	2	2.03
07/09/19	0.0153	0.148	0.163	0.629	1.88		2.04
07/10/19	0.0164	0.110	0.126	0.602	1.90		2.03
07/15/19	0.0147	0.214	0.229	0.414	1.75	2.48	1.98

Table 13: Field's Point Influent and Effluent Nutrients

Field's Point Influent and Effluent Nutrients 2019

Field's Point Influent Nutrients

Date	Nitrite $N\text{-}NO_2$ ppm	Nitrate $N\text{-}NO_3$ ppm	Nitrate+Nitrite $N\text{-}NO_3NO_2$ ppm	Ammonia $N\text{-}NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
07/16/19	0.0457	<0.100	0.109	15.5	31.2	3.78	31.3
07/17/19	0.0588	<0.100	0.121	14.4	28		28.1
07/22/19	0.240	0.184	0.424	11.3	23.8		24.2
07/23/19	0.352	0.373	0.725	6.93	13.5	2.03	14.2
07/24/19	0.271	<0.100	0.311	8.27	15.2		15.5
07/29/19	0.256	<0.100	0.315	14	26.5		26.8
07/30/19	0.303	0.126	0.429	13.3	27.2	2.96	27.6
07/31/19	0.215	<0.100	0.314	15.1	26.2		26.5
08/05/19	0.0239	<0.100	0.118	15.7	26.5		26.6
08/06/19	0.0164	<0.100	<0.100	15.8	25.6	3.44	25.6
08/07/19	0.0264	<0.100	<0.100	13.8	25.7		25.7
08/12/19	0.0168	<0.100	<0.100	16.6	29		29
08/13/19	0.0140	<0.100	<0.100	16.3	30	3.76	30
08/14/19	0.0186	<0.100	<0.100	15.5	28.5		28.5
08/19/19	0.0834	<0.100	0.127	13	21.2		21.3
08/20/19	0.144	<0.100	0.156	15.2	23.6	3.07	23.8
08/21/19	0.174	<0.100	0.195	12.7	24.8		25
08/26/19	0.193	<0.100	0.279	17.6	37.7		38
08/27/19	0.254	<0.100	0.306	17.6	31.6	3.75	31.9
08/28/19	0.352	<0.100	0.380	12.4	25.2		25.6
09/02/19	0.352	<0.100	0.359	13.9	26.2		26.6
09/03/19	0.346	<0.100	0.395	10	18	2.18	18.4
09/04/19	0.363	<0.100	0.320	15.3	27.5		27.8
09/09/19	0.0420	<0.100	<0.100	19.1	33.7		33.7
09/10/19	0.0105	<0.100	<0.100	19.5	33.2	4.01	33.2
09/11/19	0.0127	<0.100	<0.100	18.8	30.7		30.7
09/16/19	0.0163	<0.100	<0.100	18.7	32.2		32.2
09/17/19	0.0149	<0.100	<0.100	19	32	3.82	32
09/18/19	0.0122	<0.100	<0.100	19.3	32.7		32.7
09/23/19	0.0352	<0.100	<0.100	17.5	32.5		32.5
09/24/19	0.0994	<0.100	0.197	11.4	19.3	2.28	19.5
09/25/19	0.0827	<0.100	0.120	19.5	33.5		33.6
09/30/19	0.176	<0.100	0.183	19.4	33.5		33.7
10/01/19	0.258	<0.100	0.281	20.5	32	3.86	32.3
10/02/19	0.235	<0.100	0.183	17	32.2		32.4
10/07/19	0.0175	<0.100	<0.100	19	34.2		34.2
10/08/19	0.0175	<0.100	<0.100	19.7	33.2	4.22	33.2
10/09/19	0.0555	0.120	0.176	10.8	20.1		20.3
10/14/19	0.0159	<0.100	<0.100	19.1	48		48
10/15/19	0.0137	<0.100	<0.100	19.9	34	3.92	34
10/16/19	0.0190	0.118	0.137	14.6	26.5		26.6
10/21/19	0.0245	<0.100	<0.100	18.8	32.5		32.5
10/22/19	0.0249	<0.100	<0.100	16.7	42.5	3.58	42.5
10/23/19	0.0372	<0.100	0.100	13.4	23.7		23.8
10/28/19	0.0667	<0.100	0.156	11.3	17.3		17.5
10/29/19	0.0629	<0.100	<0.100	15.5	27.5	2.92	27.5
10/30/19	0.0825	<0.100	0.117	16	27.7		27.8
11/04/19	0.0906	<0.100	0.132	19.3	37.2		37.3
11/05/19	0.207	0.225	0.432	13.3	26.7	2.50	27.1
11/06/19	0.305	0.196	0.501	18.9	34		34.5
11/11/19	0.0209	<0.100	<0.100	19.5	35.5		35.5
11/12/19	0.0442	<0.100	0.109	20.8	35.6	3.55	35.7
11/13/19	0.0170	<0.100	0.116	21	34.2		34.3
11/18/19	0.0435	0.114	0.158	20.8	37.5		37.7
11/19/19	0.103	0.133	0.236	19.6	34	3.63	34.2
11/20/19	0.113	<0.100	0.177	22	38.2		38.4
11/25/19	0.251	0.440	0.691	12.3	20.9		21.6
11/26/19	0.255	0.149	0.404	14.5	24.4	2.51	24.8
11/27/19	0.337	<0.100	0.401	18.3	34.7		35.1
12/02/19	0.129	0.415	0.544	11.7	21.7		22.2
12/03/19	0.121	0.346	0.467	18.2	30	2.87	30.5
12/04/19	0.0544	0.125	0.179	18.2	28.7		28.9
12/09/19	0.0721	0.616	0.688	8.21	16.2		16.9
12/10/19	0.103	0.937	1.04	10.8	19.1	1.99	20.1
12/11/19	0.148	0.655	0.803	12.3	20.2		21
12/16/19	0.249	1.03	1.28	9.58	17.1		18.4
12/17/19	0.230	1.10	1.33	9.19	16.5	1.74	17.8
12/18/19	0.331	0.929	1.26	10.9	19.8		21.1
12/23/19	0.453	<0.100	0.525	13.9	18		18.5
12/24/19	0.473	0.204	0.677	14.9	32.7	2.79	33.4
12/25/19	0.494	0.142	0.636	16.1	26.5		27.1
12/30/19	0.800	1.18	1.98	6.45	19.1		21.1
12/31/19	0.945	1.25	2.19	9.97	17.2	1.99	19.4

Field's Point Effluent Nutrients

Date	Nitrite $N\text{-}NO_2$ ppm	Nitrate $N\text{-}NO_3$ ppm	Nitrate+Nitrite $N\text{-}NO_3NO_2$ ppm	Ammonia $N\text{-}NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
07/16/19	0.0141	0.242	0.256	0.523	1.83		2.09
07/17/19	0.0210	0.207	0.228	0.863	2.41		2.64
07/22/19	0.0121	1.07	1.08	0.882	2.48	2.42	3.56
07/23/19	0.0109	0.933	0.944	0.306	1.12		2.06
07/24/19	0.0176	0.213	0.231	0.619	1.45		1.68
07/29/19	<0.010	<0.100	<0.100	0.933	1.85	1.68	1.85
07/30/19	<0.010	<0.100	<0.100	0.561	1.35		1.35
07/31/19	<0.010	<0.100	<0.100	0.274	1.23		1.23
08/05/19	<0.010	0.183	0.183	0.392	1.11	2.17	1.29
08/06/19	<0.010	0.142	0.142	0.271	1.18		1.32
08/07/19	0.0194	0.372	0.391	0.695	1.76		2.15
08/12/19	<0.010	0.179	0.179	<0.100	0.964	2.27	1.14
08/13/19	<0.010	0.147	0.147	<0.100	0.931		1.08
08/14/19	<0.010	0.125	0.125	0.160	1.03		1.15
08/19/19	<0.010	<0.100	<0.100	0.811	1.90	2.33	1.90
08/20/19	<0.010	<0.100	<0.100	0.390	1.24		1.24
08/21/19	<0.010	<0.100	<0.100	1.01	1.86		1.86
08/26/19	<0.010	0.131	0.131	0.998	2.01	2.47	2.14
08/27/19	0.0110	0.132	0.143	0.726	1.88		2.02
08/28/19	0.0107	0.289	0.300	0.874	2.18		2.48
09/02/19	0.0227	0.181	0.204	1.52	3.03	2.74	3.23
09/03/19	0.0173	0.110	0.127	0.507	1.36		1.49
09/04/19	<0.010	<0.100	<0.100	1.56	2.64		2.64
09/09/19	0.0160	<0.100	<0.100	1.40	2.69	3.11	2.69
09/10/19	0.0147	<0.100	0.102	0.923	2.03		2.13
09/11/19	0.0451	0.160	0.205	1.47	2.60		2.80
09/16/19	0.0150	<0.100	<0.100	1.30	2.44	2.70	2.44
09/17/19	0.0276	0.122	0.150	1.34	2.42		2.57
09/18/19	0.0288	0.116	0.145	1.81	2.96		3.10
09/23/19	0.0313	0.133	0.164	1.60	3.45	3.22	3.61
09/24/19	0.0317	<0.100	0.131	0.723	1.75		1.88
09/25/19	0.0112	<0.100	<0.100	1.60	2.72		2.72
09/30/19	0.0153	<0.100	<0.100	0.940	2.08	2.42	2.08
10/01/19	0.0257	0.109	0.135	1.16	2.50		2.63
10/02/19	0.0332	<0.100	0.125	2.06	3.40		3.52
10/07/19	0.0335	<0.100	0.104	1.23	2.40	2.88	2.50
10/08/19	0.0759	0.134	0.210	1.91	3.14		3.35
10/09/19	0.118	0.982	1.10	1.24	2.25		3.35
10/14/19	0.0283	<0.100	<0.100	0.676	1.88	2.92	1.88
10/15/19	0.0388	<0.100	0.123	0.856	2.12		2.24
10/16/19	0.102	1.02	1.12	1.99	2.88		4
10/21/19	0.0237	<0.100	<0.100	2.92	4.45	2.14	4.45
10/22/19	0.0448	0.236	0.281	2.87	4.06		4.34
10/23/19	0.0906	0.189	0.280	2.76	4.04		4.32
10/28/19	0.141	0.305	0.446	2.44	3.51	1.34	3.96
10/29/19	0.0885	<0.100	0.179	1.91	3.01		3.19
10/30/19	0.0464	<0.100	0.110	3.43	4.56		4.67
11/04/19	0.0736	<0.100	0.172	4.65	5.98	2.02	6.15
11/05/19	0.158	0.260	0.418	2.78	4.22		4.64
11/06/19	0.119	0.250	0.369	3.61	4.82		5.19
11/11/19	0.170	0.232	0.402	3.49	5.25	2.23	5.65
11/12/19	0.171	0.199	0.370	3.81	5.22		5.59
11/13/19	0.166	0.254	0.420	3.92	5.52		5.94
11/18/19	0.0672	<0.100	0.108	7.27	8.45	2.51	8.56
11/19/19	0.0198	<0.100	<0.100	8.19	9.08		9.08
11/20/19	0.0176	<0.100	<0.100	13.1	14.5		14.5
11/25/19	0.0809	<0.100	0.148	7.25	7.85	0.592	8
11/26/19	0.0179	<0.100	<0.100	8.41	9.61		9.61
11/27/19	0.0166	<0.100	<0.100	8.32	9.03		9.03
12/02/19	0.135	0.731	0.866	7.53	8.87	0.527	9.74
12/03/19	0.0426	<0.100	<0.100	9.64	11.4		11.4
12/04/19	0.0254	<0.100	<0.100	10.2	12		12
12/09/19	0.255	1.63	1.89	4.68	5.83	0.963	7.72
12/10/19	0.312	0.427	0.739	6.23	7.21		7.95
12/11/19	0.205	0.203	0.408	6.34	7.94		8.35
12/16/19	0.214	0.341	0.555	6.04	6.86	0.818	7.41
12/17/19	0.293	0.342	0.635	4.94	6.85		7.48
12/18/19	0.0671	<0.100	0.125	6.61	8.04		8.16
12/23/19	0.0219	<0.100	<0.100	8.21	9.95	1.14	9.95
12/24/19	0.0185	<0.100	<0.100	7.27	8.66		8.66
12/25/19	0.0345	<0.100	<0.100	7.89	9.20		9.20
12/30/19	0.336	2.01	2.35	4.49	5.46	1.19	7.81
12/31/19	0.387	0.548	0.935	5.36	6.55		7.48

Table 13: Field's Point Influent and Effluent Nutrients

Bucklin Point Influent and Effluent Nutrients 2019

Bucklin Point Influent Nutrients

Date	Nitrite $N\text{-}NO_2$ ppm	Nitrate $N\text{-}NO_3$ ppm	Nitrate + Nitrite $N\text{-}NO_3NO_2$ ppm	Ammonia $N\text{-}NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
01/01/19	0.0931	0.729	0.822	9.07	16.8	1.80	17.6
01/02/19	0.148	0.902	1.05	14.1	23.7		24.7
01/07/19	0.150	1.29	1.44	12.8	21		22.4
01/08/19	0.167	1.29	1.46	12.8	21.4	2.35	22.9
01/09/19	0.154	1.07	1.22	12.7	21.4		22.6
01/14/19	0.161	0.716	0.877	14.3	24.9		25.8
01/15/19	0.172	0.750	0.922	14.1	24.9	2.88	25.8
01/16/19	0.165	0.602	0.767	14.1	27.2		28
01/21/19	0.156	1.37	1.53	11.9	21.3		22.8
01/22/19	0.200	1.22	1.42	13.5	24.3	2.40	25.7
01/23/19	0.204	1.14	1.34	13.6	24.9		26.2
01/28/19	0.156	1.48	1.64	10.7	20.3		21.9
01/29/19	0.160	1.43	1.59	12.4	21.5	2.25	23.1
01/30/19	0.129	1.29	1.42	10.9	21.5		22.9
02/04/19	0.151	0.712	0.863	14.5	27.5		28.4
02/05/19	0.139	0.706	0.845	15.9	26.2	5.84	27
02/06/19	0.135	0.813	0.948	16	27.2		28.1
02/11/19	0.133	0.682	0.815	15.9	26.5		27.3
02/12/19	0.133	0.700	0.833	16.1	27.5	2.67	28.3
02/13/19	0.0812	0.578	0.659	10.3	17.6		18.3
02/18/19	0.129	0.759	0.888	15.2	23.8		24.7
02/19/19	0.127	0.923	1.05	15.6	25	2.57	26
02/20/19	0.128	0.825	0.953	15.4	26.5		27.5
02/25/19	0.120	0.970	1.09	12.6	25.7		26.8
02/26/19	0.133	1.01	1.14	13.4	22.7	2.18	23.8
02/27/19	0.137	0.963	1.10	13.9	26.2		27.3
03/04/19	0.122	0.794	0.916	14.5	26.7		27.6
03/05/19	0.129	0.814	0.943	13.8	27	2.25	27.9
03/06/19	0.137	0.701	0.838	15.3	27		27.8
03/11/19	0.0936	0.936	1.03	10.8	22.4		23.4
03/12/19	0.107	1.01	1.12	12.1	22.9	2.11	24
03/13/19	0.123	0.907	1.03	13.8	20.7		21.7
03/18/19	0.148	0.932	1.08	13.6	25.5		26.6
03/19/19	0.148	0.882	1.03	14.4	26.7	2.45	27.7
03/20/19	0.140	0.826	0.966	14.8	23.4		24.4
03/25/19	0.125	0.915	1.04	14.7	25.5		26.5
03/26/19	0.121	0.879	1	15.1	24	2.26	25
03/27/19	0.128	0.803	0.931	15.5	24.5		25.4
04/01/19	0.107	0.594	0.701	15.5	28.5		29.2
04/02/19	0.118	0.558	0.676	17.2	30.7	2.88	31.4
04/03/19	0.0878	0.510	0.598	13.2	22.4		23
04/08/19	0.0860	0.411	0.497	13.1	24		24.5
04/09/19	0.119	0.792	0.911	16.5	26.3	2.51	27.2
04/10/19	0.113	0.647	0.760	16	23.4		24.2
04/15/19	0.134	0.623	0.757	12.1	20.2		21
04/16/19	0.142	0.723	0.865	14.4	24.9	2.68	25.8
04/17/19	0.129	0.611	0.740	15.5	28		28.7
04/22/19	0.119	0.503	0.622	15.4	25.5		26.1
04/23/19	0.0789	0.781	0.860	7.25	13.6	1.65	14.5
04/24/19	0.133	1.04	1.17	11.5	19		20.2
04/29/19	0.150	1.23	1.38	10.1	19		20.4
04/30/19	0.146	1.11	1.26	10.2	17.8	2.27	19.1
05/01/19	0.153	1.04	1.19	11.7	20		21.2
05/06/19	0.163	0.642	0.805	10.9	19.1		19.9
05/07/19	0.230	0.668	0.898	13.2	22.3	2.38	23.2
05/08/19	0.232	0.509	0.741	14.1	22.5		23.2
05/13/19	0.304	0.766	1.07	10.7	20.1		21.2
05/14/19	0.310	0.750	1.06	11	19.6	2.11	20.7
05/15/19	0.408	0.682	1.09	15.5	28.2		29.3
05/20/19	0.350	0.482	0.832	14.5	27.5		28.3
05/21/19	0.0812	0.627	0.708	12.8	23.2	2.40	23.9
05/22/19	0.117	0.589	0.706	16	27		27.7
05/27/19	0.0985	0.239	0.338	19.4	34		34.3
05/28/19	0.149	<0.100	0.224	17.1	28.6	2.83	28.8
05/29/19	0.0828	0.300	0.383	17.2	29.2		29.6
06/03/19	0.174	<0.100	0.175	18.9	31.2		31.4
06/04/19	0.184	<0.100	0.249	19	31.5	2.73	31.7
06/05/19	0.210	<0.100	0.211	18.2	39.5		39.7
06/10/19	0.238	<0.100	0.199	20.5	34.7		34.9
06/11/19	0.278	0.241	0.519	9.83	21.2	2.23	21.7
06/12/19	0.608	0.472	1.08	16.9	27.7		28.8
06/17/19	0.619	0.225	0.844	17	30.7		31.5
06/18/19	0.0560	<0.100	0.107	19.4	32.5	3.50	32.6
06/19/19	0.0492	<0.100	<0.100	19.7	31.7		31.7
06/24/19	0.0291	<0.100	<0.100	18.6	28.2		28.2
06/25/19	0.0280	<0.100	<0.100	20.9	33.8	3.59	33.8
06/26/19	0.0833	<0.100	<0.100	17.4	31.5		31.5
07/01/19	0.449	<0.100	0.414	17.4	29.2		29.6
07/02/19	0.275	<0.100	0.255	19	32.5	3.10	32.8
07/03/19	0.107	<0.100	<0.100	18.7	33.7		33.7
07/08/19	0.476	<0.100	0.414	20.9	33.7		34.1
07/09/19	0.0979	<0.100	<0.100	18.7	33.4	3.60	33.4
07/10/19	0.0215	<0.100	<0.100	18.6	35.7		35.7
07/15/19	0.0328	<0.100	<0.100	21.1	38.7		38.7
07/16/19	0.0173	<0.100	<0.100	22.4	41.5	4.22	41.5
07/17/19	0.0147	<0.100	<0.100	20.2	37		37
07/22/19	0.0215	<0.100	<0.100	21.8	34.5		34.5
07/23/19	0.179	0.560	0.739	9.28	17.5	2.56	18.2
07/24/19	0.273	<0.100	0.156	17.6	28.5		28.7
07/29/19	0.0208	<0.100	<0.100	22.3	37.2		37.2
07/30/19	0.388	0.187	0.575	21.9	37	3.67	37.6
07/31/19	0.395	0.118	0.513	21.5	37.2		37.7
08/05/19	0.0265	<0.100	<0.100	23.7	36		36
08/06/19	0.0397	<0.100	<0.100	22.3	34.6	4.37	34.6
08/07/19	0.0398	<0.100	<0.100	24.6	42.5		42.5
08/12/19	0.372	<0.100	0.328	24.8	39.2		39.5
08/13/19	0.0727	<0.100	<0.100	26.3	42.7	3.87	42.7

Bucklin Point Effluent Nutrients

Date	Nitrite $N\text{-}NO_2$ ppm	Nitrate $N\text{-}NO_3$ ppm	Nitrate + Nitrite $N\text{-}NO_3NO_2$ ppm	Ammonia $N\text{-}NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
01/01/19	0.0154	2.34	2.36	<0.100	1.44	1.55	3.80
01/02/19	0.0142	2.10	2.11	<0.100	1.14		3.25
01/07/19	0.0246	2.38	2.40	<0.100	1.53		3.93
01/08/19	0.0322	2.77	2.80	<0.100	1.35	1.32	4.15
01/09/19	0.0159	2.27	2.29	<0.100	1.12		3.41
01/14/19	0.0160	3.89	3.91	<0.100	1.18		5.09
01/15/19	0.0172	5.97	5.99	<0.100	1.23	2.14	7.22
01/16/19	0.0203	6.30	6.32	<0.100	1.44		7.76
01/21/19	0.0246	8.20	8.22	<0.100	1.39		9.61
01/22/19	0.0147	6.01	6.02	<0.100	1.22	2.23	7.24
01/23/19	0.0198	3.16	3.18	<0.100	1.19		4.37
01/28/19	0.0276	3.83	3.86	<0.100	1.09		4.95
01/29/19	0.0109	1.72	1.73	<0.100	1.46	1.29	3.19
01/30/19	0.0286	1.55	1.58	<0.100	1.59		3.17
02/04/19	0.0130	2.64	2.65	<0.100	1.03		3.68
02/05/19	0.0132	3.09	3.10	<0.100	1.11	3.76	4.21
02/06/19	0.0333	3.71	3.74	<0.100	1.01		4.75
02/11/19	0.0126	3.37	3.38	<0.100	0.890		4.27
02/12/19	0.0171	2.85	2.87	<0.100	1.31	2.11	4.18
02/13/19	0.0307	2.88	2.91	<0.100	1.27		4.18
02/18/19	0.0152	2.49	2.51	<0.100	1.03		3.54
02/19/19	<0.010	2.59	2.59	<0.100	1.10	1.44	3.69
02/20/19	0.0165	2.73	2.75	<0.100	1.24		3.99
02/25/19	0.0248	2.25	2.27	<0.100	1.27		3.54
02/26/19	0.0561	3	3.06	<0.100	1.56	0.922	4.62
02/27/19	0.0171	2.57	2.59	<0.100	1.37		3.96
03/04/19	0.0828	2.72	2.80	0.123	1.56		4.36
03/05/19	0.0598	3.45	3.51	<0.100	1.55	1.72	5.06
03/06/19	0.0815	3.21	3.29	0.238	1.56		4.85
03/11/19	0.0557	3.68	3.74	<0.100	1.60		5.34
03/12/19	0.119	3.64	3.76	0.205	1.69	1.66	5.45
03/13/19	0.0400	4.24	4.28	<0.100	1.27		5.55
03/18/19	0.0782	1.91	1.99	0.102	1.49		3.48
03/19/19	0.102	2.16	2.26	0.255	1.55	1.26	3.81
03/20/19	0.0829	2.45	2.53	<0.100	1.60		4.13
03/25/19	0.0933	1.91	2	0.253	1.79		3.79
03/26/19	0.0406	2.51	2.55	<0.100	1.50	1.22	4.05
03/27/19	0.0321	3.76	3.79	<0.100	1.45		5.24
04/01/19	0.0200	4.08	4.10	<0.100	1.38		5.48
04/02/19	0.0175	3.15	3.17	<0.100	1.57	1.99	4.74
04/03/19	0.0220	3.57	3.59	<0.100	1.31		4.90
04/08/19	0.0180	2.85	2.87	<0.100	1.49		4.36
04/09/19	0.118	3.61	3.73	<0.100	1.51	2.12	5.24
04/10/19	0.0169	2.92	2.94	<0.100	1.35		4.29
04/15/19	0.0171	0.155	0.172	<0.100	1.53		1.70
04/16/19	0.0127	0.349	0.362	<0.100	1.06	0.946	1.42
04/17/19	0.0230	0.400	0.423	<0.100	1.26		1.68
04/22/19	0.0249	0.965	0.990	<0.100	1.89		2.88
04/23/19	0.0190	1.64	1.66	<0.100	1.24	1.36	2.90
04/24/19	0.0240	0.946	0.970	<0.100	1.54		2.51
04/29/19	0.0494	1.71	1.76	<0.100	1.47		3.23
04/30/19	0.0708	1.78	1.85	<0.100	1.47	1.53	3.32
05/01/19	0.0655	1.33	1.40	<0.100	1.21		2.61
05/06/19	0.0338	1.53	1.56	<0.100	1.06		2.62
05/07/19	0.0169	1.16	1.18	<0.100	1.05	1.44	2.23
05/08/19	0.0164	1.12	1.14	<0.100	1.04		2.18
05/13/19	0.0225	1.03	1.05	<0.100	1.62		2.67
05/14/19	0.0298	1.43	1.46	<0.100	1.56	1.47	3.02
05/15/19	0.0152	0.979	0.994	<0.100	1.30		2.29
05/20/19	0.0243	1.37	1.39	0.168	1.56		2.95
05/21/19	0.0263	1.83	1.86	0.168	1.52	1.85	3.38
05/22/19	0.0205	2.44	2.46	<0.100	1.36		3.82
05/27/19	0.0124	1.09	1.10	0.432	2.07		3.17
05/28/19	0.0194	0.861	0.880	0.606	2.74	2.13	3.62
05/29/19	0.0175	1.31	1.33	0.855	2.78		4.11
06/03/19	0.0227	5.21	5.23	0.215	2.61		7.84
06/04/19	0.0148	1.92	1.93	0.316	2.75	3.23	4.68
06/05/19	0.0247	2.15	2.17	0.129	2.03		4.20
06/10/19	0.0275	1.38	1.41	0.150	2		3.41
06/11/19	0.0247	0.541	0.566	<0.100	1.45	1.60	2.02
06/12/19	0.0307	0.891	0.922	<0.100	1.15		2.07
06/17/19	0.0226	0.525	0.548	0.993	2.20		2.75
06/18/19	0.0139	0.145	0.159	1.10	2.29	1.73	2.45
06/19/19	0.0157	0.201	0.217	0.632	1.67		1.89
06/24/19	0.0146	0.391	0.406	0.533	1.70		2.11
06/25/19	0.0141	0.595	0.609	0.851	2.27	1.72	2.88
06/26/19	0.0221	0.449	0.471	0.494	1.95		2.42
07/01/19	0.0208	1.41	1.43	<0.100	1.81		3.24
07/02/19	0.0162	1.10	1.12	0.105	1.68	2.37	2.80
07/03/19	0.0173	1.03	1.05	0.154	1.88		2.93
07/08/19	0.0251	1.79	1.82	0.220	1.63		3.45
07/09/19	0.0229	1.63	1.65	0.127	1.61	3.43	3.26
07/10/19	0.0264	1.30	1.33	0.119	1.90		3.23
07/15/19	0.0301	1.97	2	0.687	2.55		4.55
07/16/19	0.0358	2.15	2.19	0.533	2.77	3.96	4.96
07/17/19	0.0432	1.97	2.01	0.441	2.49		4.50
07/22/19	0.0238	1.69	1.71	0.290	2.52		4.23
07/23/19	0.0216	0.624	0.646	0.146	1.78	2.57	2.43
07/24/19	0.0157	0.729	0.745	0.160	2.40		3.14
07/29/19	0.0298	1.55	1.58	0.212	1.87		3.45
07/30/19	0.0322	1.54	1.57	0.135	1.67	2.35	3.24
07/31/19	0.0308	1.50	1.53	<0.100	1.52		3.05
08/05/19	0.0386	1.38	1.42	0.125	1.38		2.80
08/06/19	0.0457	1.25	1.30	0.158	1.38	1.61	2.68
08/07/19	0.0594	1.26	1.32	0.276	1.66		2.98
08/12/19	0.0531	1.44	1.49	0.205	1.32		2.81
08/13/19	0.0441	1.06	1.10	0.125	1.20	1.80	2.30

Table 14: Bucklin Point Influent and Effluent Nutrients

Bucklin Point Influent and Effluent Nutrients 2019

Bucklin Point Influent Nutrients

Date	Nitrite $N-NO_2$ ppm	Nitrate $N-NO_3$ ppm	Nitrate + Nitrite $N-NO_3NO_2$ ppm	Ammonia $N-NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
08/14/19	0.0498	<0.100	<0.100	23.4	35.5		35.5
08/19/19	0.0652	<0.100	<0.100	26.8	37.5		37.5
08/20/19	0.564	<0.100	0.461	20.7	32	3.74	32.5
08/21/19	0.0719	<0.100	<0.100	25.9	43.2		43.2
08/26/19	0.0232	<0.100	<0.100	27	49.2		49.2
08/27/19	0.0289	<0.100	<0.100	26.8	45.4	4.77	45.4
08/28/19	0.0280	<0.100	<0.100	27	47.2		47.2
09/02/19	0.0281	<0.100	<0.100	30	45		45
09/03/19	0.268	<0.100	0.278	19	31.2	3.16	31.5
09/04/19	0.234	<0.100	0.177	23	34		34.2
09/09/19	0.0288	<0.100	<0.100	26.2	41.2		41.2
09/10/19	0.0215	<0.100	<0.100	25.1	40.7	4.47	40.7
09/11/19	0.0166	<0.100	<0.100	25.9	42		42
09/16/19	0.0295	<0.100	<0.100	25.8	40.7		40.7
09/17/19	0.0246	<0.100	<0.100	29	43	4.06	43
09/18/19	0.0265	<0.100	<0.100	29.1	45.2		45.2
09/23/19	0.0293	<0.100	<0.100	29.3	45.7		45.7
09/24/19	0.0279	<0.100	<0.100	23.4	37	3.79	37
09/25/19	0.0306	<0.100	<0.100	28.2	47		47
09/30/19	0.0272	<0.100	<0.100	30.2	47		47
10/01/19	0.0912	<0.100	<0.100	27.2	42.8	4.63	42.8
10/02/19	0.0239	<0.100	<0.100	24.2	38.7		38.7
10/07/19	0.0590	<0.100	<0.100	31.6	46.5		46.5
10/08/19	0.262	<0.100	0.222	27.3	41.7	4.30	41.9
10/09/19	0.103	<0.100	<0.100	26.6	45.7		45.7
10/14/19	0.592	<0.100	0.510	30.8	43.2		43.7
10/15/19	0.625	<0.100	0.547	27.5	40.6	4.01	41.1
10/16/19	0.286	<0.100	0.171	27.2	43.2		43.4
10/21/19	0.726	<0.100	0.660	24.7	38.2		38.9
10/22/19	0.0277	<0.100	<0.100	27.3	45.2	4.20	45.2
10/23/19	0.0264	<0.100	<0.100	22.1	37.5		37.5
10/28/19	0.0595	0.247	0.307	18.2	27.7		28
10/29/19	0.0208	<0.100	<0.100	25.2	41.2	3.17	41.2
10/30/19	0.0225	<0.100	<0.100	25	38.5		38.5
11/04/19	0.0291	<0.100	<0.100	27.1	44.2		44.2
11/05/19	0.0368	<0.100	<0.100	25.5	41	3.62	41
11/06/19	0.167	<0.100	0.150	19.2	31		31.1
11/11/19	0.0317	<0.100	<0.100	26.4	42		42
11/12/19	0.0299	<0.100	<0.100	25.3	37.8	3.57	37.8
11/13/19	0.0267	<0.100	<0.100	25.8	39.5		39.5
11/18/19	0.0450	<0.100	<0.100	28.1	45.7		45.7
11/19/19	0.0714	<0.100	0.111	23	41.5	4.28	41.6
11/20/19	0.0316	<0.100	<0.100	31.4	45.2		45.2
11/25/19	0.0818	0.391	0.473	18.8	29.7		30.2
11/26/19	0.166	<0.100	0.157	25	39.2	3.59	39.4
11/27/19	0.0503	<0.100	<0.100	24.3	42.5		42.5
12/02/19	0.0406	0.130	0.171	19.6	33.7		33.9
12/03/19	0.0713	0.260	0.331	22	35.2	3.64	35.5
12/04/19	0.0885	<0.100	0.142	22.6	42.2		42.3
12/09/19	0.0578	0.103	0.161	19.4	34.7		34.9
12/10/19	0.0638	0.563	0.627	9.77	16.5	1.67	17.1
12/11/19	0.0865	0.580	0.667	13.9	22.6		23.3
12/16/19	0.209	1.51	1.72	14.3	22.3		24
12/17/19	0.181	0.743	0.924	14.6	23.2	2.65	24.1
12/18/19	0.133	0.887	1.02	12	19.9		20.9
12/23/19	0.118	0.276	0.394	17.2	26		26.4
12/24/19	0.0960	0.206	0.302	19.3	35.5	3.29	35.8
12/25/19	0.0964	0.169	0.265	20.3	30.7		31
12/30/19	0.0498	0.320	0.370	14.1	23.6		24
12/31/19	0.0796	0.778	0.858	10.6	16.7	1.93	17.6

Bucklin Point Effluent Nutrients

Date	Nitrite $N-NO_2$ ppm	Nitrate $N-NO_3$ ppm	Nitrate + Nitrite $N-NO_3NO_2$ ppm	Ammonia $N-NH_3$ ppm	TKN N-TKN ppm	Total Phosphorus ppm	Total Nitrogen ppm
08/14/19	0.0351	0.568	0.603	<0.100	1.22		1.82
08/19/19	0.0523	0.698	0.750	0.225	1.48		2.23
08/20/19	0.0723	1.24	1.31	0.199	1.31	1.83	2.62
08/21/19	0.102	1.40	1.50	0.223	1.68		3.18
08/26/19	0.0946	1.52	1.61	<0.100	1.36		2.97
08/27/19	0.103	1.45	1.55	<0.100	1.53	2.57	3.08
08/28/19	0.0980	2.06	2.16	0.482	1.89		4.05
09/02/19	0.0845	2.06	2.14	0.220	1.47		3.61
09/03/19	0.0521	1.04	1.09	<0.100	0.988	2.75	2.08
09/04/19	0.0569	1.19	1.25	<0.100	2.41		3.66
09/09/19	0.0556	1.26	1.32	<0.100	1.25		2.57
09/10/19	0.0585	2.38	2.44	<0.100	1.20	3.02	3.64
09/11/19	0.0483	0.457	0.505	<0.100	1.17		1.67
09/16/19	0.0487	1.70	1.75	<0.100	1.53		3.28
09/17/19	0.0562	2.22	2.28	<0.100	1.31	1.64	3.59
09/18/19	0.0556	2.07	2.13	<0.100	1.27		3.40
09/23/19	0.0664	1.75	1.82	<0.100	2		3.82
09/24/19	0.0677	1.92	1.99	<0.100	1.62	1.87	3.61
09/25/19	0.0799	2.35	2.43	<0.100	1.58		4.01
09/30/19	0.0258	2.91	2.94	0.148	1.90		4.84
10/01/19	0.0822	3.40	3.48	0.106	1.62	3.32	5.10
10/02/19	0.0706	1.46	1.53	0.394	2.02		3.55
10/07/19	0.0630	1.49	1.55	0.134	1.80		3.35
10/08/19	0.0701	1.50	1.57	0.140	1.58	2.04	3.15
10/09/19	0.0588	1.32	1.38	1.11	2.98		4.36
10/14/19	0.0582	2.07	2.13	<0.100	1.47		3.60
10/15/19	0.0516	1.79	1.84	<0.100	1.22	1.77	3.06
10/16/19	0.0169	0.202	0.219	1.91	3.46		3.68
10/21/19	0.0487	2.75	2.80	<0.100	1.35		4.15
10/22/19	0.0399	2.46	2.50	<0.100	1.47	1.16	3.97
10/23/19	0.0417	2.41	2.45	<0.100	1.23		3.68
10/28/19	0.0375	2.18	2.22	<0.100	1.04		3.26
10/29/19	0.0432	2.06	2.10	<0.100	1.21	0.704	3.31
10/30/19	0.0427	2.27	2.31	<0.100	1.19		3.50
11/04/19	0.0295	3.99	4.02	<0.100	1.17		5.19
11/05/19	0.0373	3.05	3.09	0.422	1.75	1.78	4.84
11/06/19	0.0181	5.70	5.72	<0.100	1.07		6.79
11/11/19	0.0195	6.70	6.72	<0.100	1.15		7.87
11/12/19	0.0180	6.04	6.06	<0.100	1.16	1.78	7.22
11/13/19	<0.010	5.91	5.91	<0.100	1.34		7.25
11/18/19	0.0172	4.86	4.88	<0.100	1.29		6.17
11/19/19	0.0435	3.59	3.63	0.163	1.60	2.58	5.23
11/20/19	0.0189	5.18	5.20	<0.100	1.53		6.73
11/25/19	0.0104	4.80	4.81	<0.100	0.924		5.73
11/26/19	0.0123	5.17	5.18	<0.100	0.898	2.04	6.08
11/27/19	0.0202	4.53	4.55	0.128	1.03		5.58
12/02/19	0.0156	3.76	3.78	<0.100	1.69		5.47
12/03/19	0.0316	3.47	3.50	<0.100	1.23	2.45	4.73
12/04/19	0.0150	3.90	3.92	<0.100	1.24		5.16
12/09/19	0.0185	4.91	4.93	<0.100	1.92		6.85
12/10/19	0.0277	4.03	4.06	0.291	1.80	1.99	5.86
12/11/19	0.0258	2.14	2.17	0.714	2.15		4.32
12/16/19	0.0265	1.82	1.85	<0.100	1.45		3.30
12/17/19	0.0133	1.43	1.44	<0.100	1.70	0.688	3.14
12/18/19	<0.010	1.57	1.57	<0.100	1.40		2.97
12/23/19	0.0142	3.52	3.53	<0.100	1.02		4.55
12/24/19	0.0145	3.21	3.22	<0.100	1.31	0.975	4.53
12/25/19	0.0119	2.69	2.70	<0.100	1.10		3.80
12/30/19	0.0288	3.58	3.61	0.346	2.80		6.41
12/31/19	0.0520	5.03	5.08	0.561	1.86	1.91	6.94

Table 14: Bucklin Point Influent and Effluent Nutrients

Oil and Grease Data 2019
Field's Point and Bucklin Point

Field's Point Oil & Grease 2019

Date	Influent Flow	Effluent Flow	Influent Average	Effluent Average
	MGD	MGD	ppm	ppm
1/8/2019	75.59	75.59	11.25	<4.00
2/5/2019	46.30	46.30	14.72	<4.00
3/5/2019	45.04	45.04	16.52	<4.00
4/2/2019	51.88	51.88	12.83	<4.00
5/7/2019	49.57	49.57	15.76	<4.00
6/4/2019	38.71	38.71	23.52	<4.00
7/9/2019	32.73	32.73	19.73	<4.00
8/6/2019	33.50	33.50	24.72	<4.00
9/10/2019	29.12	29.12	23.04	<4.00
10/8/2019	31.60	31.60	26.91	<4.00
11/5/2019	50.95	50.95	17.29	<4.00
12/3/2019	35.35	35.35	21.69	<4.00

Bucklin Point Oil & Grease 2019

Date	Influent Flow	Effluent Flow	Influent Average	Effluent Average
	MGD	MGD	ppm	ppm
1/8/2019	28.81	28.81	17.23	<4.00
2/5/2019	23.30	23.30	19.95	<4.00
3/5/2019	22.54	22.54	25.12	<4.00
4/3/2019	33.37	28.43	21.33	<4.00
5/7/2019	28.98	28.98	9.59	<4.00
6/4/2019	19.89	19.89	15.94	<4.00
7/9/2019	16.19	16.19	23.17	<4.00
8/6/2019	16.10	16.10	25.31	<4.00
9/10/2019	14.93	14.93	20.90	<4.00
10/8/2019	14.97	14.97	29.60	<4.00
11/5/2019	26.16	24.42	23.98	<4.00
12/3/2019	18.03	18.03	23.11	<4.00

Table 15: Bucklin Point and Field's Point Oil and Grease Data

Field's Point Dissolved Metals 2019

all analyses in ppb

MDL = method detection limit

Date	**Cd**	**Cd MDL**	Cr	Cr MDL	**Cu**	**Cu MDL**	Pb	Pb MDL	**Ni**	**Ni MDL**	Ag	Ag MDL	Zn	Zn MDL	**Al**	**Al MDL**	Fe	Fe MDL
01/08/2019	0.02296	0.02	1.060	0.30	3.003	0.30	<0.300	0.30	13.03	0.30	<0.020	0.02	22.31	5.00	5.310	5.00	46.82	5.00
02/05/2019	0.02352	0.02	1.440	0.30	2.046	0.30	<0.300	0.30	13.52	0.30	0.03782	0.02	26.32	5.00	6.745	5.00	60.79	5.00
03/05/2019	<0.020	0.02	1.442	0.30	1.999	0.30	<0.300	0.30	16.89	0.30	<0.020	0.02	28.16	5.00	<5.00	5.00	50.05	5.00
04/02/2019	<0.020	0.02	1.344	0.30	2.666	0.30	<0.300	0.30	16.31	0.30	<0.020	0.02	28.49	5.00	5.697	5.00	52.50	5.00
05/07/2019	0.02352	0.02	1.162	0.30	2.045	0.30	<0.300	0.30	14.26	0.30	<0.020	0.02	26.60	5.00	6.440	5.00	41.11	5.00
06/04/2019	<0.020	0.02	1.207	0.30	1.778	0.30	<0.300	0.30	13.85	0.30	<0.020	0.02	23.35	5.00	<5.00	5.00	45.09	5.00
07/09/2019	<0.020	0.02	1.205	0.30	1.228	0.30	<0.300	0.30	12.95	0.30	<0.020	0.02	17.89	5.00	<5.00	5.00	40.29	5.00
08/06/2019	<0.020	0.02	1.044	0.30	1.717	0.30	<0.300	0.30	16.07	0.30	<0.020	0.02	23.41	5.00	<5.00	5.00	40.27	5.00
09/10/2019	<0.020	0.02	0.8196	0.30	1.251	0.30	<0.300	0.30	17.58	0.30	<0.020	0.02	23.34	5.00	<5.00	5.00	40.18	5.00
10/08/2019	<0.020	0.02	1.456	0.30	1.804	0.30	<0.300	0.30	17.19	0.30	<0.020	0.02	20.49	5.00	<5.00	5.00	53.33	5.00
11/05/2019	<0.020	0.02	0.9532	0.30	1.538	0.30	<0.300	0.30	8.066	0.30	<0.020	0.02	21.02	5.00	<5.00	5.00	51.71	5.00
12/03/2019	0.02080	0.02	1.061	0.30	1.986	0.30	<0.300	0.30	15.76	0.30	<0.020	0.02	27.25	5.00	<5.00	5.00	54.38	5.00

	Cd	**Cr**	**Cu**	**Pb**	**Ni**	**Ag**	**Zn**	**Al**	**Fe**
yearly average concentration	<0.020	1.18	1.92	<0.300	14.62	<0.020	24.05	<5.35	48.04
yearly median concentration	<0.020	1.18	1.90	<0.300	15.01	<0.020	23.38	<5.00	48.44
yearly minimum concentration	<0.020	0.8196	1.228	<0.300	8.066	<0.020	17.89	<5.00	40.18
yearly maximum concentration	0.02352	1.456	3.003	<0.300	17.58	0.03782	28.49	6.745	60.79

Table 16: Field's Point Effluent Dissolved Metals

Bucklin Point Dissolved Metals 2019

all analyses in ppb

MDL = method detection limit

Date	Cd	Cd MDL	Cr	Cr MDL	Cu	Cu MDL	Pb	Pb MDL	Ni	Ni MDL	Ag	Ag MDL	Zn	Zn MDL	Al	Al MDL	Fe	Fe MDL
01/08/2019	0.03662	0.02	0.499	0.30	3.462	0.30	<0.300	0.30	3.412	0.30	<0.020	0.02	31.65	5.00	7.221	5.00	29.31	5.00
02/05/2019	0.04865	0.02	0.685	0.30	4.527	0.30	0.3429	0.30	5.106	0.30	<0.020	0.02	35.40	5.00	9.997	5.00	30.80	5.00
03/05/2019	0.02970	0.02	0.594	0.30	4.191	0.30	0.3039	0.30	2.955	0.30	<0.020	0.02	33.71	5.00	7.364	5.00	38.68	5.00
04/02/2019	0.03823	0.02	0.630	0.30	2.940	0.30	<0.300	0.30	5.834	0.30	<0.020	0.02	41.73	5.00	9.081	5.00	37.82	5.00
05/07/2019	<0.020	0.02	0.604	0.30	1.928	0.30	<0.300	0.30	4.713	0.30	<0.020	0.02	29.69	5.00	5.389	5.00	41.46	5.00
06/04/2019	0.02736	0.02	0.697	0.30	3.016	0.30	0.3236	0.30	6.403	0.30	<0.020	0.02	37.76	5.00	6.455	5.00	44.83	5.00
07/09/2019	0.02624	0.02	0.663	0.30	2.652	0.30	0.4995	0.30	9.941	0.30	<0.020	0.02	38.63	5.00	7.727	5.00	30.19	5.00
08/06/2019	0.03781	0.02	1.094	0.30	3.467	0.30	0.5628	0.30	13.10	0.30	<0.020	0.02	47.65	5.00	11.24	5.00	24.18	5.00
09/10/2019	0.04461	0.02	0.825	0.30	5.040	0.30	0.4060	0.30	6.120	0.30	<0.020	0.02	40.46	5.00	14.66	5.00	33.74	5.00
10/08/2019	0.03123	0.02	0.716	0.30	3.503	0.30	0.4746	0.30	5.858	0.30	0.03019	0.02	40.68	5.00	8.629	5.00	34.97	5.00
11/05/2019	0.03609	0.02	0.764	0.30	5.776	0.30	0.3079	0.30	5.589	0.30	<0.020	0.02	33.85	5.00	6.746	5.00	32.57	5.00
12/03/2019	0.03672	0.02	1.051	0.30	5.710	0.30	<0.300	0.30	6.149	0.30	0.02631	0.02	43.05	5.00	8.698	5.00	43.23	5.00

	Cd	Cr	Cu	Pb	Ni	Ag	Zn	Al	Fe
yearly average concentration	<0.03	0.74	3.85	<0.37	6.27	<0.020	37.86	8.60	35.15
yearly median concentration	0.04	0.69	3.49	0.32	5.85	<0.020	38.20	8.18	34.36
yearly minimum concentration	<0.020	0.4988	1.928	<0.300	2.955	<0.020	29.69	5.389	24.18
yearly maximum concentration	0.04865	1.094	5.776	0.5628	13.10	0.03019	47.65	14.66	44.83

Table 17: Bucklin Point Effluent Dissolved Metals

Field's Point Bioassay Data 2019

Field's Point WWTF Bioassay Results - 2019 *Americamysis bahia*						
Acute	**1st Quarter, 2019**			**2nd Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
LC 50	>100	>100	Y	>100	>100	Y
A-NOEC	100	N/A**	N/A	100	N/A**	N/A
	3rd Quarter, 2019			**4th Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
LC 50	>100	>100	Y	>100	>100	Y
A-NOEC	100	N/A**	N/A	100	N/A**	N/A

* NOTE - % indicates Percent Effluent

** No permit limit exists for A-NOEC

LC 50	LC 50 is the effluent concentration that causes 50% mortality during the acute toxicity test duration.
A-NOEC	No observable effect concentration: Highest concentration of the effluent in which 90% or more of the test animals survive
Acute Test	Continuous exposure to effluent for 48 hours
NC	Not Calculated

Field's Point WWTF Bioassay Results - 2019 *Arbacia punctulata*						
Chronic	**1st Quarter, 2019**			**2nd Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	50	Required monitoring: No Limit	N/A	100	Required monitoring: No Limit	N/A
	3rd Quarter, 2019			**4th Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	50	Required monitoring: No Limit	N/A	100	Required monitoring: No Limit	N/A

* NOTE - % indicates Percent Effluent

C-NOEC	Highest concentration of effluent with no observed effect on fertilization rates
Chronic test	Tests for sublethal effects of effluent on specifically on fertilization rates of A. punctulata eggs. Exposure rate is 60 minutes

Table 18: Field's Point Bioassay Data

Bucklin Point WWTF Bioassay Results - 2019 ***Americamysis bahia***						
Acute	**1st Quarter, 2019**			**2nd Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
LC 50	>100	>100%	Y	>100	>100%	Y
A-NOEC	100	N/A**	N/A	100	N/A**	N/A
	3rd Quarter, 2019			**4th Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
LC 50	>100	>100%	Y	>100	>100%	Y
A-NOEC	100	N/A**	N/A	100	N/A**	N/A

* NOTE - % indicates Percent Effluent

** No permit limit exists for A-NOEC

LC 50	The effluent concentration that causes 50% mortality during the acute toxicity test
A-NOEC	No observable effect concentration: Highest concentration of the effluent in which 90% or more of the test animals survive.
Acute Test	Continuous exposure to effluent for 48 hours
NC	Not Calculated

Bucklin Point WWTF Bioassay Results - 2019 ***Arbacia punctulata***						
Chronic	**1st Quarter, 2019**			**2nd Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	100	50	Y	100	50	Y
	3rd Quarter, 2019			**4th Quarter, 2019**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	50	50	Y	100	50	Y

* NOTE - % indicates Percent Effluent

C-NOEC	Highest concentration of effluent with no observed effect on fertilization rates.
Chronic test	Tests for sublethal effects of effluent on specifically on fertilization rates of A. punctulata eggs. Exposure rate is 60 minutes.

Field's Point Metals Loading From Final Sludge (lbs/yr)

	Sludge	Arsenic		Beryllium		Cadmium		Chromium		Copper		Lead		Mercury		Molybdenum		Nickel		Selenium		Silver		Zinc		Cyanide	
Date	**Dry Tons**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**
01/08/2019	31.33	8.49		<2.07		<3.10		45.30		215.00		89.60		<0.13		<10.33		42.70		5.03		<5.17		386.00		<0.52	
01/22/2019	21.89	6.80		<1.83		<2.74		38.10		226.00		75.30		<0.13		<9.14		46.00		5.87		<4.57		387.00		1.50	
Monthly Avg (ppm):		**7.65**		**1.95**		**2.92**		**41.70**		**220.50**		**82.45**		**0.13**		**9.73**		**44.35**		**5.45**		**4.87**		**386.50**		**1.01**	
Monthly Total (lbs):	**1,418,840**		**10.85**		**2.76**		**4.14**		**59.17**		**312.85**		**116.98**		**0.18**		**13.81**		**62.93**		**7.73**		**6.90**		**548.38**		**1.43**
02/05/2019	29.98	7.49		<1.88		<2.82		44.40		227.00		116.00		7.09		<9.41		43.40		3.20		7.15		489.00		5.40	
02/19/2019	21.25	6.14		<1.95		<2.92		37.10		195.00		79.20		<0.50		<9.74		44.90		3.74		<4.87		430.00		9.40	
Monthly Avg (ppm):		**6.82**		**1.91**		**2.87**		**40.75**		**211.00**		**97.60**		**3.80**		**9.57**		**44.15**		**3.47**		**6.01**		**459.50**		**7.40**	
Monthly Total (lbs):	**1,281,860**		**8.74**		**2.45**		**3.68**		**52.24**		**270.47**		**125.11**		**4.87**		**12.27**		**56.59**		**4.45**		**7.70**		**589.01**		**9.49**
03/05/2019	27.09	6.46		<1.64		<2.46		44.00		164.00		64.30		<0.50		<8.19		46.70		6.95		<4.09		395.00		7.20	
03/19/2019	29.79	6.68		<2.03		<3.05		39.40		203.00		68.70		<0.60		<10.15		35.80		8.68		5.29		421.00		9.80	
Monthly Avg (ppm):		**6.57**		**1.83**		**2.75**		**41.70**		**183.50**		**66.50**		**0.55**		**9.17**		**41.25**		**7.82**		**4.69**		**408.00**		**8.50**	
Monthly Total (lbs):	**1,555,440**		**10.22**		**2.85**		**4.28**		**64.86**		**285.42**		**103.44**		**0.85**		**14.26**		**64.16**		**12.16**		**7.30**		**634.62**		**13.22**
04/02/2019	30.30	5.21		<2.06		<3.10		33.20		194.00		56.10		<0.51		<10.32		31.70		5.14		<5.16		400.00		3.50	
04/16/2019	48.76	5.38		<1.63		<2.44		44.80		217.00		122.00		<0.45		<8.13		39.40		4.75		5.79		572.00		3.00	
Monthly Avg (ppm):		**5.30**		**1.84**		**2.77**		**39.00**		**205.50**		**89.05**		**0.48**		**9.22**		**35.55**		**4.95**		**5.47**		**486.00**		**3.25**	
Monthly Total (lbs):	**1,619,220**		**8.57**		**2.99**		**4.48**		**63.15**		**332.75**		**144.19**		**0.78**		**14.93**		**57.56**		**8.01**		**8.86**		**786.94**		**5.26**
05/14/2019	33.21	4.53		<1.87		<2.81		27.30		180.00		56.60		0.37		<9.35		39.30		4.89		<4.68		402.00		4.67	
05/28/2019	22.49	4.52		<1.95		<2.92		25.70		188.00		62.40		0.25		<9.74		28.40		5.48		<4.87		426.00		2.95	
Monthly Avg (ppm):		**4.53**		**1.91**		**2.86**		**26.50**		**184.00**		**59.50**		**0.31**		**9.55**		**33.85**		**5.19**		**4.77**		**414.00**		**3.81**	
Monthly Total (lbs):	**1,599,840**		**7.24**		**3.06**		**4.58**		**42.40**		**294.37**		**95.19**		**0.50**		**15.28**		**54.15**		**8.30**		**7.64**		**662.33**		**6.10**
06/04/2019	27.37	5.77		<1.73		<2.59		32.60		194.00		83.60		<0.49		<8.64		33.90		5.93		<4.32		499.00		<1.90	
06/18/2019	23.28	6.23		<2.00		<3.00		37.20		225.00		84.50		<0.51		<9.98		50.70		7.22		<4.99		506.00		<2.00	
Monthly Avg (ppm):		**6.00**		**1.86**		**2.79**		**34.90**		**209.50**		**84.05**		**0.50**		**9.31**		**42.30**		**6.58**		**4.66**		**502.50**		**1.95**	
Monthly Total (lbs):	**1,367,460**		**8.20**		**2.55**		**3.82**		**47.72**		**286.48**		**114.94**		**0.68**		**12.73**		**57.84**		**8.99**		**6.37**		**687.15**		**2.67**
07/02/2019	26.04	5.04		<1.87		<2.80		36.80		185.00		107.00		<0.50		<9.35		44.30		5.27		<4.67		503.00		<1.90	
07/16/2019	23.42	4.88		<1.97		<2.96		38.30		189.00		73.00		<0.52		<9.87		55.20		5.40		<4.94		538.00		<2.10	
Monthly Avg (ppm):		**4.96**		**1.92**		**2.88**		**37.55**		**187.00**		**90.00**		**0.51**		**9.61**		**49.75**		**5.34**		**4.80**		**520.50**		**2.00**	
Monthly Total (lbs):	**1,282,740**		**6.36**		**2.46**		**3.70**		**48.17**		**239.87**		**115.45**		**0.65**		**12.32**		**63.82**		**6.84**		**6.16**		**667.67**		**2.57**
08/06/2019	23.37	4.53		<1.86		<2.78		31.60		208.00		51.90		<0.13		<9.27		44.20		5.55		<4.64		505.00		<0.52	
08/20/2019	26.06	5.42		<1.79		<2.68		39.60		245.00		112.00		0.14		<8.94		42.30		5.98		<4.47		561.00		<0.52	
Monthly Avg (ppm):		**4.98**		**1.82**		**2.73**		**35.60**		**226.50**		**81.95**		**0.13**		**9.11**		**43.25**		**5.77**		**4.55**		**533.00**		**0.52**	
Monthly Total (lbs):	**1,230,020**		**6.12**		**2.24**		**3.36**		**43.79**		**278.60**		**100.80**		**0.16**		**11.20**		**53.20**		**7.09**		**5.60**		**655.60**		**0.64**
09/03/2019	15.67	5.44		<1.97		<2.95		38.60		295.00		98.20		<0.58		<9.84		44.70		6.89		<4.92		670.00		2.80	
09/17/2019	23.95	4.58		<1.76		<2.64		36.90		235.00		99.80		<0.48		<8.79		36.50		6.08		<4.40		563.00		1.80	
Monthly Avg (ppm):		**5.01**		**1.86**		**2.79**		**37.75**		**265.00**		**99.00**		**0.53**		**9.31**		**40.60**		**6.49**		**4.66**		**616.50**		**2.30**	
Monthly Total (lbs):	**1,307,060**		**6.55**		**2.44**		**3.65**		**49.34**		**346.37**		**129.40**		**0.69**		**12.17**		**53.07**		**8.48**		**6.09**		**805.80**		**3.01**
10/15/2019	22.32	5.05		<1.94		<2.91		32.10		249.00		77.60		<0.50		<9.71		38.60		7.46		6.30		486.00		<1.90	
10/29/2019	20.53	4.32		<2.36		<3.55		29.20		251.00		72.00		0.92		<11.82		39.00		5.47		<5.91		491.00		<2.10	
Monthly Avg (ppm):		**4.69**		**2.15**		**3.23**		**30.65**		**250.00**		**74.80**		**0.71**		**10.76**		**38.80**		**6.47**		**6.10**		**488.50**		**2.00**	
Monthly Total (lbs):	**1,304,780**		**6.11**		**2.81**		**4.21**		**39.99**		**326.20**		**97.60**		**0.92**		**14.04**		**50.63**		**8.44**		**7.96**		**637.39**		**2.61**
11/05/2019	24.21	3.77		<2.02		<3.02		24.60		210.00		52.10		<0.52		<10.07		29.70		5.72		<5.04		417.00		<2.20	
11/13/2019	22.65	4.88		<2.16		<3.24		27.70		332.00		62.50				<10.81		37.20		8.39		5.86		550.00			
11/19/2019	34.42	3.45		<1.80		<2.70		26.80		243.00		57.60		<0.51		<8.99		34.70		6.05		6.16		448.00		<2.00	
Monthly Avg (ppm):		**4.03**		**1.99**		**2.99**		**26.37**		**261.67**		**57.40**		**0.51**		**9.96**		**33.87**		**6.72**		**5.69**		**471.67**		**2.10**	
Monthly Total (lbs):	**1,253,420**		**5.06**		**2.50**		**3.74**		**33.05**		**327.98**		**71.95**		**0.64**		**12.48**		**42.45**		**8.42**		**7.13**		**591.20**		**2.63**
12/03/2019	30.16	5.00		<2.25		<3.37		27.70		238.00		68.40		0.39		<11.24		43.60		6.07		<5.62		454.00		1.00	
12/17/2019	24.86	7.57		<2.34		3.58		43.70		314.00		110.00		0.44		<11.68		53.30		8.72		<5.84		603.00		1.80	
Monthly Avg (ppm):		**6.29**		**2.29**		**3.48**		**35.70**		**276.00**		**89.20**		**0.42**		**11.46**		**48.45**		**7.40**		**5.73**		**528.50**		**1.40**	
Monthly Total (lbs):	**1,231,560**		**7.74**		**2.82**		**4.28**		**43.97**		**339.91**		**109.86**		**0.52**		**14.11**		**59.67**		**9.11**		**7.06**		**650.88**		**0.00**
YEARLY TOTAL (LBS):	**16,452,240**		**91.76**		**31.93**		**47.93**		**587.84**		**3,641.28**		**1,324.89**		**11.45**		**159.62**		**676.07**		**98.01**		**84.77**		**7,916.97**		**51.34**

Table 20: Field's Point Sludge Analysis

Field's Point Metals Loadings from Final Sludge (lbs/yr)

Year	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Molybdeum	Nickel	Selenium	Silver	Zinc	Cyanide
1994			202.7	2628.1	13386.0	4297.2	74.0		4626.2		1113.9	15683.7	281.0
1995			203.5	2824.5	14962.8	3700.2	55.0		4202.3		818.1	13071.5	189.3
1996	132.3	4.9	186.4	3473.3	12461.8	3389.6	47.8	205.1	3860.3		757.7	11615.1	239.8
1997			189.7	3654.7	13674.5	4122.1	53.9		3400.3		867.9	12323.5	189.6
1998	44.6		208.7	2655.5	11207.8	2879.9	36.9		2188.6		698.3	10101.5	127.1
1999	35.4		233.3	2315.0	13490.2	2516.8	28.8	164.7	1887.7	74.9	677.4	11549.1	90.1
2000	42.4	32.3	352.8	1747.7	15019.4	2544.9	12.0	84.1	1191.9	23.5	384.0	6482.0	49.6
2001	88.1	16.9	205.7	2379.0	15120.0	2611.1	26.3	204.6	2008.3	282.0	634.9	13297.6	111.0
2002	84.9	7.6	154.5	1757.0	15758.0	3156.0	27.9	190.1	1555.0	190.4	651.5	15148.0	79.6
2003	53.6	9.7	183.8	1976.2	12993.4	3008.8	28.4	98.1	1485.4	118.2	466.3	12773.9	60.8
2004	43.4	12.1	221.0	3774.2	20910.1	2608.5	23.8	103.2	2472.9	163.4	501.2	14645.1	95.9
2005	79.5	13.9	250.7	4970.6	30477.9	2867.9	29.6	190.3	3092.9	167.2	478.5	20592.3	78.6
2006	85.2	11.7	131.8	1448.6	5889.2	2616.6	16.7	193.4	1181.6	136.4	452.8	12290.6	56.9
2007	18.5	12.2	64.5	612.1	3862.6	1033.7	6.8	157.1	526.2	41.8	173.4	6833.0	67.5
2008	32.9	48.3	66.7	856.5	5426.0	1793.2	74.0	294.3	841.1	39.2	195.7	9914.5	113.8
2009	38.0	33.0	82.5	919.6	4792.0	1771.9	8.4	300.2	769.1	26.5	132.2	10442.8	121.1
2010	44.8	27.6	73.5	928.9	6111.0	1770.2	60.6	276.2	874.0	33.0	151.0	9897.7	94.6
2011	40.8	26.1	123.7	1156.0	3795.4	1613.2	7.5	261.0	790.7	43.0	115.9	9026.6	71.5
2012	33.8	28.5	78.3	995.0	3892.6	1269.2	8.1	285.5	818.7	114.5	185.3	8760.1	199.1
2013	75.1	3.6	48.0	1006.5	4202.2	1454.2	8.0	99.9	757.9	168.3	189.9	8772.9	83.2
2014	82.1	3.9	41.3	846.3	3873.3	1153.0	6.7	100.6	709.6	181.4	131.9	7457.4	59.7
2015	88.0	2.4	42.3	798.3	3683.9	991.0	6.5	98.3	652.2	154.2	105.6	8168.1	71.3
2016	67.2	2.1	22.2	713.9	3385.5	1048.0	6.8	96.7	604.5	113.7	75.6	7542.5	51.3
2017	70.1	3.0	28.3	965.8	3838.7	1126.3	6.4	92.4	662.0	118.3	77.1	8073.0	38.4
2018	83.1	32.2	49.8	713.9	3828.7	1320.0	6.8	163.3	659.4	103.0	112.2	7833.8	142.8
2019	91.8	31.9	47.9	587.8	3641.3	1324.9	11.5	159.6	676.1	98.0	84.8	7917.0	51.3

Note: Beryllium, cadmium, molybdenum, and silver laboratory methodology was modified between 2017-2018

Table 21: Field's Point Sludge Summary

Bucklin Point Metals Loadings from Final Sludge (lbs/yr)

	Sludge	Arsenic		Beryllium		Cadmium		Chromium		Copper		Lead		Mercury		Molybdenum		Nickel		Selenium		Silver		Zinc		Cyanide	
Date	**Dry Tons**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**	**ppm**	**lbs**
1/8/2019	6.5	5.13		<2.34		<3.51		72.60		525.00		93.00		0.26		<11.69		56.90		6.10		11.50		572.00		0.77	
1/22/2019	6.7	5.10		<2.30		<3.44		77.50		605.00		89.00		0.14		<11.48		56.60		6.58		12.00		570.00		1.00	
Monthly Avg (ppm):		**5.12**		**2.32**		**3.47**		**75.05**		**565.00**		**91.00**		**0.20**		**11.58**		**56.75**		**6.34**		**11.75**		**571.00**		**0.88**	
Monthly Total (lbs):	**366,700**		**1.88**		**0.85**		**1.27**		**27.52**		**207.19**		**33.37**		**0.07**		**4.25**		**20.81**		**2.32**		**4.31**		**209.39**		**0.32**
2/5/2019	6.7	5.15		<2.24		<3.36		73.60		535.00		95.60		0.72		<11.20		60.30		4.91		11.70		624.00		9.10	
2/19/2019	7.0	5.87		<2.33		<3.50		76.30		572.00		106.00		<0.61		<11.66		60.00		5.54		12.20		712.00		15.40	
Monthly Avg (ppm):		**5.51**		**2.29**		**3.43**		**74.95**		**553.50**		**100.80**		**0.66**		**11.43**		**60.15**		**5.22**		**11.95**		**668.00**		**12.25**	
Monthly Total (lbs):	**330.040**		**1.82**		**0.76**		**1.13**		**24.74**		**182.68**		**33.27**		**0.22**		**3.77**		**19.85**		**1.72**		**3.94**		**220.47**		**4.04**
3/5/2019	7.1	6.48		<2.32		<3.48		68.90		551.00		105.00		0.74		<11.60		51.50		8.30		11.50		685.00		12.80	
3/19/2019	6.6	6.35		<2.26		<3.39		77.10		506.00		96.30		0.70		<11.31		59.90		7.49		10.60		635.00		13.40	
Monthly Avg (ppm):		**6.42**		**2.29**		**3.44**		**73.00**		**528.50**		**100.65**		**0.72**		**11.46**		**55.70**		**7.90**		**11.05**		**660.00**		**13.10**	
Monthly Total (lbs):	**374,260**		**2.40**		**0.86**		**1.29**		**27.32**		**197.80**		**37.67**		**0.27**		**4.29**		**20.85**		**2.96**		**4.14**		**247.01**		**4.90**
4/2/2019	6.3	4.57		<2.22		<3.33		130.00		518.00		90.10		0.69		11.40		97.20		5.48		11.00		654.00		6.40	
4/17/2019	6.6	4.42		<2.22		<3.32		131.00		559.00		100.00		0.95		11.60		101.00		6.01		13.10		697.00		6.60	
Monthly Avg (ppm):		**4.50**		**2.22**		**3.33**		**130.50**		**538.50**		**95.05**		**0.82**		**11.50**		**99.10**		**5.75**		**12.05**		**675.50**		**6.50**	
Monthly Total (lbs):	**350,520**		**1.58**		**0.78**		**1.17**		**45.74**		**188.76**		**33.32**		**0.29**		**4.03**		**34.74**		**2.02**		**4.22**		**236.78**		**2.28**
5/14/2019	7.4	3.98		<2.05		<3.07		82.70		452.00		80.30		0.87		<10.23		61.70		4.33		10.10		564.00		5.39	
5/28/2019	14.8	4.50		<2.17		<3.26		86.60		556.00		91.80		0.73		<10.86		68.60		5.47		12.00		641.00		3.51	
Monthly Avg (ppm):		**4.24**		**2.11**		**3.16**		**84.65**		**504.00**		**86.05**		**0.80**		**10.54**		**65.15**		**4.90**		**11.05**		**602.50**		**4.45**	
Monthly Total (lbs):	**404,400**		**1.71**		**0.85**		**1.28**		**34.23**		**203.82**		**34.80**		**0.32**		**4.26**		**26.35**		**1.98**		**4.47**		**243.65**		**1.80**
6/4/2019	7.5	5.34		<2.20		<3.30		91.80		608.00		100.00		0.58		<11.01		71.40		8.10		13.60		726.00		<2.10	
6/18/2019	7.8	4.86		<2.07		<3.10		88.80		656.00		98.10		0.89		11.50		64.50		7.03		13.70		751.00		2.20	
Monthly Avg (ppm):		**5.10**		**2.13**		**3.20**		**90.30**		**632.00**		**99.05**		**0.73**		**11.26**		**67.95**		**7.56**		**13.65**		**738.50**		**2.15**	
Monthly Total (lbs):	**429,540**		**2.19**		**0.91**		**1.37**		**38.79**		**271.47**		**42.55**		**0.31**		**4.84**		**29.19**		**3.25**		**5.86**		**317.22**		**0.92**
7/2/2019	5.9	4.82		<2.21		<3.31		83.40		605.00		99.10		1.11		12.20		62.90		6.61		13.90		817.00		<2.20	
7/16/2019	8.2	4.70		<2.21		<3.31		82.80		638.00		94.80		0.64		12.20		63.00		6.99		14.50		840.00		3.80	
Monthly Avg (ppm):		**4.76**		**2.21**		**3.31**		**83.10**		**621.50**		**96.95**		**0.88**		**12.20**		**62.95**		**6.80**		**14.20**		**828.50**		**3.00**	
Monthly Total (lbs):	**439,240**		**2.09**		**0.97**		**1.45**		**36.50**		**272.99**		**42.58**		**0.39**		**5.36**		**27.65**		**2.99**		**6.24**		**363.91**		**1.32**
8/6/2019	6.4	5.35		<2.10		<3.15		78.10		643.00		97.20		0.18		12.10		63.10		6.39		14.30		868.00		<0.53	
8/20/2019	7.4	5.65		<2.21		<3.31		87.00		700.00		97.10		0.20		12.70		75.50		6.01		14.30		919.00		<0.51	
Monthly Avg (ppm):		**5.50**		**2.15**		**3.23**		**82.55**		**671.50**		**97.15**		**0.19**		**12.40**		**69.30**		**6.20**		**14.30**		**893.50**		**0.52**	
Monthly Total (lbs):	**424.520**		**2.33**		**0.91**		**1.37**		**35.04**		**285.07**		**41.24**		**0.08**		**5.26**		**29.42**		**2.63**		**6.07**		**379.31**		**0.22**
9/3/2019	7.1	5.15		<2.11		<3.16		95.20		723.00		101.00		0.79		13.40		85.10		6.72		14.30		986.00		2.70	
9/17/2019	7.8	4.86		<2.19		<3.28		79.30		654.00		83.90		0.87		12.40		65.70		6.34		13.10		828.00		2.30	
Monthly Avg (ppm):		**5.01**		**2.15**		**3.22**		**87.25**		**688.50**		**92.45**		**0.83**		**12.90**		**75.40**		**6.53**		**13.70**		**907.00**		**2.50**	
Monthly Total (lbs):	**352,700**		**1.77**		**0.76**		**1.14**		**30.77**		**242.83**		**32.61**		**0.29**		**4.55**		**26.59**		**2.30**		**4.83**		**319.90**		**0.88**
10/15/2019	7.3	4.33		<2.17		<3.25		77.70		684.00		78.20		1.04		13.30		79.50		5.93		15.00		791.00		<2.00	
10/29/2019	7.7	4.07		<2.26		<3.38		68.80		685.00		70.20		1.14		13.00		77.60		6.00		14.80		699.00		2.30	
Monthly Avg (ppm):		**4.20**		**2.21**		**3.32**		**73.25**		**684.50**		**74.20**		**1.09**		**13.15**		**78.55**		**5.96**		**14.90**		**745.00**		**2.15**	
Monthly Total (lbs):	**417.720**		**1.75**		**0.92**		**1.39**		**30.60**		**285.93**		**30.99**		**0.46**		**5.49**		**32.81**		**2.49**		**6.22**		**311.20**		**0.90**
11/5/2019	7.5	4.68		<2.12		<3.18		73.40		688.00		77.00		1.18		14.70		85.70		7.18		15.90		811.00		<2.30	
11/13/2019	7.1	3.81		<2.15		<3.22		66.40		646.00		69.50				13.60		75.10		6.72		14.90		750.00			
11/19/2019	7.2	4.33		<2.19		<3.29		72.90		680.00		70.50		1.32		14.50		83.40		7.02		16.50		771.00		<2.30	
Monthly Avg (ppm):		**4.27**		**2.15**		**3.23**		**70.90**		**671.33**		**72.33**		**1.25**		**14.27**		**81.40**		**6.97**		**15.77**		**777.33**		**2.30**	
Monthly Total (lbs):	**379.780**		**1.62**		**0.82**		**1.23**		**26.93**		**254.96**		**27.47**		**0.47**		**5.42**		**30.91**		**2.65**		**5.99**		**295.21**		**0.87**
12/3/2019	7.0	4.29		<2.14		<3.20		82.30		620.00		72.30		1.05		14.90		93.70		7.95		16.40		781.00		1.30	
12/17/2019	7.0	4.99		<2.35		<3.52		95.60		727.00		85.40		0.76		14.60		103.00		9.21		28.30		916.00		3.10	
Monthly Avg (ppm):		**4.64**		**2.24**		**3.36**		**88.95**		**673.50**		**78.85**		**0.90**		**14.75**		**98.35**		**8.58**		**22.35**		**848.50**		**2.20**	
Monthly Total (lbs):	**336.100**		**1.56**		**0.75**		**1.13**		**29.90**		**226.36**		**26.50**		**0.30**		**4.96**		**33.06**		**2.88**		**7.51**		**285.18**		**0.74**
YEARLY TOTAL (LBS):	**4,605,520**		**22.70**		**10.14**		**15.22**		**388.08**		**2,819.86**		**416.37**		**3.47**		**56.48**		**332.23**		**30.19**		**63.80**		**3,429.23**		**19.19**

Table 22: Bucklin Point Sludge Analysis

Bucklin Point Metals Loading from Final Sludge (lbs/yr)

Year	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Molybdeum	Nickel	Selenium	Silver	Zinc	Cyanide
1994	16.2		35.4	655.5	3839.7	723.4	84.2		627.6		171.3	4234.5	64.3
1995			35.8	681.0	4306.7	551.8	55.9		539.8		126.2	3495.8	57.6
1996													
1997	16.0		52.9	1177.6	4589.3	1183.6	16.0		1074.4		339.8	4349.4	58.9
1998	12.2		44.8	1263.0	4743.4	1128.3	12.2		977.8		463.4	5838.9	27.7
1999	11.1		44.4	993.6	3906.8	930.3	11.1		716.9		473.0	5945.8	24.3
2000	38.3		60.8	1304.1	5164.7	1073.2	16.8	171.8	1345.4		467.7	7104.0	24.8
2001	57.8	13.6	38.6	1003.3	4132.9	900.1	12.0	167.4	985.3	44.4	371.2	6336.5	33.6
2002	43.7	6.1	27.1	755.0	4565.0	1034.3	18.0	148.9	840.7	37.6	385.8	7226.0	13.3
2003	30.2	6.6	29.2	2669.3	3439.4	772.3	10.0	69.3	868.1	32.1	273.0	5973.1	8.9
2004	27.6	7.3	45.5	851.5	3733.7	739.0	11.6	62.0	794.7	36.1	225.0	6759.2	7.6
2005	18.8	5.9	30.9	969.5	4468.6	682.1	8.9	77.4	781.5	32.5	153.0	5469.7	10.3
2006	25.5	2.0	24.4	2398.8	3657.0	713.0	6.8	37.1	1089.2	33.9	165.4	4953.9	12.0
2007	11.2	5.2	25.7	4143.3	4676.1	633.5	9.3	70.7	1389.7	14.4	177.5	5635.0	22.8
2008	8.9	14.1	23.3	5594.6	4209.5	585.4	36.0	84.7	1568.6	17.4	116.8	5519.0	27.4
2009	18.1	8.2	20.6	1054.3	3132.4	516.6	4.6	79.6	438.2	14.6	62.5	4895.0	19.3
2010	20.7	7.0	17.5	619.0	3075.2	445.7	14.4	74.3	318.1	14.6	58.1	3949.5	17.1
2011	19.3	9.0	13.9	499.9	2159.5	474.2	4.9	90.0	294.1	15.1	66.4	3583.1	14.5
2012	18.2	8.4	13.5	370.6	2502.2	370.7	4.3	84.3	269.2	16.0	56.8	3388.8	24.9
2013	21.1	1.9	11.7	349.5	2493.6	381.4	4.0	45.4	271.9	21.2	54.1	3264.5	19.6
2014	26.6	2.5	11.1	432.7	3268.3	373.4	2.9	51.5	335.1	30.3	57.8	3499.3	19.1
2015	25.4	2.3	7.4	422.7	3125.3	367.9	3.3	49.2	346.2	31.9	54.6	3619.9	21.8
2016	24.1	2.2	5.8	397.4	2872.2	365.9	3.9	54.1	347.5	28.4	80.7	3620.5	17.9
2017	19.4	2.2	7.1	678.0	2497.0	324.5	2.3	45.3	520.9	26.9	61.2	3191.8	10.5
2018	21.6	8.8	14.6	369.7	2333.5	360.7	1.4	47.9	272.7	24.8	62.8	3149.7	14.4
2019	22.7	10.1	15.2	388.1	2819.9	416.4	3.2	56.5	332.2	30.2	63.8	3429.2	19.2

Note: Beryllium, cadmium, molybdenum, and silver laboratory calculation methodology was modified between 2017-2018

Table 23: Bucklin Point Sludge Summary

Bucklin Point and Field's Point 2019
Quarterly Filter Cake Data

Plant:	Bucklin Point				Field's Point			
Quarter:	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sample Date:	2/20/2019	6/12/2019	8/28/2019	11/13/2019	2/20/2019	6/12/2019	8/28/2019	11/13/2019
(TCLP) Arsenic (mg/L)	<0.05	0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05
(TCLP) Barium (mg/L)	0.092	7.64	0.137	0.044	0.066	4.28	0.081	0.108
(TCLP) Cadmium (mg/L)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
(TCLP) Chromium (mg/L)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
(TCLP) Lead (mg/L)	<0.025	1.52	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
(TCLP) Mercury (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
(TCLP) Selenium (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
(TCLP) Silver (mg/L)	<0.025	<0.025	<0.025	<0.025	<0.025	0.034	<0.025	<0.025
Aluminum (mg/kg)	4440	6630	5080	2990	2670	2540	2460	1570
Arsenic (mg/kg)	3.35	4.16	5.55	2.48	6.03	5.65	6.01	3.74
Beryllium (mg/kg)	<1.55	<1.34	<1.32	<0.49	0.96	<0.99	<1.11	<0.39
Cadmium (mg/kg)	3.45	4.44	4.46	1.73	3.68	2.62	3.18	2.03
Chromium (mg/kg)	52.8	82.9	84	38.1	38.7	33	30.0	17.1
Copper (mg/kg)	487	707	610	431	200	211	237	218
Lead (mg/kg)	93.3	124	87.4	46.8	67	72.3	67.6	44.2
Mercury (mg/kg)	0.467	0.441	0.447	0.707	<0.267	0.374	<0.218	0.349
Nickel (mg/kg)	43.8	76.3	75.5	49.9	42.1	49.1	49.1	26.2
Phosphorous (mg/kg)	15100	21300	15800	10900	12200	10800	10900	10300
Selenium (mg/kg)	<3.10	<2.69	<2.65	1.40	<1.49	<1.97	<2.22	2.13
Sulfur (mg/kg)	38000	NA	NA	NA	21000	NA	NA	NA
Zinc (mg/kg)	608	887	875	538	424	536	566	409
Total PCBs	<2.673	<2.214	<2.403	<2.520	<2.250	<2.106	<2.412	<2.448
Arachlor 1221 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1232 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1016 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1242 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1248 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1254 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1260 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1262 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Arachlor 1268 (ug/kg)	<0.297	<0.246	<0.267	<0.280	<0.250	<0.234	<0.268	<0.272
Percent Total Solids (%)	21.5	23.8	23.7	23.3	25.5	27	23.9	24.2
Percent Fixed Solids (%)	21	26	25	22	17	14	13	11
Percent Volatile Solids (%)	79	74	75	78	83	86	87	89
Paint Filter/Free Liquids (Present/Absent)	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
(TCLP) Benzene (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) Carbon tetrachloride (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) Chlordane (mg/L) *	<0.005	NA	NA	NA	<0.005	NA	NA	NA
(TCLP) Chlorobenzene (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) Chloroform (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) o-Cresol (mg/L) *	<0.10	NA	NA	NA	<0.10	NA	NA	NA
(TCLP) m-Cresol (mg/L) *	<0.10	NA	NA	NA	0.2	NA	NA	NA
(TCLP) p-Cresol (mg/L) *	<0.10	NA	NA	NA	0.2	NA	NA	NA
(TCLP) 2,4-D (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(TCLP) 1,4-Dichlorobenzene (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) 1,2-Dichloroethane (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) 1,1-Dichloroethylene (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) 2,4-Dinitrotoluene (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(TCLP) Endrin (mg/L) *	<0.002	NA	NA	NA	<0.002	NA	NA	NA
(TCLP) Heptachlor (and its hydroxide/epoxide) (mg/L) *	<0.001	NA	NA	NA	<0.001	NA	NA	NA
(TCLP) Hexachlorobenzene (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(TCLP) Hexachlorobutadiene (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(TCLP) Hexachloroethane (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(TCLP) Lindane (mg/L) *	<0.001	NA	NA	NA	<0.001	NA	NA	NA
(TCLP) Methoxychlor (mg/L) *	<0.010	NA	NA	NA	<0.010	NA	NA	NA
(TCLP) Methyl ethyl ketone (mg/L) *	1	NA	NA	NA	<0.10	NA	NA	NA
(TCLP) Nitrobenzene (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA

* Parameter analysis required annually
NA = Not Analyzed

All samples analyzed by New England Testing Laboratory,
West Warwick, Rhode Island

Bucklin Point and Field's Point 2019
Quarterly Filter Cake Data

Plant:	Bucklin Point				Field's Point			
Quarter:	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sample Date:	2/20/2019	6/12/2019	8/28/2019	11/13/2019	2/20/2019	6/12/2019	8/28/2019	11/13/2019
(TCLP) Pentachlorophenol (mg/L) *	<0.10	NA	NA	NA	<0.10	NA	NA	NA
(TCLP) Pyridine (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(TCLP) Tetrachloroethylene (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) Toxaphene (mg/L) *	<0.100	NA	NA	NA	<0.100	NA	NA	NA
(TCLP) Trichloroethylene (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
(TCLP) 2,4,5-Trichlorophenol (mg/L) *	<0.10	NA	NA	NA	<0.10	NA	NA	NA
(TCLP) 2,4,6-Trichlorophenol (mg/L) *	<0.10	NA	NA	NA	<0.10	NA	NA	NA
(TCLP) 2,4,5-TP (Silvex) (mg/L) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) Vinyl chloride (mg/L) *	<0.02	NA	NA	NA	<0.02	NA	NA	NA
Corrosivity/pH (SU)	8.5	7.6	8.7	5.4	5.5	5.6	5.2	5.4
Flash Point/Ignitability (Deg. F) *	>200	NA	NA	NA	>200	NA	NA	NA
Reactive Cyanide (mg/kg) *	<0.9	NA	NA	NA	<0.8	NA	NA	NA
Reactive Sulfide (mg/kg) *	<0.5	NA	NA	NA	<0.4	NA	NA	NA
Percent Total Sulfur (%) *	NA	NA	NA	NA	NA	NA	NA	NA

* Parameter analysis required annually
NA = Not Analyzed

All samples analyzed by New England Testing Laboratory,
West Warwick, Rhode Island

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/8/2019	1,1,1-Trichloroethane	<0.001	ppm
1/8/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
1/8/2019	1,1,2-Trichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethylene	<0.001	ppm
1/8/2019	1,2-Dichlorobenzene	<0.001	ppm
1/8/2019	1,2-Dichloroethane	<0.001	ppm
1/8/2019	1,2-Dichloropropane	<0.001	ppm
1/8/2019	1,3-Dichlorobenzene	<0.001	ppm
1/8/2019	1,4-Dichlorobenzene	<0.001	ppm
1/8/2019	2-Chloroethyl vinyl ether	<0.002	ppm
1/8/2019	Acetone	0.99	ppm
1/8/2019	Benzene	<0.001	ppm
1/8/2019	Bromodichloromethane	<0.001	ppm
1/8/2019	Bromoform	<0.001	ppm
1/8/2019	Bromomethane	<0.010	ppm
1/8/2019	Carbon Tetrachloride	<0.001	ppm
1/8/2019	Chlorobenzene	<0.001	ppm
1/8/2019	Chloroethane	<0.010	ppm
1/8/2019	Chloroform	.0029	ppm
1/8/2019	Chloromethane	<0.010	ppm
1/8/2019	cis-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Dibromochloromethane	<0.001	ppm
1/8/2019	Ethylbenzene	<0.001	ppm
1/8/2019	m,p-Xylene	<0.001	ppm
1/8/2019	Methylene Chloride	<0.005	ppm
1/8/2019	o-Xylene	<0.001	ppm
1/8/2019	Tetrachloroethylene	.0011	ppm
1/8/2019	Toluene	.0026	ppm
1/8/2019	trans-1,2-Dichloroethylene	<0.001	ppm
1/8/2019	trans-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Trichloroethylene	<0.001	ppm
1/8/2019	Trichlorofluoromethane	<0.001	ppm
1/8/2019	Vinyl Chloride	<0.001	ppm
2/5/2019	1,1,1-Trichloroethane	<0.01	ppm
2/5/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
2/5/2019	1,1,2-Trichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethylene	<0.01	ppm
2/5/2019	1,2-Dichlorobenzene	<0.01	ppm
2/5/2019	1,2-Dichloroethane	<0.01	ppm
2/5/2019	1,2-Dichloropropane	<0.01	ppm
2/5/2019	1,3-Dichlorobenzene	<0.01	ppm
2/5/2019	1,4-Dichlorobenzene	<0.01	ppm
2/5/2019	2-Chloroethyl vinyl ether	<0.02	ppm
2/5/2019	Acetone	0.210	ppm
2/5/2019	Benzene	<0.01	ppm
2/5/2019	Bromodichloromethane	<0.01	ppm
2/5/2019	Bromoform	<0.01	ppm
2/5/2019	Bromomethane	<0.1	ppm
2/5/2019	Carbon Tetrachloride	<0.01	ppm
2/5/2019	Chlorobenzene	<0.01	ppm
2/5/2019	Chloroethane	<0.1	ppm
2/5/2019	Chloroform	<0.01	ppm
2/5/2019	Chloromethane	<0.1	ppm
2/5/2019	cis-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Dibromochloromethane	<0.01	ppm
2/5/2019	Ethylbenzene	<0.01	ppm
2/5/2019	m,p-Xylene	<0.01	ppm
2/5/2019	Methylene Chloride	<0.05	ppm
2/5/2019	o-Xylene	<0.01	ppm
2/5/2019	Tetrachloroethylene	<0.01	ppm
2/5/2019	Toluene	<0.01	ppm
2/5/2019	trans-1,2-Dichloroethylene	<0.01	ppm
2/5/2019	trans-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Trichloroethylene	<0.01	ppm
2/5/2019	Trichlorofluoromethane	<0.01	ppm
2/5/2019	Vinyl Chloride	<0.01	ppm
3/5/2019	1,1,1-Trichloroethane	<0.01	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/8/2019	1,1,1-Trichloroethane	<0.001	ppm
1/8/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
1/8/2019	1,1,2-Trichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethylene	<0.001	ppm
1/8/2019	1,2-Dichlorobenzene	<0.001	ppm
1/8/2019	1,2-Dichloroethane	<0.001	ppm
1/8/2019	1,2-Dichloropropane	<0.001	ppm
1/8/2019	1,3-Dichlorobenzene	<0.001	ppm
1/8/2019	1,4-Dichlorobenzene	<0.001	ppm
1/8/2019	2-Chloroethyl vinyl ether	<0.002	ppm
1/8/2019	Acetone	<0.010	ppm
1/8/2019	Benzene	<0.001	ppm
1/8/2019	Bromodichloromethane	<0.001	ppm
1/8/2019	Bromoform	<0.001	ppm
1/8/2019	Bromomethane	<0.01	ppm
1/8/2019	Carbon Tetrachloride	<0.001	ppm
1/8/2019	Chlorobenzene	<0.001	ppm
1/8/2019	Chloroethane	<0.01	ppm
1/8/2019	Chloroform	0.0019	ppm
1/8/2019	Chloromethane	<0.01	ppm
1/8/2019	cis-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Dibromochloromethane	<0.001	ppm
1/8/2019	Ethylbenzene	<0.001	ppm
1/8/2019	m,p-Xylene	<0.001	ppm
1/8/2019	Methylene Chloride	<0.005	ppm
1/8/2019	o-Xylene	<0.001	ppm
1/8/2019	Tetrachloroethylene	<0.001	ppm
1/8/2019	Toluene	<0.001	ppm
1/8/2019	trans-1,2-Dichloroethylene	<0.001	ppm
1/8/2019	trans-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Trichloroethylene	<0.001	ppm
1/8/2019	Trichlorofluoromethane	<0.001	ppm
1/8/2019	Vinyl Chloride	<0.001	ppm
2/5/2019	1,1,1-Trichloroethane	<0.01	ppm
2/5/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
2/5/2019	1,1,2-Trichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethylene	<0.01	ppm
2/5/2019	1,2-Dichlorobenzene	<0.01	ppm
2/5/2019	1,2-Dichloroethane	<0.01	ppm
2/5/2019	1,2-Dichloropropane	<0.01	ppm
2/5/2019	1,3-Dichlorobenzene	<0.01	ppm
2/5/2019	1,4-Dichlorobenzene	<0.01	ppm
2/5/2019	2-Chloroethyl vinyl ether	<0.02	ppm
2/5/2019	Acetone	0.21	ppm
2/5/2019	Benzene	<0.01	ppm
2/5/2019	Bromodichloromethane	<0.01	ppm
2/5/2019	Bromoform	<0.01	ppm
2/5/2019	Bromomethane	<0.10	ppm
2/5/2019	Carbon Tetrachloride	<0.01	ppm
2/5/2019	Chlorobenzene	<0.01	ppm
2/5/2019	Chloroethane	<0.10	ppm
2/5/2019	Chloroform	<0.01	ppm
2/5/2019	Chloromethane	<0.10	ppm
2/5/2019	cis-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Dibromochloromethane	<0.01	ppm
2/5/2019	Ethylbenzene	<0.01	ppm
2/5/2019	m,p-Xylene	<0.01	ppm
2/5/2019	Methylene Chloride	<0.05	ppm
2/5/2019	o-Xylene	<0.01	ppm
2/5/2019	Tetrachloroethylene	<0.01	ppm
2/5/2019	Toluene	<0.01	ppm
2/5/2019	trans-1,2-Dichloroethylene	<0.01	ppm
2/5/2019	trans-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Trichloroethylene	<0.01	ppm
2/5/2019	Trichlorofluoromethane	<0.01	ppm
2/5/2019	Vinyl Chloride	<0.01	ppm
3/5/2019	1,1,1-Trichloroethane	<0.001	ppm

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
3/5/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
3/5/2019	1,1,2-Trichloroethane	<0.01	ppm
3/5/2019	1,1-Dichloroethane	<0.01	ppm
3/5/2019	1,1-Dichloroethylene	<0.01	ppm
3/5/2019	1,2-Dichlorobenzene	<0.01	ppm
3/5/2019	1,2-Dichloroethane	<0.01	ppm
3/5/2019	1,2-Dichloropropane	<0.01	ppm
3/5/2019	1,3-Dichlorobenzene	<0.01	ppm
3/5/2019	1,4-Dichlorobenzene	<0.01	ppm
3/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
3/5/2019	Acetone	0.10	ppm
3/5/2019	Benzene	<0.01	ppm
3/5/2019	Bromodichloromethane	<0.01	ppm
3/5/2019	Bromoform	<0.01	ppm
3/5/2019	Bromomethane	<0.01	ppm
3/5/2019	Carbon Tetrachloride	<0.01	ppm
3/5/2019	Chlorobenzene	<0.01	ppm
3/5/2019	Chloroethane	<0.01	ppm
3/5/2019	Chloroform	0.0054	ppm
3/5/2019	Chloromethane	<0.01	ppm
3/5/2019	cis-1,3-Dichloropropylene	<0.01	ppm
3/5/2019	Dibromochloromethane	<0.01	ppm
3/5/2019	Ethylbenzene	<0.01	ppm
3/5/2019	m,p-Xylene	0.0018	ppm
3/5/2019	Methylene Chloride	<0.005	ppm
3/5/2019	o-Xylene	<0.01	ppm
3/5/2019	Tetrachloroethylene	0.002	ppm
3/5/2019	Toluene	0.0024	ppm
3/5/2019	trans-1,2-Dichloroethylene	<0.01	ppm
3/5/2019	trans-1,3-Dichloropropylene	<0.01	ppm
3/5/2019	Trichloroethylene	<0.01	ppm
3/5/2019	Trichlorofluoromethane	<0.01	ppm
3/5/2019	Vinyl Chloride	<0.001	ppm
4/2/2019	1,1,1-Trichloroethane	<0.010	ppm
4/2/2019	1,1,2,2-Tetrachloroethane	<0.010	ppm
4/2/2019	1,1,2-Trichloroethane	<0.010	ppm
4/2/2019	1,1-Dichloroethane	<0.010	ppm
4/2/2019	1,1-Dichloroethylene	<0.010	ppm
4/2/2019	1,2-Dichlorobenzene	<0.010	ppm
4/2/2019	1,2-Dichloroethane	<0.010	ppm
4/2/2019	1,2-Dichloropropane	<0.010	ppm
4/2/2019	1,3-Dichlorobenzene	<0.010	ppm
4/2/2019	1,4-Dichlorobenzene	<0.010	ppm
4/2/2019	2-Chloroethyl vinyl ether	<0.020	ppm
4/2/2019	Acetone	<0.100	ppm
4/2/2019	Acrolein	<0.100	ppm
4/2/2019	Acrylonitrile	<0.100	ppm
4/2/2019	Benzene	<0.010	ppm
4/2/2019	Bromodichloromethane	<0.010	ppm
4/2/2019	Bromoform	<0.010	ppm
4/2/2019	Bromomethane	<0.100	ppm
4/2/2019	Carbon Tetrachloride	<0.010	ppm
4/2/2019	Chlorobenzene	<0.010	ppm
4/2/2019	Chloroethane	<0.100	ppm
4/2/2019	Chloroform	<0.010	ppm
4/2/2019	Chloromethane	<0.100	ppm
4/2/2019	cis-1,3-Dichloropropylene	<0.010	ppm
4/2/2019	Dibromochloromethane	<0.010	ppm
4/2/2019	Ethylbenzene	<0.010	ppm
4/2/2019	m,p-Xylene	<0.010	ppm
4/2/2019	Methylene Chloride	<0.050	ppm
4/2/2019	o-Xylene	<0.010	ppm
4/2/2019	Tetrachloroethylene	<0.010	ppm
4/2/2019	Toluene	<0.010	ppm
4/2/2019	trans-1,2-Dichloroethylene	<0.010	ppm
4/2/2019	trans-1,3-Dichloropropylene	<0.010	ppm
4/2/2019	Trichloroethylene	<0.010	ppm
4/2/2019	Trichlorofluoromethane	<0.010	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
3/5/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
3/5/2019	1,1,2-Trichloroethane	<0.001	ppm
3/5/2019	1,1-Dichloroethane	<0.001	ppm
3/5/2019	1,1-Dichloroethylene	<0.001	ppm
3/5/2019	1,2-Dichlorobenzene	<0.001	ppm
3/5/2019	1,2-Dichloroethane	<0.001	ppm
3/5/2019	1,2-Dichloropropane	<0.001	ppm
3/5/2019	1,3-Dichlorobenzene	<0.001	ppm
3/5/2019	1,4-Dichlorobenzene	<0.001	ppm
3/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
3/5/2019	Acetone	<0.01	ppm
3/5/2019	Benzene	<0.001	ppm
3/5/2019	Bromodichloromethane	<0.001	ppm
3/5/2019	Bromoform	<0.001	ppm
3/5/2019	Bromomethane	<0.01	ppm
3/5/2019	Carbon Tetrachloride	<0.001	ppm
3/5/2019	Chlorobenzene	<0.001	ppm
3/5/2019	Chloroethane	<0.01	ppm
3/5/2019	Chloroform	0.0024	ppm
3/5/2019	Chloromethane	<0.01	ppm
3/5/2019	cis-1,3-Dichloropropylene	<0.001	ppm
3/5/2019	Dibromochloromethane	<0.001	ppm
3/5/2019	Ethylbenzene	<0.001	ppm
3/5/2019	m,p-Xylene	<0.001	ppm
3/5/2019	Methylene Chloride	<0.005	ppm
3/5/2019	o-Xylene	<0.001	ppm
3/5/2019	Tetrachloroethylene	<0.001	ppm
3/5/2019	Toluene	<0.001	ppm
3/5/2019	trans-1,2-Dichloroethylene	<0.001	ppm
3/5/2019	trans-1,3-Dichloropropylene	<0.001	ppm
3/5/2019	Trichloroethylene	<0.001	ppm
3/5/2019	Trichlorofluoromethane	<0.001	ppm
3/5/2019	Vinyl Chloride	<0.001	ppm
4/2/2019	1,1,1-Trichloroethane	<0.010	ppm
4/2/2019	1,1,2,2-Tetrachloroethane	<0.010	ppm
4/2/2019	1,1,2-Trichloroethane	<0.010	ppm
4/2/2019	1,1-Dichloroethane	<0.010	ppm
4/2/2019	1,1-Dichloroethylene	<0.010	ppm
4/2/2019	1,2-Dichlorobenzene	<0.010	ppm
4/2/2019	1,2-Dichloroethane	<0.010	ppm
4/2/2019	1,2-Dichloropropane	<0.010	ppm
4/2/2019	1,3-Dichlorobenzene	<0.010	ppm
4/2/2019	1,4-Dichlorobenzene	<0.010	ppm
4/2/2019	2-Chloroethyl vinyl ether	<0.020	ppm
4/2/2019	Acetone	<0.100	ppm
4/2/2019	Acrolein	<0.100	ppm
4/2/2019	Acrylonitrile	<0.100	ppm
4/2/2019	Benzene	<0.010	ppm
4/2/2019	Bromodichloromethane	<0.010	ppm
4/2/2019	Bromoform	<0.010	ppm
4/2/2019	Bromomethane	<0.100	ppm
4/2/2019	Carbon Tetrachloride	<0.010	ppm
4/2/2019	Chlorobenzene	<0.010	ppm
4/2/2019	Chloroethane	<0.100	ppm
4/2/2019	Chloroform	<0.010	ppm
4/2/2019	Chloromethane	<0.100	ppm
4/2/2019	cis-1,3-Dichloropropylene	<0.010	ppm
4/2/2019	Dibromochloromethane	<0.010	ppm
4/2/2019	Ethylbenzene	<0.010	ppm
4/2/2019	m,p-Xylene	<0.010	ppm
4/2/2019	Methylene Chloride	<0.050	ppm
4/2/2019	o-Xylene	<0.010	ppm
4/2/2019	Tetrachloroethylene	<0.010	ppm
4/2/2019	Toluene	<0.010	ppm
4/2/2019	trans-1,2-Dichloroethylene	<0.010	ppm
4/2/2019	trans-1,3-Dichloropropylene	<0.010	ppm
4/2/2019	Trichloroethylene	<0.010	ppm
4/2/2019	Trichlorofluoromethane	<0.010	ppm

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
4/2/2019	Vinyl Chloride	<0.010	ppm
5/7/2019	(m & p) Xylene	<0.002	ppm
5/7/2019	(o) Xylene	<0.001	ppm
5/7/2019	1,1,1-Trichloroethane	<0.001	ppm
5/7/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
5/7/2019	1,1,2-Trichloroethane	<0.001	ppm
5/7/2019	1,1-Dichloroethane	<0.001	ppm
5/7/2019	1,1-Dichloroethene	<0.001	ppm
5/7/2019	1,2-Dichlorobenzene	<0.001	ppm
5/7/2019	1,2-Dichloroethane	<0.001	ppm
5/7/2019	1,2-Dichloropropane	<0.001	ppm
5/7/2019	1,3-Dichlorobenzene	<0.001	ppm
5/7/2019	1,4-Dichlorobenzene	<0.001	ppm
5/7/2019	2-Chloroethylvinylether	<0.001	ppm
5/7/2019	Acetone	0.107	ppm
5/7/2019	Acrolein	<0.001	ppm
5/7/2019	Acrylonitrile	<0.001	ppm
5/7/2019	Benzene	<0.001	ppm
5/7/2019	Bromodichloromethane	<0.001	ppm
5/7/2019	Bromoform	<0.001	ppm
5/7/2019	Bromomethane	<0.002	ppm
5/7/2019	Carbon Tetrachloride	<0.001	ppm
5/7/2019	Chlorobenzene	<0.001	ppm
5/7/2019	Chloroethane	<0.001	ppm
5/7/2019	Chloroform	0.00415	ppm
5/7/2019	Chloromethane	<0.001	ppm
5/7/2019	cis-1,3-Dichloropropene	<0.001	ppm
5/7/2019	Dibromochloromethane	<0.001	ppm
5/7/2019	Ethylbenzene	<0.001	ppm
5/7/2019	Methylene Chloride	<0.001	ppm
5/7/2019	Tetrachloroethene	0.00213	ppm
5/7/2019	Toluene	0.00174	ppm
5/7/2019	trans-1,2-Dichloroethene	<0.001	ppm
5/7/2019	trans-1,3-Dichloropropene	<0.001	ppm
5/7/2019	Trichloroethene	0.00111	ppm
5/7/2019	Trichlorofluoromethane	<0.001	ppm
5/7/2019	Vinyl Chloride	<0.001	ppm
6/4/2019	(m & p) Xylene	<0.002	ppm
6/4/2019	(o) Xylene	<0.001	ppm
6/4/2019	1,1,1-Trichloroethane	<0.001	ppm
6/4/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
6/4/2019	1,1,2-Trichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethene	<0.001	ppm
6/4/2019	1,2-Dichlorobenzene	<0.001	ppm
6/4/2019	1,2-Dichloroethane	<0.001	ppm
6/4/2019	1,2-Dichloropropane	<0.001	ppm
6/4/2019	1,3-Dichlorobenzene	<0.001	ppm
6/4/2019	1,4-Dichlorobenzene	<0.001	ppm
6/4/2019	2-Chloroethylvinylether	<0.001	ppm
6/4/2019	Acetone	0.112	ppm
6/4/2019	Acrolein	<0.001	ppm
6/4/2019	Acrylonitrile	<0.001	ppm
6/4/2019	Benzene	<0.001	ppm
6/4/2019	Bromodichloromethane	<0.001	ppm
6/4/2019	Bromoform	<0.001	ppm
6/4/2019	Bromomethane	<0.002	ppm
6/4/2019	Carbon Tetrachloride	<0.001	ppm
6/4/2019	Chlorobenzene	<0.001	ppm
6/4/2019	Chloroethane	<0.001	ppm
6/4/2019	Chloroform	0.00506	ppm
6/4/2019	Chloromethane	<0.001	ppm
6/4/2019	cis-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Dibromochloromethane	<0.001	ppm
6/4/2019	Ethylbenzene	<0.001	ppm
6/4/2019	Methylene Chloride	<0.001	ppm
6/4/2019	Tetrachloroethene	0.00161	ppm
6/4/2019	Toluene	0.00601	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
4/2/2019	Vinyl Chloride	<0.010	ppm
5/7/2019	(m & p) Xylene	<0.002	ppm
5/7/2019	(o) Xylene	<0.001	ppm
5/7/2019	1,1,1-Trichloroethane	<0.001	ppm
5/7/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
5/7/2019	1,1,2-Trichloroethane	<0.001	ppm
5/7/2019	1,1-Dichloroethane	<0.001	ppm
5/7/2019	1,1-Dichloroethene	<0.001	ppm
5/7/2019	1,2-Dichlorobenzene	<0.001	ppm
5/7/2019	1,2-Dichloroethane	<0.001	ppm
5/7/2019	1,2-Dichloropropane	<0.001	ppm
5/7/2019	1,3-Dichlorobenzene	<0.001	ppm
5/7/2019	1,4-Dichlorobenzene	<0.001	ppm
5/7/2019	2-Chloroethylvinylether	<0.001	ppm
5/7/2019	Acetone	0.00110	ppm
5/7/2019	Acrolein	<0.001	ppm
5/7/2019	Acrylonitrile	<0.001	ppm
5/7/2019	Benzene	<0.001	ppm
5/7/2019	Bromodichloromethane	0.00613	ppm
5/7/2019	Bromoform	<0.001	ppm
5/7/2019	Bromomethane	<0.002	ppm
5/7/2019	Carbon Tetrachloride	<0.001	ppm
5/7/2019	Chlorobenzene	<0.001	ppm
5/7/2019	Chloroethane	<0.001	ppm
5/7/2019	Chloroform	0.00642	ppm
5/7/2019	Chloromethane	<0.001	ppm
5/7/2019	cis-1,3-Dichloropropene	<0.001	ppm
5/7/2019	Dibromochloromethane	0.00327	ppm
5/7/2019	Ethylbenzene	<0.001	ppm
5/7/2019	Methylene Chloride	<0.001	ppm
5/7/2019	Tetrachloroethene	<0.001	ppm
5/7/2019	Toluene	<0.001	ppm
5/7/2019	trans-1,2-Dichloroethene	<0.001	ppm
5/7/2019	trans-1,3-Dichloropropene	<0.001	ppm
5/7/2019	Trichloroethene	<0.001	ppm
5/7/2019	Trichlorofluoromethane	<0.001	ppm
5/7/2019	Vinyl Chloride	<0.001	ppm
6/4/2019	(m & p) Xylene	<0.002	ppm
6/4/2019	(o) Xylene	<0.001	ppm
6/4/2019	1,1,1-Trichloroethane	<0.001	ppm
6/4/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
6/4/2019	1,1,2-Trichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethene	<0.001	ppm
6/4/2019	1,2-Dichlorobenzene	<0.001	ppm
6/4/2019	1,2-Dichloroethane	<0.001	ppm
6/4/2019	1,2-Dichloropropane	<0.001	ppm
6/4/2019	1,3-Dichlorobenzene	<0.001	ppm
6/4/2019	1,4-Dichlorobenzene	<0.001	ppm
6/4/2019	2-Chloroethylvinylether	<0.001	ppm
6/4/2019	Acetone	0.00144	ppm
6/4/2019	Acrolein	<0.001	ppm
6/4/2019	Acrylonitrile	<0.001	ppm
6/4/2019	Benzene	<0.001	ppm
6/4/2019	Bromodichloromethane	0.00244	ppm
6/4/2019	Bromoform	<0.001	ppm
6/4/2019	Bromomethane	<0.002	ppm
6/4/2019	Carbon Tetrachloride	<0.001	ppm
6/4/2019	Chlorobenzene	<0.001	ppm
6/4/2019	Chloroethane	<0.001	ppm
6/4/2019	Chloroform	0.00376	ppm
6/4/2019	Chloromethane	<0.001	ppm
6/4/2019	cis-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Dibromochloromethane	0.00138	ppm
6/4/2019	Ethylbenzene	<0.001	ppm
6/4/2019	Methylene Chloride	<0.001	ppm
6/4/2019	Tetrachloroethene	<0.001	ppm
6/4/2019	Toluene	<0.001	ppm

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
6/4/2019	trans-1,2-Dichloroethene	<0.001	ppm
6/4/2019	trans-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Trichloroethene	<0.001	ppm
6/4/2019	Trichlorofluoromethane	<0.001	ppm
6/4/2019	Vinyl Chloride	<0.001	ppm
7/9/2019	(m & p) Xylene	<0.002	ppm
7/9/2019	(o) Xylene	<0.001	ppm
7/9/2019	1,1,1-Trichloroethane	<0.001	ppm
7/9/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/9/2019	1,1,2-Trichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethene	<0.001	ppm
7/9/2019	1,2-Dichlorobenzene	<0.001	ppm
7/9/2019	1,2-Dichloroethane	<0.001	ppm
7/9/2019	1,2-Dichloropropane	<0.001	ppm
7/9/2019	1,3-Dichlorobenzene	<0.001	ppm
7/9/2019	1,4-Dichlorobenzene	<0.001	ppm
7/9/2019	2-Chloroethylvinylether	<0.001	ppm
7/9/2019	Acetone	0.103	ppm
7/9/2019	Acrolein	<0.001	ppm
7/9/2019	Acrylonitrile	<0.001	ppm
7/9/2019	Benzene	<0.001	ppm
7/9/2019	Bromodichloromethane	<0.001	ppm
7/9/2019	Bromoform	<0.001	ppm
7/9/2019	Bromomethane	<0.002	ppm
7/9/2019	Carbon Tetrachloride	<0.001	ppm
7/9/2019	Chlorobenzene	<0.001	ppm
7/9/2019	Chloroethane	<0.001	ppm
7/9/2019	Chloroform	0.00588	ppm
7/9/2019	Chloromethane	<0.001	ppm
7/9/2019	cis-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Dibromochloromethane	<0.001	ppm
7/9/2019	Ethylbenzene	<0.001	ppm
7/9/2019	Methylene Chloride	<0.001	ppm
7/9/2019	Tetrachloroethene	0.00129	ppm
7/9/2019	Toluene	0.00165	ppm
7/9/2019	trans-1,2-Dichloroethene	<0.001	ppm
7/9/2019	trans-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Trichloroethene	<0.001	ppm
7/9/2019	Trichlorofluoromethane	<0.001	ppm
7/9/2019	Vinyl Chloride	<0.001	ppm
8/6/2019	(m & p) Xylene	<0.002	ppm
8/6/2019	(o) Xylene	<0.001	ppm
8/6/2019	1,1,1-Trichloroethane	<0.001	ppm
8/6/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
8/6/2019	1,1,2-Trichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethene	<0.001	ppm
8/6/2019	1,2-Dichlorobenzene	<0.001	ppm
8/6/2019	1,2-Dichloroethane	<0.001	ppm
8/6/2019	1,2-Dichloropropane	<0.001	ppm
8/6/2019	1,3-Dichlorobenzene	<0.001	ppm
8/6/2019	1,4-Dichlorobenzene	<0.001	ppm
8/6/2019	2-Chloroethylvinylether	<0.001	ppm
8/6/2019	Acetone	0.129	ppm
8/6/2019	Acrolein	<0.001	ppm
8/6/2019	Acrylonitrile	<0.001	ppm
8/6/2019	Benzene	<0.001	ppm
8/6/2019	Bromodichloromethane	<0.001	ppm
8/6/2019	Bromoform	<0.001	ppm
8/6/2019	Bromomethane	<0.002	ppm
8/6/2019	Carbon Tetrachloride	<0.001	ppm
8/6/2019	Chlorobenzene	<0.001	ppm
8/6/2019	Chloroethane	<0.001	ppm
8/6/2019	Chloroform	0.00575	ppm
8/6/2019	Chloromethane	<0.001	ppm
8/6/2019	cis-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Dibromochloromethane	<0.001	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
6/4/2019	trans-1,2-Dichloroethene	<0.001	ppm
6/4/2019	trans-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Trichloroethene	<0.001	ppm
6/4/2019	Trichlorofluoromethane	<0.001	ppm
6/4/2019	Vinyl Chloride	<0.001	ppm
7/9/2019	(m & p) Xylene	<0.002	ppm
7/9/2019	(o) Xylene	<0.001	ppm
7/9/2019	1,1,1-Trichloroethane	<0.001	ppm
7/9/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/9/2019	1,1,2-Trichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethene	<0.001	ppm
7/9/2019	1,2-Dichlorobenzene	<0.001	ppm
7/9/2019	1,2-Dichloroethane	<0.001	ppm
7/9/2019	1,2-Dichloropropane	<0.001	ppm
7/9/2019	1,3-Dichlorobenzene	<0.001	ppm
7/9/2019	1,4-Dichlorobenzene	<0.001	ppm
7/9/2019	2-Chloroethylvinylether	<0.001	ppm
7/9/2019	Acetone	0.00156	ppm
7/9/2019	Acrolein	<0.001	ppm
7/9/2019	Acrylonitrile	<0.001	ppm
7/9/2019	Benzene	<0.001	ppm
7/9/2019	Bromodichloromethane	0.00218	ppm
7/9/2019	Bromoform	<0.001	ppm
7/9/2019	Bromomethane	0.00388	ppm
7/9/2019	Carbon Tetrachloride	<0.001	ppm
7/9/2019	Chlorobenzene	<0.001	ppm
7/9/2019	Chloroethane	<0.001	ppm
7/9/2019	Chloroform	0.00348	ppm
7/9/2019	Chloromethane	<0.001	ppm
7/9/2019	cis-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Dibromochloromethane	0.00124	ppm
7/9/2019	Ethylbenzene	<0.001	ppm
7/9/2019	Methylene Chloride	<0.001	ppm
7/9/2019	Tetrachloroethene	<0.001	ppm
7/9/2019	Toluene	<0.001	ppm
7/9/2019	trans-1,2-Dichloroethene	<0.001	ppm
7/9/2019	trans-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Trichloroethene	<0.001	ppm
7/9/2019	Trichlorofluoromethane	<0.001	ppm
7/9/2019	Vinyl Chloride	<0.001	ppm
8/6/2019	(m & p) Xylene	<0.002	ppm
8/6/2019	(o) Xylene	<0.001	ppm
8/6/2019	1,1,1-Trichloroethane	<0.001	ppm
8/6/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
8/6/2019	1,1,2-Trichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethene	<0.001	ppm
8/6/2019	1,2-Dichlorobenzene	<0.001	ppm
8/6/2019	1,2-Dichloroethane	<0.001	ppm
8/6/2019	1,2-Dichloropropane	<0.001	ppm
8/6/2019	1,3-Dichlorobenzene	<0.001	ppm
8/6/2019	1,4-Dichlorobenzene	<0.001	ppm
8/6/2019	2-Chloroethylvinylether	<0.001	ppm
8/6/2019	Acetone	0.00208	ppm
8/6/2019	Acrolein	<0.001	ppm
8/6/2019	Acrylonitrile	<0.001	ppm
8/6/2019	Benzene	<0.001	ppm
8/6/2019	Bromodichloromethane	0.0125	ppm
8/6/2019	Bromoform	0.0100	ppm
8/6/2019	Bromomethane	0.00270	ppm
8/6/2019	Carbon Tetrachloride	<0.001	ppm
8/6/2019	Chlorobenzene	<0.001	ppm
8/6/2019	Chloroethane	<0.001	ppm
8/6/2019	Chloroform	0.00559	ppm
8/6/2019	Chloromethane	<0.001	ppm
8/6/2019	cis-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Dibromochloromethane	0.0188	ppm

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
8/6/2019	Ethylbenzene	<0.001	ppm
8/6/2019	Methylene Chloride	<0.001	ppm
8/6/2019	Tetrachloroethene	0.00106	ppm
8/6/2019	Toluene	0.00160	ppm
8/6/2019	trans-1,2-Dichloroethene	<0.001	ppm
8/6/2019	trans-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Trichloroethene	<0.001	ppm
8/6/2019	Trichlorofluoromethane	<0.001	ppm
8/6/2019	Vinyl Chloride	<0.001	ppm
9/10/2019	1,1,1-Trichloroethane	<0.01	ppm
9/10/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
9/10/2019	1,1,2-Trichloroethane	<0.01	ppm
9/10/2019	1,1-Dichloroethane	<0.01	ppm
9/10/2019	1,1-Dichloroethylene	<0.01	ppm
9/10/2019	1,2-Dichlorobenzene	<0.01	ppm
9/10/2019	1,2-Dichloroethane	<0.01	ppm
9/10/2019	1,2-Dichloropropane	<0.01	ppm
9/10/2019	1,3-Dichlorobenzene	<0.01	ppm
9/10/2019	1,4-Dichlorobenzene	<0.01	ppm
9/10/2019	2-Chloroethyl vinyl ether	<0.02	ppm
9/10/2019	Acetone	250	ppm
9/10/2019	Acrolein	<0.010	ppm
9/10/2019	Acrylonitrile	<0.010	ppm
9/10/2019	Benzene	<0.01	ppm
9/10/2019	Bromodichloromethane	<0.01	ppm
9/10/2019	Bromoform	<0.01	ppm
9/10/2019	Bromomethane	<0.10	ppm
9/10/2019	Carbon Tetrachloride	<0.01	ppm
9/10/2019	Chlorobenzene	<0.01	ppm
9/10/2019	Chloroethane	<0.1	ppm
9/10/2019	Chloroform	<0.01	ppm
9/10/2019	Chloromethane	<0.10	ppm
9/10/2019	cis-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Dibromochloromethane	<0.01	ppm
9/10/2019	Ethylbenzene	<0.01	ppm
9/10/2019	m,p-Xylene	<0.01	ppm
9/10/2019	Methylene Chloride	<0.05	ppm
9/10/2019	o-Xylene	<0.01	ppm
9/10/2019	Tetrachloroethylene	<0.01	ppm
9/10/2019	Toluene	<0.01	ppm
9/10/2019	trans-1,2-Dichloroethylene	<0.01	ppm
9/10/2019	trans-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Trichloroethylene	<0.01	ppm
9/10/2019	Trichlorofluoromethane	<0.01	ppm
9/10/2019	Vinyl Chloride	<0.01	ppm
10/8/2019	1,1,1-Trichloroethane	<0.01	ppm
10/8/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
10/8/2019	1,1,2-Trichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethylene	<0.01	ppm
10/8/2019	1,2-Dichlorobenzene	<0.01	ppm
10/8/2019	1,2-Dichloroethane	<0.01	ppm
10/8/2019	1,2-Dichloropropane	<0.01	ppm
10/8/2019	1,3-Dichlorobenzene	<0.01	ppm
10/8/2019	1,4-Dichlorobenzene	<0.01	ppm
10/8/2019	2-Chloroethyl vinyl ether	<0.02	ppm
10/8/2019	Acetone	<0.10	ppm
10/8/2019	Acrolein	<0.10	ppm
10/8/2019	Acrylonitrile	<0.10	ppm
10/8/2019	Benzene	<0.01	ppm
10/8/2019	Bromodichloromethane	<0.01	ppm
10/8/2019	Bromoform	<0.01	ppm
10/8/2019	Bromomethane	<0.10	ppm
10/8/2019	Carbon Tetrachloride	<0.01	ppm
10/8/2019	Chlorobenzene	<0.01	ppm
10/8/2019	Chloroethane	<0.10	ppm
10/8/2019	Chloroform	<0.01	ppm
10/8/2019	Chloromethane	<0.10	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
8/6/2019	Ethylbenzene	<0.001	ppm
8/6/2019	Methylene Chloride	<0.001	ppm
8/6/2019	Tetrachloroethene	<0.001	ppm
8/6/2019	Toluene	<0.001	ppm
8/6/2019	trans-1,2-Dichloroethene	<0.001	ppm
8/6/2019	trans-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Trichloroethene	<0.001	ppm
8/6/2019	Trichlorofluoromethane	<0.001	ppm
8/6/2019	Vinyl Chloride	<0.001	ppm
9/10/2019	1,1,1-Trichloroethane	<0.01	ppm
9/10/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
9/10/2019	1,1,2-Trichloroethane	<0.01	ppm
9/10/2019	1,1-Dichloroethane	<0.01	ppm
9/10/2019	1,1-Dichloroethylene	<0.01	ppm
9/10/2019	1,2-Dichlorobenzene	<0.01	ppm
9/10/2019	1,2-Dichloroethane	<0.01	ppm
9/10/2019	1,2-Dichloropropane	<0.01	ppm
9/10/2019	1,3-Dichlorobenzene	<0.01	ppm
9/10/2019	1,4-Dichlorobenzene	<0.01	ppm
9/10/2019	2-Chloroethyl vinyl ether	<0.02	ppm
9/10/2019	Acetone	<0.10	ppm
9/10/2019	Acrolein	<0.010	ppm
9/10/2019	Acrylonitrile	<0.010	ppm
9/10/2019	Benzene	<0.01	ppm
9/10/2019	Bromodichloromethane	<0.01	ppm
9/10/2019	Bromoform	<0.01	ppm
9/10/2019	Bromomethane	<0.1	ppm
9/10/2019	Carbon Tetrachloride	<0.01	ppm
9/10/2019	Chlorobenzene	<0.01	ppm
9/10/2019	Chloroethane	<0.1	ppm
9/10/2019	Chloroform	<0.01	ppm
9/10/2019	Chloromethane	<0.1	ppm
9/10/2019	cis-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Dibromochloromethane	<0.01	ppm
9/10/2019	Ethylbenzene	<0.01	ppm
9/10/2019	m,p-Xylene	<0.01	ppm
9/10/2019	Methylene Chloride	<0.05	ppm
9/10/2019	o-Xylene	<0.01	ppm
9/10/2019	Tetrachloroethylene	<0.01	ppm
9/10/2019	Toluene	<0.01	ppm
9/10/2019	trans-1,2-Dichloroethylene	<0.01	ppm
9/10/2019	trans-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Trichloroethylene	<0.01	ppm
9/10/2019	Trichlorofluoromethane	<0.01	ppm
9/10/2019	Vinyl Chloride	<0.01	ppm
10/8/2019	1,1,1-Trichloroethane	<0.01	ppm
10/8/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
10/8/2019	1,1,2-Trichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethylene	<0.01	ppm
10/8/2019	1,2-Dichlorobenzene	<0.01	ppm
10/8/2019	1,2-Dichloroethane	<0.01	ppm
10/8/2019	1,2-Dichloropropane	<0.01	ppm
10/8/2019	1,3-Dichlorobenzene	<0.01	ppm
10/8/2019	1,4-Dichlorobenzene	<0.01	ppm
10/8/2019	2-Chloroethyl vinyl ether	<0.02	ppm
10/8/2019	Acetone	<0.10	ppm
10/8/2019	Acrolein	<0.10	ppm
10/8/2019	Acrylonitrile	<0.10	ppm
10/8/2019	Benzene	<0.01	ppm
10/8/2019	Bromodichloromethane	<0.01	ppm
10/8/2019	Bromoform	<0.01	ppm
10/8/2019	Bromomethane	<0.10	ppm
10/8/2019	Carbon Tetrachloride	<0.01	ppm
10/8/2019	Chlorobenzene	<0.01	ppm
10/8/2019	Chloroethane	<0.10	ppm
10/8/2019	Chloroform	<0.01	ppm
10/8/2019	Chloromethane	<0.10	ppm

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
10/8/2019	cis-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Dibromochloromethane	<0.01	ppm
10/8/2019	Ethylbenzene	<0.01	ppm
10/8/2019	m,p-Xylene	<0.01	ppm
10/8/2019	Methylene Chloride	<0.05	ppm
10/8/2019	o-Xylene	<0.01	ppm
10/8/2019	Tetrachloroethylene	<0.01	ppm
10/8/2019	Toluene	<0.01	ppm
10/8/2019	trans-1,2-Dichloroethylene	<0.01	ppm
10/8/2019	trans-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Trichloroethylene	<0.01	ppm
10/8/2019	Trichlorofluoromethane	<0.01	ppm
10/8/2019	Vinyl Chloride	<0.01	ppm
11/5/2019	1,1,1-Trichloroethane	<0.002	ppm
11/5/2019	1,1,2,2-Tetrachloroethane	<0.002	ppm
11/5/2019	1,1,2-Trichloroethane	<0.002	ppm
11/5/2019	1,1-Dichloroethane	<0.002	ppm
11/5/2019	1,1-Dichloroethylene	<0.002	ppm
11/5/2019	1,2-Dichlorobenzene	<0.002	ppm
11/5/2019	1,2-Dichloroethane	<0.002	ppm
11/5/2019	1,2-Dichloropropane	<0.002	ppm
11/5/2019	1,3-Dichlorobenzene	<0.002	ppm
11/5/2019	1,4-Dichlorobenzene	<0.002	ppm
11/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
11/5/2019	Acetone	<0.010	ppm
11/5/2019	Acrolein	<0.010	ppm
11/5/2019	Acrylonitrile	<0.010	ppm
11/5/2019	Benzene	<0.002	ppm
11/5/2019	Bromodichloromethane	<0.002	ppm
11/5/2019	Bromoform	<0.002	ppm
11/5/2019	Bromomethane	<0.010	ppm
11/5/2019	Carbon Tetrachloride	<0.002	ppm
11/5/2019	Chlorobenzene	<0.002	ppm
11/5/2019	Chloroethane	<0.010	ppm
11/5/2019	Chloroform	<0.002	ppm
11/5/2019	Chloromethane	<0.010	ppm
11/5/2019	cis-1,3-Dichloropropylene	<0.002	ppm
11/5/2019	Dibromochloromethane	<0.002	ppm
11/5/2019	Ethylbenzene	<0.002	ppm
11/5/2019	m,p-Xylene	<0.002	ppm
11/5/2019	Methylene Chloride	<0.005	ppm
11/5/2019	o-Xylene	<0.002	ppm
11/5/2019	Tetrachloroethylene	<0.002	ppm
11/5/2019	Toluene	<0.002	ppm
11/5/2019	trans-1,2-Dichloroethylene	<0.002	ppm
11/5/2019	trans-1,3-Dichloropropylene	<0.002	ppm
11/5/2019	Trichloroethylene	<0.002	ppm
11/5/2019	Trichlorofluoromethane	<0.002	ppm
11/5/2019	Vinyl Chloride	<0.002	ppm
12/3/2019	(m & p) Xylene	<0.002	ppm
12/3/2019	(o) Xylene	<0.001	ppm
12/3/2019	1,1,1-Trichloroethane	<0.001	ppm
12/3/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/3/2019	1,1,2-Trichloroethane	<0.001	ppm
12/3/2019	1,1-Dichloroethane	<0.001	ppm
12/3/2019	1,1-Dichloroethene	<0.001	ppm
12/3/2019	1,2-Dichlorobenzene	<0.001	ppm
12/3/2019	1,2-Dichloroethane	<0.001	ppm
12/3/2019	1,2-Dichloropropane	<0.001	ppm
12/3/2019	1,3-Dichlorobenzene	<0.001	ppm
12/3/2019	1,4-Dichlorobenzene	<0.001	ppm
12/3/2019	2-Chloroethylvinylether	<0.001	ppm
12/3/2019	Acetone	0.0647	ppm
12/3/2019	Acrolein	<0.001	ppm
12/3/2019	Acrylonitrile	<0.001	ppm
12/3/2019	Benzene	<0.001	ppm
12/3/2019	Bromodichloromethane	<0.001	ppm
12/3/2019	Bromoform	<0.001	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
10/8/2019	cis-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Dibromochloromethane	<0.01	ppm
10/8/2019	Ethylbenzene	<0.01	ppm
10/8/2019	m,p-Xylene	<0.01	ppm
10/8/2019	Methylene Chloride	<0.05	ppm
10/8/2019	o-Xylene	<0.01	ppm
10/8/2019	Tetrachloroethylene	<0.01	ppm
10/8/2019	Toluene	<0.01	ppm
10/8/2019	trans-1,2-Dichloroethylene	<0.01	ppm
10/8/2019	trans-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Trichloroethylene	<0.01	ppm
10/8/2019	Trichlorofluoromethane	<0.01	ppm
10/8/2019	Vinyl Chloride	<0.01	ppm
11/5/2019	1,1,1-Trichloroethane	<0.005	ppm
11/5/2019	1,1,2,2-Tetrachloroethane	<0.005	ppm
11/5/2019	1,1,2-Trichloroethane	<0.005	ppm
11/5/2019	1,1-Dichloroethane	<0.005	ppm
11/5/2019	1,1-Dichloroethylene	<0.005	ppm
11/5/2019	1,2-Dichlorobenzene	<0.005	ppm
11/5/2019	1,2-Dichloroethane	<0.005	ppm
11/5/2019	1,2-Dichloropropane	<0.005	ppm
11/5/2019	1,3-Dichlorobenzene	<0.005	ppm
11/5/2019	1,4-Dichlorobenzene	<0.005	ppm
11/5/2019	2-Chloroethyl vinyl ether	<0.005	ppm
11/5/2019	Acetone	<0.010	ppm
11/5/2019	Acrolein	<0.010	ppm
11/5/2019	Acrylonitrile	<0.010	ppm
11/5/2019	Benzene	<0.005	ppm
11/5/2019	Bromodichloromethane	<0.005	ppm
11/5/2019	Bromoform	<0.005	ppm
11/5/2019	Bromomethane	<0.010	ppm
11/5/2019	Carbon Tetrachloride	<0.005	ppm
11/5/2019	Chlorobenzene	<0.005	ppm
11/5/2019	Chloroethane	<0.010	ppm
11/5/2019	Chloroform	<0.005	ppm
11/5/2019	Chloromethane	<0.010	ppm
11/5/2019	cis-1,3-Dichloropropylene	<0.005	ppm
11/5/2019	Dibromochloromethane	<0.005	ppm
11/5/2019	Ethylbenzene	<0.005	ppm
11/5/2019	m,p-Xylene	<0.005	ppm
11/5/2019	Methylene Chloride	<0.005	ppm
11/5/2019	o-Xylene	<0.005	ppm
11/5/2019	Tetrachloroethylene	<0.005	ppm
11/5/2019	Toluene	<0.005	ppm
11/5/2019	trans-1,2-Dichloroethylene	<0.005	ppm
11/5/2019	trans-1,3-Dichloropropylene	<0.005	ppm
11/5/2019	Trichloroethylene	<0.005	ppm
11/5/2019	Trichlorofluoromethane	<0.005	ppm
11/5/2019	Vinyl Chloride	<0.005	ppm
12/3/2019	(m & p) Xylene	<0.002	ppm
12/3/2019	(o) Xylene	<0.001	ppm
12/3/2019	1,1,1-Trichloroethane	<0.001	ppm
12/3/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/3/2019	1,1,2-Trichloroethane	<0.001	ppm
12/3/2019	1,1-Dichloroethane	<0.001	ppm
12/3/2019	1,1-Dichloroethene	<0.001	ppm
12/3/2019	1,2-Dichlorobenzene	<0.001	ppm
12/3/2019	1,2-Dichloroethane	<0.001	ppm
12/3/2019	1,2-Dichloropropane	<0.001	ppm
12/3/2019	1,3-Dichlorobenzene	<0.001	ppm
12/3/2019	1,4-Dichlorobenzene	<0.001	ppm
12/3/2019	2-Chloroethylvinylether	<0.001	ppm
12/3/2019	Acetone	<0.001	ppm
12/3/2019	Acrolein	<0.001	ppm
12/3/2019	Acrylonitrile	<0.001	ppm
12/3/2019	Benzene	<0.001	ppm
12/3/2019	Bromodichloromethane	<0.001	ppm
12/3/2019	Bromoform	<0.001	ppm

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2019

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
12/3/2019	Bromomethane	<0.002	ppm
12/3/2019	Carbon Tetrachloride	<0.001	ppm
12/3/2019	Chlorobenzene	<0.001	ppm
12/3/2019	Chloroethane	<0.001	ppm
12/3/2019	Chloroform	0.00224	ppm
12/3/2019	Chloromethane	<0.001	ppm
12/3/2019	cis-1,3-Dichloropropene	<0.001	ppm
12/3/2019	Dibromochloromethane	<0.001	ppm
12/3/2019	Ethylbenzene	<0.001	ppm
12/3/2019	Methylene Chloride	<0.001	ppm
12/3/2019	Tetrachloroethene	0.00141	ppm
12/3/2019	Toluene	0.00146	ppm
12/3/2019	trans-1,2-Dichloroethene	<0.001	ppm
12/3/2019	trans-1,3-Dichloropropene	<0.001	ppm
12/3/2019	Trichloroethene	0.00134	ppm
12/3/2019	Trichlorofluoromethane	<0.001	ppm
12/3/2019	Vinyl Chloride	<0.001	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
12/3/2019	Bromomethane	0.00804	ppm
12/3/2019	Carbon Tetrachloride	<0.001	ppm
12/3/2019	Chlorobenzene	<0.001	ppm
12/3/2019	Chloroethane	<0.001	ppm
12/3/2019	Chloroform	<0.001	ppm
12/3/2019	Chloromethane	<0.001	ppm
12/3/2019	cis-1,3-Dichloropropene	<0.001	ppm
12/3/2019	Dibromochloromethane	<0.001	ppm
12/3/2019	Ethylbenzene	<0.001	ppm
12/3/2019	Methylene Chloride	<0.001	ppm
12/3/2019	Tetrachloroethene	<0.001	ppm
12/3/2019	Toluene	<0.001	ppm
12/3/2019	trans-1,2-Dichloroethene	<0.001	ppm
12/3/2019	trans-1,3-Dichloropropene	<0.001	ppm
12/3/2019	Trichloroethene	<0.001	ppm
12/3/2019	Trichlorofluoromethane	<0.001	ppm
12/3/2019	Vinyl Chloride	<0.001	ppm

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/8/2019	1,1,1-Trichloroethane	<0.001	ppm
1/8/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
1/8/2019	1,1,2-Trichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethylene	<0.001	ppm
1/8/2019	1,2-Dichlorobenzene	<0.001	ppm
1/8/2019	1,2-Dichloroethane	<0.001	ppm
1/8/2019	1,2-Dichloropropane	<0.001	ppm
1/8/2019	1,3-Dichlorobenzene	<0.001	ppm
1/8/2019	1,4-Dichlorobenzene	<0.001	ppm
1/8/2019	2-Chloroethyl vinyl ether	<0.002	ppm
1/8/2019	Acetone	0.91	ppm
1/8/2019	Benzene	<0.001	ppm
1/8/2019	Bromodichloromethane	<0.001	ppm
1/8/2019	Bromoform	<0.001	ppm
1/8/2019	Bromomethane	<0.010	ppm
1/8/2019	Carbon Tetrachloride	<0.001	ppm
1/8/2019	Chlorobenzene	<0.001	ppm
1/8/2019	Chloroethane	<0.010	ppm
1/8/2019	Chloroform	.0024	ppm
1/8/2019	Chloromethane	<0.010	ppm
1/8/2019	cis-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Dibromochloromethane	<0.001	ppm
1/8/2019	Ethylbenzene	<0.001	ppm
1/8/2019	m,p-Xylene	<0.001	ppm
1/8/2019	Methylene Chloride	<0.005	ppm
1/8/2019	o-Xylene	<0.001	ppm
1/8/2019	Tetrachloroethylene	0.0012	ppm
1/8/2019	Toluene	0.0017	ppm
1/8/2019	trans-1,2-Dichloroethylene	<0.001	ppm
1/8/2019	trans-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Trichloroethylene	<0.001	ppm
1/8/2019	Trichlorofluoromethane	<0.001	ppm
1/8/2019	Vinyl Chloride	<0.001	ppm
2/5/2019	1,1,1-Trichloroethane	<0.01	ppm
2/5/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
2/5/2019	1,1,2-Trichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethylene	<0.01	ppm
2/5/2019	1,2-Dichlorobenzene	<0.01	ppm
2/5/2019	1,2-Dichloroethane	<0.01	ppm
2/5/2019	1,2-Dichloropropane	<0.01	ppm
2/5/2019	1,3-Dichlorobenzene	<0.01	ppm
2/5/2019	1,4-Dichlorobenzene	<0.01	ppm
2/5/2019	2-Chloroethyl vinyl ether	<0.02	ppm
2/5/2019	Acetone	.28	ppm
2/5/2019	Benzene	<0.01	ppm
2/5/2019	Bromodichloromethane	<0.01	ppm
2/5/2019	Bromoform	<0.01	ppm
2/5/2019	Bromomethane	<0.10	ppm
2/5/2019	Carbon Tetrachloride	<0.01	ppm
2/5/2019	Chlorobenzene	<0.01	ppm
2/5/2019	Chloroethane	<0.10	ppm
2/5/2019	Chloroform	<0.01	ppm
2/5/2019	Chloromethane	<0.10	ppm
2/5/2019	cis-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Dibromochloromethane	<0.01	ppm
2/5/2019	Ethylbenzene	<0.01	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/8/2019	1,1,1-Trichloroethane	<0.001	ppm
1/8/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
1/8/2019	1,1,2-Trichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethane	<0.001	ppm
1/8/2019	1,1-Dichloroethylene	<0.001	ppm
1/8/2019	1,2-Dichlorobenzene	<0.001	ppm
1/8/2019	1,2-Dichloroethane	<0.001	ppm
1/8/2019	1,2-Dichloropropane	<0.001	ppm
1/8/2019	1,3-Dichlorobenzene	<0.001	ppm
1/8/2019	1,4-Dichlorobenzene	<0.001	ppm
1/8/2019	2-Chloroethyl vinyl ether	<0.002	ppm
1/8/2019	Acetone	<0.010	ppm
1/8/2019	Benzene	<0.001	ppm
1/8/2019	Bromodichloromethane	<0.001	ppm
1/8/2019	Bromoform	<0.001	ppm
1/8/2019	Bromomethane	<0.010	ppm
1/8/2019	Carbon Tetrachloride	<0.001	ppm
1/8/2019	Chlorobenzene	<0.001	ppm
1/8/2019	Chloroethane	<0.010	ppm
1/8/2019	Chloroform	<0.001	ppm
1/8/2019	Chloromethane	<0.010	ppm
1/8/2019	cis-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Dibromochloromethane	<0.001	ppm
1/8/2019	Ethylbenzene	<0.001	ppm
1/8/2019	m,p-Xylene	<0.001	ppm
1/8/2019	Methylene Chloride	<0.005	ppm
1/8/2019	o-Xylene	<0.001	ppm
1/8/2019	Tetrachloroethylene	<0.001	ppm
1/8/2019	Toluene	<0.001	ppm
1/8/2019	trans-1,2-Dichloroethylene	<0.001	ppm
1/8/2019	trans-1,3-Dichloropropylene	<0.001	ppm
1/8/2019	Trichloroethylene	<0.001	ppm
1/8/2019	Trichlorofluoromethane	<0.001	ppm
1/8/2019	Vinyl Chloride	<0.001	ppm
2/5/2019	1,1,1-Trichloroethane	<0.01	ppm
2/5/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
2/5/2019	1,1,2-Trichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethane	<0.01	ppm
2/5/2019	1,1-Dichloroethylene	<0.01	ppm
2/5/2019	1,2-Dichlorobenzene	<0.01	ppm
2/5/2019	1,2-Dichloroethane	<0.01	ppm
2/5/2019	1,2-Dichloropropane	<0.01	ppm
2/5/2019	1,3-Dichlorobenzene	<0.01	ppm
2/5/2019	1,4-Dichlorobenzene	<0.01	ppm
2/5/2019	2-Chloroethyl vinyl ether	<0.02	ppm
2/5/2019	Acetone	<0.10	ppm
2/5/2019	Benzene	<0.01	ppm
2/5/2019	Bromodichloromethane	<0.01	ppm
2/5/2019	Bromoform	<0.01	ppm
2/5/2019	Bromomethane	<0.10	ppm
2/5/2019	Carbon Tetrachloride	<0.01	ppm
2/5/2019	Chlorobenzene	<0.01	ppm
2/5/2019	Chloroethane	<0.10	ppm
2/5/2019	Chloroform	<0.01	ppm
2/5/2019	Chloromethane	<0.10	ppm
2/5/2019	cis-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Dibromochloromethane	<0.01	ppm
2/5/2019	Ethylbenzene	<0.01	ppm

Table 26: EPA VOC Data
Bucklin Point

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
2/5/2019	m,p-Xylene	<0.01	ppm
2/5/2019	Methylene Chloride	<0.01	ppm
2/5/2019	o-Xylene	<0.01	ppm
2/5/2019	Tetrachloroethylene	<0.01	ppm
2/5/2019	Toluene	<0.01	ppm
2/5/2019	trans-1,2-Dichloroethylene	<0.01	ppm
2/5/2019	trans-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Trichloroethylene	<0.01	ppm
2/5/2019	Trichlorofluoromethane	<0.05	ppm
2/5/2019	Vinyl Chloride	<0.01	ppm
3/5/2019	1,1,1-Trichloroethane	<0.001	ppm
3/5/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
3/5/2019	1,1,2-Trichloroethane	<0.001	ppm
3/5/2019	1,1-Dichloroethane	<0.001	ppm
3/5/2019	1,1-Dichloroethylene	<0.001	ppm
3/5/2019	1,2-Dichlorobenzene	<0.001	ppm
3/5/2019	1,2-Dichloroethane	<0.001	ppm
3/5/2019	1,2-Dichloropropane	<0.001	ppm
3/5/2019	1,3-Dichlorobenzene	<0.001	ppm
3/5/2019	1,4-Dichlorobenzene	<0.001	ppm
3/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
3/5/2019	Acetone	0.031	ppm
3/5/2019	Benzene	<0.001	ppm
3/5/2019	Bromodichloromethane	<0.001	ppm
3/5/2019	Bromoform	<0.001	ppm
3/5/2019	Bromomethane	<0.01	ppm
3/5/2019	Carbon Tetrachloride	<0.001	ppm
3/5/2019	Chlorobenzene	<0.001	ppm
3/5/2019	Chloroethane	<0.01	ppm
3/5/2019	Chloroform	0.0025	ppm
3/5/2019	Chloromethane	<0.01	ppm
3/5/2019	cis-1,3-Dichloropropylene	<0.001	ppm
3/5/2019	Dibromochloromethane	<0.001	ppm
3/5/2019	Ethylbenzene	<0.001	ppm
3/5/2019	m,p-Xylene	<0.001	ppm
3/5/2019	Methylene Chloride	<0.005	ppm
3/5/2019	o-Xylene	<0.001	ppm
3/5/2019	Tetrachloroethylene	0.0041	ppm
3/5/2019	Toluene	<0.001	ppm
3/5/2019	trans-1,2-Dichloroethylene	<0.001	ppm
3/5/2019	trans-1,3-Dichloropropylene	<0.001	ppm
3/5/2019	Trichloroethylene	<0.001	ppm
3/5/2019	Trichlorofluoromethane	<0.001	ppm
3/5/2019	Vinyl Chloride	<0.001	ppm
4/2/2019	1,1,1-Trichloroethane	<0.001	ppm
4/2/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
4/2/2019	1,1,2-Trichloroethane	<0.001	ppm
4/2/2019	1,1-Dichloroethane	<0.001	ppm
4/2/2019	1,1-Dichloroethylene	<0.001	ppm
4/2/2019	1,2-Dichlorobenzene	<0.001	ppm
4/2/2019	1,2-Dichloroethane	<0.001	ppm
4/2/2019	1,2-Dichloropropane	<0.001	ppm
4/2/2019	1,3-Dichlorobenzene	<0.001	ppm
4/2/2019	1,4-Dichlorobenzene	<0.001	ppm
4/2/2019	2-Chloroethyl vinyl ether	<0.002	ppm
4/2/2019	Acetone	0.270	ppm
4/2/2019	Acrolein	<0.010	ppm
4/2/2019	Acrylonitrile	<0.010	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
2/5/2019	m,p-Xylene	<0.01	ppm
2/5/2019	Methylene Chloride	<0.05	ppm
2/5/2019	o-Xylene	<0.01	ppm
2/5/2019	Tetrachloroethylene	<0.01	ppm
2/5/2019	Toluene	<0.01	ppm
2/5/2019	trans-1,2-Dichloroethylene	<0.01	ppm
2/5/2019	trans-1,3-Dichloropropylene	<0.01	ppm
2/5/2019	Trichloroethylene	<0.01	ppm
2/5/2019	Trichlorofluoromethane	<0.01	ppm
2/5/2019	Vinyl Chloride	<0.01	ppm
3/5/2019	1,1,1-Trichloroethane	<0.001	ppm
3/5/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
3/5/2019	1,1,2-Trichloroethane	<0.001	ppm
3/5/2019	1,1-Dichloroethane	<0.001	ppm
3/5/2019	1,1-Dichloroethylene	<0.001	ppm
3/5/2019	1,2-Dichlorobenzene	<0.001	ppm
3/5/2019	1,2-Dichloroethane	<0.001	ppm
3/5/2019	1,2-Dichloropropane	<0.001	ppm
3/5/2019	1,3-Dichlorobenzene	<0.001	ppm
3/5/2019	1,4-Dichlorobenzene	<0.001	ppm
3/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
3/5/2019	Acetone	<0.01	ppm
3/5/2019	Benzene	<0.001	ppm
3/5/2019	Bromodichloromethane	<0.001	ppm
3/5/2019	Bromoform	<0.001	ppm
3/5/2019	Bromomethane	<0.01	ppm
3/5/2019	Carbon Tetrachloride	<0.001	ppm
3/5/2019	Chlorobenzene	<0.001	ppm
3/5/2019	Chloroethane	<0.01	ppm
3/5/2019	Chloroform	<0.001	ppm
3/5/2019	Chloromethane	<0.01	ppm
3/5/2019	cis-1,3-Dichloropropylene	<0.001	ppm
3/5/2019	Dibromochloromethane	<0.001	ppm
3/5/2019	Ethylbenzene	<0.001	ppm
3/5/2019	m,p-Xylene	<0.001	ppm
3/5/2019	Methylene Chloride	<0.005	ppm
3/5/2019	o-Xylene	<0.001	ppm
3/5/2019	Tetrachloroethylene	<0.001	ppm
3/5/2019	Toluene	<0.001	ppm
3/5/2019	trans-1,2-Dichloroethylene	<0.001	ppm
3/5/2019	trans-1,3-Dichloropropylene	<0.001	ppm
3/5/2019	Trichloroethylene	<0.001	ppm
3/5/2019	Trichlorofluoromethane	<0.001	ppm
3/5/2019	Vinyl Chloride	<0.001	ppm
4/3/2019	1,1,1-Trichloroethane	<0.001	ppm
4/3/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
4/3/2019	1,1,2-Trichloroethane	<0.001	ppm
4/3/2019	1,1-Dichloroethane	<0.001	ppm
4/3/2019	1,1-Dichloroethylene	<0.001	ppm
4/3/2019	1,2-Dichlorobenzene	<0.001	ppm
4/3/2019	1,2-Dichloroethane	<0.001	ppm
4/3/2019	1,2-Dichloropropane	<0.001	ppm
4/3/2019	1,3-Dichlorobenzene	<0.001	ppm
4/3/2019	1,4-Dichlorobenzene	<0.001	ppm
4/3/2019	2-Chloroethyl vinyl ether	<0.002	ppm
4/3/2019	Acetone	<0.010	ppm
4/3/2019	Acrolein	<0.010	ppm
4/3/2019	Acrylonitrile	<0.010	ppm

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
4/2/2019	Benzene	<0.001	ppm
4/2/2019	Bromodichloromethane	<0.001	ppm
4/2/2019	Bromoform	<0.001	ppm
4/2/2019	Bromomethane	<0.010	ppm
4/2/2019	Carbon Tetrachloride	<0.001	ppm
4/2/2019	Chlorobenzene	<0.001	ppm
4/2/2019	Chloroethane	<0.010	ppm
4/2/2019	Chloroform	0.004	ppm
4/2/2019	Chloromethane	<0.010	ppm
4/2/2019	cis-1,3-Dichloropropylene	<0.001	ppm
4/2/2019	Dibromochloromethane	<0.001	ppm
4/2/2019	Ethylbenzene	<0.001	ppm
4/2/2019	m,p-Xylene	<0.001	ppm
4/2/2019	Methylene Chloride	<0.005	ppm
4/2/2019	o-Xylene	<0.001	ppm
4/2/2019	Tetrachloroethylene	0.0028	ppm
4/2/2019	Toluene	0.0035	ppm
4/2/2019	trans-1,2-Dichloroethylene	<0.001	ppm
4/2/2019	trans-1,3-Dichloropropylene	<0.001	ppm
4/2/2019	Trichloroethylene	<0.001	ppm
4/2/2019	Trichlorofluoromethane	<0.001	ppm
4/2/2019	Vinyl Chloride	<0.001	ppm
5/8/2019	(m & p) Xylene	<0.002	ppm
5/8/2019	(o) Xylene	<0.001	ppm
5/8/2019	1,1,1-Trichloroethane	<0.001	ppm
5/8/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
5/8/2019	1,1,2-Trichloroethane	<0.001	ppm
5/8/2019	1,1-Dichloroethane	<0.001	ppm
5/8/2019	1,1-Dichloroethene	<0.001	ppm
5/8/2019	1,2-Dichlorobenzene	<0.001	ppm
5/8/2019	1,2-Dichloroethane	<0.001	ppm
5/8/2019	1,2-Dichloropropane	<0.001	ppm
5/8/2019	1,3-Dichlorobenzene	<0.001	ppm
5/8/2019	1,4-Dichlorobenzene	<0.001	ppm
5/8/2019	2-Chloroethylvinylether	<0.001	ppm
5/8/2019	Acetone	0.133	ppm
5/8/2019	Acrolein	<0.001	ppm
5/8/2019	Acrylonitrile	<0.001	ppm
5/8/2019	Benzene	<0.001	ppm
5/8/2019	Bromodichloromethane	<0.001	ppm
5/8/2019	Bromoform	<0.001	ppm
5/8/2019	Bromomethane	<0.002	ppm
5/8/2019	Carbon Tetrachloride	<0.001	ppm
5/8/2019	Chlorobenzene	<0.001	ppm
5/8/2019	Chloroethane	<0.001	ppm
5/8/2019	Chloroform	0.00492	ppm
5/8/2019	Chloromethane	<0.001	ppm
5/8/2019	cis-1,3-Dichloropropene	<0.001	ppm
5/8/2019	Dibromochloromethane	<0.001	ppm
5/8/2019	Ethylbenzene	<0.001	ppm
5/8/2019	Methylene Chloride	<0.001	ppm
5/8/2019	Tetrachloroethene	0.00269	ppm
5/8/2019	Toluene	0.00795	ppm
5/8/2019	trans-1,2-Dichloroethene	<0.001	ppm
5/8/2019	trans-1,3-Dichloropropene	<0.001	ppm
5/8/2019	Trichloroethene	<0.001	ppm
5/8/2019	Trichlorofluoromethane	<0.001	ppm
5/8/2019	Vinyl Chloride	<0.001	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
4/3/2019	Benzene	<0.001	ppm
4/3/2019	Bromodichloromethane	<0.001	ppm
4/3/2019	Bromoform	<0.001	ppm
4/3/2019	Bromomethane	<0.010	ppm
4/3/2019	Carbon Tetrachloride	<0.001	ppm
4/3/2019	Chlorobenzene	<0.001	ppm
4/3/2019	Chloroethane	<0.010	ppm
4/3/2019	Chloroform	<0.001	ppm
4/3/2019	Chloromethane	<0.010	ppm
4/3/2019	cis-1,3-Dichloropropylene	<0.001	ppm
4/3/2019	Dibromochloromethane	<0.001	ppm
4/3/2019	Ethylbenzene	<0.001	ppm
4/3/2019	m,p-Xylene	<0.001	ppm
4/3/2019	Methylene Chloride	<0.005	ppm
4/3/2019	o-Xylene	<0.001	ppm
4/3/2019	Tetrachloroethylene	<0.001	ppm
4/3/2019	Toluene	<0.001	ppm
4/3/2019	trans-1,2-Dichloroethylene	<0.001	ppm
4/3/2019	trans-1,3-Dichloropropylene	<0.001	ppm
4/3/2019	Trichloroethylene	<0.001	ppm
4/3/2019	Trichlorofluoromethane	<0.001	ppm
4/3/2019	Vinyl Chloride	<0.001	ppm
5/7/2019	(m & p) Xylene	<0.002	ppm
5/7/2019	(o) Xylene	<0.001	ppm
5/7/2019	1,1,1-Trichloroethane	<0.001	ppm
5/7/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
5/7/2019	1,1,2-Trichloroethane	<0.001	ppm
5/7/2019	1,1-Dichloroethane	<0.001	ppm
5/7/2019	1,1-Dichloroethene	<0.001	ppm
5/7/2019	1,2-Dichlorobenzene	<0.001	ppm
5/7/2019	1,2-Dichloroethane	<0.001	ppm
5/7/2019	1,2-Dichloropropane	<0.001	ppm
5/7/2019	1,3-Dichlorobenzene	<0.001	ppm
5/7/2019	1,4-Dichlorobenzene	<0.001	ppm
5/7/2019	2-Chloroethylvinylether	<0.001	ppm
5/7/2019	Acetone	0.00171	ppm
5/7/2019	Acrolein	<0.001	ppm
5/7/2019	Acrylonitrile	<0.001	ppm
5/7/2019	Benzene	<0.001	ppm
5/7/2019	Bromodichloromethane	<0.001	ppm
5/7/2019	Bromoform	<0.001	ppm
5/7/2019	Bromomethane	<0.002	ppm
5/7/2019	Carbon Tetrachloride	<0.001	ppm
5/7/2019	Chlorobenzene	<0.001	ppm
5/7/2019	Chloroethane	<0.001	ppm
5/7/2019	Chloroform	0.00120	ppm
5/7/2019	Chloromethane	<0.001	ppm
5/7/2019	cis-1,3-Dichloropropene	<0.001	ppm
5/7/2019	Dibromochloromethane	<0.001	ppm
5/7/2019	Ethylbenzene	<0.001	ppm
5/7/2019	Methylene Chloride	<0.001	ppm
5/7/2019	Tetrachloroethene	<0.001	ppm
5/7/2019	Toluene	<0.001	ppm
5/7/2019	trans-1,2-Dichloroethene	<0.001	ppm
5/7/2019	trans-1,3-Dichloropropene	<0.001	ppm
5/7/2019	Trichloroethene	<0.001	ppm
5/7/2019	Trichlorofluoromethane	<0.001	ppm
5/7/2019	Vinyl Chloride	<0.001	ppm

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
6/4/2019	(m & p) Xylene	<0.002	ppm
6/4/2019	(o) Xylene	<0.001	ppm
6/4/2019	1,1,1-Trichloroethane	<0.001	ppm
6/4/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
6/4/2019	1,1,2-Trichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethene	<0.001	ppm
6/4/2019	1,2-Dichlorobenzene	<0.001	ppm
6/4/2019	1,2-Dichloroethane	<0.001	ppm
6/4/2019	1,2-Dichloropropane	<0.001	ppm
6/4/2019	1,3-Dichlorobenzene	<0.001	ppm
6/4/2019	1,4-Dichlorobenzene	<0.001	ppm
6/4/2019	2-Chloroethylvinylether	<0.001	ppm
6/4/2019	Acetone	0.0613	ppm
6/4/2019	Acrolein	<0.001	ppm
6/4/2019	Acrylonitrile	<0.001	ppm
6/4/2019	Benzene	<0.001	ppm
6/4/2019	Bromodichloromethane	<0.001	ppm
6/4/2019	Bromoform	<0.001	ppm
6/4/2019	Bromomethane	<0.002	ppm
6/4/2019	Carbon Tetrachloride	<0.001	ppm
6/4/2019	Chlorobenzene	<0.001	ppm
6/4/2019	Chloroethane	<0.001	ppm
6/4/2019	Chloroform	0.00292	ppm
6/4/2019	Chloromethane	<0.001	ppm
6/4/2019	cis-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Dibromochloromethane	<0.001	ppm
6/4/2019	Ethylbenzene	<0.001	ppm
6/4/2019	Methylene Chloride	<0.001	ppm
6/4/2019	Tetrachloroethene	0.00249	ppm
6/4/2019	Toluene	0.00193	ppm
6/4/2019	trans-1,2-Dichloroethene	<0.001	ppm
6/4/2019	trans-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Trichloroethene	<0.001	ppm
6/4/2019	Trichlorofluoromethane	<0.001	ppm
6/4/2019	Vinyl Chloride	<0.001	ppm
7/9/2019	(m & p) Xylene	<0.002	ppm
7/9/2019	(o) Xylene	<0.001	ppm
7/9/2019	1,1,1-Trichloroethane	<0.001	ppm
7/9/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/9/2019	1,1,2-Trichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethene	<0.001	ppm
7/9/2019	1,2-Dichlorobenzene	<0.001	ppm
7/9/2019	1,2-Dichloroethane	<0.001	ppm
7/9/2019	1,2-Dichloropropane	<0.001	ppm
7/9/2019	1,3-Dichlorobenzene	<0.001	ppm
7/9/2019	1,4-Dichlorobenzene	<0.001	ppm
7/9/2019	2-Chloroethylvinylether	<0.001	ppm
7/9/2019	Acetone	0.0827	ppm
7/9/2019	Acrolein	<0.001	ppm
7/9/2019	Acrylonitrile	<0.001	ppm
7/9/2019	Benzene	<0.001	ppm
7/9/2019	Bromodichloromethane	<0.001	ppm
7/9/2019	Bromoform	<0.001	ppm
7/9/2019	Bromomethane	0.00225	ppm
7/9/2019	Carbon Tetrachloride	<0.001	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
6/4/2019	(m & p) Xylene	<0.002	ppm
6/4/2019	(o) Xylene	<0.001	ppm
6/4/2019	1,1,1-Trichloroethane	<0.001	ppm
6/4/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
6/4/2019	1,1,2-Trichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethane	<0.001	ppm
6/4/2019	1,1-Dichloroethene	<0.001	ppm
6/4/2019	1,2-Dichlorobenzene	<0.001	ppm
6/4/2019	1,2-Dichloroethane	<0.001	ppm
6/4/2019	1,2-Dichloropropane	<0.001	ppm
6/4/2019	1,3-Dichlorobenzene	<0.001	ppm
6/4/2019	1,4-Dichlorobenzene	<0.001	ppm
6/4/2019	2-Chloroethylvinylether	<0.001	ppm
6/4/2019	Acetone	0.00490	ppm
6/4/2019	Acrolein	<0.001	ppm
6/4/2019	Acrylonitrile	<0.001	ppm
6/4/2019	Benzene	<0.001	ppm
6/4/2019	Bromodichloromethane	<0.001	ppm
6/4/2019	Bromoform	<0.001	ppm
6/4/2019	Bromomethane	<0.002	ppm
6/4/2019	Carbon Tetrachloride	<0.001	ppm
6/4/2019	Chlorobenzene	<0.001	ppm
6/4/2019	Chloroethane	<0.001	ppm
6/4/2019	Chloroform	<0.001	ppm
6/4/2019	Chloromethane	<0.001	ppm
6/4/2019	cis-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Dibromochloromethane	<0.001	ppm
6/4/2019	Ethylbenzene	<0.001	ppm
6/4/2019	Methylene Chloride	<0.001	ppm
6/4/2019	Tetrachloroethene	<0.001	ppm
6/4/2019	Toluene	<0.001	ppm
6/4/2019	trans-1,2-Dichloroethene	<0.001	ppm
6/4/2019	trans-1,3-Dichloropropene	<0.001	ppm
6/4/2019	Trichloroethene	<0.001	ppm
6/4/2019	Trichlorofluoromethane	<0.001	ppm
6/4/2019	Vinyl Chloride	<0.001	ppm
7/9/2019	(m & p) Xylene	<0.002	ppm
7/9/2019	(o) Xylene	<0.001	ppm
7/9/2019	1,1,1-Trichloroethane	<0.001	ppm
7/9/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/9/2019	1,1,2-Trichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethane	<0.001	ppm
7/9/2019	1,1-Dichloroethene	<0.001	ppm
7/9/2019	1,2-Dichlorobenzene	<0.001	ppm
7/9/2019	1,2-Dichloroethane	<0.001	ppm
7/9/2019	1,2-Dichloropropane	<0.001	ppm
7/9/2019	1,3-Dichlorobenzene	<0.001	ppm
7/9/2019	1,4-Dichlorobenzene	<0.001	ppm
7/9/2019	2-Chloroethylvinylether	<0.001	ppm
7/9/2019	Acetone	0.00211	ppm
7/9/2019	Acrolein	<0.001	ppm
7/9/2019	Acrylonitrile	<0.001	ppm
7/9/2019	Benzene	<0.001	ppm
7/9/2019	Bromodichloromethane	<0.001	ppm
7/9/2019	Bromoform	<0.001	ppm
7/9/2019	Bromomethane	<0.002	ppm
7/9/2019	Carbon Tetrachloride	<0.001	ppm

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
7/9/2019	Chlorobenzene	<0.001	ppm
7/9/2019	Chloroethane	<0.001	ppm
7/9/2019	Chloroform	0.00250	ppm
7/9/2019	Chloromethane	<0.001	ppm
7/9/2019	cis-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Dibromochloromethane	<0.001	ppm
7/9/2019	Ethylbenzene	<0.001	ppm
7/9/2019	Methylene Chloride	0.00111	ppm
7/9/2019	Tetrachloroethene	0.00420	ppm
7/9/2019	Toluene	0.00336	ppm
7/9/2019	trans-1,2-Dichloroethene	<0.001	ppm
7/9/2019	trans-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Trichloroethene	0.00110	ppm
7/9/2019	Trichlorofluoromethane	<0.001	ppm
7/9/2019	Vinyl Chloride	<0.001	ppm
8/6/2019	(m & p) Xylene	<0.002	ppm
8/6/2019	(o) Xylene	<0.001	ppm
8/6/2019	1,1,1-Trichloroethane	<0.001	ppm
8/6/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
8/6/2019	1,1,2-Trichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethene	<0.001	ppm
8/6/2019	1,2-Dichlorobenzene	<0.001	ppm
8/6/2019	1,2-Dichloroethane	<0.001	ppm
8/6/2019	1,2-Dichloropropane	<0.001	ppm
8/6/2019	1,3-Dichlorobenzene	<0.001	ppm
8/6/2019	1,4-Dichlorobenzene	<0.001	ppm
8/6/2019	2-Chloroethylvinylether	<0.001	ppm
8/6/2019	Acetone	0.122	ppm
8/6/2019	Acrolein	<0.001	ppm
8/6/2019	Acrylonitrile	0.00108	ppm
8/6/2019	Benzene	<0.001	ppm
8/6/2019	Bromodichloromethane	<0.001	ppm
8/6/2019	Bromoform	<0.001	ppm
8/6/2019	Bromomethane	<0.002	ppm
8/6/2019	Carbon Tetrachloride	<0.001	ppm
8/6/2019	Chlorobenzene	<0.001	ppm
8/6/2019	Chloroethane	<0.001	ppm
8/6/2019	Chloroform	0.00181	ppm
8/6/2019	Chloromethane	<0.001	ppm
8/6/2019	cis-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Dibromochloromethane	<0.001	ppm
8/6/2019	Ethylbenzene	<0.001	ppm
8/6/2019	Methylene Chloride	<0.001	ppm
8/6/2019	Tetrachloroethene	0.00723	ppm
8/6/2019	Toluene	0.00508	ppm
8/6/2019	trans-1,2-Dichloroethene	<0.001	ppm
8/6/2019	trans-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Trichloroethene	0.00155	ppm
8/6/2019	Trichlorofluoromethane	<0.001	ppm
8/6/2019	Vinyl Chloride	<0.001	ppm
9/10/2019	1,1,1-Trichloroethane	<0.01	ppm
9/10/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
9/10/2019	1,1,2-Trichloroethane	<0.01	ppm
9/10/2019	1,1-Dichloroethane	<0.01	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
7/9/2019	Chlorobenzene	<0.001	ppm
7/9/2019	Chloroethane	<0.001	ppm
7/9/2019	Chloroform	<0.001	ppm
7/9/2019	Chloromethane	<0.001	ppm
7/9/2019	cis-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Dibromochloromethane	<0.001	ppm
7/9/2019	Ethylbenzene	<0.001	ppm
7/9/2019	Methylene Chloride	<0.001	ppm
7/9/2019	Tetrachloroethene	<0.001	ppm
7/9/2019	Toluene	<0.001	ppm
7/9/2019	trans-1,2-Dichloroethene	<0.001	ppm
7/9/2019	trans-1,3-Dichloropropene	<0.001	ppm
7/9/2019	Trichloroethene	<0.001	ppm
7/9/2019	Trichlorofluoromethane	<0.001	ppm
7/9/2019	Vinyl Chloride	<0.001	ppm
8/6/2019	(m & p) Xylene	<0.002	ppm
8/6/2019	(o) Xylene	<0.001	ppm
8/6/2019	1,1,1-Trichloroethane	<0.001	ppm
8/6/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
8/6/2019	1,1,2-Trichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethane	<0.001	ppm
8/6/2019	1,1-Dichloroethene	<0.001	ppm
8/6/2019	1,2-Dichlorobenzene	<0.001	ppm
8/6/2019	1,2-Dichloroethane	<0.001	ppm
8/6/2019	1,2-Dichloropropane	<0.001	ppm
8/6/2019	1,3-Dichlorobenzene	<0.001	ppm
8/6/2019	1,4-Dichlorobenzene	<0.001	ppm
8/6/2019	2-Chloroethylvinylether	<0.001	ppm
8/6/2019	Acetone	0.00322	ppm
8/6/2019	Acrolein	<0.001	ppm
8/6/2019	Acrylonitrile	<0.001	ppm
8/6/2019	Benzene	<0.001	ppm
8/6/2019	Bromodichloromethane	<0.001	ppm
8/6/2019	Bromoform	<0.001	ppm
8/6/2019	Bromomethane	<0.002	ppm
8/6/2019	Carbon Tetrachloride	<0.001	ppm
8/6/2019	Chlorobenzene	<0.001	ppm
8/6/2019	Chloroethane	<0.001	ppm
8/6/2019	Chloroform	<0.001	ppm
8/6/2019	Chloromethane	<0.001	ppm
8/6/2019	cis-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Dibromochloromethane	<0.001	ppm
8/6/2019	Ethylbenzene	<0.001	ppm
8/6/2019	Methylene Chloride	<0.001	ppm
8/6/2019	Tetrachloroethene	0.00225	ppm
8/6/2019	Toluene	<0.001	ppm
8/6/2019	trans-1,2-Dichloroethene	<0.001	ppm
8/6/2019	trans-1,3-Dichloropropene	<0.001	ppm
8/6/2019	Trichloroethene	<0.001	ppm
8/6/2019	Trichlorofluoromethane	<0.001	ppm
8/6/2019	Vinyl Chloride	<0.001	ppm
9/10/2019	1,1,1-Trichloroethane	<0.01	ppm
9/10/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
9/10/2019	1,1,2-Trichloroethane	<0.01	ppm
9/10/2019	1,1-Dichloroethane	<0.01	ppm

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
9/10/2019	1,1-Dichloroethylene	<0.01	ppm
9/10/2019	1,2-Dichlorobenzene	<0.01	ppm
9/10/2019	1,2-Dichloroethane	<0.01	ppm
9/10/2019	1,2-Dichloropropane	<0.01	ppm
9/10/2019	1,3-Dichlorobenzene	<0.01	ppm
9/10/2019	1,4-Dichlorobenzene	<0.01	ppm
9/10/2019	2-Chloroethyl vinyl ether	<0.02	ppm
9/10/2019	Acetone	<0.10	ppm
9/10/2019	Acrolein	<0.010	ppm
9/10/2019	Acrylonitrile	<0.010	ppm
9/10/2019	Benzene	<0.01	ppm
9/10/2019	Bromodichloromethane	<0.01	ppm
9/10/2019	Bromoform	<0.01	ppm
9/10/2019	Bromomethane	<0.1	ppm
9/10/2019	Carbon Tetrachloride	<0.01	ppm
9/10/2019	Chlorobenzene	<0.01	ppm
9/10/2019	Chloroethane	<0.1	ppm
9/10/2019	Chloroform	<0.01	ppm
9/10/2019	Chloromethane	<0.1	ppm
9/10/2019	cis-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Dibromochloromethane	<0.01	ppm
9/10/2019	Ethylbenzene	<0.01	ppm
9/10/2019	m,p-Xylene	<0.01	ppm
9/10/2019	Methylene Chloride	<0.05	ppm
9/10/2019	o-Xylene	<0.01	ppm
9/10/2019	Tetrachloroethylene	<0.01	ppm
9/10/2019	Toluene	<0.01	ppm
9/10/2019	trans-1,2-Dichloroethylene	<0.01	ppm
9/10/2019	trans-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Trichloroethylene	<0.01	ppm
9/10/2019	Trichlorofluoromethane	<0.01	ppm
9/10/2019	Vinyl Chloride	<0.01	ppm
10/8/2019	1,1,1-Trichloroethane	<0.01	ppm
10/8/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
10/8/2019	1,1,2-Trichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethylene	<0.01	ppm
10/8/2019	1,2-Dichlorobenzene	<0.01	ppm
10/8/2019	1,2-Dichloroethane	<0.01	ppm
10/8/2019	1,2-Dichloropropane	<0.01	ppm
10/8/2019	1,3-Dichlorobenzene	<0.01	ppm
10/8/2019	1,4-Dichlorobenzene	<0.01	ppm
10/8/2019	2-Chloroethyl vinyl ether	<0.02	ppm
10/8/2019	Acetone	<0.10	ppm
10/8/2019	Acrolein	<0.10	ppm
10/8/2019	Acrylonitrile	<0.10	ppm
10/8/2019	Benzene	<0.01	ppm
10/8/2019	Bromodichloromethane	<0.01	ppm
10/8/2019	Bromoform	<0.01	ppm
10/8/2019	Bromomethane	<0.10	ppm
10/8/2019	Carbon Tetrachloride	<0.01	ppm
10/8/2019	Chlorobenzene	<0.01	ppm
10/8/2019	Chloroethane	<0.10	ppm
10/8/2019	Chloroform	<0.01	ppm
10/8/2019	Chloromethane	<0.10	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
9/10/2019	1,1-Dichloroethylene	<0.01	ppm
9/10/2019	1,2-Dichlorobenzene	<0.01	ppm
9/10/2019	1,2-Dichloroethane	<0.01	ppm
9/10/2019	1,2-Dichloropropane	<0.01	ppm
9/10/2019	1,3-Dichlorobenzene	<0.01	ppm
9/10/2019	1,4-Dichlorobenzene	<0.01	ppm
9/10/2019	2-Chloroethyl vinyl ether	<0.02	ppm
9/10/2019	Acetone	<0.10	ppm
9/10/2019	Acrolein	<0.010	ppm
9/10/2019	Acrylonitrile	<0.010	ppm
9/10/2019	Benzene	<0.01	ppm
9/10/2019	Bromodichloromethane	<0.01	ppm
9/10/2019	Bromoform	<0.01	ppm
9/10/2019	Bromomethane	<0.1	ppm
9/10/2019	Carbon Tetrachloride	<0.01	ppm
9/10/2019	Chlorobenzene	<0.01	ppm
9/10/2019	Chloroethane	<0.1	ppm
9/10/2019	Chloroform	<0.01	ppm
9/10/2019	Chloromethane	<0.1	ppm
9/10/2019	cis-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Dibromochloromethane	<0.01	ppm
9/10/2019	Ethylbenzene	<0.01	ppm
9/10/2019	m,p-Xylene	<0.01	ppm
9/10/2019	Methylene Chloride	<0.05	ppm
9/10/2019	o-Xylene	<0.01	ppm
9/10/2019	Tetrachloroethylene	<0.01	ppm
9/10/2019	Toluene	<0.01	ppm
9/10/2019	trans-1,2-Dichloroethylene	<0.01	ppm
9/10/2019	trans-1,3-Dichloropropylene	<0.01	ppm
9/10/2019	Trichloroethylene	<0.01	ppm
9/10/2019	Trichlorofluoromethane	<0.01	ppm
9/10/2019	Vinyl Chloride	<0.01	ppm
10/8/2019	1,1,1-Trichloroethane	<0.01	ppm
10/8/2019	1,1,2,2-Tetrachloroethane	<0.01	ppm
10/8/2019	1,1,2-Trichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethane	<0.01	ppm
10/8/2019	1,1-Dichloroethylene	<0.01	ppm
10/8/2019	1,2-Dichlorobenzene	<0.01	ppm
10/8/2019	1,2-Dichloroethane	<0.01	ppm
10/8/2019	1,2-Dichloropropane	<0.01	ppm
10/8/2019	1,3-Dichlorobenzene	<0.01	ppm
10/8/2019	1,4-Dichlorobenzene	<0.01	ppm
10/8/2019	2-Chloroethyl vinyl ether	<0.02	ppm
10/8/2019	Acetone	<0.10	ppm
10/8/2019	Acrolein	<0.10	ppm
10/8/2019	Acrylonitrile	<0.10	ppm
10/8/2019	Benzene	<0.01	ppm
10/8/2019	Bromodichloromethane	<0.01	ppm
10/8/2019	Bromoform	<0.01	ppm
10/8/2019	Bromomethane	<0.10	ppm
10/8/2019	Carbon Tetrachloride	<0.01	ppm
10/8/2019	Chlorobenzene	<0.01	ppm
10/8/2019	Chloroethane	<0.10	ppm
10/8/2019	Chloroform	<0.01	ppm
10/8/2019	Chloromethane	<0.10	ppm

Table 26: EPA VOC Data
Bucklin Point

EPA VOC Data
Bucklin Point 2019

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
10/8/2019	cis-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Dibromochloromethane	<0.01	ppm
10/8/2019	Ethylbenzene	<0.01	ppm
10/8/2019	m,p-Xylene	<0.01	ppm
10/8/2019	Methylene Chloride	<0.05	ppm
10/8/2019	o-Xylene	<0.01	ppm
10/8/2019	Tetrachloroethylene	<0.01	ppm
10/8/2019	Toluene	<0.01	ppm
10/8/2019	trans-1,2-Dichloroethylene	<0.01	ppm
10/8/2019	trans-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Trichloroethylene	<0.01	ppm
10/8/2019	Trichlorofluoromethane	<0.01	ppm
10/8/2019	Vinyl Chloride	<0.01	ppm
11/5/2019	1,1,1-Trichloroethane	<0.002	ppm
11/5/2019	1,1,2,2-Tetrachloroethane	<0.002	ppm
11/5/2019	1,1,2-Trichloroethane	<0.002	ppm
11/5/2019	1,1-Dichloroethane	<0.002	ppm
11/5/2019	1,1-Dichloroethylene	<0.002	ppm
11/5/2019	1,2-Dichlorobenzene	<0.002	ppm
11/5/2019	1,2-Dichloroethane	<0.002	ppm
11/5/2019	1,2-Dichloropropane	<0.002	ppm
11/5/2019	1,3-Dichlorobenzene	<0.002	ppm
11/5/2019	1,4-Dichlorobenzene	<0.002	ppm
11/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
11/5/2019	Acetone	<0.010	ppm
11/5/2019	Acrolein	<0.010	ppm
11/5/2019	Acrylonitrile	<0.010	ppm
11/5/2019	Benzene	<0.002	ppm
11/5/2019	Bromodichloromethane	<0.002	ppm
11/5/2019	Bromoform	<0.002	ppm
11/5/2019	Bromomethane	<0.010	ppm
11/5/2019	Carbon Tetrachloride	<0.002	ppm
11/5/2019	Chlorobenzene	<0.002	ppm
11/5/2019	Chloroethane	<0.010	ppm
11/5/2019	Chloroform	<0.002	ppm
11/5/2019	Chloromethane	<0.010	ppm
11/5/2019	cis-1,3-Dichloropropylene	<0.002	ppm
11/5/2019	Dibromochloromethane	<0.002	ppm
11/5/2019	Ethylbenzene	<0.002	ppm
11/5/2019	m,p-Xylene	<0.002	ppm
11/5/2019	Methylene Chloride	<0.005	ppm
11/5/2019	o-Xylene	<0.002	ppm
11/5/2019	Tetrachloroethylene	<0.002	ppm
11/5/2019	Toluene	<0.002	ppm
11/5/2019	trans-1,2-Dichloroethylene	<0.002	ppm
11/5/2019	trans-1,3-Dichloropropylene	<0.002	ppm
11/5/2019	Trichloroethylene	<0.002	ppm
11/5/2019	Trichlorofluoromethane	<0.002	ppm
11/5/2019	Vinyl Chloride	<0.002	ppm
12/3/2019	(m & p) Xylene	<0.002	ppm
12/3/2019	(o) Xylene	<0.001	ppm
12/3/2019	1,1,1-Trichloroethane	<0.001	ppm
12/3/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/3/2019	1,1,2-Trichloroethane	<0.001	ppm
12/3/2019	1,1-Dichloroethane	<0.001	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
10/8/2019	cis-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Dibromochloromethane	<0.01	ppm
10/8/2019	Ethylbenzene	<0.01	ppm
10/8/2019	m,p-Xylene	<0.01	ppm
10/8/2019	Methylene Chloride	<0.05	ppm
10/8/2019	o-Xylene	<0.01	ppm
10/8/2019	Tetrachloroethylene	<0.01	ppm
10/8/2019	Toluene	<0.01	ppm
10/8/2019	trans-1,2-Dichloroethylene	<0.01	ppm
10/8/2019	trans-1,3-Dichloropropylene	<0.01	ppm
10/8/2019	Trichloroethylene	<0.01	ppm
10/8/2019	Trichlorofluoromethane	<0.01	ppm
10/8/2019	Vinyl Chloride	<0.01	ppm
11/5/2019	1,1,1-Trichloroethane	<0.002	ppm
11/5/2019	1,1,2,2-Tetrachloroethane	<0.002	ppm
11/5/2019	1,1,2-Trichloroethane	<0.002	ppm
11/5/2019	1,1-Dichloroethane	<0.002	ppm
11/5/2019	1,1-Dichloroethylene	<0.002	ppm
11/5/2019	1,2-Dichlorobenzene	<0.002	ppm
11/5/2019	1,2-Dichloroethane	<0.002	ppm
11/5/2019	1,2-Dichloropropane	<0.002	ppm
11/5/2019	1,3-Dichlorobenzene	<0.002	ppm
11/5/2019	1,4-Dichlorobenzene	<0.002	ppm
11/5/2019	2-Chloroethyl vinyl ether	<0.002	ppm
11/5/2019	Acetone	<0.010	ppm
11/5/2019	Acrolein	<0.010	ppm
11/5/2019	Acrylonitrile	<0.010	ppm
11/5/2019	Benzene	<0.002	ppm
11/5/2019	Bromodichloromethane	<0.002	ppm
11/5/2019	Bromoform	<0.002	ppm
11/5/2019	Bromomethane	<0.010	ppm
11/5/2019	Carbon Tetrachloride	<0.002	ppm
11/5/2019	Chlorobenzene	<0.002	ppm
11/5/2019	Chloroethane	<0.010	ppm
11/5/2019	Chloroform	<0.002	ppm
11/5/2019	Chloromethane	<0.010	ppm
11/5/2019	cis-1,3-Dichloropropylene	<0.002	ppm
11/5/2019	Dibromochloromethane	<0.002	ppm
11/5/2019	Ethylbenzene	<0.002	ppm
11/5/2019	m,p-Xylene	<0.002	ppm
11/5/2019	Methylene Chloride	<0.005	ppm
11/5/2019	o-Xylene	<0.002	ppm
11/5/2019	Tetrachloroethylene	<0.002	ppm
11/5/2019	Toluene	<0.002	ppm
11/5/2019	trans-1,2-Dichloroethylene	<0.002	ppm
11/5/2019	trans-1,3-Dichloropropylene	<0.002	ppm
11/5/2019	Trichloroethylene	<0.002	ppm
11/5/2019	Trichlorofluoromethane	<0.002	ppm
11/5/2019	Vinyl Chloride	<0.002	ppm
12/3/2019	(m & p) Xylene	<0.002	ppm
12/3/2019	(o) Xylene	<0.001	ppm
12/3/2019	1,1,1-Trichloroethane	<0.001	ppm
12/3/2019	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/3/2019	1,1,2-Trichloroethane	<0.001	ppm
12/3/2019	1,1-Dichloroethane	<0.001	ppm

Table 26: EPA VOC Data
Bucklin Point

Sanitary Manhole Sampling Data 2019

Date	Location	Al (ppb)	As (ppb)	BOD (ppm)	CBOD (ppm)	Cd (ppb)	Cr (ppb)	Cu (ppb)	CN (ppm)	Total Nitrogen (ppm N)	Pb (ppb)	Hg (ppt)	Mo (ppb)	NH3-N (ppm)	Ni (ppb)	NO3NO2 (mg N/L)	Se (ppb)	Ag (ppb)	TKN (mg N/L)	TSS (ppm)	Zn (ppb)
1/9/2019	BS03	23.56	<0.500	22.01	25.3	0.03259	0.8584	2.687	0.00432	9.5	<0.300	6.38	<0.300	3.88	0.98	1.61	<1.000	<0.020	7.89	39	17.53
1/16/2019	FS39	254.2	<0.500	57.33	64.98	0.09324	1.31	18.08	<0.004	14.6	4.279	15.4	0.4613	3.05	1.569	2.55	<1.000	0.06	12.1	87	33.88
1/30/2019	BS10	76.19	<0.500	45.01	43.18	0.1136	<0.300	14.26	<0.004	20.3	10.98	3.71	<0.300	9.6	1.022	3.27	<1.000	0.0306	17	14.4	28.19
2/6/2019	FS14	142.2	<0.500	76.84	77.28	0.05895	0.5881	12.53	<0.004	14.4	0.5739	2.38	0.3038	5.25	2.468	1.88	<1.000	0.06889	12.5	60.5	36.88
2/13/2019	FS13	115.9	<0.500	47.02	45.79	0.1544	0.4649	3.477	<0.004	4.96	2.417	6.71	<0.300	2.82	2.533	1.56	<1.000	0.02292	8.5	58.298	18.66
2/20/2019	BS17	160.2	<0.500	73.36	86.22	0.1941	0.6394	14.3	0.00439	15.9	1.552	27.2	0.3089	6.32	1.904	3.01	<1.000	0.04283	12.9	53	39.65
2/27/2019	FS24	609.1	<0.500	502.22	495.05	0.2559	15.2	32.51	0.00478	62.5	10.58	8.03	1.154	24.2	84.14	0.524	<1.000	0.3579	62	345	182.8
3/6/2019	BS04	295.1	<0.500	439.27	529.73	0.4593	1.865	19.28	<0.004	36.3	0.6668	10.9	1.071	13.3	2.285	1.14	<1.000	0.1354	35.2	454	138.9
3/13/2019	FS03	551.8	1.927	74.28	70.72	0.07291	2.826	47.91	0.00433		15.23	20.7	0.6605		6.355		<1.000	0.09753		91	121.1
3/20/2019	BS05	86.54	<0.500	72.23	67.25	0.1303	0.3358	5.913	0.00699	22.6	0.3875	10.9	<0.300	12	1.618	3.3	<1.000	0.03121	19.3	79.333	40.67
3/27/2019	FS17	298.3	<0.500	364.21	360.9	0.161	2.77	30.71	<0.004	69.5	7.519	18.8	1.089	38.6	3.358	<0.100	<1.000	0.1578	69.5	255	174.1
4/3/2019	BS13	296.2	<2.000		526.85	0.1211	4.796	38.92	<0.004		<1.200		<1.200		8.826		<4.000	0.08224			73.84
4/10/2019	FS38	7.194	<0.500	8.81	8.57	0.1144	1.158	1.351	<0.004	4.83	1.368	4.09	0.5277	<0.100	2.783	3.02	<1.000	0.08296	1.81	7	12.66
4/17/2019	BS24	155.4	<0.500	133.67	128.71	0.1848	0.6756	85.14	<0.004	31	1.416	13.1	0.3489	15.1	2.775	<0.100	<1.000	0.08892	31	127	47.61
4/24/2019	FS19	63.1	0.5545			0.02852	3.065	7.905	0.0054		8.831		0.7504		4.365		<1.000	0.09055			17.74
5/1/2019	BS23	61.47	<0.500	92.95	76.89	0.03328	<0.300	22.11	<0.004	24.3	7.4	15.5	0.3464	15.7	0.832	<0.100	<1.000	0.04543	24.3	60	41.47
5/8/2019	FS37	240.7	<0.500	269.29	230.33	0.09741	0.5497	13.43	<0.004	72	6.674	5.58	0.7248	41.6	1.415	<0.100	<1.000	0.02992	72	134.67	63.31
5/15/2019	BS08	255.9	<0.500	246.5		0.1131	0.8209	52.03	<0.004	94.5	3.17	3.92	0.8336	61	2.965	<0.100	<1.000	0.09728	94.5	138	142.7
5/22/2019	FS24	238.6	<0.500	402.18	404.68	0.111	1.106	18.63	<0.004	87.5	9.262	5.26	1.066	58.5	2.148	<0.100	<1.000	0.2769	87.5	266	119.3
5/28/2019	BS26	893.5	0.8195			0.2619	6.363	99.14	<0.004		7.455		0.7592		4.633		<1.000	0.1899			509.7
6/5/2019	FS16	149.9	<0.500	240.82	230.89	0.06939	0.561	13.3	<0.004	33.4	5.662	12.9	0.6865	53.2	1.591	<0.100	<1.000	0.06975	83.6	98	89.25
6/12/2019	BS14	43.91	<0.500	<2.00	<2.00	0.109	0.3325	1.182	<0.004	3.21	0.5386	2.68	<0.300	0.604	0.707	2.43	<1.000	<0.020	0.784	6.6	19.8
6/19/2019	FS04	48.54	<0.500	17.73	17.59	0.1383	0.3467	5.798	<0.004	12.9	30.3	16.2	0.4127	7.11	1.5	1.15	<1.000	0.05331	11.8	31.333	32.08
7/10/2019	FS02	95.77	<0.500	98.25	97.72	0.1064	0.7256	9.938	<0.004	24.4	2.058	15.3	88.43	14.1	1.986	0.123	<1.000	0.2516	24.3	93	68.35
7/17/2019	FS26	249.8	<0.500	325.77	427.37	0.1228	1.206	22.36	<0.004	94	9.377	10.6	1.126	61.5	2.779	<0.100	<1.000	0.2282	94	254	142.8
7/24/2019	FS31	275.7	0.6028	295.53	298.8	0.1203	1.076	37.56	<0.004	55.5	1.837	15.9	0.8443	33.5	2.393	<0.100	<1.000	0.229	55.5	192	135.2
7/31/2019	FS41	158.8	0.6774	335.16	337.6	0.1104	0.536	12.32	<0.004	88	7.026	7.63	0.9239	57.2	2.374	<0.100	<1.000	0.06209	88	96	89.78
8/7/2019	BS21	252.8	0.5904	235.55	241.44	0.1603	0.9938	43.27	<0.004	50	4.421	31.7	0.7419	31.4	2.523	<0.100	<1.000	0.08421	50	128	93.47
8/13/2019	FS43	272.2	0.6524	176.79	197.22	0.08796	0.7338	18.1	<0.004	76.5	13.34	45.2	0.6718	55.2	2.041	<0.100	<1.000	0.08055	76.5	57	79.84
8/21/2019	FS12	391.4	<0.500	285.07	291.81	0.1243	3.301	17.34	<0.004	49.4	5.996	2.88	0.7335	30.4	2.246	<0.100	<1.000	0.5191	49.4	208	88.72
8/28/2019	FS13	123.5	1.325	78.46		0.188	0.687	6.494	<0.004	23.1	0.3806	3.75	0.3085	14.5	3.083	<0.100	<1.000	0.07771	23.1	32	38.38
9/4/2019	BS02	92.51	<0.500	490.16	528.77	0.08954	0.6753	72	<0.004	74.5	6.227	30.5	1.149	29.1	1.902	<0.100	<1.000	0.9113	74.5	1365	114.6
10/23/2019	BS18	1863	0.7758			0.3536	4.222	68.4	<0.004	105	7.68	25.9	2.146	57.4	8.24	<0.100	<1.000	0.184	105	692	398.6
11/20/2019	FS14	80.07	<0.500	96.48	87.6	0.04691	0.4284	19.39	<0.004	38.5	0.8928	7.73	0.4378	25.7	1.66	<0.100	<1.000	0.0518	38.5	69	50.43
11/26/2019	FS18	778.6	0.5216	666.28	609.03	0.3926	3.131	88.13	0.00813	130	3.598	22	2.376	54.6	4.57	<0.100	1.471	0.3377	130	960	316.8

Table 27: Sanitary Manhole Sampling Data

NBC Industrial and Commercial User Sample Results

User Name	Location	Sample Date	Type (Grab or Composite)	District	Cd	Cr	Cu	Pb	Ni	Ag	Zn	As	Hg	CN	TTO*	BOD	TSS	Oil and Grease	Ammonia	Total Kjeldahl Nitrogen	NO3NO2	Total Nitrogen	Total Residual Chlorine	Acetone*			
GRAB #																								1	2	3	4
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L	ppm	ppm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ppb	mg/L	mg/L	mg/L	mg/L
9W Halo OpCo L.P.	1	4/30/2019	C	BP												429.37	69	36.18	1.57	13.4	1.35	14.7					
9W Halo OpCo L.P.	1	11/5/2019	C	BP												371.9	53	39.25	0.531	13.3	0.609	13.9					
A & F Plating Company	1	1/22/2019	C	FP	<0.015	<0.075	0.09122	<0.075	0.2063	<0.025	<0.060	<0.005		0.0593					0.509	1.45	0.127	1.58					
A & F Plating Company	1	10/7/2019	C	FP	<0.015	<0.075	0.02789	<0.075	0.05024	<0.025	<0.060	<0.005		0.014					<0.100	0.541	<0.100	0.541					
A. Harrison & Company, Inc.	1	3/14/2019	C	FP								<0.005			0.03875			<4.000	<0.100	<0.500	0.117	<0.500		<0.100	<0.100	<0.100	<0.100
A. Harrison & Company, Inc.	1	9/26/2019	C	FP								<0.005						4.804	<0.100	0.694	0.171	0.865					
Accent Plating Company	1	2/26/2019	C	BP	<0.015	<0.075	5.647	<0.075	0.1286	<0.025	0.1462			<0.004					0.123	6.27	1.08	7.35					
Accent Plating Company	1	5/2/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			0.00699					0.202	16.1	0.643	16.7					
Accent Plating Company	1	10/10/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			0.00584					<0.100	2.32	0.446	2.77					
Al-Jac Produce	1	5/22/2019	C	FP								0.01741				8863.26	14780		17.7	432	6.86	439					
Al-Jac Produce	1	12/12/2019	C	FP								0.03099				15970.99	39980		47.8	555	5.6	561					
Alloy Holdings, LLC	1	3/19/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.3569	<0.005							<0.100	<0.500	0.112	<0.500					
Alloy Holdings, LLC	1	10/23/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.09204	<0.005							<0.100	<0.500	<0.100	<0.500					
Armbrust International, Ltd.	1	4/24/2019	C	FP	<0.015	<0.075	0.1883	<0.075	0.1414	0.06726	0.2593	<0.005		0.0157					0.548	31.6	<0.100	31.6					
Armbrust International, Ltd.	1	7/24/2019	C	FP	<0.015	<0.075	0.09946	<0.075	0.251	<0.025	0.1221	<0.005		0.159					0.464	20	<0.100	20					
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP											0.86487	36896.67	<2.0000		3580	3640	<0.100	3640		0.857			
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	C	BP												19647.6			5400	5750	0.143	5750					
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP											25.1075									0.1	0.16	0.17	100
Aspen Aerogels Rhode Island, LLC	2	8/8/2019	G	BP												<2000.00	18.144		6650	8750	0.118	8750					
Aspen Aerogels Rhode Island, LLC	1	9/23/2019	C	BP												3511.47			3640	3650	<0.100	3650					
B. Deltoro & Sons, Inc.	1	5/15/2019	C	FP								0.007639				6112.91	9900		16.7	163	3.29	166					
B. Deltoro & Sons, Inc.	1	11/14/2019	C	FP								0.00749				4856.21	8860		6.13	196	0.914	197					
Bliss Manufacturing Co., Inc.	1	1/28/2019	C	BP	<0.015	<0.075	0.1858	<0.075	<0.050	0.04774	0.06517			<0.004					<0.100	6.7	<0.100	6.7					
Bliss Manufacturing Co., Inc.	1	9/12/2019	C	BP	<0.015	<0.075	0.7339	<0.075	<0.050	0.1299	0.07582			<0.004					42.2	352	<0.100	352					
Cardi Corporation	1	7/15/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005					2	<4.000	7.53	8.5	<0.100	8.5					
Cardi Corporation	1	7/15/2019	G	FP											0.00491									0.00463	0.00507	0.00483	0.00511
Cardi Corporation	1	7/23/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005					8.4694	<4.000	6.8	7.91	<0.100	7.91					
Cardi Corporation	1	7/23/2019	G	FP											0.0016									0.00144	0.00162	0.0018	0.00152
Chemart Company	1	3/5/2019	C	BP	<0.015	<0.075	0.1177	<0.075	0.289	<0.025	<0.060			0.00714					6.27	37.8	0.113	37.9					
Chemart Company	1	10/10/2019	C	BP	<0.015	<0.075	0.1182	<0.075	0.1224	<0.025	<0.060			0.00808					<0.100	0.972	0.114	1.09					
Cintas Corporation	1	4/29/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.07115			0.0054		17.86	26	5.082	0.557	2.58	0.926	3.51					
Cintas Corporation	1	4/29/2019	G	BP											0.04331									0.0184	0.0259	0.0332	0.0267
Cintas Corporation	1	11/4/2019	C	BP	<0.015	<0.075	0.1256	<0.075	<0.050	<0.025	0.3347			0.00531		190.4	62	25.75	<0.100	7.47	0.126	7.6					
Conopco, Inc.	1	3/26/2019	C	BP															0.171	<0.500	1.09	1.09					
Conopco, Inc.	1	3/26/2019	G	BP											0.58378									<0.010	<0.010	<0.010	<0.010
Conopco, Inc.	1	10/2/2019	C	BP															<0.100	<0.500	1.21	1.21					
Contract Specialties, Inc.	1	1/30/2019	C	FP	<0.015	<0.075	0.5133	<0.075	<0.050	<0.025	<0.060	<0.005		0.0055					<0.100	0.799	0.945	1.74					
Contract Specialties, Inc.	1	8/27/2019	C	FP	<0.015	<0.075	0.05433	<0.075	<0.050	<0.025	<0.060	<0.005		<0.004					0.132	0.804	0.261	1.06					
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.015	<0.075	0.02073	<0.075	<0.050	<0.025	0.1883				1.535	3	5.2941	<4.000	2.2	108	<0.100	108		1.4			
Denison Acquisition Company, LLC	1	7/30/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.1036					338.25	19.2	5.116	0.179	1.74	0.117	1.86					
DiFruscia Industries, Inc.	1	1/17/2019	C	FP	<0.015	<0.075	0.2195	<0.075	0.1146	<0.025	1.087	<0.005		0.332					0.945	2.03	2.77	4.8					
DiFruscia Industries, Inc.	1	7/8/2019	C	FP	<0.015	0.3307	0.08188	<0.075	0.1589	<0.025	4.809	<0.005		0.0123					0.131	0.535	0.319	0.854					
DiFruscia Industries, Inc.	1	11/12/2019	C	FP	<0.015	0.1321	0.6308	<0.075	0.759	<0.025	1.902	<0.005		0.056					<0.100	<0.500	7.74	7.74					
E&M Enterprises, LTD	1	1/16/2019	C	FP	<0.015	<0.075	0.2843	<0.075	0.1733	<0.025	<0.060	<0.005		0.387					<0.100	<0.500	0.127	<0.500					
E&M Enterprises, LTD	1	9/10/2019	C	FP	<0.015	<0.075	0.1384	<0.075	0.4289	<0.025	<0.060	<0.005		0.0851					<0.100	0.539	0.153	0.692					
Eagle Laundry Inc.	1	3/12/2019	C	FP								<0.005				55.1	12.395		<0.100	1.54	0.187	1.73					
Eagle Laundry Inc.	1	3/13/2019	C	FP														26.66									
Eagle Laundry Inc.	1	10/22/2019	C	FP								<0.005				131.67	13.667	20.85	<0.100	2.42	0.136	2.56					
Eaton Aerospace	1	2/21/2019	G	BP	<0.015	0.1138	0.2034	<0.075	0.3146	<0.025	<0.060			0.00474					<0.100	<0.500	10.8	10.8					
Eaton Aerospace	1	6/11/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			<0.004					<0.100	<0.500	<0.100	<0.500					
Ecological Fibers, Inc.	1	1/16/2019	C	BP	<0.015	<0.075	0.02022	<0.075	<0.050	<0.025	0.2882					256.32	49.2		44.1	66.8	0.649	67.4					
Ecological Fibers, Inc.	1	1/16/2019	G	BP											<1.0									<1.0	<1.0	<1.0	<1.0
Ecological Fibers, Inc.	1	7/25/2019	C	BP	<0.015	<0.075	<0.020	<0.075	0.09105	<0.025	3.937					713.6	48.25		99.5	168	0.129	168					
Ecological Fibers, Inc.	1	11/7/2019	C	BP	<0.015	<0.075	0.02124	<0.075	0.2648	<0.025	6.208					321.87	10.6		104	185	0.163	185					
Electrolizing, Inc.	1	1/22/2019	C	FP	<0.015	0.4841	0.131	<0.075	<0.050	<0.025	2.049	<0.005		0.00885					0.143	<0.500	19.9	19.9					
Electrolizing, Inc.	1	9/4/2019	C	FP	<0.015	0.1769	0.04249	<0.075	<0.050	<0.025	1.638	<0.005		<0.004					0.873	<1.250	37	37					
Finlay Extracts & Ingredients USA, Inc.	1	4/16/2019	C	BP												2503.83	132		3.73	91.5	0.514	92					
Finlay Extracts & Ingredients USA, Inc.	1	10/30/2019	C	BP												1928.68	76.5		0.378	33.2	0.241	33.4					
G. Tanury Plating Company	1	1/22/2019	C	FP	<0.015	<0.075	0.447	<0.075	0.6933	<0.025	0.07698	<0.005		0.0502					<0.100	<0.500	0.32	<0.500					
G. Tanury Plating Company	1	9/23/2019	C	FP	<0.015	<0.075	0.9842	<0.075	2.489	<0.025	0.06744	<0.005		0.033					0.589	1.88	0.254	2.13					
G. Tanury Plating Company	1	10/17/2019	C	FP	<0.015	<0.075	0.6376	<0.075	0.7618	<0.025	<0.060	<0.005		0.0303					<0.100	<0.500	0.395	<0.500					
General Cable Industries, LLC	1	1/29/2019	C	BP	<0.015	<0.075	0.2008	<0.075	<0.050	<0.025	0.914					912.89	112.5	16.99	<0.100	28.5	<0.100	28.5					
General Cable Industries, LLC	1	9/17/2019	C	BP	<0.015	<0.075	0.6948	<0.075	0.1046	<0.025	0.5897					125.45	102	<4.000	<0.100	6.84	<0.100	6.84					
Godfrey and Wing Inc.	1	4/30/2019	C	BP	<0.015	<0.075	0.02869	<0.075	<0.050	<0.025	<0.060								<0.100	<0.500	0.123	<0.500					
Godfrey and Wing Inc.	1	4/30/2019	G	BP											0.06871									0.00582	0.0047	0.0059	0.0222
Godfrey and Wing Inc.	1	8/7/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	<0.500	0.126	<0.500					
Hillview Auto Body	1	4/16/2019	G	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005			0.0789			<4.000	<0.100	<0.500	0.123	<0.500		0.033			
Hillview Auto Body	1	10/17/2019	G	FP	<0.015	<0.075	0.04971	<0.075	<0.050	<0.025	0.2304	<0.005						5.067	<0.100	0.939	0.108	1.05					
Hord Crystal Corporation	1	2/8/2019	G	BP	<0.015	<0.075	0.07276	<0.075	<0.050	<0.025	<0.060			<0.004					6.16	133	<0.100	133					
Hord Crystal Corporation	1	9/17/2019	G	BP	<0.015	<0.075	0.6316	<0.075	<0.050	<0.025	0.07185			<0.004					3.65	73.5	2.12	75.6					

*TTO (Total Toxic Organics) includes volatile organic compounds, shown in detail in Table 27B. Acetone is included in the TTO as well as shown seperately. In calculating TTO, detectable results for replicate samples for all reported parameters were averaged and results for all parameters were summed. If no parameters were detectable, results were reported as <maximum MDL.

Table 28A: NBC Industrial and Commercial User Data

NBC Industrial and Commercial User Sample Results

User Name / GRAB #	Location	Sample Date	Type (Grab or Composite)	District	Cd	Cr	Cu	Pb	Ni	Ag	Zn	As	Hg	CN	TTO*	BOD	TSS	Oil and Grease	Ammonia	Total Kjeldahl Nitrogen	NO3NO2	Total Nitrogen	Total Residual Chlorine	Acetone*			
																								1	2	3	4
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L	ppm	ppm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ppb	mg/L	mg/L	mg/L	mg/L
HP Services, Inc.	1	2/28/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			<0.004				<4.000	<0.100	<0.500	<0.100	<0.500					
HP Services, Inc.	1	10/2/2019	G	BP	<0.015	<0.075	0.02332	<0.075	<0.050	<0.025	<0.060			<0.004				<4.000	<0.100	<0.500	0.155	<0.500					
Ideal Plating & Polishing Co., Inc.	1	2/4/2019	C	FP	<0.015	<0.075	0.3163	<0.075	0.2956	<0.025	0.0896	<0.005		0.138					<0.100	<0.500	0.141	<0.500					
Ideal Plating & Polishing Co., Inc.	1	7/24/2019	C	FP	<0.015	<0.075	0.326	<0.075	0.2851	<0.025	0.1071	<0.005		0.00422					<0.100	<0.500	0.154	<0.500					
Induplate, LLC	1	1/28/2019	C	FP	<0.015	0.08073	0.05607	<0.075	0.2167	<0.025	0.2348	<0.005		0.00834					<0.100	0.507	0.932	1.44					
Induplate, LLC	1	8/21/2019	C	FP	<0.015	0.2038	0.04338	<0.075	0.6	<0.025	0.5799	<0.005		0.0192					0.538	1.33	2.05	3.38					
International Chromium Plating	1	3/6/2019	C	FP	<0.015	0.1522	0.03071	<0.075	0.2328	<0.025	0.1029	<0.005		0.02					0.503	0.914	0.667	1.58					
International Chromium Plating	1	10/17/2019	C	FP	<0.015	0.6006	0.03479	<0.075	0.2426	<0.025	0.1066	<0.005		0.011					0.481	0.771	0.545	1.32					
International Etching, Inc.	1	3/5/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005		<0.004					<0.100	0.5	0.165	0.665					
International Etching, Inc.	1	3/19/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005		0.0043					<0.100	0.615	0.117	<0.500					
International Insignia Corporation	1	3/28/2019	C	FP	<0.015	<0.075	0.482	<0.075	0.6504	<0.025	0.07444	<0.005		0.0172					0.134	6.19	0.157	6.35					
International Insignia Corporation	1	8/7/2019	C	FP	<0.015	<0.075	0.2464	<0.075	0.8356	<0.025	<0.060	<0.005		0.0103					0.396	4.81	<0.100	4.81					
Interplex Engineered Products, Inc.	1	2/27/2019	C	BP	<0.015	<0.075	0.06591	<0.075	0.2377	<0.025	<0.060			0.0187					0.471	2.92	0.184	3.1					
Interplex Engineered Products, Inc.	1	10/7/2019	C	BP	<0.015	<0.075	0.3787	<0.075	0.6702	0.07673	<0.060			0.0701					<0.100	1.43	0.111	1.54					
Ira Green, Inc.	1	1/24/2019	C	FP	<0.015	<0.075	0.081	<0.075	<0.050	<0.025	<0.060	<0.005		0.0596					<0.100	<0.500	0.131	<0.500					
Ira Green, Inc.	1	9/18/2019	C	FP	<0.015	<0.075	0.149	<0.075	<0.050	<0.025	<0.060	<0.005		0.0382					0.125	<0.500	0.174	<0.500					
Ira Green, Inc.	1	12/3/2019	C	FP	<0.015	<0.075	0.4444	<0.075	<0.050	0.03357	<0.060	<0.005		1.24													
Isle Brewers Guild, LLC	1	5/9/2019	C	BP												1222.28	386		0.267	15.6	1.11	16.7					
Isle Brewers Guild, LLC	1	11/13/2019	C	BP												531.94	222		0.127	17.1	0.607	17.7					
John H. Collins & Sons Company	1	4/2/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.1215			0.102				9.674		6.26							
John H. Collins & Sons Company	1	4/2/2019	G	BP											0.58433									0.59	0.27	0.27	
John H. Collins & Sons Company	1	7/25/2019	C	BP	<0.015	<0.075	0.05406	<0.075	<0.050	<0.025	1.598			0.027				14.93	8.57	38.4	0.684	39.1					
John Rocchio Corporation	2	3/12/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060						12.8	<4.000	0.41	1.2	0.139	1.34					
John Rocchio Corporation	2	5/6/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060						11	<4.000	0.301	0.584	0.194	0.778					
Lincoln Manufacturing, Inc.	1	3/12/2019	G	BP														222.1	0.884	13.2	48.2	61.4					
Lincoln Manufacturing, Inc.	1	9/10/2019	G	BP														61.93	1.72	31	<0.100	31					
Mahr Federal Inc.	1	3/21/2019	C	FP	<0.015	0.4774	0.04572	<0.075	<0.050	<0.025	<0.060	<0.005		<0.004					<0.100	<0.500	<0.100	<0.500					
Mahr Federal Inc.	1	7/31/2019	C	FP	<0.015	0.446	0.05639	<0.075	<0.050	<0.025	<0.060	<0.005		<0.004					<0.100	0.935	0.147	1.08					
Manchester Street, LLC	1	2/20/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005							<0.100	1.45	1.29	2.74					
Manchester Street, LLC	1	9/18/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005							0.219	1.34	2.06	3.4					
Materion Technical Materials, Inc.	1	3/25/2019	C	BP	<0.015	<0.075	0.1235	<0.075	<0.050	0.04311	0.1167			0.00613					0.135	2.71	0.208	2.92					
Materion Technical Materials, Inc.	1	7/31/2019	C	BP	<0.015	<0.075	0.03231	<0.075	<0.050	0.03507	<0.060			<0.004					<0.100	1.87	0.415	2.28					
Metallurgical Solutions, Inc.	1	2/14/2019	G	FP	<0.015	1.769	0.3649	<0.075	0.9389	<0.025	<0.060	0.008972		0.104					0.675	<2.500	1230	1230					
Metallurgical Solutions, Inc.	1	9/3/2019	G	FP	<0.015	0.4441	0.2076	<0.075	0.316	<0.025	<0.060	<0.005		0.0321					1.37	<2.500	710	710					
Monarch Metal Finishing Co., Inc. - Aurora St.	1	3/11/2019	C	FP	<0.015	<0.075	0.1387	<0.075	0.2036	<0.025	<0.060	<0.005		0.0487					0.227	0.803	0.216	1.02					
Monarch Metal Finishing Co., Inc. - Georgia Ave	1	4/25/2019	C	FP	<0.015	0.2353	0.716	<0.075	0.3362	<0.025	1.328	<0.005		0.18					4.5	7.37	0.354	7.72					
Monarch Metal Finishing Co., Inc. - Georgia Ave	1	9/4/2019	C	FP	<0.015	0.2068	3.224	<0.075	1.296	<0.025	2.755	<0.005		<0.004					4.2	7.18	0.976	8.16					
Murdock Webbing Co., Inc.	1	4/22/2019	C	BP	<0.015	<0.075	0.09242	<0.075	<0.050	<0.025	<0.060					373.45	221	52.7	5.18	54.5	1.27	55.8					
Murdock Webbing Co., Inc.	1	7/18/2019	C	BP	<0.015	<0.075	0.07813	<0.075	<0.050	<0.025	0.06383					732.47	30	11.55	1.18	25.4	0.689	26.1					
Narragansett Jewelry	1	1/8/2019	C	FP	<0.015	<0.075	0.1932	<0.075	<0.050	<0.025	<0.060	<0.005		<0.004					<0.100	0.569	0.538	1.11					
Narragansett Jewelry	1	9/4/2019	C	FP	<0.015	<0.075	0.06541	<0.075	<0.050	<0.025	<0.060	<0.005		0.00786					<0.100	<0.500	0.254	<0.500					
New England Linen Supply, Inc.	1	4/3/2019	C	BP												918.66	140	279.8	1.66	9.69	1.14	10.8					
New England Linen Supply, Inc.	1	11/5/2019	C	BP												1166.88	396.87	363									
New England Linen Supply, Inc.	1	12/5/2019	C	BP														107.4									
NGC Inc.	1	5/15/2019	C	FP								0.01652				1367.94	53	5.488	6.23	302	0.382	302					
Ocean State Peeled Potatoes	1	5/13/2019	C	FP								0.0278				1512.65	3470		3.68	155	0.229	155					
Ocean State Peeled Potatoes	1	11/14/2019	C	FP								0.007324				2230.25	11480		5.25	130	1.57	132					
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.015	<0.075	0.02761	<0.075	<0.050	<0.025	0.1669				0.0635	55.27	5.9794	6.163	0.954	9.67	0.105	9.77		0.029			
Organic Dyes and Pigments, LLC. - Lincoln	1	7/23/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060					20.18	15.684	5	<0.100	0.732	0.131	0.863					
Pawtucket Power Associates	2	1/10/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	0.566	3.71	4.28					
Pawtucket Power Associates	3	1/10/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	<0.500	0.819	0.819					
Pawtucket Power Associates	1	7/29/2019	C	BP	<0.015	<0.075	0.05759	<0.075	<0.050	<0.025	0.09402							<4.000	0.318	1.81	0.67	2.48					
Pawtucket Power Associates	4	7/29/2019	C	BP	<0.015	<0.075	0.1049	<0.075	<0.050	<0.025	0.2761								<0.100	3.5	1.4	4.9					
Pawtucket Power Associates	2	7/30/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.07728								0.495	1.74	4.89	6.63					
Pawtucket Power Associates	3	7/30/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	<0.500	0.551	0.551					
Providence Journal Co.	1	2/11/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005						6.385	0.562	30.8	0.145	30.9					
Providence Journal Co.	1	10/29/2019	C	FP	<0.015	<0.075	0.02703	<0.075	<0.050	<0.025	<0.060	0.006143						<4.000	<0.100	30.6	<0.100	30.6					
Providence Metallizing Company, Inc.	1	5/1/2019	C	BP	<0.015	0.2928	0.1952	<0.075	0.4491	<0.025	<0.060			<0.004					<0.100	<0.500	1.09	1.09					
Providence Metallizing Company, Inc.	1	9/24/2019	C	BP	<0.015	0.287	0.1802	<0.075	0.271	<0.025	<0.060			<0.004					<0.100	<0.500	0.622	0.622					
Providence Specialty Products	1	3/12/2019	G	FP												603.43	178	170.2	<0.100	13.8	0.15	13.9					
Providence Specialty Products	1	8/27/2019	G	FP												32.07	7.6923	10.34	<0.100	<0.500	0.225	<0.500					
RI Convention Center Authority - Garrahy Parking Garage	1	2/7/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.2431	<0.005					<2.0000	<4.000	0.473	0.505	1.1	1.6					
RI Convention Center Authority - Garrahy Parking Garage	1	2/20/2019	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.2419	<0.005					<2.0000	<4.000	0.843	0.904	0.945	1.85					
RI Resource Recovery	1	5/28/2019	C	FP	<0.015	<0.075	<0.020	<0.075	0.05075	<0.025	<0.060	0.122	2.62	0.0216		24.78	42	<4.000	<0.100	17.1	1.99	19.1					
RI Resource Recovery	4	5/28/2019	G	FP															<0.100	16.2	7.9	24.1					
RI Resource Recovery	1	9/9/2019	C	FP	<0.015	<0.075	<0.020	<0.075	0.06341	<0.025	<0.060	0.2053	3.39	0.025		42.19	85	<4.000	0.822	24	4.06	28.1					
RI Resource Recovery	4	9/9/2019	G	FP															0.554	22.5	9.35	31.8					
Stackbin Corporation	1	4/16/2019	G	BP	<0.015	<0.075	0.1147	<0.075	<0.050	<0.025	0.1324			<0.008				99.42	<0.100	20.8	<0.100	20.8					

*TTO (Total Toxic Organics) includes volatile organic compounds, shown in detail in Table 27B. Acetone is included in the TTO as well as shown seperately. In calculating TTO, detectable results for replicate samples for all reported parameters were averaged and results for all parameters were summed. If no parameters were detectable, results were reported as <maximum MDL.

Table 28A: NBC Industrial and Commercial User Data

NBC Industrial and Commercial User Sample Results

User Name / GRAB #	Location	Sample Date	Type (Grab or Composite)	District	Cd	Cr	Cu	Pb	Ni	Ag	Zn	As	Hg	CN	TTO*	BOD	TSS	Oil and Grease	Ammonia	Total Kjeldahl Nitrogen	NO3NO2	Total Nitrogen	Total Residual Chlorine	Acetone*			
																								1	2	3	4
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L	ppm	ppm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ppb	mg/L	mg/L	mg/L	mg/L
Stackbin Corporation	2	4/16/2019	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			0.0118					1.33	5.83	20.4	26.2					
Stackbin Corporation	1	10/8/2019	G	BP	<0.015	<0.075	0.1836	<0.075	<0.050	<0.025	0.3497			<0.008				133.2	<0.100	28.8	1.38	30.2					
Stackbin Corporation	2	10/8/2019	G	BP	<0.015	<0.075	0.03048	<0.075	<0.050	<0.025	<0.060			<0.008					0.463	5.43	13.4	18.8					
Summit Manufacturing Corporation	1	1/9/2019	C	BP	<0.015	0.7483	0.526	<0.075	0.1599	<0.025	0.2639			0.0112					0.354	1.57	2.86	4.43					
Summit Manufacturing Corporation	1	10/3/2019	C	BP	<0.015	0.2398	0.7394	<0.075	0.07874	<0.025	0.3447			<0.004					0.296	0.555	3.82	4.37					
Surface Coatings Division, MFB LLC	1	1/3/2019	C	FP	<0.015	<0.075	0.3952	<0.075	1.247	<0.025	1.085	<0.005		0.177					0.537	1.15	0.299	1.45					
Surface Coatings Division, MFB LLC	1	7/11/2019	C	FP	<0.015	<0.075	0.09874	<0.075	0.0906	<0.025	0.8154	<0.005		<0.004					<0.100	0.596	0.402	0.998					
Tanury Industries	1	2/5/2019	C	BP	<0.015	0.8353	1.945	<0.075	0.6749	0.3138	<0.060			0.83					2.75	5.22	0.331	5.55					
Tanury Industries	1	4/24/2019	C	BP	<0.015	0.3645	0.2741	<0.075	0.7912	<0.025	<0.060			0.0639					1.79	4.96	1.91	6.87					
Technodic, Inc.	1	1/29/2019	C	FP	<0.015	1.462	0.2285	<0.075	<0.050	<0.025	0.08066	<0.005		0.0179					0.139	<0.500	18.5	18.5					
Technodic, Inc.	1	10/2/2019	C	FP	<0.015	0.4237	0.05035	<0.075	<0.050	<0.025	<0.060	<0.005		0.00992					<0.100	<0.500	8.25	8.25					
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.015	<0.075	0.05575	<0.075	<0.050	<0.025	0.2163				0.84	122.77	26	<4.000	10.6	22.8	<0.100	22.8		0.84			
Tedor Pharma Inc.	1	7/29/2019	G	BP	<0.015	<0.075	0.06042	<0.075	<0.050	<0.025	0.1333					37.84	22.667	<4.000	0.161	3.01	<0.100	3.01					
Teknicote Tank T-7	1	1/29/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			<0.004					<0.100	12.8	0.176	13					
Teknicote Tank T-7	1	9/26/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.06184			<0.004					<0.100	8.07	0.689	8.76					
Teknor Apex	1	3/26/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.5523							<4.000	<0.100	0.555	0.394	0.949					
Teknor Apex	1	8/5/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.3647							<4.000	<0.100	<0.500	0.711	0.711					
The Okonite Company	1	2/25/2019	C	BP	<0.015	<0.075	0.4356	<0.075	<0.050	<0.025	0.5158							<4.000	<0.100	4	0.984	4.98					
The Okonite Company	1	10/21/2019	C	BP	<0.015	<0.075	0.06201	<0.075	<0.050	<0.025	0.06775							<4.000	<0.100	0.56	<0.100	0.56					
Tiffany and Company	1	1/30/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			<0.004					0.23	1.87	<0.100	1.87					
Tiffany and Company	1	10/2/2019	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			<0.004					<0.100	1.23	0.287	1.52					
Tri-Jay Company	1	2/12/2019	C	FP	<0.015	<0.075	1.415	<0.075	0.78	0.3426	0.1292	<0.005		0.137					0.442	4.39	0.613	5					
Tri-Jay Company	1	10/3/2019	C	FP	<0.015	<0.075	0.9404	<0.075	0.6088	0.04649	0.5737	<0.005		0.0102					<0.100	2.7	0.729	3.43					
Truex, Inc.	1	2/19/2019	C	BP	<0.015	<0.075	0.3533	<0.075	<0.050	<0.025	0.1075			0.00728				<4.000	0.237	3.25	0.583	3.83					
Truex, Inc.	1	8/6/2019	C	BP	<0.015	<0.075	0.1457	<0.075	<0.050	<0.025	0.08714			<0.004				<4.000	<0.100	1.21	0.162	1.37					
Unique Plating Company	1	1/9/2019	C	FP	0.05129	<0.075	25.2	0.2054	12.35	0.7877	1.286	0.008973		0.0415					<1.000	0.61	0.936	1.55					
Unique Plating Company	1	4/3/2019	C	FP	<0.015	0.2281	0.2975	<0.075	0.4059	<0.025	<0.060	<0.005		0.0184					<1.000	<0.500	0.129	<0.500					
Unique Plating Company	1	7/15/2019	C	FP	<0.015	0.08369	0.0387	<0.075	0.09753	0.03327	<0.060	<0.005		0.21					<0.100	<0.500	1.74	1.74					
Univar USA, Inc.	1	3/7/2019	C	FP	<0.015	<0.075	0.04075	<0.075	<0.050	<0.025	0.2058	<0.005	58.1	0.0165					18.2	19.9	1.15	21					
Univar USA, Inc.	1	3/7/2019	G	FP											0.031								7780	<0.01	<0.01	<0.010	
Univar USA, Inc.	1	8/8/2019	C	FP	<0.015	<0.075	0.02671	0.2482	<0.050	<0.025	0.09971	<0.005	54.9	<0.008					1.48	2.45	2.47	4.92					
Univar USA, Inc.	1	8/8/2019	G	FP																			533				
Universal Plating Company, Inc.	1	2/26/2019	C	FP	<0.015	<0.075	0.07395	<0.075	<0.050	<0.025	<0.060	<0.005		0.0135					<0.100	0.958	0.111	1.07					
Universal Plating Company, Inc.	1	10/7/2019	C	FP	<0.015	<0.075	0.248	<0.075	<0.050	<0.025	<0.060	<0.005		<0.004					<0.100	<0.500	0.178	<0.500					

*TTO (Total Toxic Organics) includes volatile organic compounds, shown in detail in Table 27B. Acetone is included in the TTO as well as shown seperately. In calculating TTO, detectable results for replicate samples for all reported parameters were averaged and results for all parameters were summed. If no parameters were detectable, results were reported as <maximum MDL.

Table 28A: NBC Industrial and Commercial User Data

NBC Industrial and Commercial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	(m & p) Xylene					(o) Xylene					1,1-Dichloroethane				1,1-Dichloroethene				1,1,1-Trichloroethane				1,1,2-Trichloroethane			
GRAB NO.					1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
A. Harrison & Company, Inc.	1	3/14/2019	C	FP	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP	<0.002					<0.001					<0.001				<0.001				<0.001				<0.001			
Cardi Corporation	1	7/15/2019	G	FP	<0.002	<0.002	<0.002	<0.002		<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cardi Corporation	1	7/23/2019	G	FP	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cintas Corporation	1	4/29/2019	G	BP	<0.002	<0.002	<0.002	<0.002		<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Conopco, Inc.	1	3/26/2019	G	BP	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001		0.0021	0.0022	0.0021	0.0019	<0.001	<0.001	<0.001	<0.001	0.05	0.05	0.05	0.049	<0.001	<0.001	<0.001	<0.001
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.001					<0.001					<0.001				<0.001				<0.001				<0.001			
Ecological Fibers, Inc.	1	1/16/2019	G	BP	<0.1	<0.1	<0.1	<0.10		<0.1	<0.1	<0.1	<0.10		<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10
Godfrey and Wing Inc.	1	4/30/2019	G	BP	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Hillview Auto Body	1	4/16/2019	G	FP	<0.001					<0.001					<0.001				<0.001				<0.001				<0.001			
John H. Collins & Sons Company	1	4/2/2019	G	BP	0.1	0.056	0.21			0.042	0.021	0.079			<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.001					<0.001					<0.001				<0.001				<0.001				<0.001			
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.02					<0.02					<0.02				<0.02				<0.02				<0.02			
Univar USA, Inc.	1	3/7/2019	G	FP	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001			<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	

*TTO and additional NBC Industrial and Commercial User data shown in Table 28A

Table 28B: NBC Industrial and Commercial User TTO Result Detail

NBC Industrial and Commercial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	1,1,2,2-Tetrachloroethane				1,2-Dichlorobenzene					1,2-Dichloroethane				1,2-Dichloropropane				1,3-Dichlorobenzene					1,4-Dichlorobenzene				
GRAB NO.					1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	5	1	2	3	4	5
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
A. Harrison & Company, Inc.	1	3/14/2019	C	FP	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP	<0.001				<0.001					<0.001				<0.001				<0.001					<0.001				
Cardi Corporation	1	7/15/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	
Cardi Corporation	1	7/23/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	
Cintas Corporation	1	4/29/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	
Conopco, Inc.	1	3/26/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.001				<0.001					<0.001				<0.001				<0.001					<0.001				
Ecological Fibers, Inc.	1	1/16/2019	G	BP	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10		<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10		<0.1	<0.1	<0.1	<0.10	
Godfrey and Wing Inc.	1	4/30/2019	G	BP	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hillview Auto Body	1	4/16/2019	G	FP	<0.001				<0.001					<0.001				<0.001				<0.001					<0.001				
John H. Collins & Sons Company	1	4/2/2019	G	BP	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010			<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010			<0.010	<0.010	<0.010		
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.001				<0.001					<0.001				<0.001				<0.001					<0.001				
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.02				<0.02					<0.02				<0.02				<0.02					<0.02				
Univar USA, Inc.	1	3/7/2019	G	FP	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001			<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001			<0.001	<0.001	<0.001		

*TTO and additional NBC Industrial and Commercial User data shown in Table 28A

Table 28B: NBC Industrial and Commercial User TTO Result Detail

NBC Industrial and Commercial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	2-Chloroethyl vinyl ether				Acetone				Acrolein				Acrylonitrile				Benzene				Bromodichloromethane			
GRAB NO.					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
A. Harrison & Company, Inc.	1	3/14/2019	C	FP	<0.020	<0.020	<0.020	<0.020	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP	<0.020	<0.020	<0.020	<0.020	0.1	0.16	0.17	100	<0.010	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP	<0.001				0.857				<0.001								<0.001				<0.001			
Cardi Corporation	1	7/15/2019	G	FP	<0.001	<0.001	<0.001	<0.001	0.00463	0.00507	0.00483	0.00511	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cardi Corporation	1	7/23/2019	G	FP	<0.001	<0.001	<0.001	<0.001	0.00144	0.00162	0.0018	0.00152	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cintas Corporation	1	4/29/2019	G	BP	<0.001	<0.001	<0.001	<0.001	0.0184	0.0259	0.0332	0.0267	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.00362	0.00399	0.00442
Conopco, Inc.	1	3/26/2019	G	BP	<0.002	<0.002	<0.002	<0.002	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.002				1.4				0.035								<0.0019				<0.001			
Ecological Fibers, Inc.	1	1/16/2019	G	BP	<0.2	<0.2	<0.2	<0.2	<1.0	<1.0	<1.0	<1.0	<1.0								<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10
Godfrey and Wing Inc.	1	4/30/2019	G	BP	<0.001	<0.001	<0.001	<0.001	0.00582	0.0047	0.0059	0.0222	<0.001	<0.001	<0.001	<0.001					<0.001	<0.001	<0.001	<0.001	0.00341	0.00383	0.00351	0.00362
Hillview Auto Body	1	4/16/2019	G	FP	<0.002				0.033				<0.01				<0.01				<0.001				0.0029			
John H. Collins & Sons Company	1	4/2/2019	G	BP	<0.020	<0.020	<0.020		0.59	0.27	0.27		<0.100	<0.100	<0.100		<0.100	<0.100	<0.100		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.002				0.029												<0.001				0.0025			
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.04				0.84				<0.2								<0.02				<0.02			
Univar USA, Inc.	1	3/7/2019	G	FP	<0.002	<0.002	<0.002		<0.01	<0.01	<0.010										<0.001	<0.001	<0.001		0.0026	0.0029	0.0025	

*TTO and additional NBC Industrial and Commercial User data shown in Table 28A

Table 28B: NBC Industrial and Commercial User TTO Result Detail

NBC Industrial and Commercial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	Bromoform				Bromomethane				Carbon Tetrachloride				Chlorobenzene					Chloroethane				Chloroform			
GRAB NO.					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
A. Harrison & Company, Inc.	1	3/14/2019	C	FP	<0.010	<0.010	<0.010	<0.010	<0.100	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.100	<0.100	<0.100	<0.100	0.041	0.04	0.037	0.037
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP	<0.010	<0.010	<0.010	<0.010	<0.100	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.100	<0.100	<0.100	<0.050	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP	<0.001				0.00317				<0.001				<0.001					0.0016				<0.001			
Cardi Corporation	1	7/15/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cardi Corporation	1	7/23/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cintas Corporation	1	4/29/2019	G	BP	0.0013	0.00109	0.00128	0.00155	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	0.00114	<0.001	0.00636	0.00585	0.00636	0.00659
Conopco, Inc.	1	3/26/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.001				<0.01				<0.001				<0.001					<0.01				0.1			
Ecological Fibers, Inc.	1	1/16/2019	G	BP	<0.1	<0.1	<0.1	<0.10	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10		<1.0	<1.0	<1.0	<0.5	<0.1	<0.1	<0.1	<0.10
Godfrey and Wing Inc.	1	4/30/2019	G	BP	<0.001	<0.001	<0.001		<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00154	<0.001	0.0533	0.0565	0.0522	0.0537
Hillview Auto Body	1	4/16/2019	G	FP	<0.001				<0.01				<0.001				<0.001					<0.01				0.043			
John H. Collins & Sons Company	1	4/2/2019	G	BP	<0.010	<0.010	<0.010		<0.100	<0.100	<0.100		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010			<0.100	<0.100	<0.100		0.013	0.013	<0.010	
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.001				<0.010				<0.001				<0.001					<0.010				0.032			
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.02				<0.2				<0.02				<0.02					<0.2				<0.02			
Univar USA, Inc.	1	3/7/2019	G	FP	<0.001	<0.001	<0.001		<0.01	<0.01	<0.01		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001			<0.01	<0.01	<0.01		0.028	0.029	0.028	

*TTO and additional NBC Industrial and Commercial User data shown in Table 28A

Table 28B: NBC Industrial and Commercial User TTO Result Detail

NBC Industrial and Commercial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	Chloromethane				cis-1,3-Dichloropropene				Dibromochloromethane				Ethylbenzene					Methylene Chloride				Tetrachloroethene			
GRAB NO.					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
A. Harrison & Company, Inc.	1	3/14/2019	C	FP	<0.100	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP	<0.100	<0.100	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP	<0.001				<0.001				<0.001				<0.001					<0.001				<0.001			
Cardi Corporation	1	7/15/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cardi Corporation	1	7/23/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cintas Corporation	1	4/29/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00343	0.00313	0.0036	0.00379	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	0.00103	0.00103	<0.001	<0.001
Conopco, Inc.	1	3/26/2019	G	BP	<0.010	<0.010	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.005	<0.005	<0.005	<0.005	0.44	0.44	0.44	0.43
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.01				<0.001				<0.001				<0.001					<0.005				<0.001			
Ecological Fibers, Inc.	1	1/16/2019	G	BP	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10		<0.5	<0.5	<0.5	<0.10	<0.1	<0.1	<0.1	<0.10
Godfrey and Wing Inc.	1	4/30/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Hillview Auto Body	1	4/16/2019	G	FP	<0.01				<0.001				<0.001				<0.001					<0.005				<0.001			
John H. Collins & Sons Company	1	4/2/2019	G	BP	<0.100	<0.100	<0.100		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		0.021	0.013	0.042			<0.050	<0.050	<0.050		<0.010	<0.010	<0.010	
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.010				<0.001				<0.001				<0.001					<0.005				<0.001			
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.2				<0.02				<0.02				<0.02					<0.1				<0.02			
Univar USA, Inc.	1	3/7/2019	G	FP	<0.01	<0.01	<0.01		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001			<0.005	<0.005	<0.005		<0.001	<0.001	<0.001	

*TTO and additional NBC Industrial and Commercial User data shown in Table 28A

Table 28B: NBC Industrial and Commercial User TTO Result Detail

NBC Industrial and Commercial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	Toluene				trans-1,2-Dichloroethene				trans-1,3-Dichloropropene				Trichloroethene				Trichlorofluoromethane				Vinyl Chloride			
GRAB NO.					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
A. Harrison & Company, Inc.	1	3/14/2019	C	FP	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	1	4/1/2019	G	BP	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aspen Aerogels Rhode Island, LLC	2	3/12/2019	G	BP	0.0031				<0.001				<0.001				<0.001				<0.001				<0.001			
Cardi Corporation	1	7/15/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cardi Corporation	1	7/23/2019	G	FP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cintas Corporation	1	4/29/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Conopco, Inc.	1	3/26/2019	G	BP	<0.001	<0.001	<0.001	<0.001	0.0023	0.002	0.0018	<0.0022	<0.001	<0.001	<0.001	<0.001	0.089	0.091	0.091	0.089	0.0013	0.0013	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012
Denison Acquisition Company, LLC	1	2/27/2019	G	BP	<0.001				<0.001				<0.001				<0.001				<0.001				<0.001			
Ecological Fibers, Inc.	1	1/16/2019	G	BP	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<1.0
Godfrey and Wing Inc.	1	4/30/2019	G	BP	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hillview Auto Body	1	4/16/2019	G	FP	<0.001				<0.001				<0.001				<0.001				<0.001				<0.001			
John H. Collins & Sons Company	1	4/2/2019	G	BP	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	
Organic Dyes and Pigments, LLC. - Lincoln	1	2/14/2019	G	BP	<0.001				<0.001				<0.001				<0.001				<0.001				<0.001			
Tedor Pharma Inc.	1	2/26/2019	G	BP	<0.02				<0.02				<0.02				<0.02				<0.02				<0.02			
Univar USA, Inc.	1	3/7/2019	G	FP	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	

*TTO and additional NBC Industrial and Commercial User data shown in Table 28A

Table 28B: NBC Industrial and Commercial User TTO Result Detail

Septage Monitoring Data - 2019

Results in ppm

Sample No.	Date	Cd	Cd MDL	Cr	Cr MDL	Cu	Cu MDL	Pb	Pb MDL	Ni	Ni MDL	Ag	Ag MDL	Zn	Zn MDL
CA13457-BP-SEPTAGE	1/2/2019	<0.015	0.015	<0.075	0.075	5.431	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	4.504	0.06
CA13456-BP-SEPTAGE	1/4/2019	<0.015	0.015	<0.075	0.075	3.087	0.02	<0.075	0.075	0.05159	0.05	<0.025	0.025	5.109	0.06
CA15317-BP-SEPTAGE	1/7/2019	<0.015	0.015	<0.075	0.075	2.913	0.02	0.07595	0.075	0.05758	0.05	<0.025	0.025	4.848	0.06
CA15316-BP-SEPTAGE	1/8/2019	<0.015	0.015	<0.075	0.075	3.019	0.02	0.1175	0.075	0.1027	0.05	<0.025	0.025	5.347	0.06
CA15315-BP-SEPTAGE	1/10/2019	<0.015	0.015	<0.075	0.075	2.419	0.02	0.09954	0.075	0.08005	0.05	<0.025	0.025	4.489	0.06
CA15600-BP-SEPTAGE	1/14/2019	<0.015	0.015	<0.075	0.075	3.928	0.02	0.2170	0.075	0.05920	0.05	0.08090	0.025	6.020	0.06
CA15599-BP-SEPTAGE	1/15/2019	0.03463	0.015	0.2500	0.075	22.93	0.02	0.6844	0.075	0.2994	0.05	0.03012	0.025	26.95	0.3
CA15598-BP-SEPTAGE	1/18/2019	<0.015	0.015	<0.075	0.075	6.034	0.02	0.1734	0.075	0.09436	0.05	<0.025	0.025	8.859	0.06
CA16199-BP-SEPTAGE	1/23/2019	<0.015	0.015	0.08319	0.075	7.150	0.02	0.2968	0.075	0.1711	0.05	<0.025	0.025	14.61	0.06
CA16200-BP-SEPTAGE	1/24/2019	<0.015	0.015	0.1073	0.075	4.393	0.02	0.1399	0.075	0.1477	0.05	<0.025	0.025	6.561	0.06
CA16201-BP-SEPTAGE	1/25/2019	<0.015	0.015	<0.075	0.075	4.086	0.02	0.1899	0.075	0.07407	0.05	<0.025	0.025	5.864	0.06
CA16613-BP-SEPTAGE	1/28/2019	<0.015	0.015	0.1001	0.075	19.29	0.02	0.4056	0.075	0.1444	0.05	0.06432	0.025	15.57	0.06
CA16614-BP-SEPTAGE	1/30/2019	0.02104	0.015	0.2225	0.075	13.30	0.02	1.024	0.075	0.3933	0.05	0.05024	0.025	36.62	0.3
CA16615-BP-SEPTAGE	2/1/2019	0.1174	0.015	0.3683	0.075	26.32	0.02	1.973	0.075	0.5784	0.05	0.07847	0.025	45.29	0.3
CA17171-BP-SEPTAGE	2/6/2019	<0.015	0.015	<0.075	0.075	1.926	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.026	0.06
CA17170-BP-SEPTAGE	2/7/2019	<0.015	0.015	<0.075	0.075	4.599	0.02	0.3888	0.075	0.09247	0.05	<0.025	0.025	12.20	0.06
CA17169-BP-SEPTAGE	2/8/2019	<0.015	0.015	<0.075	0.075	4.488	0.02	0.3704	0.075	0.09303	0.05	<0.025	0.025	12.27	0.06
CA17541-BP-SEPTAGE	2/12/2019	<0.015	0.015	<0.075	0.075	7.095	0.02	0.1034	0.075	0.08109	0.05	0.02975	0.025	7.996	0.06
CA17542-BP-SEPTAGE	2/13/2019	<0.015	0.015	<0.075	0.075	3.246	0.02	<0.075	0.075	0.05879	0.05	<0.025	0.025	6.057	0.06
CA17543-BP-SEPTAGE	2/14/2019	<0.015	0.015	<0.075	0.075	1.880	0.02	0.4899	0.075	0.06713	0.05	<0.025	0.025	12.81	0.06
CA18066-BP-SEPTAGE	2/19/2019	<0.015	0.015	<0.075	0.075	11.29	0.02	0.2231	0.075	0.2745	0.05	<0.025	0.025	20.81	0.06
CA18067-BP-SEPTAGE	2/20/2019	0.01620	0.015	<0.075	0.075	13.27	0.02	0.5382	0.075	0.2387	0.05	0.03839	0.025	20.25	0.06
CA18068-BP-SEPTAGE	2/21/2019	0.01551	0.015	0.09387	0.075	7.792	0.02	0.5953	0.075	0.2357	0.05	<0.025	0.025	23.09	0.06
CA18478-BP-SEPTAGE	2/25/2019	<0.015	0.015	<0.075	0.075	3.993	0.02	0.2473	0.075	0.05969	0.05	<0.025	0.025	7.399	0.06
CA18479-BP-SEPTAGE	2/27/2019	0.02768	0.015	0.1380	0.075	8.742	0.02	0.4756	0.075	0.2581	0.05	0.09142	0.025	14.91	0.06
CA18480-BP-SEPTAGE	3/1/2019	0.02407	0.015	0.1267	0.075	9.771	0.02	0.3650	0.075	0.2686	0.05	0.02605	0.025	19.34	0.06
CA18980-BP-SEPTAGE	3/6/2019	<0.015	0.015	<0.075	0.075	4.488	0.02	0.2353	0.075	0.06633	0.05	<0.025	0.025	8.164	0.06
CA18981-BP-SEPTAGE	3/7/2019	0.04373	0.015	<0.075	0.075	5.453	0.02	0.5973	0.075	0.1389	0.05	<0.025	0.025	8.579	0.06
CA18982-BP-SEPTAGE	3/8/2019	0.2309	0.015	0.2164	0.075	13.40	0.02	3.361	0.075	0.4736	0.05	0.04970	0.025	28.80	0.3
CA19353-BP-SEPTAGE	3/11/2019	<0.015	0.015	<0.075	0.075	1.650	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.019	0.06
CA19354-BP-SEPTAGE	3/13/2019	0.03907	0.015	0.1032	0.075	4.699	0.02	0.6163	0.075	0.1421	0.05	<0.025	0.025	9.574	0.06
CA19355-BP-SEPTAGE	3/15/2019	<0.015	0.015	<0.075	0.075	1.905	0.02	0.7051	0.075	<0.050	0.05	<0.025	0.025	3.599	0.06
CA19821-BP-SEPTAGE	3/18/2019	<0.015	0.015	<0.075	0.075	0.8586	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.889	0.06
CA19822-BP-SEPTAGE	3/20/2019	<0.015	0.015	<0.075	0.075	1.269	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	4.601	0.06
CA19823-BP-SEPTAGE	3/22/2019	<0.015	0.015	<0.075	0.075	3.378	0.02	0.2255	0.075	0.07217	0.05	<0.025	0.025	6.425	0.06
CA20283-BP-SEPTAGE	3/25/2019	<0.015	0.015	<0.075	0.075	2.489	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.808	0.06
CA20282-BP-SEPTAGE	3/26/2019	<0.015	0.015	<0.075	0.075	2.732	0.02	0.1132	0.075	0.08465	0.05	<0.025	0.025	11.35	0.06
CA20281-BP-SEPTAGE	3/28/2019	<0.015	0.015	<0.075	0.075	8.034	0.02	0.2165	0.075	0.1179	0.05	0.02882	0.025	12.52	0.06
CA20901-BP-SEPTAGE	4/1/2019	0.01958	0.015	0.07687	0.075	6.625	0.02	0.4800	0.075	0.1183	0.05	0.02572	0.025	12.03	0.06
CA20902-BP-SEPTAGE	4/2/2019	<0.015	0.015	<0.075	0.075	1.447	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.817	0.06
CA20903-BP-SEPTAGE	4/3/2019	0.03252	0.015	0.1647	0.075	31.58	0.02	0.6958	0.075	0.2499	0.05	0.05138	0.025	21.66	0.06
CA21308-BP-SEPTAGE	4/8/2019	<0.015	0.015	<0.075	0.075	2.117	0.02	0.1096	0.075	0.05815	0.05	<0.025	0.025	5.828	0.06
CA21309-BP-SEPTAGE	4/10/2019	<0.015	0.015	0.09194	0.075	6.234	0.02	0.2040	0.075	0.1385	0.05	<0.025	0.025	12.80	0.06
CA21310-BP-SEPTAGE	4/12/2019	0.05322	0.015	0.3135	0.075	18.82	0.02	2.147	0.075	0.3159	0.05	0.03391	0.025	35.73	0.3
CA21763-BP-SEPTAGE	4/15/2019	0.02813	0.015	0.07841	0.075	14.98	0.02	0.2262	0.075	0.2824	0.05	<0.025	0.025	19.51	0.06
CA21764-BP-SEPTAGE	4/17/2019	<0.015	0.015	<0.075	0.075	0.3559	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.206	0.06
CA21765-BP-SEPTAGE	4/20/2019	<0.015	0.015	<0.075	0.075	2.742	0.02	0.1846	0.075	0.09295	0.05	<0.025	0.025	5.980	0.06
CA22225-BP-SEPTAGE	4/22/2019	<0.015	0.015	<0.075	0.075	14.72	0.02	<0.075	0.075	0.2738	0.05	<0.025	0.025	13.03	0.06
CA22226-BP-SEPTAGE	4/23/2019	<0.015	0.015	<0.075	0.075	1.713	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.076	0.06

Table 29: Septage Sampling Data

Septage Monitoring Data - 2019

Results in ppm

Sample No.	Date	Cd	Cd MDL	Cr	Cr MDL	Cu	Cu MDL	Pb	Pb MDL	Ni	Ni MDL	Ag	Ag MDL	Zn	Zn MDL
CA22227-BP-SEPTAGE	4/26/2019	<0.015	0.015	<0.075	0.075	3.219	0.02	0.07852	0.075	0.06455	0.05	<0.025	0.025	8.107	0.06
CA22760-BP-SEPTAGE	5/2/2019	<0.015	0.015	<0.075	0.075	2.287	0.02	<0.075	0.075	0.05143	0.05	<0.025	0.025	1.686	0.06
CA22761-BP-SEPTAGE	5/3/2019	<0.015	0.015	<0.075	0.075	3.707	0.02	0.1354	0.075	0.07639	0.05	<0.025	0.025	3.428	0.06
CA22762-BP-SEPTAGE	5/4/2019	<0.015	0.015	<0.075	0.075	1.159	0.02	0.1821	0.075	<0.050	0.05	<0.025	0.025	3.672	0.06
CA23188-BP-SEPTAGE	5/9/2019	0.01515	0.015	<0.075	0.075	5.848	0.02	0.2367	0.075	0.1068	0.05	0.04208	0.025	10.89	0.06
CA23189-BP-SEPTAGE	5/10/2019	0.02364	0.015	0.1478	0.075	21.26	0.02	0.4180	0.075	0.2383	0.05	<0.025	0.025	17.83	0.06
CA23190-BP-SEPTAGE	5/11/2019	<0.015	0.015	<0.075	0.075	2.865	0.02	0.2075	0.075	0.06503	0.05	<0.025	0.025	9.347	0.06
CA23707-BP-SEPTAGE	5/13/2019	0.01507	0.015	0.08578	0.075	8.810	0.02	0.3154	0.075	0.1342	0.05	<0.025	0.025	16.13	0.06
CA23708-BP-SEPTAGE	5/14/2019	<0.015	0.015	<0.075	0.075	6.904	0.02	0.2205	0.075	0.09149	0.05	<0.025	0.025	13.20	0.06
CA23709-BP-SEPTAGE	5/15/2019	0.02021	0.015	0.1225	0.075	9.827	0.02	0.3337	0.075	0.2126	0.05	0.03404	0.025	20.49	0.06
CA24107-BP-SEPTAGE	5/20/2019	<0.015	0.015	<0.075	0.075	0.4973	0.02	1.081	0.075	<0.050	0.05	<0.025	0.025	1.996	0.06
CA24105-BP-SEPTAGE	5/21/2019	<0.015	0.015	<0.075	0.075	0.3451	0.02	0.1267	0.075	<0.050	0.05	<0.025	0.025	2.849	0.06
CA24106-BP-SEPTAGE	5/25/2019	0.01543	0.015	0.1868	0.075	9.957	0.02	2.343	0.075	0.2517	0.05	0.06830	0.025	17.92	0.06
CA24594-BP-SEPTAGE	5/28/2019	<0.015	0.015	<0.075	0.075	1.643	0.02	0.2299	0.075	<0.050	0.05	<0.025	0.025	6.665	0.06
CA24595-BP-SEPTAGE	5/30/2019	<0.015	0.015	<0.075	0.075	0.3376	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.767	0.06
CA24596-BP-SEPTAGE	6/1/2019	<0.015	0.015	<0.075	0.075	0.3171	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.6099	0.06
CA25039-BP-SEPTAGE	6/3/2019	<0.015	0.015	<0.075	0.075	0.4832	0.02	0.8769	0.075	<0.050	0.05	<0.025	0.025	1.724	0.06
CA25040-BP-SEPTAGE	6/5/2019	<0.015	0.015	<0.075	0.075	2.219	0.02	0.3684	0.075	0.07391	0.05	<0.025	0.025	7.058	0.06
CA25041-BP-SEPTAGE	6/7/2019	0.03376	0.015	0.1920	0.075	13.40	0.02	1.488	0.075	0.3152	0.05	0.03097	0.025	29.25	0.3
CA25542-BP-SEPTAGE	6/10/2019	<0.015	0.015	<0.075	0.075	2.716	0.02	0.07599	0.075	<0.050	0.05	<0.025	0.025	2.978	0.06
CA25543-BP-SEPTAGE	6/11/2019	<0.015	0.015	<0.075	0.075	10.97	0.02	0.1410	0.075	0.05291	0.05	<0.025	0.025	7.020	0.06
CA25544-BP-SEPTAGE	6/12/2019	<0.015	0.015	<0.075	0.075	5.581	0.02	0.1447	0.075	0.06509	0.05	<0.025	0.025	5.473	0.06
CA25942-BP-SEPTAGE	6/17/2019	<0.015	0.015	<0.075	0.075	4.189	0.02	0.1390	0.075	0.05789	0.05	<0.025	0.025	6.279	0.06
CA25943-BP-SEPTAGE	6/19/2019	<0.015	0.015	<0.075	0.075	8.965	0.02	0.3460	0.075	0.3126	0.05	<0.025	0.025	14.34	0.06
CA25944-BP-SEPTAGE	6/21/2019	0.01714	0.015	0.08852	0.075	11.30	0.02	0.3467	0.075	0.2647	0.05	<0.025	0.025	15.28	0.06
CA26435-BP-SEPTAGE	6/24/2019	<0.015	0.015	<0.075	0.075	4.734	0.02	0.1657	0.075	0.05593	0.05	<0.025	0.025	6.039	0.06
CA26434-BP-SEPTAGE	6/25/2019	<0.015	0.015	<0.075	0.075	12.92	0.02	0.3006	0.075	0.3749	0.05	<0.025	0.025	27.88	0.3
CA26433-BP-SEPTAGE	6/26/2019	<0.015	0.015	<0.075	0.075	12.03	0.02	0.2330	0.075	0.07142	0.05	<0.025	0.025	7.441	0.06
CA26853-BP-SEPTAGE	7/1/2019	<0.015	0.015	<0.075	0.075	1.008	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.393	0.06
CA26854-BP-SEPTAGE	7/3/2019	0.01751	0.015	0.1186	0.075	9.940	0.02	0.9653	0.075	0.1602	0.05	<0.025	0.025	14.58	0.06
CA26855-BP-SEPTAGE	7/5/2019	<0.015	0.015	<0.075	0.075	3.636	0.02	0.2825	0.075	0.09566	0.05	<0.025	0.025	7.523	0.06
CA27411-BP-SEPTAGE	7/10/2019	<0.015	0.015	<0.075	0.075	0.5324	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.119	0.06
CA27412-BP-SEPTAGE	7/11/2019	<0.015	0.015	<0.075	0.075	0.7546	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.072	0.06
CA27413-BP-SEPTAGE	7/12/2019	0.02965	0.015	0.1479	0.075	20.45	0.02	0.4378	0.075	0.2106	0.05	<0.025	0.025	21.75	0.06
CA27830-BP-SEPTAGE	7/15/2019	<0.015	0.015	0.08101	0.075	7.663	0.02	0.3018	0.075	1.348	0.05	0.03148	0.025	18.88	0.06
CA27831-BP-SEPTAGE	7/17/2019	<0.015	0.015	<0.075	0.075	4.446	0.02	0.2404	0.075	0.5936	0.05	<0.025	0.025	16.34	0.06
CA27832-BP-SEPTAGE	7/19/2019	0.1863	0.015	0.4341	0.075	15.33	0.02	0.9526	0.075	0.9671	0.05	0.06622	0.025	45.54	0.3
CA28372-BP-SEPTAGE	7/22/2019	<0.015	0.015	<0.075	0.075	5.358	0.02	0.2580	0.075	0.1601	0.05	<0.025	0.025	13.31	0.06
CA28371-BP-SEPTAGE	7/23/2019	0.04856	0.015	0.1437	0.075	20.48	0.02	1.304	0.075	0.4697	0.05	0.03974	0.025	17.94	0.06
CA28370-BP-SEPTAGE	7/26/2019	<0.015	0.015	<0.075	0.075	1.719	0.02	<0.075	0.075	0.06573	0.05	<0.025	0.025	6.204	0.06
CA28787-BP-SEPTAGE	7/29/2019	<0.015	0.015	<0.075	0.075	5.252	0.02	0.09235	0.075	0.1144	0.05	<0.025	0.025	11.99	0.06
CA28788-BP-SEPTAGE	7/31/2019	<0.015	0.015	<0.075	0.075	2.254	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	4.261	0.06
CA28789-BP-SEPTAGE	8/2/2019	0.02070	0.015	0.1070	0.075	4.408	0.02	0.2858	0.075	0.1373	0.05	<0.025	0.025	15.65	0.06
CA29337-BP-SEPTAGE	8/5/2019	<0.015	0.015	<0.075	0.075	1.108	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	4.306	0.06
CA29338-BP-SEPTAGE	8/7/2019	<0.015	0.015	<0.075	0.075	0.9313	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.404	0.06
CA29339-BP-SEPTAGE	8/9/2019	<0.015	0.015	<0.075	0.075	3.855	0.02	0.1643	0.075	0.05759	0.05	0.02628	0.025	7.502	0.06
CA29749-BP-SEPTAGE	8/13/2019	0.02814	0.015	0.1056	0.075	4.697	0.02	0.2721	0.075	0.2445	0.05	<0.025	0.025	11.51	0.06
CA29748-BP-SEPTAGE	8/14/2019	<0.015	0.015	<0.075	0.075	4.780	0.02	0.5009	0.075	0.07939	0.05	<0.025	0.025	6.822	0.06
CA29747-BP-SEPTAGE	8/16/2019	<0.015	0.015	<0.075	0.075	2.069	0.02	0.09031	0.075	<0.050	0.05	<0.025	0.025	5.112	0.06

Table 29: Septage Sampling Data

Septage Monitoring Data - 2019

Results in ppm

Sample No.	Date	Cd	Cd MDL	Cr	Cr MDL	Cu	Cu MDL	Pb	Pb MDL	Ni	Ni MDL	Ag	Ag MDL	Zn	Zn MDL
CA30355-BP-SEPTAGE	8/19/2019	0.01715	0.015	0.08022	0.075	15.98	0.02	0.7241	0.075	0.1592	0.05	<0.025	0.025	15.48	0.06
CA30356-BP-SEPTAGE	8/20/2019	<0.015	0.015	<0.075	0.075	4.433	0.02	0.2746	0.075	0.1049	0.05	<0.025	0.025	8.428	0.06
CA30357-BP-SEPTAGE	8/21/2019	<0.015	0.015	<0.075	0.075	2.346	0.02	0.1354	0.075	0.05685	0.05	<0.025	0.025	6.734	0.06
CA30746-BP-SEPTAGE	8/26/2019	<0.015	0.015	<0.075	0.075	0.4781	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.129	0.06
CA30747-BP-SEPTAGE	8/28/2019	<0.015	0.015	<0.075	0.075	4.318	0.02	0.1944	0.075	0.1696	0.05	<0.025	0.025	4.844	0.06
CA30748-BP-SEPTAGE	8/30/2019	<0.015	0.015	<0.075	0.075	7.151	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.867	0.06
CA31218-BP-SEPTAGE	9/3/2019	<0.015	0.015	<0.075	0.075	2.453	0.02	0.1431	0.075	0.06768	0.05	<0.025	0.025	7.149	0.06
CA31216-BP-SEPTAGE	9/5/2019	<0.075	0.075	<0.375	0.375	40.06	0.1	0.6759	0.375	0.2574	0.25	0.7124	0.125	28.01	0.3
CA31217-BP-SEPTAGE	9/7/2019	<0.015	0.015	<0.075	0.075	1.060	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.128	0.06
CA31705-BP-SEPTAGE	9/9/2019	<0.015	0.015	<0.075	0.075	3.759	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.567	0.06
CA31706-BP-SEPTAGE	9/12/2019	<0.015	0.015	<0.075	0.075	2.070	0.02	0.2608	0.075	0.06459	0.05	<0.025	0.025	7.553	0.06
CA31707-BP-SEPTAGE	9/14/2019	0.03739	0.015	0.1440	0.075	18.90	0.02	1.438	0.075	0.2678	0.05	0.04857	0.025	31.79	0.3
CA32213-BP-SEPTAGE	9/16/2019	<0.015	0.015	<0.075	0.075	4.084	0.02	0.1098	0.075	0.08662	0.05	<0.025	0.025	7.071	0.06
CA32214-BP-SEPTAGE	9/17/2019	<0.015	0.015	0.09914	0.075	6.818	0.02	0.2379	0.075	0.1150	0.05	<0.025	0.025	11.85	0.06
CA32215-BP-SEPTAGE	9/18/2019	0.1113	0.015	<0.075	0.075	9.486	0.02	2.998	0.075	0.07117	0.05	<0.025	0.025	9.217	0.06
CA32614-BP-SEPTAGE	9/25/2019	<0.015	0.015	<0.075	0.075	12.15	0.02	0.1538	0.075	0.09179	0.05	<0.025	0.025	7.526	0.06
CA32615-BP-SEPTAGE	9/26/2019	<0.015	0.015	<0.075	0.075	5.974	0.02	0.1221	0.075	0.08822	0.05	<0.025	0.025	8.825	0.06
CA32616-BP-SEPTAGE	9/28/2019	<0.015	0.015	<0.075	0.075	2.105	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	4.359	0.06
CA33243-BP-SEPTAGE	10/2/2019	<0.015	0.015	<0.075	0.075	4.565	0.02	0.5287	0.075	0.09024	0.05	<0.025	0.025	8.426	0.06
CA33242-BP-SEPTAGE	10/3/2019	<0.015	0.015	<0.075	0.075	2.564	0.02	0.1062	0.075	0.06778	0.05	<0.025	0.025	7.224	0.06
CA33241-BP-SEPTAGE	10/4/2019	<0.015	0.015	<0.075	0.075	5.008	0.02	0.2746	0.075	0.1088	0.05	<0.025	0.025	13.18	0.06
CA33719-BP-SEPTAGE	10/7/2019	0.01609	0.015	0.09096	0.075	14.67	0.02	0.3357	0.075	0.1455	0.05	0.04684	0.025	14.77	0.06
CA33720-BP-SEPTAGE	10/9/2019	0.03681	0.015	0.2157	0.075	65.04	0.1	2.862	0.075	0.5047	0.05	0.05177	0.025	47.23	0.3
CA33721-BP-SEPTAGE	10/10/2019	0.05000	0.015	0.1325	0.075	36.83	0.02	1.902	0.075	0.2662	0.05	0.07195	0.025	33.85	0.3
CA34311-BP-SEPTAGE	10/16/2019	<0.015	0.015	<0.075	0.075	7.236	0.02	0.4517	0.075	0.07934	0.05	<0.025	0.025	8.337	0.06
CA34312-BP-SEPTAGE	10/18/2019	<0.015	0.015	<0.075	0.075	3.315	0.02	0.2569	0.075	0.06764	0.05	<0.025	0.025	14.42	0.06
CA34313-BP-SEPTAGE	10/21/2019	<0.015	0.015	<0.075	0.075	1.984	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.345	0.06
CA34776-BP-SEPTAGE	10/22/2019	<0.015	0.015	<0.075	0.075	1.440	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.387	0.06
CA34777-BP-SEPTAGE	10/23/2019	0.02206	0.015	0.1453	0.075	13.31	0.02	0.6289	0.075	0.2461	0.05	0.2389	0.125	19.95	0.3
CA34778-BP-SEPTAGE	10/25/2019	0.02082	0.015	0.1016	0.075	18.48	0.02	0.3407	0.075	0.1737	0.05	0.02904	0.025	16.13	0.06
CA35301-BP-SEPTAGE	10/30/2019	<0.015	0.015	<0.075	0.075	3.149	0.02	0.1028	0.075	<0.050	0.05	<0.025	0.025	3.946	0.06
CA35302-BP-SEPTAGE	10/31/2019	<0.015	0.015	<0.075	0.075	2.256	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.533	0.06
CA35303-BP-SEPTAGE	11/2/2019	<0.015	0.015	<0.075	0.075	0.5538	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.6935	0.06
CA35742-BP-SEPTAGE	11/4/2019	0.02065	0.015	<0.075	0.075	8.643	0.02	0.2373	0.075	0.1183	0.05	0.03826	0.025	14.69	0.06
CA35743-BP-SEPTAGE	11/6/2019	0.04313	0.015	0.2296	0.075	25.53	0.02	1.745	0.075	0.3979	0.05	0.09624	0.025	27.89	0.3
CA35744-BP-SEPTAGE	11/8/2019	<0.015	0.015	<0.075	0.075	4.935	0.02	0.4337	0.075	0.1083	0.05	<0.025	0.025	9.369	0.06
CA36252-BP-SEPTAGE	11/11/2019	<0.015	0.015	<0.075	0.075	2.201	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.077	0.06
CA36253-BP-SEPTAGE	11/12/2019	0.02873	0.015	0.1195	0.075	9.230	0.02	0.5900	0.075	0.1570	0.05	0.03786	0.025	22.21	0.3
CA36254-BP-SEPTAGE	11/13/2019	<0.015	0.015	<0.075	0.075	2.823	0.02	<0.075	0.075	0.05607	0.05	<0.025	0.025	6.931	0.06
CA36646-BP-SEPTAGE	11/18/2019	0.01741	0.015	0.1176	0.075	7.071	0.02	0.3426	0.075	0.1513	0.05	<0.025	0.025	15.78	0.06
CA36647-BP-SEPTAGE	11/20/2019	<0.015	0.015	<0.075	0.075	8.057	0.02	0.2119	0.075	0.1499	0.05	<0.025	0.025	10.50	0.06
CA36648-BP-SEPTAGE	11/22/2019	0.01676	0.015	0.1002	0.075	11.09	0.02	0.3508	0.075	0.1547	0.05	<0.025	0.025	15.07	0.06
CA37051-BP-SEPTAGE	11/25/2019	<0.015	0.015	<0.075	0.075	1.285	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.987	0.06
CA37052-BP-SEPTAGE	11/27/2019	<0.015	0.015	<0.075	0.075	2.373	0.02	0.1275	0.075	0.07443	0.05	<0.025	0.025	10.21	0.06
CA37050-BP-SEPTAGE	11/29/2019	0.01914	0.015	0.09880	0.075	9.924	0.02	0.5050	0.075	0.2420	0.05	<0.025	0.025	15.35	0.06
CA37617-BP-SEPTAGE	12/2/2019	0.02149	0.015	0.09254	0.075	8.667	0.02	0.3530	0.075	0.1486	0.05	0.04656	0.025	15.60	0.06
CA37618-BP-SEPTAGE	12/4/2019	0.02132	0.015	0.1445	0.075	14.05	0.02	0.6823	0.075	0.1799	0.05	0.04527	0.025	22.99	0.3
CA37619-BP-SEPTAGE	12/5/2019	<0.015	0.015	0.1195	0.075	13.92	0.02	0.3921	0.075	0.3124	0.05	0.02515	0.025	14.12	0.06
CA38081-BP-SEPTAGE	12/9/2019	<0.015	0.015	<0.075	0.075	6.976	0.02	0.2099	0.075	0.08463	0.05	<0.025	0.025	7.104	0.06

Table 29: Septage Sampling Data

Septage Monitoring Data - 2019

Results in ppm

Sample No.	Date	Cd	Cd MDL	Cr	Cr MDL	Cu	Cu MDL	Pb	Pb MDL	Ni	Ni MDL	Ag	Ag MDL	Zn	Zn MDL
CA38082-BP-SEPTAGE	12/10/2019	<0.015	0.015	<0.075	0.075	0.8375	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.785	0.06
CA38083-BP-SEPTAGE	12/11/2019	<0.015	0.015	<0.075	0.075	3.747	0.02	0.1669	0.075	0.07273	0.05	0.06349	0.025	9.008	0.06
CA38559-BP-SEPTAGE	12/16/2019	<0.015	0.015	<0.075	0.075	16.70	0.02	0.2590	0.075	0.1428	0.05	<0.025	0.025	15.88	0.06
CA38558-BP-SEPTAGE	12/18/2019	0.1041	0.015	0.2391	0.075	40.04	0.02	0.8042	0.075	0.3916	0.05	0.1783	0.025	81.96	0.3
CA38557-BP-SEPTAGE	12/20/2019	0.01792	0.015	<0.075	0.075	5.675	0.02	0.2914	0.075	0.1228	0.05	<0.025	0.025	14.51	0.06
CA39298-BP-SEPTAGE	12/23/2019	0.03358	0.015	0.1605	0.075	14.04	0.02	0.6877	0.075	0.2939	0.05	0.04231	0.025	35.13	0.3
CA39299-BP-SEPTAGE	12/26/2019	<0.015	0.015	<0.075	0.075	2.530	0.02	0.2271	0.075	0.06162	0.05	<0.025	0.025	5.702	0.06
CA39300-BP-SEPTAGE	12/27/2019	0.02601	0.015	0.1572	0.075	28.08	0.02	0.7244	0.075	0.2866	0.05	0.04604	0.025	34.17	0.3
CA39479-BP-SEPTAGE	12/30/2019	0.02123	0.015	0.1061	0.075	6.818	0.02	0.4653	0.075	0.1540	0.05	0.03135	0.025	21.46	0.06

Table 29: Septage Sampling Data

Metals Loading to Bucklin Point from Septage (lbs/yr)

Year	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc	Total Metals	Total Septage Volume (MGY)
1996	4.5	77.6	946.0	167.0	33.9	19.6	1414	2663	14.760
1997	3.9	33.2	806.0	113.0	27.4	10.3	1060	2054	14.220
1998	4.5	29.2	830.0	93.0	31.0	5.7	1016	2009	17.530
1999	3.4	26.5	623.0	61.0	20.0	4.1	849	1587	21.500
2000	2.8	21.8	591.0	53.0	26.7	4.1	873	1572	23.340
2001	1.5	20.7	436.0	42.3	22.4	4.2	633	1160	17.390
2002	0.95	8.2	322.6	30.4	22.8	33.1	473	892	17.036
2003	0.89	3.8	196.4	15.9	7.1	4.2	299	527	13.033
2004	0.90	5.0	256.3	15.9	8.9	3.3	321	612	9.100
2005	0.93	7.9	349.9	25.5	11.3	1.9	458	855	8.961
2006	1.35	8.8	416.0	24.2	13.2	3.3	495	961	9.363
2007	1.49	11.45	532.25	28.18	14.82	4.20	604.82	1197	8.526
2008	2.81	10.5	440.3	19.8	9.5	5.3	508	996	9.301
2009	1.5	12.1	435.4	23.0	11.6	4.2	554.4	1042	9.080
2010	1.4	12.5	505.1	30.7	15.5	3.3	639.8	1208	8.023
2011	1.6	21.1	558.4	35.8	16.8	5.1	745.3	1384	7.069
2012	1.6	17.7	775.6	39.0	22.5	3.4	988.6	1848	7.077
2013	1.9	9.7	545.4	35.9	17.0	5.0	687.9	1303	7.242
2014	1.5	10.5	606.7	36.2	15.9	7.0	780.8	1459	7.922
2015	1.5	10.5	547.7	37.9	14.3	3.1	950.3	1565	8.421
2016	1.2	6.8	399.6	25.4	8.8	2.9	657.8	1102	7.839
2017	1.2	6.2	494.2	24.2	10.6	2.9	699.6	1239	7.683
2018	2.1	5.6	395.1	19.2	6.1	2.5	587.8	1019	7.272
2019	1.5	6.8	545.9	28.3	10.2	2.6	819.7	1415	8.276

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
1/2/2019	10:55 AM	CA12987	Nutrient Blank	CA12987	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
1/2/2019	8:40 AM	CA12988	Blackstone River @ Slater Mill	CA12987	RIVER	0.503	0.15	4.43	7.14	674	6.2	668	46.2	18.3	2890	851	845	4.9462		
1/2/2019	2:55 PM	CA12989	Pawtuxet River @ Broad St.	CA12987	RIVER	0.440	0.09	4.67	7.40	619	3.29	616	32.6	<5.0	2140	829	770	2.0833		
1/2/2019	2:10 PM	CA12990	Woonasquatucket River @ Valley St.	CA12987	RIVER	0.520	0.13	4.23	7.38	554	2.36	552	13.7	<5.0	2660	677	673	2.9787		
1/2/2019	1:40 PM	CA12991	Woonasquatucket River @ Manton Ave. Bridge	CA12987	RIVER	0.505	0.12	4.13	7.40	500	2.25	498	16.7	<5.0	2650	630	636	<2.0000		
1/2/2019	10:35 AM	CA12992	Moshassuck River @ Footbridge at Mill St.	CA12987	RIVER	0.591	0.19	4.03	7.44	623	5.79	617	52.3	<5.0	3260	770	794	2.0619		
1/2/2019	9:10 AM	CA12993	Moshassuck River @ Higginson Ave.	CA12987	RIVER	0.563	0.18	4.04	7.34	539	3.15	536	10.2	<5.0	3070	634	668	<2.0000		
1/2/2019	9:10 AM	CA12994	Moshassuck River @ Higginson Ave. (Duplicate)	CA12987	RIVER	0.563	0.18	4.04	7.34	536	3.16	533	10.7	5.44	2970	644	691	<2.0000		
1/2/2019	9:55 AM	CA12995	Ten Mile River @ Roger Williams Ave.	CA12987	RIVER	0.529	0.17	4.37	7.36	1530	7.05	1520	46.4	11.2	3280	1720	1740	2.8302		
1/2/2019	1:25 PM	CA12980	Phillipsdale Landing Surface		BAY	0.500	1.83	4.90	7.40	698	6.36	692	55.2	28.9	2990	1000	855	3.2609	0.7695	0.89241
1/2/2019	1:25 PM	CA12981	Phillipsdale Landing Surface (Duplicate)		BAY	0.500	1.83	4.90	7.40	671	6.7	664	55	33.1	3010	938	902	2.7368	1.0671	1.0575
1/3/2019	9:35 AM	CA12973	Nutrient Blank	CA12973	BAY					<6.000	<1.5	<6.0	8.73	<5.0	<20.000	<200.000	<100.000			
1/3/2019	9:15 AM	CA12974	Conimicut Point Surface	CA12973	BAY	0.500	14.62	4.10	7.93	534	5.42	529	52.5	18	2120	854	683	4.6	0.36123	0.38526
1/3/2019	1:30 PM	CA12975	Edgewood Yacht Club Surface	CA12973	BAY	0.500	16.25	5.27	7.96	502	7.9	494	77.6	40.1	1850	836	734	6.0606	1.681	0.90246
1/3/2019	8:45 AM	CA12976	Pomham Rocks Surface	CA12973	BAY	0.500	12.39	3.99	7.85	531	5.26	526	55.2	23.5	2070	843	682	4.4681	0.50928	0.43113
1/3/2019	1:10 PM	CA12977	India Point Park Surface	CA12973	BAY	0.500	5.44	4.41	7.60	594	5.51	588	52.6	30.4	2660	928	756	4.898	1.0452	1.0015
1/3/2019	9:25 AM	CA12978	Bullock Reach Buoy Surface	CA12973	BAY	0.500	16.94	4.47	7.93	436	5.46	431	51.3	25.8	1690	764	635	4.3299	2.2302	0.81429
1/3/2019	8:55 AM	CA12979	Pawtuxet Cove Surface	CA12973	BAY	0.500	2.02	3.87	7.50	638	4.47	634	41.3	<5.0	2600	924	790	<2.0000	0.75996	0.71379
1/3/2019	8:30 AM	CA12982	Edgewood Shoal Surface	CA12973	BAY	0.500	13.35	4.22	7.79	554	6.43	548	67.4	32	2100	875	724	7	0.7503	0.62505
1/3/2019	8:35 AM	CA12983	Edgewood Shoal Bottom	CA12973	BAY					349	6.3	343	61.1	29	1350	629	483	7		
1/16/2019	3:15 PM	CA15531	Nutrient Blank	CA15531	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
1/16/2019	8:50 AM	CA15532	Blackstone River @ Slater Mill	CA15531	RIVER	0.503	0.17	0.93	7.01	1190	7.29	1180	41.6	6.25	3290	1220	1320	<2.0000		
1/16/2019	2:10 PM	CA15533	Pawtuxet River @ Broad St.	CA15531	RIVER	0.513	0.10	2.02	7.56	690	5.31	685	94.5	9.01	2660	927	970	2.1739		
1/16/2019	3:05 PM	CA15534	Woonasquatucket River @ Valley St.	CA15531	RIVER	0.507	0.13	2.30	7.40	728	2.51	725	<7.000	<5.0	2860	826	870	<2.0000		
1/16/2019	2:40 PM	CA15535	Woonasquatucket River @ Manton Ave. Bridge	CA15531	RIVER	0.501	0.12	1.83	7.46	674	2.49	672	<7.000	<5.0	2650	771	835	<2.0000		
1/16/2019	10:50 AM	CA15536	Moshassuck River @ Footbridge at Mill St.	CA15531	RIVER	0.443	0.23	2.39	7.17	770	5.98	764	73.7	<5.0	3640	928	999	2.1505		
1/16/2019	9:25 AM	CA15537	Moshassuck River @ Higginson Ave.	CA15531	RIVER	0.452	0.22	1.83	7.14	628	3.05	625	<7.000	<5.0	3160	753	787	2.3913		
1/16/2019	9:25 AM	CA15538	Moshassuck River @ Higginson Ave. (Duplicate)	CA15531	RIVER	0.452	0.22	1.83	7.14	622	3.11	619	13.4	<5.0	3080	811	798	2.1053		
1/16/2019	1:00 PM	CA15539	Ten Mile River @ Roger Williams Ave.	CA15531	RIVER	0.534	0.19	2.20	7.59	1650	7.1	1640	20.6	29.6	3520	1870	1940	<2.0000		
1/30/2019	10:25 AM	CA16416	Nutrient Blank	CA16416	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
1/30/2019	10:10 AM	CA16417	Blackstone River @ Slater Mill	CA16416	RIVER	0.660	0.15	1.80	8.18	750	7.37	743	52	6.02	2710	1030	975	64.632		
1/30/2019	10:10 AM	CA16418	Blackstone River @ Slater Mill (Duplicate)	CA16416	RIVER	0.660	0.15	1.80	8.18	752	8.05	744	48.5	<5.0	2520	1030	1020	256.63		
1/30/2019	8:45 AM	CA16419	Blackstone River @ Stateline	CA16416	RIVER	0.680	0.15	1.55	8.93	562	9.91	552	63.2	<5.0	2750	772	809	28.687		
1/30/2019	9:40 AM	CA16420	Blackstone River @ Bikepath Bridge	CA16416	RIVER	0.410	0.20	1.77	8.28	713	9.82	703	49.8	<5.0	2770	930	974	7.6768		
1/30/2019	2:00 PM	CA16421	Pawtuxet River @ Broad St.	CA16416	RIVER	0.500	0.09	2.94	8.15	604	6.26	598	61.6	<5.0	2190	775	844	8.2474		
1/30/2019	1:05 PM	CA16422	Woonasquatucket River @ Valley St.	CA16416	RIVER	0.310	0.15	3.44	8.00	598	2.65	595	<7.000	<5.0	2550	709	774	4		
1/30/2019	12:55 PM	CA16423	Woonasquatucket River @ Manton Ave. Bridge	CA16416	RIVER	0.400	0.14	3.37	7.99	569	2.45	567	<7.000	<5.0	2570	651	723	5.3061		
1/30/2019	1:30 PM	CA16424	Moshassuck River @ Footbridge at Mill St.	CA16416	RIVER	0.520	0.22	3.88	7.85	663	5.29	658	39.3	<5.0	3170	799	868	4.2		
1/30/2019	2:20 PM	CA16426	Nutrient Blank	CA16426	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
1/30/2019	10:45 AM	CA16427	Warren Reservoir/Kickemuit River	CA16426	RIVER	0.490	0.10	2.17	7.07	704	6.6	697	36.8	12.9	1640	1050	1050	3.6559		
1/30/2019	10:18 AM	CA16428	Coles River @ Milford Rd.	CA16426	RIVER	0.536	0.06	1.18	7.15	255	2.11	253	<7.000	6.89	1080	509	532	<2.0000		
1/30/2019	11:12 AM	CA16429	Palmer River @ Rt. 6	CA16426	RIVER	0.491	0.10	0.91	7.12	446	2.99	443	12.3	6.7	1260	697	728	4.8889		
1/30/2019	12:50 PM	CA16430	Runnins River @ River Rd.	CA16426	RIVER	0.501	0.19	1.94	6.86	829	9.78	819	27.2	<5.0	3080	1010	1120	<2.0000		
1/30/2019	9:00 AM	CA16431	Taunton River @ Berkley Bridge	CA16426	RIVER	0.506	0.11	1.39	7.38	449	8.68	440	40	10.3	1610	727	760	2.9213		
1/30/2019	2:05 PM	CA16432	Ten Mile River @ Roger Williams Ave.	CA16426	RIVER	0.489	0.16	2.47	7.36	1090	5.52	1080	16.5	19.2	2380	1270	1350	<2.0000		
1/30/2019	1:25 PM	CA16433	Ten Mile River @ Central Ave.	CA16426	RIVER	0.515	0.20	3.36	7.23	1510	5.79	1500	30.3	24.9	2880	1670	1810	2.0225		
1/30/2019	1:25 PM	CA16434	Ten Mile River @ Central Ave. (Duplicate)	CA16426	RIVER	0.515	0.20	3.36	7.23	1520	5.75	1510	24.4	24.1	3010	1750	1830	2.6374		
2/13/2019	2:40 PM	CA17368	Nutrient Blank	CA17368	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
2/13/2019	9:55 AM	CA17369	Blackstone River @ Slater Mill	CA17368	RIVER	0.527	0.23	1.91	7.97	809	13.7	795	55.2	6.92	3050	965	1060	<2.0000		
2/13/2019	1:40 PM	CA17370	Pawtuxet River @ Broad St.	CA17368	RIVER	0.546	0.26	2.37	7.67	816	8.39	808	106	14.6	2850	1000	1080	4.421		
2/13/2019	11:10 AM	CA17371	Woonasquatucket River @ Valley St.	CA17368	RIVER	0.517	0.48	2.82	7.05	715	3.27	712	18.1	<5.0	2420	849	901	5.4737		
2/13/2019	10:35 AM	CA17372	Woonasquatucket River @ Manton Ave. Bridge	CA17368	RIVER	0.510	0.45	2.47	7.85	691	2.66	688	17.1	<5.0	2630	793	864	2.3913		
2/13/2019	10:35 AM	CA17373	Woonasquatucket River @ Manton Ave. Bridge (Duplicate)	CA17368	RIVER	0.510	0.45	2.47	7.85	674	2.34	672	20.7	<5.0	2240	790	866	2.2727		
2/13/2019	2:25 PM	CA17374	Moshassuck River @ Footbridge at Mill St.	CA17368	RIVER	0.527	0.48	3.85	7.47	521	7.96	513	72.2	7.43	2020	778	799	18.316		
2/13/2019	9:00 AM	CA17375	Moshassuck River @ Higginson Ave.	CA17368	RIVER	0.519	0.38	3.08	8.01	558	2.8	555	27.3	<5.0	2680	670	717	2.9787		
2/13/2019	1:05 PM	CA17376	Ten Mile River @ Roger Williams Ave.	CA17368	RIVER	0.553	0.24	2.86	7.61	1600	5.83	1590	<7.000	40.9	2750	1670	1780	4.4681		
2/13/2019	9:55 AM	CA15540	Phillipsdale Landing Surface		BAY	0.520	7.12	2.77	8.68	847	10.7	836	143	162	2560	1290	1230	5.7732	2.1362	1.0096
2/13/2019	10:00 AM	CA15541	Phillipsdale Landing Bottom		BAY	2.040	20.75	3.09	8.07	247	5.16	242	67.3	29.4	998	768	441	13.6		
2/27/2019	2:25 PM	CA18126	Nutrient Blank	CA18126	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
2/27/2019	12:50 PM	CA18127	Blackstone River @ Slater Mill	CA18126	RIVER	0.490	0.24	1.56	7.71	752	16.8	735	90.1	6.13	2680	937	922	<2.0000		
2/27/2019	9:05 AM	CA18128	Blackstone River @ Stateline	CA18126	RIVER	0.500	0.24	0.49	8.17	614	21.3	593	139	<5.0	2580	850	845	<2.0000		
2/27/2019	10:15 AM	CA18129	Blackstone River @ Bikepath Bridge	CA18126	RIVER	0.410	0.24	1.05	7.81	725	17.3	708	80.2	39.6	2580	919	914	<2.0000		
2/27/2019	2:15 PM	CA18130	Pawtuxet River @ Broad St.	CA18126	RIVER	0.520	0.15	1.97	7.56	822	12	810	116	16	2350	1010	1010	<2.0000		

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS											
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
2/27/2019	1:35 PM	CA18131	Woonasquatucket River @ Valley St.	CA18126	RIVER	0.520	0.24	1.76	7.56	670	6.09	664	52.2	<5.0	2320	772	779	2.5806		
2/27/2019	1:35 PM	CA18132	Woonasquatucket River @ Valley St. (Duplicate)	CA18126	RIVER	0.520	0.24	1.76	7.56	669	5.96	663	56.6	<5.0	2320	767	814	<2.0000		
2/27/2019	10:35 AM	CA18133	Moshassuck River @ Higginson Ave.	CA18126	RIVER	0.480	0.39	1.94	7.71	581	2.64	578	<7.000	6.27	2930	716	676	<2.0000		
2/27/2019	1:20 PM	CA18134	Moshassuck River @ Footbridge at Mill St.	CA18126	RIVER	0.500	0.36	2.31	7.53	708	4.39	704	57.8	<5.0	3470	824	822	3.5789		
2/27/2019	2:25 PM	CA18135	Nutrient Blank	CA18135	RIVER					<6.000	<1.5	<6.0	<7.000	5.69	<20.000	<200.000	<100.000			
2/27/2019	10:55 AM	CA18136	Warren Reservoir/Kickemuit River	CA18135	RIVER	0.524	0.11	1.18	8.46	436	4.49	432	21	5.43	1100	757	721	3.4343		
2/27/2019	10:30 AM	CA18137	Coles River @ Milford Rd.	CA18135	RIVER	0.524	0.08	1.83	8.37	231	1.95	229	10.3	5.3	972	588	434	2.4		
2/27/2019	11:15 AM	CA18138	Palmer River @ Rt. 6	CA18135	RIVER	0.518	0.08	0.39	7.97	323	2.25	321	16.4	6.5	1030	607	538	2.0619		
2/27/2019	12:45 PM	CA18139	Runnins River @ River Rd.	CA18135	RIVER	0.531	0.21	0.46	7.35	684	5.18	679	13	6.28	2460	881	861	<2.0000		
2/27/2019	12:45 PM	CA18140	Runnins River @ River Rd. (Duplicate)	CA18135	RIVER	0.531	0.21	0.46	7.35	682	5.13	677	12.6	<5.0	2510	944	876	<2.0000		
2/27/2019	9:15 AM	CA18141	Taunton River @ Berkley Bridge	CA18135	RIVER	0.483	0.15	0.87	7.50	410	7.36	403	95.9	10.8	1430	861	700	10		
2/27/2019	2:10 PM	CA18142	Ten Mile River @ Roger Williams Ave.	CA18135	RIVER	0.466	0.25	2.15	7.64	1360	6.72	1350	<7.000	18	2600	1510	1500	3.3684		
2/27/2019	1:25 PM	CA18143	Ten Mile River @ Central Ave.	CA18135	RIVER	0.512	0.27	2.01	7.57	1780	3.88	1780	12.2	18.2	2660	1940	1940	4.7917		
3/13/2019	10:55 AM	CA15513	Nutrient Blank	CA15513	BAY					12.7	<1.5	12.7	<7.000	<5.0	<20.000	<200.000	<100.000			
3/13/2019	10:05 AM	CA15514	Conimicut Point Surface	CA15513	BAY	0.500	8.46	3.32	8.17	175	5.34	170	16.3	<5.0	476	602	310	6.9388	7.13	1.2999
3/13/2019	10:10 AM	CA15515	Conimicut Point Bottom	CA15513	BAY					16.7	1.99	14.7	<7.000	<5.0	36.6	378	<100.000	10		
3/13/2019	1:55 PM	CA15516	Edgewood Yacht Club Surface	CA15513	BAY	0.500	20.05	4.78	8.16	257	8.18	249	33.8	16.8	731	670	400	7.4419	5.0387	1.2832
3/13/2019	2:00 PM	CA15517	Edgewood Yacht Club Bottom	CA15513	BAY					11.3	1.89	9.41	<7.000	<5.0	30.4	409	104	8.1319		
3/13/2019	1:25 PM	CA15518	Pomham Rocks Surface	CA15513	BAY	0.500	20.77	5.97	8.12	253	8.04	245	28	13.2	707	615	407	6.1538	3.5557	1.1285
3/13/2019	1:30 PM	CA15519	Pomham Rocks Bottom	CA15513	BAY					25.7	2.3	23.4	<7.000	<5.0	69.4	600	155	7.3913		
3/13/2019	1:00 PM	CA15520	India Point Park Surface	CA15513	BAY	0.500	4.08	5.91	8.11	434	8.76	425	30.9	16.8	1290	811	597	5.1064	6.03	1.2241
3/13/2019	1:05 PM	CA15521	India Point Park Bottom	CA15513	BAY					8.57	<1.5	8.57	10.4	<5.0	<20.000	429	<100.000	20.213		
3/13/2019	10:25 AM	CA15522	Bullock Reach Buoy Surface	CA15513	BAY	0.500	7.99	8.08	8.88	161	5.75	155	23.1	5.88	438	565	283	11.277	0.8307	0.23465
3/13/2019	10:25 AM	CA15523	Bullock Reach Buoy Surface (Duplicate)	CA15513	BAY	0.500	7.99	8.08	8.88	165	6.14	159	22.5	7.21	442	573	279	6.3917	3.2302	0.52582
3/13/2019	10:30 AM	CA15524	Bullock Reach Buoy Bottom	CA15513	BAY					8.47	1.59	6.88	<7.000	<5.0	30.3	415	<100.000	9.1954		
3/13/2019	1:40 PM	CA15525	Pawtuxet Cove Surface	CA15513	BAY	0.500	3.73	4.96	7.74	805	12.5	792	138	11.6	2610	1230	1140	2.4719	1.9275	0.96097
3/13/2019	1:45 PM	CA15526	Pawtuxet Cove Bottom	CA15513	BAY					67.5	3.13	64.4	<7.000	<5.0	151	539	154	7.83		
3/13/2019	1:25 PM	CA19039	Nutrient Blank	CA19039	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
3/13/2019	9:40 AM	CA19040	Blackstone River @ Slater Mill	CA19039	RIVER	0.487	0.30	3.316	7.27	804	15.6	788	33.3	<5.0	2570	1020	1010	2.3923		
3/13/2019	2:20 PM	CA19041	Pawtuxet River @ Broad St.	CA19039	RIVER	0.448	0.16	5.040	7.17	933	13.3	920	113	12.6	2990	1210	1240	<2.0000		
3/13/2019	10:40 AM	CA19042	Woonasquatucket River @ Valley St.	CA19039	RIVER	0.380	0.22	3.581	7.14	590	2.43	588	<7.000	<5.0	2280	716	723	2.2587		
3/13/2019	10:15 AM	CA19043	Woonasquatucket River @ Manton Ave. Bridge	CA19039	RIVER	0.460	0.20	3.230	7.03	544	1.86	542	<7.000	<5.0	2300	645	684	<2.0000		
3/13/2019	11:10 AM	CA19044	Moshassuck River @ Footbridge at Mill St.	CA19039	RIVER	0.454	0.38	3.742	7.12	684	4.3	680	31.4	<5.0	3040	837	875	<2.0000		
3/13/2019	11:10 AM	CA19045	Moshassuck River @ Footbridge at Mill St. (Duplicate)	CA19039	RIVER	0.454	0.38	3.742	7.12	678	2.3	676	35	<5.0	3070	832	854	<2.0000		
3/13/2019	8:40 AM	CA19046	Moshassuck River @ Higginson Ave.	CA19039	RIVER	0.510	0.41	2.709	7.24	545	2.4	543	<7.000	<5.0	2680	689	669	<2.0000		
3/13/2019	1:15 PM	CA19047	Ten Mile River @ Roger Williams Ave.	CA19039	RIVER	0.500	0.28	4.700	7.40	1740	7.23	1730	<7.000	16.1	2360	1810	1950	2.6005		
3/27/2019	10:25 AM	CA20083	Nutrient Blank	CA20083	BAY					17.7	<1.5	17.7	<7.000	<5.0	<20.000	<200.000	<100.000			
3/27/2019	10:05 AM	CA20084	Conimicut Point Surface	CA20083	BAY					108	4.73	103	12.5	<5.0	427	561	235	7.6087	2.7547	0.85907
3/27/2019	1:45 PM	CA20085	Edgewood Yacht Club Surface	CA20083	BAY					211	7.83	203	48.9	13.9	788	677	378	4.8485	2.0889	0.9903
3/27/2019	1:45 PM	CA20086	Edgewood Yacht Club Surface (Duplicate)	CA20083	BAY					210	7.86	202	48.2	14.1	772	702	379	5.567	2.3382	1.2184
3/27/2019	9:50 AM	CA20087	Pomham Rocks Surface	CA20083	BAY					160	5.9	154	35	6.65	590	678	349	6.5263	2.8965	1.2273
3/27/2019	1:15 PM	CA20088	India Point Park Surface	CA20083	BAY					263	8.13	255	59.2	12	939	771	457	17.474	2.729	1.4062
3/27/2019	10:15 AM	CA20089	Bullock Reach Buoy Surface	CA20083	BAY					173	5.77	167	24.9	<5.0	659	585	304	6.8132	3.5457	1.2926
3/27/2019	1:35 PM	CA20090	Pawtuxet Cove Surface	CA20083	BAY					578	5.74	572	60.9	11.8	2470	994	920	5.4167	2.1526	1.0994
3/27/2019	1:00 PM	CA20091	Phillipsdale Landing Surface	CA20083	BAY					672	16.5	655	99.9	82	2090	1200	1060	3.3333	1.5256	1.1022
3/27/2019	2:05 PM	CA20092	Edgewood Shoal Surface	CA20083	BAY					157	9.04	148	50.3	14.5	548	596	335	6.2366	2.0269	0.76765
3/27/2019	2:10 PM	CA20093	Edgewood Shoal Bottom	CA20083	BAY					12.3	1.96	10.3	<7.000	<5.0	73.3	480	122	8.8172		
3/27/2019	8:45 AM	CA20097	Nutrient Blank	CA20097	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
3/27/2019	8:30 AM	CA20098	Blackstone River @ Slater Mill	CA20097	RIVER	0.810	0.18	6.45	7.53	618	20.2	598	69.6	<5.0	2070	946	869	2.963		
3/27/2019	10:30 AM	CA20099	Blackstone River @ Stateline	CA20097	RIVER	2.500	0.17	5.77	7.35	511	17.8	493	165	<5.0	1940	919	855	2.3077		
3/27/2019	9:30 AM	CA20100	Blackstone River @ Bikepath Bridge	CA20097	RIVER	0.930	0.18	6.34	7.36	610	21.6	588	98.9	<5.0	2090	953	899	2.1622		
3/27/2019	3:00 PM	CA20101	Pawtuxet River @ Broad St.	CA20097	RIVER	1.150	0.12	6.91	7.26	684	7.67	676	79.4	11.4	2290	980	924	<2.0000		
3/27/2019	3:00 PM	CA20102	Pawtuxet River @ Broad St. (Duplicate)	CA20097	RIVER	1.150	0.12	6.91	7.26	674	7.45	667	76	11.2	2380	931	927	2.1978		
3/27/2019	1:45 PM	CA20103	Woonasquatucket River @ Valley St.	CA20097	RIVER	0.705	0.19	7.31	7.56	598	2.47	596	<7.000	<5.0	1940	745	712	2.5532		
3/27/2019	12:45 PM	CA20104	Moshassuck River @ Higginson Ave.	CA20097	RIVER	0.797	0.28	7.47	7.55	381	2.93	378	<7.000	<5.0	2130	564	529	3.913		
3/27/2019	1:15 PM	CA20105	Moshassuck River @ Footbridge at Mill St.	CA20097	RIVER	0.420	0.29	7.17	7.49	562	3.87	558	21.9	<5.0	2470	735	734	2.8571		
3/27/2019	2:00 PM	CA20106	Nutrient Blank	CA20106	RIVER					11	<1.5	11	<7.000	<5.0	<20.000	<200.000	<100.000			
3/27/2019	11:00 AM	CA20107	Warren Reservoir/Kickemuit River	CA20106	RIVER	0.550	0.13	5.72	7.15	500	5.94	494	31.6	5.21	1000	957	836	5.5914		
3/27/2019	10:20 AM	CA20108	Coles River @ Milford Rd.	CA20106	RIVER	0.530	0.08	6.90	7.16	170	2.29	168	<7.000	<5.0	452	509	503	<2.0000		
3/27/2019	11:30 AM	CA20109	Palmer River @ Rt. 6	CA20106	RIVER	0.510	0.11	5.86	7.15	265	2.65	262	14.3	<5.0	777	602	566	3.5165		
3/27/2019	12:45 PM	CA20110	Runnins River @ River Rd.	CA20106	RIVER	0.500	0.22	5.02	7.05	585	3.37	582	<7.000	<5.0	1830	852	863	<2.0000		
3/27/2019	9:30 AM	CA20111	Taunton River @ Berkley Bridge	CA20106	RIVER	0.440	0.14	6.65	6.72	315	7.21	308	84.4	7.05	1310	706	663	2.7083		
3/27/2019	9:30 AM	CA20112	Taunton River @ Berkley Bridge (Duplicate)	CA20106	RIVER	0.440	0.14	6.65	6.72	316	7.85	308	86.3	6.97	1000	709	669	2.5		
3/27/2019	1:30 PM	CA20113	Ten Mile River @ Roger Williams Ave.	CA20106	RIVER	0.450	0.22	8.00	7.52	851	4.88	846	<7.000	13.6	1850	1150	1110	3.9175		

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
3/27/2019	1:50 PM	CA20114	Ten Mile River @ Central Ave.	CA20106	RIVER	0.460	0.27	7.87	7.13	1740	3.96	1740	7.68	9.49	1840	1920	2000	3.125		
4/10/2019	9:40 AM	CA21104	Nutrient Blank	CA21104	BAY					10	<1.5	10	<7.000	<5.0	<20.000	<200.000	<100.000			
4/10/2019	9:00 AM	CA21105	Conimicut Point Surface	CA21104	BAY	0.490	23.01	8.79	7.89	133	5.16	128	7.95	5.76	325	651	233	7.0213	7.7439	1.5483
4/10/2019	9:05 AM	CA21106	Conimicut Point Bottom	CA21104	BAY					20.9	2.27	18.6	18.5	6.95	164	493	110	8.8421		
4/10/2019	1:25 PM	CA21107	Edgewood Yacht Club Surface	CA21104	BAY	0.470	21.92	9.16	8.15	156	8.59	147	9.17	9.5	420	769	297	8.2222	0.55779	0.23347
4/10/2019	1:25 PM	CA21108	Edgewood Yacht Club Surface (Duplicate)	CA21104	BAY	0.470	21.92	9.16	8.15	158	8.65	149	13.3	9.48	410	813	279	5.9829	3.6426	1.0788
4/10/2019	1:35 PM	CA21109	Edgewood Yacht Club Bottom	CA21104	BAY					13.7	2.08	11.6	7.49	5.13	140	568	100	9.4218		
4/10/2019	10:15 AM	CA21110	Pomham Rocks Surface	CA21104	BAY	0.510	19.14	8.74	8.02	294	8.65	285	32.9	17.5	671	900	448	5.5102	7.0476	2.8655
4/10/2019	10:20 AM	CA21111	Pomham Rocks Bottom	CA21104	BAY					10.3	1.94	8.36	12.7	5.29	150	497	<100.000	7.8512		
4/10/2019	1:00 PM	CA21112	India Point Park Surface	CA21104	BAY	0.530	26.24	8.45	7.98	260	6.54	253	21	12.2	612	840	392	7.2614	12.71	4.7835
4/10/2019	1:10 PM	CA21113	India Point Park Bottom	CA21104	BAY					15.2	2.26	12.9	43	8.35	152	494	<100.000	10.208		
4/10/2019	9:25 AM	CA21114	Bullock Reach Buoy Surface	CA21104	BAY	0.470	22.89	8.70	8.04	97.8	4.48	93.3	8.52	<5.0	291	629	208	6.087	7.0368	1.4259
4/10/2019	9:30 AM	CA21115	Bullock Reach Buoy Bottom	CA21104	BAY					10	1.93	8.07	18.6	6.67	165	446	<100.000	14.545		
4/10/2019	1:55 PM	CA21116	Pawtuxet Cove Surface	CA21104	BAY	0.490	6.49	9.93	7.81	630	7.49	623	59.2	<5.0	2010	1280	851	3.0435	5.0355	1.8305
4/10/2019	2:00 PM	CA21117	Pawtuxet Cove Bottom	CA21104	BAY					44.6	3.33	41.3	17	5.72	189	600	153	9.4737		
4/10/2019	11:00 AM	CA21121	Nutrient Blank	CA21121	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
4/10/2019	9:10 AM	CA21122	Blackstone River @ Slater Mill	CA21121	RIVER					768	12.9	755	33.5	<5.0	2030	1170	1000	9.0323		
4/10/2019	2:45 PM	CA21123	Pawtuxet River @ Broad St.	CA21121	RIVER	0.710	0.14	10.48	7.52	724	5.8	718	38.3	<5.0	2120	1010	955	<2.0000		
4/10/2019	10:20 AM	CA21124	Woonasquatucket River @ Valley St.	CA21121	RIVER	0.503	0.19	9.67	7.51	498	2.15	496	<7.000	<5.0	1780	750	630	<2.0000		
4/10/2019	10:00 AM	CA21125	Woonasquatucket River @ Manton Ave. Bridge	CA21121	RIVER	0.482	0.18	9.36	7.35	444	1.89	442	15.2	6.4	1580	558	594	<2.0000		
4/10/2019	10:45 AM	CA21126	Moshassuck River @ Footbridge at Mill St.	CA21121	RIVER	0.332	0.29	9.36	7.35	456	4.78	451	27.4	<5.0	2160	697	646	2.3305		
4/10/2019	8:30 AM	CA21127	Moshassuck River @ Higginson Ave.	CA21121	RIVER					299	2.7	296	<7.000	<5.0	1670	417	432	<2.0000		
4/10/2019	1:00 PM	CA21128	Ten Mile River @ Roger Williams Ave.	CA21121	RIVER	0.650	0.24	11.35	7.72	1260	8.02	1250	<7.000	10.5	1160	1640	1470	6.4909		
4/10/2019	1:00 PM	CA21129	Ten Mile River @ Roger Williams Ave. (Duplicate)	CA21121	RIVER	0.650	0.24	11.35	7.72	1260	7.05	1250	<7.000	9.63	1170	1630	1470	7.265		
4/10/2019	9:30 AM	CA21130	Phillipsdale Landing Surface		BAY	0.661	4.24	9.21	7.51	830	15.4	815	48.3	41.3	1560	1590	1040	4.0568	8.6232	4.5501
4/10/2019	9:35 AM	CA21131	Phillipsdale Landing Bottom		BAY	2.344	22.87	7.84	7.85	701	15.1	686	52.8	36.9	1410	1490	870	7.5247		
4/23/2019	1:45 PM	CA22036	Nutrient Blank	CA22036	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
4/23/2019	8:45 AM	CA22037	Blackstone River @ Slater Mill	CA22036	RIVER	0.519	0.15	14.42	7.32	448	13.6	434	27.1	7.84	1730	1130	688	18		
4/23/2019	10:39 AM	CA22038	Blackstone River @ Stateline	CA22036	RIVER	0.550	0.13	14.04	7.28	368	15.2	353	39.9	8.47	1560	904	658	19.778		
4/23/2019	9:36 AM	CA22039	Blackstone River @ Bikepath Bridge	CA22036	RIVER	0.510	0.14	14.16	7.30	373	10.8	362	20.5	7.74	1660	914	628	21.972		
4/23/2019	9:36 AM	CA22040	Blackstone River @ Bikepath Bridge (Duplicate)	CA22036	RIVER	0.510	0.14	14.16	7.30	373	10.6	362	28.3	8.1	1710	873	623	18.718		
4/23/2019	2:25 PM	CA22041	Pawtuxet River @ Broad St.	CA22036	RIVER	0.309	0.10	13.28	7.14	405	3.96	401	24.6	<5.0	1950	751	615	6.8182		
4/23/2019	12:55 PM	CA22042	Woonasquatucket River @ Valley St.	CA22036	RIVER	0.368	0.15	13.68	7.33	245	2.01	243	<7.000	<5.0	1270	613	413	8.6956		
4/23/2019	12:20 PM	CA22043	Woonasquatucket River @ Manton Ave. Bridge	CA22036	RIVER	0.525	0.14	13.69	7.30	211	1.91	209	<7.000	<5.0	1240	562	388	5.1613		
4/23/2019	1:30 PM	CA22044	Moshassuck River @ Footbridge at Mill St.	CA22036	RIVER	0.220	0.20	13.78	7.39	269	3.85	265	7.85	7.49	1920	721	485	15.333		
4/23/2019	9:15 AM	CA22045	Nutrient Blank	CA22045	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
4/23/2019	12:41 PM	CA22046	Warren Reservoir/Kickemuit River	CA22045	RIVER	0.513	0.10	13.37	7.16	252	8.94	243	70.4	14.9	991	1020	895	4.4898		
4/23/2019	1:05 PM	CA22047	Coles River @ Milford Rd.	CA22045	RIVER	0.495	0.07	14.33	7.28	144	4.21	140	23.1	31.3	349	757	646	2.6966		
4/23/2019	1:45 PM	CA22048	Palmer River @ Rt. 6	CA22045	RIVER	0.521	5.10	13.62	6.95	321	3.82	317	<7.000	10.4	1800	774	713	2		
4/23/2019	1:30 PM	CA22049	Runnins River @ River Rd.	CA22045	RIVER	0.501	0.16	13.10	7.29	133	5.29	128	49.3	16.5	901	1250	561	9.7826		
4/23/2019	9:00 AM	CA22050	Taunton River @ Berkley Bridge	CA22045	RIVER	0.250	0.12	13.93	8.05	304	10.6	293	94.5	16	1000	977	795	8.3333		
4/23/2019	10:15 AM	CA22051	Ten Mile River @ Roger Williams Ave.	CA22045	RIVER	0.250	0.20	14.77	7.53	1040	11	1030	15.3	16.1	1210	1670	1400	10.444		
4/23/2019	11:00 AM	CA22052	Ten Mile River @ Central Ave.	CA22045	RIVER	0.019	0.15	12.73	7.24	505	7.16	498	10.1	12.1	1180	1050	852	5.4348		
4/24/2019	9:45 AM	CA22021	Nutrient Blank	CA22021	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
4/24/2019	9:15 AM	CA22022	Conimicut Point Surface	CA22021	BAY	0.445	22.40	11.70	8.15	75.2	4.38	70.8	<7.000	6.99	527	769	<100.000	8.6	19.647	4.6491
4/24/2019	10:10 AM	CA22023	Edgewood Yacht Club Surface	CA22021	BAY	0.569	12.34	12.75	7.90	329	8.74	320	78.5	18.8	1260	1020	536	6.4	6.3342	3.8865
4/24/2019	9:00 AM	CA22024	Pomham Rocks Surface	CA22021	BAY	0.489	8.58	13.18	7.63	356	9.69	346	83.1	16.4	1400	1150	528	5.8947	6.1854	4.6956
4/24/2019	1:30 PM	CA22025	India Point Park Surface	CA22021	BAY	0.482	4.25	13.37	7.52	453	12.5	440	78.7	19.5	1670	1110	801	7.4	7.3902	5.9475
4/24/2019	9:25 AM	CA22026	Bullock Reach Buoy Surface	CA22021	BAY	0.520	13.89	12.60	8.20	243	5.58	237	9.55	<5.0	1130	841	394	5.3061	7.9713	1.4852
4/24/2019	1:50 PM	CA22027	Pawtuxet Cove Surface	CA22021	BAY	0.550	1.21	13.80	7.33	389	5.68	383	63.4	43.2	1990	855	682	2.8	4.044	3.0333
4/24/2019	1:50 PM	CA22028	Pawtuxet Cove Surface (Duplicate)	CA22021	BAY	0.550	1.21	13.80	7.33	390	5.74	384	61.8	42.7	2140	806	603	3.2	3.3345	2.2358
4/24/2019	1:00 PM	CA22029	Phillipsdale Landing Surface	CA22021	BAY	0.480	0.21	15.20	7.86	344	11	333	72.2	31	1620	828	629	6.2	8.2395	5.0697
4/24/2019	8:35 AM	CA22030	Edgewood Shoal Surface	CA22021	BAY	0.500	10.46	13.05	7.19	337	9.23	328	89.3	22	1290	1040	589	5.9574	4.6428	3.9591
4/24/2019	8:40 AM	CA22031	Edgewood Shoal Bottom	CA22021	BAY					181	5.66	175	65.2	15	742	854	221	8.5417		
5/8/2019	9:15 AM	CA22962	Nutrient Blank	CA22962	BAY					13.7	<1.5	13.7	<7.000	<5.0	<20.000	<200.000	<100.000			
5/8/2019	9:50 AM	CA22963	Conimicut Point Surface	CA22962	BAY	0.490	19.29	13.62	7.90	236	6.2	230	61.2	20.3	1060	1020	308	21.684	1.7828	1.1883
5/8/2019	9:55 AM	CA22964	Conimicut Point Bottom	CA22962	BAY					12.6	2.26	10.3	23.1	14.4	307	713	<100.000	33.333		
5/8/2019	9:30 AM	CA22965	Edgewood Yacht Club Surface	CA22962	BAY	0.480	17.52	13.56	7.58	300	8.18	292	72.9	41.1	1190	1110	383	12.8	1.744	1.068
5/8/2019	9:35 AM	CA22966	Edgewood Yacht Club Bottom	CA22962	BAY					236	6.7	229	61.4	35.3	1010	733	271	26.465		
5/8/2019	1:10 PM	CA22967	Pomham Rocks Surface	CA22962	BAY	0.520	18.41	13.65	7.93	338	7.7	330	66.9	26.5	1430	1180	422	2.4742	3.24	1.4368
5/8/2019	1:15 PM	CA22968	Pomham Rocks Bottom	CA22962	BAY					52.3	3.36	48.9	26.3	13.1	435	884	<100.000	39.149		
5/8/2019	12:45 PM	CA22969	India Point Park Surface	CA22962	BAY	0.520	15.27	13.91	7.83	321	8.9	312	71.7	28.6	1320	1140	412	5.8696	2.2857	2.1427
5/8/2019	12:45 PM	CA22970	India Point Park Surface (Duplicate)	CA22962	BAY	0.520	15.27	13.91	7.83	325	9.48	316	75.9	27.9	1360	1130	416	5.6471	2.1132	1.8073
5/8/2019	12:50 PM	CA22971	India Point Park Bottom	CA22962	BAY					96.1	4.14	92	44.9	17.6	584	812	<100.000	4.2857		

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
5/8/2019	10:10 AM	CA22972	Bullock Reach Buoy Surface	CA22962	BAY	0.520	17.62	13.87	7.88	262	6.8	255	66.9	22.7	1110	723	330	15.714	1.7406	1.1468
5/8/2019	10:15 AM	CA22973	Bullock Reach Buoy Bottom	CA22962	BAY					34.8	2.36	32.4	19.1	9.42	344	444	<100.000	26.882		
5/8/2019	1:35 PM	CA22974	Pawtuxet Cove Surface	CA22962	BAY	0.530	4.61	15.27	7.94	424	7.47	417	290	<5.0	1940	957	832	2.2222	1.575	1.4536
5/8/2019	1:40 PM	CA22975	Pawtuxet Cove Bottom	CA22962	BAY					80.8	3.98	76.8	54.5	13.9	573	527	105	6.5263		
5/8/2019	3:10 PM	CA22979	Nutrient Blank	CA22979	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
5/8/2019	9:55 AM	CA22980	Blackstone River @ Slater Mill	CA22979	RIVER	0.492	0.17	15.115	7.53	557	12.5	544	10.7	6.71	2070	792	755	5.2174		
5/8/2019	1:40 PM	CA22981	Pawtuxet River @ Broad St.	CA22979	RIVER	0.490	0.11	15.812	7.02	444	7.71	436	285	<5.0	1920	896	929	2.1505		
5/8/2019	11:00 AM	CA22982	Woonasquatucket River @ Valley St.	CA22979	RIVER	0.538	0.16	15.870	7.38	435	2.82	432	9.82	<5.0	1570	622	608	<2.0000		
5/8/2019	10:35 AM	CA22983	Woonasquatucket River @ Manton Ave. Bridge	CA22979	RIVER	0.464	0.15	15.464	7.19	379	2.55	376	20.5	<5.0	1460	631	573	2.3913		
5/8/2019	11:25 AM	CA22984	Moshassuck River @ Footbridge at Mill St.	CA22979	RIVER	0.534	0.24	15.192	7.31	448	5.41	443	31.1	<5.0	2450	621	649	2.3913		
5/8/2019	8:35 AM	CA22985	Moshassuck River @ Higginson Ave.	CA22979	RIVER	0.489	0.22	14.280	7.46	269	3.47	266	<7.000	5.25	1770	455	432	2.1505		
5/8/2019	8:35 AM	CA22986	Moshassuck River @ Higginson Ave. (Duplicate)	CA22979	RIVER	0.489	0.22	14.280	7.46	269	3.21	266	<7.000	5.31	1830	458	415	2.9545		
5/8/2019	3:05 PM	CA22987	Ten Mile River @ Roger Williams Ave.	CA22979	RIVER	0.520	0.19	17.236	7.57	718	8.51	709	10.6	21	1470	1050	1010	5.2174		
5/8/2019	2:15 PM	CA22988	Phillipsdale Landing Surface	CA22979	BAY	0.478	3.11	16.556	7.05	542	10	532	61.9	70.2	2190	901	762	3.0233	1.8676	2.0799
5/8/2019	2:20 PM	CA22989	Phillipsdale Landing Bottom	CA22979	BAY	1.717	7.55	14.711	7.02	308	10.6	297	124	33.5	1400	735	452	7.6744		
5/21/2019	9:30 AM	CA23906	Nutrient Blank	CA23906	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
5/21/2019	1:00 PM	CA23907	Conimicut Point Surface	CA23906	BAY	0.500	20.37	15.520	7.74	148	4.96	143	30.6	17.4	836	576	184	6.8	4.1268	1.747
5/21/2019	1:00 PM	CA23908	Conimicut Point Surface (Duplicate)	CA23906	BAY	0.500	20.37	15.520	7.74	146	4.83	141	30.7	17.4	842	627	224	4.4118	4.485	1.9302
5/21/2019	1:35 PM	CA23909	Edgewood Yacht Club Surface	CA23906	BAY	0.500	22.42	15.220	7.67	98.2	5.07	93.1	60.1	19.3	769	521	143	22.947	0.96858	0.68163
5/21/2019	8:25 AM	CA23910	Pomham Rocks Surface	CA23906	BAY	0.500	18.41	15.290	7.19	254	6.82	247	63.3	47.6	1210	918	401	21.505	3.339	2.5216
5/21/2019	10:00 AM	CA23911	India Point Park Surface	CA23906	BAY	0.500	18.21	16.220	7.53	196	6.25	190	61.4	21.3	995	628	269	21.25	2.5332	2.2887
5/21/2019	1:20 PM	CA23912	Bullock Reach Buoy Surface	CA23906	BAY	0.500	18.55	15.900	7.71	191	6.37	185	40.7	35.3	983	617	235	22.418	3.3849	1.8757
5/21/2019	8:35 AM	CA23913	Pawtuxet Cove Surface	CA23906	BAY	0.500	2.83	17.490	7.23	522	6.96	515	86.7	5.35	1990	907	775	7.7482	1.7281	1.5507
5/21/2019	9:20 AM	CA23914	Phillipsdale Landing Surface	CA23906	BAY	0.500	2.70	16.970	7.36	523	9.42	514	75	41.3	1740	987	805	8.6316	5.985	3.6972
5/21/2019	2:00 PM	CA23915	Edgewood Shoal Surface	CA23906	BAY	0.500	24.27	14.370	7.67	60.6	3.91	56.7	61	16.4	686	480	<100.000	28.041	3.6543	1.622
5/21/2019	2:10 PM	CA23916	Edgewood Shoal Bottom	CA23906	BAY					40.5	3.68	36.8	7.45	15.6	546	407	<100.000	29.293		
5/21/2019	12:30 PM	CA23921	Nutrient Blank	CA23921	RIVER					15.7	<1.5	15.7	<7.000	<5.0	<20.000	<200.000	<100.000			
5/21/2019	8:30 AM	CA23922	Blackstone River @ Slater Mill	CA23921	RIVER	0.430	0.19	18.010	7.62	538	9.29	529	56.3	7.79	1650	810	787	11.087		
5/21/2019	8:30 AM	CA23923	Blackstone River @ Slater Mill (Duplicate)	CA23921	RIVER	0.430	0.19	18.010	7.62	548	9.28	539	<7.000	9.45	1750	817	805	11.522		
5/21/2019	10:25 AM	CA23924	Blackstone River @ Stateline	CA23921	RIVER	0.480	0.17	17.940	7.59	504	10.9	493	<7.000	7.03	1710	745	889	5.5914		
5/21/2019	9:40 AM	CA23925	Blackstone River @ Bikepath Bridge	CA23921	RIVER	0.580	0.18	18.480	7.60	491	10.4	481	<7.000	5.19	1750	762	748	6.8889		
5/21/2019	2:45 PM	CA23926	Pawtuxet River @ Broad St.	CA23921	RIVER	0.490	0.13	18.830	7.50	513	7.05	506	81.1	<5.0	1980	790	851	3.956		
5/21/2019	1:35 PM	CA23927	Woonasquatucket River @ Valley St.	CA23921	RIVER	0.230	0.16	19.070	7.71	461	5.19	456	<7.000	<5.0	1560	704	721	4.4444		
5/21/2019	12:50 PM	CA23994	Woonasquatucket River @ Manton Ave. Bridge		RIVER	0.460	0.15	18.790	7.63	390	4.38	386	30.8	<5.0	1500	664	684	3.6559		
5/21/2019	2:00 PM	CA23929	Moshassuck River @ Footbridge at Mill St.	CA23921	RIVER	0.390	0.24	17.660	7.47	389	5.65	383	35.3	<5.0	2560	643	687	3.7363		
5/21/2019	1:40 PM	CA23930	Nutrient Blank	CA23930	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
5/21/2019	9:50 AM	CA23932	Coles River @ Milford Rd.	CA23930	RIVER	0.518	0.07	18.346	7.85	62.7	4.22	58.5	8.67	14.1	84.3	630	648	2.9545		
5/21/2019	9:50 AM	CA23933	Coles River @ Milford Rd. (Duplicate)	CA23930	RIVER	0.518	0.07	18.346	7.85	63.9	4.31	59.6	<7.000	14.8	77	628	604	3.2184		
5/21/2019	12:55 PM	CA23934	Palmer River @ Rt. 6	CA23930	RIVER	0.494	5.19	18.851	7.23	170	4.23	166	45.1	9.07	1170	805	564	18.495		
5/21/2019	8:50 AM	CA23936	Taunton River @ Berkley Bridge	CA23930	RIVER	0.499	0.14	18.018	7.85	325	6.96	318	67.3	13.8	1160	792	800	4.8421		
5/21/2019	1:30 PM	CA23937	Ten Mile River @ Roger Williams Ave.	CA23930	RIVER	0.531	0.20	19.206	7.83	640	8.08	632	8.98	15.3	1590	1010	1050	5.0549		
5/21/2019	2:00 PM	CA23938	Ten Mile River @ Central Ave.	CA23930	RIVER	0.554	0.22	19.195	7.29	662	11.5	650	40	17.1	1970	1110	1070	6.5263		
6/5/2019	10:15 AM	CA24670	Nutrient Blank	CA24670	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/5/2019	9:25 AM	CA24671	Conimicut Point Surface	CA24670	BAY	0.500	26.67	16.110	7.84	<6.000	<1.5	<6.0	<7.000	<5.0	187	420	<100.000	11.837	2.709	1.6708
6/5/2019	9:30 AM	CA24672	Conimicut Point Bottom	CA24670	BAY					<6.000	1.56	<6.0	<7.000	13.5	275	393	<100.000	12.653		
6/5/2019	10:30 AM	CA24673	Edgewood Yacht Club Surface	CA24670	BAY	0.500	23.50	16.550	7.94	23.3	3.12	20.2	<7.000	12.9	371	550	<100.000	8.866	8.277	4.2345
6/5/2019	10:35 AM	CA24674	Edgewood Yacht Club Bottom	CA24670	BAY					<6.000	2.2	<6.0	12.6	12.9	379	464	<100.000	9.375		
6/5/2019	8:50 AM	CA24675	Pomham Rocks Surface	CA24670	BAY	0.500	22.91	16.490	7.52	58.9	3.29	55.6	<7.000	5.33	467	588	<100.000	12.105	5.4618	3.1896
6/5/2019	8:50 AM	CA24676	Pomham Rocks Surface (Duplicate)	CA24670	BAY	0.500	22.91	16.490	7.52	58.2	3.27	54.9	<7.000	5.54	469	537	<100.000	10.213	4.7718	3.1341
6/5/2019	8:55 AM	CA24677	Pomham Rocks Bottom	CA24670	BAY					10.7	2.34	8.36	11.5	14.1	433	400	<100.000	8		
6/5/2019	1:05 PM	CA24678	India Point Park Surface	CA24670	BAY	0.500	21.29	16.690	7.53	161	5.52	155	15.9	29.8	762	570	140	8.4848	4.7592	3.6576
6/5/2019	1:10 PM	CA24679	India Point Park Bottom	CA24670	BAY					142	5.17	137	21.5	28	730	568	114	9.4949		
6/5/2019	9:50 AM	CA24680	Bullock Reach Buoy Surface	CA24670	BAY	0.500	26.62	16.060	7.87	<6.000	<1.5	<6.0	<7.000	<5.0	190	426	<100.000	10.417	3.1776	1.654
6/5/2019	9:55 AM	CA24681	Bullock Reach Buoy Bottom	CA24670	BAY					<6.000	<1.5	<6.0	<7.000	9.36	226	431	<100.000	9.4624		
6/5/2019	1:35 PM	CA24682	Pawtuxet Cove Surface	CA24670	BAY	0.500	8.62	19.460	7.59	393	10.2	383	69.7	<5.0	1440	920	559	5.8947	5.097	1.7795
6/5/2019	1:40 PM	CA24683	Pawtuxet Cove Bottom	CA24670	BAY					59.8	3.45	56.3	17.6	9.48	510	643	<100.000	9.1304		
6/5/2019	9:45 AM	CA24689	Nutrient Blank	CA24689	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/5/2019	8:15 AM	CA24690	Blackstone River @ Slater Mill	CA24689	RIVER	0.243	0.20	18.886	7.81	647	8.26	639	25.8	12.4	2140	901	923	3.913		
6/5/2019	2:55 PM	CA24691	Pawtuxet River @ Broad St.	CA24689	RIVER	0.230	0.14	19.360	7.53	658	14.9	643	126	<5.0	2460	946	1000	<2.0000		
6/5/2019	1:20 PM	CA24692	Woonasquatucket River @ Valley St.	CA24689	RIVER	0.040	0.19	19.458	7.72	621	6.05	615	24.4	<5.0	1840	797	846	<2.0000		
6/5/2019	12:50 PM	CA24693	Woonasquatucket River @ Manton Ave. Bridge	CA24689	RIVER	0.045	0.16	19.644	8.14	460	5.57	454	51.4	<5.0	1430	670	695	<2.0000		
6/5/2019	12:50 PM	CA24694	Woonasquatucket River @ Manton Ave. Bridge (Duplicate)	CA24689	RIVER	0.045	0.16	19.644	8.14	459	5.86	453	44.3	<5.0	1430	656	682	<2.0000		
6/5/2019	1:45 PM	CA24695	Moshassuck River @ Footbridge at Mill St.	CA24689	RIVER	0.021	0.30	18.673	7.48	598	17.5	580	94.7	<5.0	3320	820	899	2.3158		

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
6/5/2019	8:45 AM	CA24696	Moshassuck River @ Higginson Ave.	CA24689	RIVER	0.396	0.25	18.126	7.60	192	6.58	185	45.5	11.2	1690	440	448	2.5		
6/5/2019	9:30 AM	CA24697	Ten Mile River @ Roger Williams Ave.	CA24689	RIVER	0.450	0.23	18.926	7.60	535	15	520	55.1	14.8	1670	914	926	2.268		
6/5/2019	10:10 AM	CA24684	Phillipsdale Landing Surface	CA24689	BAY	0.020	9.97	18.076	7.58	382	9.82	372	25.8	43	1300	945	607	5.8823	11.653	4.182
6/5/2019	10:15 AM	CA24685	Phillipsdale Landing Bottom	CA24689	BAY	2.536	22.89	15.612	7.51	148	5.7	142	48	35.7	765	638	150	10.823		
6/19/2019	1:25 PM	CA25742	Nutrient Blank	CA25742	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/19/2019	9:10 AM	CA25743	Conimicut Point Surface	CA25742	BAY	0.500	20.40	20.270	8.11	6.44	<1.5	6.44	<7.000	5.27	989	680	<100.000	9.0526	14.577	3.6297
6/19/2019	12:50 PM	CA25744	Edgewood Yacht Club Surface	CA25742	BAY	0.500	18.01	21.120	8.04	60.6	5.86	54.7	<7.000	24.6	1290	752	<100.000	6.875	32.541	3.8883
6/19/2019	1:00 PM	CA25745	Pomham Rocks Surface	CA25742	BAY	0.500	18.22	21.150	7.66	127	7.46	120	<7.000	31.7	1350	817	139	5.0526	19.735	4.4436
6/19/2019	1:15 PM	CA25746	India Point Park Surface	CA25742	BAY	0.500	17.87	21.540	7.58	195	8.04	187	59	34.7	1430	814	272	5.3608	9.3555	3.1431
6/19/2019	9:25 AM	CA25747	Bullock Reach Buoy Surface	CA25742	BAY	0.500	17.21	20.610	8.09	10.4	2.51	7.89	<7.000	<5.0	1120	689	<100.000	6.2	30.393	2.9767
6/19/2019	8:55 AM	CA25748	Pawtuxet Cove Surface	CA25742	BAY	0.500	4.62	20.080	7.19	590	11.3	579	109	7.85	2440	994	892	3.2653	3.1095	1.0956
6/19/2019	1:35 PM	CA25749	Phillipsdale Landing Surface	CA25742	BAY	0.500	8.25	20.330	7.06	384	9.91	374	60.4	175	2290	960	640	5.2525	22.411	5.3427
6/19/2019	1:35 PM	CA25750	Phillipsdale Landing Surface (Duplicate)	CA25742	BAY	0.500	8.25	20.330	7.06	385	9.7	375	60.5	174	2380	1060	636	5.5102	18.971	4.5876
6/19/2019	8:30 AM	CA25751	Edgewood Shoal Surface	CA25742	BAY	0.500	18.79	19.880	7.84	106	6.04	100	19.8	31.1	1300	705	152	7.5269	22.304	3.9339
6/19/2019	8:35 AM	CA25752	Edgewood Shoal Bottom	CA25742	BAY					16.9	4.93	12	210	67.3	1210	735	165	10.417		
6/19/2019	9:45 AM	CA25756	Nutrient Blank	CA25756	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/19/2019	8:30 AM	CA25757	Blackstone River @ Slater Mill	CA25756	RIVER	0.804	0.22	20.350	6.86	738	10.3	728	60.4	15.6	2490	1060	1020	5.7732		
6/19/2019	10:30 AM	CA25758	Blackstone River @ Stateline	CA25756	RIVER	1.230	0.20	20.420	7.73	722	16.2	706	52.6	15.6	2430	1060	987	4		
6/19/2019	9:30 AM	CA25759	Blackstone River @ Bikepath Bridge	CA25756	RIVER	0.622	0.23	20.940	7.54	820	12.6	807	59.2	14.7	2660	1180	1130	4.7917		
6/19/2019	3:10 PM	CA25760	Pawtuxet River @ Broad St.	CA25756	RIVER	0.450	0.14	20.900	7.71	613	10.4	603	71.1	5.37	2510	891	877	<2.0000		
6/19/2019	2:15 PM	CA25761	Woonasquatucket River @ Valley St.	CA25756	RIVER	0.470	0.19	20.890	7.80	587	6.82	580	46.5	5.04	1950	796	802	<2.0000		
6/19/2019	2:15 PM	CA25762	Woonasquatucket River @ Valley St. (Duplicate)	CA25756	RIVER	0.470	0.19	20.890	7.80	592	6.43	586	45.5	5.32	2010	797	789	<2.0000		
6/19/2019	1:45 PM	CA25763	Moshassuck River @ Footbridge at Mill St.	CA25756	RIVER	0.430	0.27	19.350	7.66	591	15.2	576	107	6.1	3500	874	889	2.9787		
6/19/2019	1:00 PM	CA25764	Moshassuck River @ Higginson Ave.	CA25756	RIVER	0.540	0.23	20.050	7.59	253	11.1	242	99.9	10.7	2360	603	536	<2.0000		
6/19/2019	2:08 PM	CA25765	Nutrient Blank	CA25765	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/19/2019	10:50 AM	CA25766	Warren Reservoir/Kickemuit River	CA25765	RIVER	0.497	0.11	20.506	7.19	384	23.9	360	132	38.4	2810	1130	1060	<2.0000		
6/19/2019	10:20 AM	CA25767	Coles River @ Milford Rd.	CA25765	RIVER	0.505	0.07	20.351	7.51	181	15.4	166	136	63.4	2080	1020	954	2.5105		
6/19/2019	11:25 AM	CA25768	Palmer River @ Rt. 6	CA25765	RIVER	0.524	14.75	21.083	7.00	76.3	5.63	70.7	54.5	17.5	1640	775	314	7.1882		
6/19/2019	11:25 AM	CA25769	Palmer River @ Rt. 6 (Duplicate)	CA25765	RIVER	0.524	14.75	21.083	7.00	75.5	5.43	70.1	55.2	15.3	1700	805	293	8.6021		
6/19/2019	12:35 PM	CA25770	Runnins River @ River Rd.	CA25765	RIVER	0.501	0.24	18.865	7.59	370	3.99	366	14.8	11.9	4060	767	728	<2.0000		
6/19/2019	9:05 AM	CA25771	Taunton River @ Berkley Bridge	CA25765	RIVER	0.465	0.18	19.824	7.30	496	11.7	484	104	70.5	2640	1030	1030	4.4025		
6/19/2019	2:00 PM	CA25772	Ten Mile River @ Roger Williams Ave.	CA25765	RIVER	0.534	0.22	21.799	7.60	541	13.9	527	66.9	34.8	2610	961	920	2.7484		
6/19/2019	1:10 PM	CA25773	Ten Mile River @ Central Ave.	CA25765	RIVER	0.526	0.27	20.105	7.56	904	23.9	880	131	33.8	3350	1350	1360	2.5641		
7/3/2019	8:30 AM	CA26667	Nutrient Blank	CA26667	BAY					13.8	<1.5	13.8	<7.000	<5.0	<20.000	<200.000	<100.000			
7/3/2019	9:15 AM	CA26669	Conimicut Point Surface	CA26667	BAY	0.500	27.10	21.780	7.94	<6.000	1.7	<6.0	<7.000	11.6	704	403	<100.000	36.145	5.1741	1.583
7/3/2019	2:00 PM	CA26670	Edgewood Yacht Club Surface	CA26667	BAY	0.500	24.74	22.730	7.97	<6.000	<1.5	<6.0	<7.000	56.2	1070	550	<100.000	33.474	13.438	2.2036
7/3/2019	2:05 PM	CA26671	Edgewood Yacht Club Bottom	CA26667	BAY					9.23	<1.5	9.23	<7.000	44.4	1080	490	<100.000	37.474		
7/3/2019	8:45 AM	CA26672	Pomham Rocks Surface	CA26667	BAY	0.500	25.05	21.240	8.03	9.9	<1.5	9.9	<7.000	27.9	892	543	<100.000	9.1667	1.4977	0.36354
7/3/2019	1:05 PM	CA26674	India Point Park Surface	CA26667	BAY	0.500	21.02	21.890	7.92	<6.000	1.85	<6.0	<7.000	21.9	1220	682	<100.000	32.5	46.935	5.7525
7/3/2019	1:10 PM	CA26675	India Point Park Bottom	CA26667	BAY					6.14	2.4	<6.0	<7.000	23.5	1140	558	<100.000	30.707		
7/3/2019	9:35 AM	CA26676	Bullock Reach Buoy Surface	CA26667	BAY	0.500	27.35	23.130	8.13	<6.000	<1.5	<6.0	<7.000	8.17	799	453	<100.000	29.8	9.3984	2.3581
7/3/2019	9:35 AM	CA26677	Bullock Reach Buoy Surface (Duplicate)	CA26667	BAY	0.500	27.35	23.130	8.13	<6.000	<1.5	<6.0	<7.000	9.67	806	456	<100.000	29.091	10.262	2.1486
7/3/2019	1:45 PM	CA26679	Pawtuxet Cove Surface	CA26667	BAY	0.500	9.01	24.200	7.58	539	14.3	525	18.9	<5.0	2010	1080	728	15.353	15.01	2.1481
7/3/2019	1:50 PM	CA26680	Pawtuxet Cove Bottom	CA26667	BAY					127	4.71	122	25	24.7	1270	685	256	33.053		
7/3/2019	3:35 PM	CA26684	Nutrient Blank	CA26684	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
7/3/2019	9:08 AM	CA26685	Blackstone River @ Slater Mill	CA26684	RIVER	0.340	0.24	24.096	8.22	665	4.87	660	10.8	10.1	2380	901	1000	4.8276		
7/3/2019	3:10 PM	CA26686	Pawtuxet River @ Broad St.	CA26684	RIVER	0.237	0.18	23.705	7.34	982	23.8	958	43.8	5.45	2830	1210	1280	2.3656		
7/3/2019	1:35 PM	CA26687	Woonasquatucket River @ Valley St.	CA26684	RIVER	0.305	0.21	24.236	7.90	651	3.94	647	<7.000	<5.0	1960	796	856	4.6316		
7/3/2019	1:05 PM	CA26688	Woonasquatucket River @ Manton Ave. Bridge	CA26684	RIVER	0.335	0.18	25.248	8.13	459	5.95	453	34.8	5.92	1570	664	698	2.6829		
7/3/2019	2:25 PM	CA26689	Moshassuck River @ Footbridge at Mill St.	CA26684	RIVER	0.272	0.30	21.670	7.60	654	17.2	637	66.8	<5.0	4010	823	897	<2.0000		
7/3/2019	2:25 PM	CA26690	Moshassuck River @ Footbridge at Mill St. (Duplicate)	CA26684	RIVER	0.272	0.30	21.670	7.60	640	17.2	623	70	<5.0	3840	847	889	2.8866		
7/3/2019	8:35 AM	CA26691	Moshassuck River @ Higginson Ave.	CA26684	RIVER	0.225	0.24	22.293	8.16	301	14	287	57.1	12.1	2230	627	580	<2.0000		
7/3/2019	10:55 AM	CA26692	Ten Mile River @ Roger Williams Ave.	CA26684	RIVER	0.520	0.25	24.723	7.96	417	10.4	407	57.1	29.8	2690	817	810	3.4091		
7/3/2019	10:10 AM	CA26693	Phillipsdale Landing Surface	CA26684	BAY	0.453	20.38	21.450	7.99	<6.000	<1.5	<6.0	<7.000	28.3	1240	720	<100.000	38.621	38.004	4.9719
7/3/2019	10:15 AM	CA26694	Phillipsdale Landing Bottom	CA26684	BAY	2.602	25.83	19.962	7.67	23.7	3.89	19.8	21.1	31.2	1040	504	<100.000	38.444		
7/17/2019	1:15 PM	CA27622	Nutrient Blank	CA27622	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	129			
7/17/2019	9:10 AM	CA27623	Conimicut Point Surface	CA27622	BAY	0.500	43.44	24.230	7.79	10.1	<1.5	10.1	<7.000	24.1	748	498	<100.000	10.316	9.3837	2.5472
7/17/2019	8:30 AM	CA27624	Edgewood Yacht Club Surface	CA27622	BAY	0.500	26.31	24.420	7.82	<6.000	<1.5	<6.0	<7.000	34	906	516	<100.000	7.4747	13.495	4.1961
7/17/2019	8:30 AM	CA27625	Edgewood Yacht Club Surface (Duplicate)	CA27622	BAY	0.500	26.31	24.420	7.82	13.6	<1.5	13.6	<7.000	34.1	913	535	<100.000	7.5789	13.715	3.7233
7/17/2019	8:08 AM	CA27626	Pomham Rocks Surface	CA27622	BAY	0.500	25.65	24.250	7.78	<6.000	1.54	<6.0	<7.000	34.3	967	535	135	8.125	13.577	2.9706
7/17/2019	7:50 AM	CA27627	India Point Park Surface	CA27622	BAY	0.500	24.59	24.630	7.50	65.5	6.49	59	47	78.8	1280	626	133	7.2165	11.972	3.5349
7/17/2019	9:30 AM	CA27628	Bullock Reach Buoy Surface	CA27622	BAY	0.500	27.63	24.460	7.63	<6.000	<1.5	<6.0	<7.000	26.5	748	503	<100.000	6.3158	10.909	3.0201
7/17/2019	8:50 AM	CA27629	Pawtuxet Cove Surface	CA27622	BAY	0.500	11.25	24.840	7.30	529	7.57	521	11.5	23.8	1910	961	806	6.1224	4.8357	2.317
7/17/2019	1:00 PM	CA27630	Phillipsdale Landing Surface	CA27622	BAY	0.500	26.64	24.820	7.83	49	7.02	42	7.08	185	1560	3770	758	17.609	426.87	53.904

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
7/17/2019	8:20 AM	CA27631	Edgewood Shoal Surface	CA27622	BAY	0.500	26.25	24.280	7.85	<6.000	<1.5	<6.0	<7.000	30	869	501	199	9.4845	12.572	3.1167
7/17/2019	8:25 AM	CA27632	Edgewood Shoal Bottom	CA27622	BAY					10.7	2.15	8.55	37.2	66.6	1170	499	<100.000	9.375		
7/17/2019	10:45 AM	CA27636	Nutrient Blank	CA27636	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
7/17/2019	8:20 AM	CA27637	Blackstone River @ Slater Mill	CA27636	RIVER	0.533	0.24	25.910	7.61	728	16.1	712	20.4	7.46	1420	1120	1080	6.8085		
7/17/2019	10:15 AM	CA27638	Blackstone River @ Stateline	CA27636	RIVER	0.494	0.23	25.360	7.57	770	6.34	764	15.3	18.2	1940	1060	1140	4.5161		
7/17/2019	9:05 AM	CA27639	Blackstone River @ Bikepath Bridge	CA27636	RIVER	0.534	0.24	26.085	7.50	870	12.1	858	11	13.9	1770	1160	1210	3.4043		
7/17/2019	2:45 PM	CA27640	Pawtuxet River @ Broad St.	CA27636	RIVER	0.486	0.17	25.562	7.41	973	23.5	949	23.3	<5.0	2630	1150	1300	<2.0000		
7/17/2019	2:45 PM	CA27641	Pawtuxet River @ Broad St. (Duplicate)	CA27636	RIVER	0.486	0.17	25.562	7.41	972	23.6	948	25.5	<5.0	2670	1140	1290	<2.0000		
7/17/2019	1:00 PM	CA27642	Woonasquatucket River @ Valley St.	CA27636	RIVER	0.344	0.23	25.246	7.63	455	2.4	453	<7.000	<5.0	1810	600	667	<2.0000		
7/17/2019	12:30 PM	CA27643	Woonasquatucket River @ Manton Ave. Bridge	CA27636	RIVER	0.274	0.19	26.215	7.64	218	3.83	214	20.5	<5.0	1610	426	466	<2.0000		
7/17/2019	1:50 PM	CA27644	Moshassuck River @ Footbridge at Mill St.	CA27636	RIVER	0.261	0.32	22.357	7.50	754	17.3	737	52.8	<5.0	4410	869	986	<2.0000		
7/17/2019	9:15 AM	CA27645	Nutrient Blank	CA27645	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
7/17/2019	1:15 PM	CA27646	Warren Reservoir/Kickemuit River	CA27645	RIVER	0.566	0.11	25.320	7.00	7.5	3.67	<6.0	29.8	33.4	1320	669	700	<2.0000		
7/17/2019	1:15 PM	CA27647	Warren Reservoir/Kickemuit River (Duplicate)	CA27645	RIVER	0.566	0.11	25.320	7.00	7.86	3.8	<6.0	23.8	33.8	1460	668	685	<2.0000		
7/17/2019	12:45 PM	CA27648	Coles River @ Milford Rd.	CA27645	RIVER	0.910	0.08	25.440	7.56	137	7.7	129	62.9	58	3410	850	799	4.0169		
7/17/2019	2:00 PM	CA27649	Palmer River @ Rt. 6	CA27645	RIVER	0.635	7.82	27.350	6.87	42.5	3.91	38.6	<7.000	12.2	1960	733	465	13.548		
7/17/2019	2:30 PM	CA27650	Runnins River @ River Rd.	CA27645	RIVER	1.110	0.34	22.410	7.30	431	5.51	425	14.2	5.44	4940	693	821	2.449		
7/17/2019	9:00 AM	CA27651	Taunton River @ Berkley Bridge	CA27645	RIVER	0.502	2.72	25.350	6.81	459	18.9	440	91	41	3040	1120	963	7.7419		
7/17/2019	10:00 AM	CA27652	Ten Mile River @ Roger Williams Ave.	CA27645	RIVER	0.827	0.26	25.730	7.31	189	6.43	183	77	16.3	1390	713	641	5.9957		
7/17/2019	10:45 AM	CA27653	Ten Mile River @ Central Ave.	CA27645	RIVER	0.724	0.28	23.320	7.35	959	5.39	954	27.9	49	3070	1160	1330	<2.0000		
7/31/2019	10:00 AM	CA28583	Nutrient Blank	CA28583	BAY					<6.000	<1.5		<7.000	<5.0	<20.000	<200.000	<100.000			
7/31/2019	9:20 AM	CA28584	Conimicut Point Surface	CA28583	BAY	0.500	25.68	26.240	7.93	<6.000	<1.5	<6.0	12.3	21.8	692	497	<100.000	7.9167	2.1052	2.8055
7/31/2019	9:25 AM	CA28585	Conimicut Point Bottom	CA28583	BAY					<6.000	1.85	<6.0	<7.000	41.9	942	502	<100.000	9.2135		
7/31/2019	1:25 PM	CA28586	Edgewood Yacht Club Surface	CA28583	BAY	0.500	21.60	26.510	8.04	7.41	<1.5	7.41	<7.000	40.4	961	749	<100.000	9.1667	12.298	9.1191
7/31/2019	1:30 PM	CA28587	Edgewood Yacht Club Bottom	CA28583	BAY					<6.000	<1.5	<6.0	17.7	108	1220	557	<100.000	11.828		
7/31/2019	8:15 AM	CA28588	Pomham Rocks Surface	CA28583	BAY	0.500	21.96	25.750	8.07	<6.000	<1.5	<6.0	<7.000	18.6	851	665	<100.000	7.4227	9.0738	6.3213
7/31/2019	8:25 AM	CA28589	Pomham Rocks Bottom	CA28583	BAY					<6.000	1.74	<6.0	<7.000	54.2	1060	486	<100.000	9.5833		
7/31/2019	8:00 AM	CA28590	India Point Park Surface	CA28583	BAY	0.500	19.42	25.490	7.76	56.6	7.09	49.5	15.8	62.8	1320	670	109	5.9794	5.2905	2.1442
7/31/2019	8:05 AM	CA28591	India Point Park Bottom	CA28583	BAY					10.4	3.43	6.97	62.4	63	982	518	<100.000	8		
7/31/2019	9:30 AM	CA28592	Bullock Reach Buoy Surface	CA28583	BAY	0.500	24.40	26.310	7.88	12.9	<1.5	12.9	<7.000	28.9	823	514	<100.000	7.5789	1.8061	4.0236
7/31/2019	9:35 AM	CA28593	Bullock Reach Buoy Bottom	CA28583	BAY					<6.000	2.06	<6.0	31.9	53.2	1080	412	<100.000	79.792		
7/31/2019	8:40 AM	CA28594	Pawtuxet Cove Surface	CA28583	BAY	0.500	11.08	25.890	7.49	595	6.91	588	24.3	15.5	1960	1100	738	4.5652	2.669	2.2417
7/31/2019	8:40 AM	CA28595	Pawtuxet Cove Surface (Duplicate)	CA28583	BAY	0.500	11.08	25.890	7.49	595	7.07	588	23.9	16.5	1950	1030	754	4.4444	3.8301	2.6331
7/31/2019	8:45 AM	CA28596	Pawtuxet Cove Bottom	CA28583	BAY					<6.000	1.89	<6.0	20.8	44.8	909	503	<100.000	8.5393		
7/31/2019	3:00 PM	CA28601	Nutrient Blank	CA28601	RIVER					15.4	<1.5	15.4	7.26	<5.0	42.5	<200.000	<100.000			
7/31/2019	10:15 AM	CA28602	Blackstone River @ Slater Mill	CA28601	RIVER	0.426	0.25	26.619	8.45	15.4	3.98	11.4	28.7	18	2060	816	861	<2.0000		
7/31/2019	2:34 PM	CA28603	Pawtuxet River @ Broad St.	CA28601	RIVER	0.453	0.19	26.438	7.72	1040	11	1030	8.21	<5.0	2640	1290	1340	<2.0000		
7/31/2019	1:35 PM	CA28604	Woonasquatucket River @ Valley St.	CA28601	RIVER	0.450	0.24	26.484	8.11	681	3.24	678	<7.000	<5.0	1660	789	837	<2.0000		
7/31/2019	1:10 PM	CA28605	Woonasquatucket River @ Manton Ave. Bridge	CA28601	RIVER	0.462	0.19	27.892	8.08	468	4.92	463	9	<5.0	1350	646	677	<2.0000		
7/31/2019	2:00 PM	CA28606	Moshassuck River @ Footbridge at Mill St.	CA28601	RIVER	0.310	0.32	23.192	7.96	689	12.7	676	30.4	<5.0	4240	782	816	<2.0000		
7/31/2019	10:42 AM	CA28607	Moshassuck River @ Higginson Ave.	CA28601	RIVER	0.357	0.25	22.516	7.91	332	5.86	326	35.7	12.2	3550	535	535	<2.0000		
7/31/2019	10:42 AM	CA28609	Moshassuck River @ Higginson Ave. (Duplicate)	CA28601	RIVER	0.357	0.25	22.516	7.91	327	5.94	321	31.9	11.8	3560	494	542	<2.0000		
7/31/2019	9:05 AM	CA28608	Ten Mile River @ Roger Williams Ave.	CA28601	RIVER	0.472	0.23	25.850	8.02	139	3.26	136	52.3	26.7	2080	497	472	<2.0000		
7/31/2019	9:30 AM	CA28610	Phillipsdale Landing Surface	CA28601	BAY	0.450	11.30	25.578	7.74	69.5	6.92	62.6	19.7	115	1790	453	186	5.7471	4.6605	1.999
7/31/2019	9:35 AM	CA28611	Phillipsdale Landing Bottom	CA28601	BAY	2.382	21.92	24.488	7.59	57.2	10.1	47.1	97	99.9	1330	418	185	6.1224		
8/15/2019	1:50 PM	CA29385	Nutrient Blank	CA29385	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/15/2019	8:55 AM	CA29386	Conimicut Point Surface	CA29385	BAY	0.500	25.54	23.310	7.80	<6.000	<1.5	<6.0	<7.000	52.9	865	579	<100.000	40.215	48.981	5.5613
8/15/2019	10:00 AM	CA29387	Edgewood Yacht Club Surface	CA29385	BAY	0.500	24.29	23.500	7.67	44.2	4.72	39.5	12	98.4	1180	568	104	30.2	30.312	6.4418
8/15/2019	8:35 AM	CA29388	Pomham Rocks Surface	CA29385	BAY	0.500	25.79	22.250	7.60	50.7	4.47	46.2	22.8	79.5	1070	585	213	28.172	11.488	2.918
8/15/2019	1:20 PM	CA29389	India Point Park Surface	CA29385	BAY	0.500	22.82	23.860	7.36	68.3	7.01	61.3	59.7	76.2	1270	621	171	31.277	13.465	6.3143
8/15/2019	9:10 AM	CA29390	Bullock Reach Buoy Surface	CA29385	BAY	0.500	25.91	23.240	7.80	<6.000	<1.5	<6.0	<7.000	56.8	905	614	<100.000	42.316	33.026	5.8878
8/15/2019	9:35 AM	CA29391	Pawtuxet Cove Surface	CA29385	BAY	0.500	17.48	23.310	7.87	580	6.61	573	25	16.6	1880	1140	748	23.878	53.402	13.312
8/15/2019	1:35 PM	CA29392	Phillipsdale Landing Surface	CA29385	BAY	0.500	17.72	25.150	8.48	12.8	1.6	11.2	7.19	79.7	1910	723	140	29.375	101.38	7.2022
8/15/2019	8:15 AM	CA29393	Edgewood Shoal Surface	CA29385	BAY	0.500	25.31	23.450	7.57	39.5	4.42	35.1	8.82	92.8	1160	643	108	40	42.43	9.0483
8/15/2019	8:15 AM	CA29394	Edgewood Shoal Surface (Duplicate)	CA29385	BAY	0.500	25.31	23.450	7.57	39.4	4	35.4	9.11	92.1	1170	588	<100.000	38.958	37.417	9.2533
8/15/2019	8:20 AM	CA29395	Edgewood Shoal Bottom	CA29385	BAY					10.3	1.95	8.35	77.9	96.5	1220	500	<100.000	45.161		
8/15/2019	2:40 PM	CA29399	Nutrient Blank	CA29399	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/15/2019	9:10 AM	CA29400	Blackstone River @ Slater Mill	CA29399	RIVER	0.449	0.21	22.479	7.70	624	4.8	619	39.5	18.7	2430	887	919	17.5		
8/15/2019	9:10 AM	CA29401	Blackstone River @ Slater Mill (Duplicate)	CA29399	RIVER	0.449	0.21	22.479	7.70	615	4.78	610	35.9	18.1	2400	874	936	11.875		
8/15/2019	10:47 AM	CA29402	Blackstone River @ Stateline	CA29399	RIVER	0.254	0.21	22.363	7.56	703	5.16	698	19.8	16.7	2420	948	1010	7.5269		
8/15/2019	9:55 AM	CA29403	Blackstone River @ Bikepath Bridge	CA29399	RIVER	0.498	0.22	22.924	7.58	656	4.85	651	47.9	19.3	2610	879	1020	3.5556		
8/15/2019	8:25 AM	CA29404	Pawtuxet River @ Broad St.	CA29399	RIVER	0.488	17.72	23.867	7.06	101	4.28	96.7	69.8	69.5	1250	786	222	26.4		
8/15/2019	2:00 PM	CA29405	Woonasquatucket River @ Valley St.	CA29399	RIVER	0.446	0.26	22.964	7.74	686	2.33	684	<7.000	<5.0	1890	821	866	<2.0000		
8/15/2019	2:25 PM	CA29406	Moshassuck River @ Footbridge at Mill St.	CA29399	RIVER	0.505	0.32	21.465	7.55	647	15.7	631	56.8	<5.0	3860	765	831	5.2083		

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS											
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
8/15/2019	1:15 PM	CA29407	Moshassuck River @ Higginson Ave.	CA29399	RIVER	0.516	0.25	20.117	7.50	330	3.22	327	17.6	9.8	3950	486	532	2		
8/15/2019	9:25 AM	CA29408	Nutrient Blank	CA29408	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/15/2019	10:20 AM	CA29409	Warren Reservoir/Kickemuit River	CA29408	RIVER	0.500	0.14	21.700	8.38	9.73	<1.5	9.73	<7.000	6.52	164	789	623	14.483		
8/15/2019	8:30 AM	CA29410	Coles River @ Milford Rd.	CA29408	RIVER	0.500	0.10	22.200	8.28	482	6.49	476	49.5	26.4	3980	1050	1030	5.2174		
8/15/2019	10:45 AM	CA29411	Palmer River @ Rt. 6	CA29408	RIVER	0.500	23.00	24.600	7.21	6.4	1.81	<6.0	<7.000	49.4	577	770	212	27.879		
8/15/2019	1:15 PM	CA29412	Runnins River @ River Rd.	CA29408	RIVER	0.500	0.41	20.300	8.48	454	3.5	450	<7.000	<5.0	4810	678	635	4.2105		
8/15/2019	9:15 AM	CA29413	Taunton River @ Berkley Bridge	CA29408	RIVER	0.500	14.20	24.400	7.23	197	4.42	193	28.2	35.7	2110	962	443	17.347		
8/15/2019	2:30 PM	CA29414	Ten Mile River @ Roger Williams Ave.	CA29408	RIVER	0.500	0.26	24.300	7.84	183	4.12	179	39	27.3	1970	618	560	<2.0000		
8/15/2019	1:50 PM	CA29415	Ten Mile River @ Central Ave.	CA29408	RIVER	0.500	0.32	22.000	8.09	1820	6.09	1810	<7.000	32.4	2810	2260	2250	<2.0000		
8/15/2019	1:50 PM	CA29416	Ten Mile River @ Central Ave. (Duplicate)	CA29408	RIVER	0.500	0.32	22.000	8.09	1830	6.19	1820	<7.000	32.1	2860	2210	2350	<2.0000		
8/28/2019	10:00 AM	CA30271	Nutrient Blank	CA30271	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/28/2019	8:50 AM	CA30272	Machine Cleaning Blank	CA30271	BAY					14.4	<1.5	14.4	<7.000	<5.0	<20.000	<200.000	<100.000			
8/28/2019	9:25 AM	CA30273	Conimicut Point Surface	CA30271	BAY	0.500	27.78	21.20	7.71	<6.000	<1.5	<6.0	<7.000	35.4	745	450	<100.000	10.769	5.5128	1.405
8/28/2019	9:25 AM	CA30274	Conimicut Point Surface (Duplicate)	CA30271	BAY	0.500	27.78	21.20	7.71	<6.000	<1.5	<6.0	<7.000	35.2	747	481	<100.000	9.7872	6.1782	1.4428
8/28/2019	9:30 AM	CA30275	Conimicut Point Bottom	CA30271	BAY					10.9	<1.5	10.9	<7.000	36.8	735	441	<100.000	5.8333		
8/28/2019	9:10 AM	CA30276	Edgewood Yacht Club Surface	CA30271	BAY	0.500	27.66	21.16	7.70	<6.000	<1.5	<6.0	9.52	90.3	975	525	<100.000	12.21	10.938	2.1938
8/28/2019	9:15 AM	CA30277	Edgewood Yacht Club Bottom	CA30271	BAY					<6.000	<1.5	<6.0	8.8	71.6	1090	678	<100.000	7.4468		
8/28/2019	10:40 AM	CA30278	Pomham Rocks Surface	CA30271	BAY	0.500	27.78	21.20	7.71	<6.000	<1.5	<6.0	<7.000	90	977	499	<100.000	8.4444	12.486	2.0694
8/28/2019	10:45 AM	CA30279	Pomham Rocks Bottom	CA30271	BAY					<6.000	<1.5	<6.0	<7.000	55.8	927	513	<100.000	8.3333		
8/28/2019	8:50 AM	CA30280	India Point Park Surface	CA30271	BAY	0.500	18.34	22.13	7.94	17.5	3.47	14	36.7	67.3	1020	598	143	5.1111	11.926	2.6255
8/28/2019	8:55 AM	CA30281	India Point Park Bottom	CA30271	BAY					17.3	3.22	14.1	36	68.5	1010	547	<100.000	29.438		
8/28/2019	9:40 AM	CA30282	Bullock Reach Buoy Surface	CA30271	BAY	0.500	27.78	21.20	7.71	11.4	<1.5	11.4	<7.000	44.9	950	488	<100.000	10	8.9631	1.2543
8/28/2019	9:45 AM	CA30283	Bullock Reach Buoy Bottom	CA30271	BAY					<6.000	1.54	<6.0	9.47	49.8	894	506	<100.000	14.624		
8/28/2019	10:25 AM	CA30284	Pawtuxet Cove Surface	CA30271	BAY	0.500	27.79	21.20	7.72	512	2.29	510	20.7	28.4	1840	1060	656	5.4348	9.3045	2.5957
8/28/2019	10:30 AM	CA30285	Pawtuxet Cove Bottom	CA30271	BAY					<6.000	<1.5	<6.0	7.33	53.9	1040	571	<100.000	13.814		
8/28/2019	9:45 AM	CA30289	Nutrient Blank	CA30289	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/28/2019	7:50 AM	CA30290	Machine Cleaning Blank	CA30289	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/28/2019	8:45 AM	CA30291	Blackstone River @ Slater Mill	CA30289	RIVER	0.530	0.24	20.58	7.55	691	4.13	687	35.4	11.7	1960	981	973	7.7419		
8/28/2019	2:45 PM	CA30292	Pawtuxet River @ Broad St.	CA30289	RIVER	0.560	0.23	21.5	7.89	1360	4.04	1360	<7.000	<5.0	3120	1560	1700	<2.0000		
8/28/2019	1:15 PM	CA30293	Woonasquatucket River @ Valley St.	CA30289	RIVER	0.502	0.23	20.5	8.10	574	2.2	572	<7.000	<5.0	1860	655	747	<2.0000		
8/28/2019	12:45 PM	CA30294	Woonasquatucket River @ Manton Ave. Bridge	CA30289	RIVER	0.500	0.18	21.25	8.62	327	2.77	324	<7.000	<5.0	1240	461	511	<2.0000		
8/28/2019	1:45 PM	CA30295	Moshassuck River @ Footbridge at Mill St.	CA30289	RIVER	0.500	0.32	18.28	7.78	700	11.9	688	39.4	<5.0	4710	754	846	2.5532		
8/28/2019	9:30 AM	CA30297	Ten Mile River @ Roger Williams Ave.	CA30289	RIVER	0.540	0.28	21.26	7.35	176	4.98	171	59.2	24.3	1920	506	507	2.1053		
8/28/2019	9:30 AM	CA30298	Ten Mile River @ Roger Williams Ave. (Duplicate)	CA30289	RIVER	0.540	0.28	21.26	7.35	176	5.03	171	58.8	25.8	2000	554	505	<2.0000		
8/28/2019	10:15 AM	CA30299	Phillipsdale Landing Surface	CA30289	BAY	0.540	22.22	21.98	7.94	127	5.68	121	<7.000	116	1770	4980	308	13.978	111.4	9.1756
8/28/2019	10:20 AM	CA30300	Phillipsdale Landing Bottom	CA30289	BAY	2.210	27.17	21.61	7.70	10.1	2.98	7.12	8.49	97.6	1220	1020	<100.000	13.556		
9/11/2019	10:25 AM	CA31274	Nutrient Blank	CA31274	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/11/2019	9:50 AM	CA31275	Conimicut Point Surface	CA31274	BAY	0.500	29.47	20.82	7.83	<6.000	<1.5	<6.0	<7.000	32.1	479	483	<100.000	32.653	12.793	4.1535
9/11/2019	2:30 PM	CA31276	Edgewood Yacht Club Surface	CA31274	BAY	0.500	42.42	22.29	7.8	48.1	4.16	43.9	<7.000	51.2	739	602	<100.000	11.111	22.077	4.8
9/11/2019	9:25 AM	CA31277	Pomham Rocks Surface	CA31274	BAY	0.500	27.57	21.32	7.72	68.6	4.82	63.8	29.5	57.9	791	584	103	27.347	10.368	3.8496
9/11/2019	9:25 AM	CA31278	Pomham Rocks Surface (Duplicate)	CA31274	BAY	0.500	27.57	21.32	7.72	60.5	4.82	55.7	24.6	58	793	600	113	30.204	11.881	3.6357
9/11/2019	1:45 PM	CA31279	India Point Park Surface	CA31274	BAY	0.500	33.67	22.46	7.44	167	12.4	155	92	93.1	1300	957	409	23.878	12.181	4.4268
9/11/2019	10:10 AM	CA31280	Bullock Reach Buoy Surface	CA31274	BAY	0.500	28.92	21.12	7.74	22.5	3.61	18.9	24.5	47.3	647	772	123	24.086	10.132	3.4872
9/11/2019	2:10 PM	CA31281	Pawtuxet Cove Surface	CA31274	BAY	0.500	20.25	22.23	7.57	352	5.58	346	51.8	48.5	1380	1140	547	24.286	10.9	4.0524
9/11/2019	1:20 PM	CA31282	Phillipsdale Landing Surface	CA31274	BAY	0.500	11.26	22.26	7.36	457	11.6	445	135	203	1910	1340	949	13.878	15.37	3.3234
9/11/2019	9:05 AM	CA31283	Edgewood Shoal Surface	CA31274	BAY	0.500	28.82	21.48	7.62	73.7	5.4	68.3	40.7	69	818	782	284	28.125	11.488	3.732
9/11/2019	9:10 AM	CA31284	Edgewood Shoal Bottom	CA31274	BAY					69.1	4.87	64.2	62.4	67.4	833	736	149	31.183		
9/11/2019	10:45 AM	CA31288	Nutrient Blank	CA31288	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	231	103			
9/11/2019	8:45 AM	CA31289	Blackstone River @ Slater Mill	CA31288	RIVER	0.500	0.22	20.17	7.14	747	4.25	743	37.6	13	2400	1060	1070	2.3404		
9/11/2019	10:30 AM	CA31290	Blackstone River @ Stateline	CA31288	RIVER	0.500	0.22	19.78	7.49	820	4.77	815	14.4	14.7	2040	1120	1090	2.7368		
9/11/2019	9:50 AM	CA31291	Blackstone River @ Bikepath Bridge	CA31288	RIVER	0.500	0.23	20.18	7.53	970	4.42	966	29.1	13.9	2440	1260	1390	2.3404		
9/11/2019	2:40 PM	CA31292	Pawtuxet River @ Broad St.	CA31288	RIVER	0.500	0.25	21.4	7.63	1340	2.99	1340	9.09	<5.0	3150	1600	1630	<2.0000		
9/11/2019	2:00 PM	CA31293	Woonasquatucket River @ Valley St.	CA31288	RIVER	0.500	0.23	21.07	7.87	713	2.78	710	10.2	<5.0	1670	862	876	<2.0000		
9/11/2019	2:00 PM	CA31294	Woonasquatucket River @ Valley St. (Duplicate)	CA31288	RIVER	0.500	0.23	21.07	7.87	714	3.05	711	9.03	<5.0	1690	842	879	<2.0000		
9/11/2019	1:30 PM	CA31295	Moshassuck River @ Footbridge at Mill St.	CA31288	RIVER	0.500	0.32	19.44	7.42	746	18.8	727	83.5	<5.0	4640	989	1010	2.5532		
9/11/2019	1:00 PM	CA31296	Moshassuck River @ Higginson Ave.	CA31288	RIVER	0.500	0.24	19.31	7.49	287	5.54	281	50.2	6.53	3520	497	496	4.086		
9/11/2019	2:45 PM	CA31297	Nutrient Blank	CA31297	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/11/2019	10:40 AM	CA31298	Warren Reservoir/Kickemuit River	CA31297	RIVER	0.409	6.97	22.544	6.70	<6.000	<1.5	<6.0	296	<5.0	1030	4630	863	74.255		
9/11/2019	10:10 AM	CA31299	Coles River @ Milford Rd.	CA31297	RIVER	0.497	0.13	18.726	7.78	424	5.41	419	37.3	15.5	883	995	847	<2.0000		
9/11/2019	11:05 AM	CA31300	Palmer River @ Rt. 6	CA31297	RIVER	0.550	20.71	21.715	7.18	<6.000	<1.5	<6.0	<7.000	12.2	899	1300	148	7.619		
9/11/2019	1:10 PM	CA31301	Runnins River @ River Rd.	CA31297	RIVER	0.523	6.14	17.609	6.97	98.9	6.28	92.6	284	<5.0	4290	1500	504	7.3913		
9/11/2019	1:10 PM	CA31302	Runnins River @ River Rd. (Duplicate)	CA31297	RIVER	0.523	6.14	17.609	6.97	98	6.38	91.6	284	<5.0	4320	1110	522	13.095		
9/11/2019	9:05 AM	CA31303	Taunton River @ Berkley Bridge	CA31297	RIVER	0.475	9.86	21.071	7.08	588	5.38	583	26.7	52.9	2160	1640	828	6.8889		
9/11/2019	2:30 PM	CA31304	Ten Mile River @ Roger Williams Ave.	CA31297	RIVER	0.554	0.26	21.186	7.58	163	5.79	157	69.8	16.7	1770	891	490	13.778		

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
9/11/2019	1:55 PM	CA31305	Ten Mile River @ Central Ave.	CA31297	RIVER	0.502	0.37	20.521	7.65	1280	4.43	1280	11.5	20.7	3160	1640	1610	2.9474		
9/25/2019	1:35 PM	CA32421	Nutrient Blank	CA32421	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/25/2019	09:20 AM	CA32422	Conimicut Point Surface	CA32421	BAY	0.500	28.60	20.47	7.84	8.14	<1.5	8.14	<7.000	43.2	273	724	<100.000	24.536	15.763	4.4673
9/25/2019	09:25 AM	CA32423	Conimicut Point Bottom	CA32421	BAY					<6.000	<1.5	<6.0	<7.000	37	362	675	<100.000	24.889		
9/25/2019	10:45 AM	CA32424	Edgewood Yacht Club Surface	CA32421	BAY	0.500	28.39	21.00	7.94	<6.000	<1.5	<6.0	<7.000	46.9	295	739	<100.000	8.5714	15.139	8.3697
9/25/2019	10:50 AM	CA32425	Edgewood Yacht Club Bottom	CA32421	BAY					17.2	1.53	15.7	31	49.2	438	656	<100.000	11.209		
9/25/2019	10:20 AM	CA32426	Pomham Rocks Surface	CA32421	BAY	0.500	27.43	20.57	7.78	48.4	3.66	44.7	20.5	62.4	567	781	102	7.234	9.639	4.9629
9/25/2019	10:25 AM	CA32427	Pomham Rocks Bottom	CA32421	BAY					9.61	3.67	<6.0	107	74.4	595	755	<100.000	16.25		
9/25/2019	01:10 PM	CA32428	India Point Park Surface	CA32421	BAY	0.500	27.04	21.31	7.56	100	6.58	93.4	68.5	69.7	743	1030	191	9.899	12.577	6.2322
9/25/2019	01:15 PM	CA32429	India Point Park Bottom	CA32421	BAY					14.1	2.65	11.4	58.6	53.4	472	868	<100.000	15.368		
9/25/2019	09:50 AM	CA32430	Bullock Reach Buoy Surface	CA32421	BAY	0.500	27.37	20.73	7.88	28.3	2.7	25.6	<7.000	52.2	411	828	<100.000	9.8925	15.364	4.5147
9/25/2019	09:50 AM	CA32450	Bullock Reach Buoy Surface (Duplicate)	CA32421	BAY	0.500	27.37	20.73	7.88	28.8	2.73	26.1	<7.000	53.3	412	835	<100.000	9.0526	16.39	7.4649
9/25/2019	09:55 AM	CA32431	Bullock Reach Buoy Bottom	CA32421	BAY					8.49	<1.5	8.49	12	43.8	339	655	<100.000	8.0851		
9/25/2019	01:45 PM	CA32432	Pawtuxet Cove Surface	CA32421	BAY	0.500	16.46	21.11	7.85	544	5.01	539	13.5	21.8	1370	1410	666	13.474	11.577	4.5213
9/25/2019	01:50 PM	CA32433	Pawtuxet Cove Bottom	CA32421	BAY					16.8	2.77	14	34.1	62.2	406	810	<100.000	<2.0000		
9/25/2019	2:40 PM	CA32437	Nutrient Blank	CA32437	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/25/2019	10:25 AM	CA32438	Blackstone River @ Main St. Bridge	CA32437	RIVER	0.490	0.26	19.75	7.68	909	3.63	905	7.42	8.41	2080	1250	1340	<2.0000		
9/25/2019	08:30 AM	CA32439	Pawtuxet River @ Broad St.	CA32437	RIVER	0.570	0.23	19.73	7.48	1120	8.97	1110	<7.000	<5.0	2530	1500	1340	2.0619		
9/25/2019	02:20 PM	CA32441	Woonasquatucket River @ Manton Ave. Bridge	CA32437	RIVER	0.430	0.19	20.97	8.21	871	5.67	865	<7.000	<5.0	1050	1110	1140	7.5269		
9/25/2019	09:30 AM	CA32444	Moshassuck River @ Higginson Ave.	CA32437	RIVER	0.410	0.24	16.85	7.48	318	5.16	313	84.4	7.74	3630	707	509	<2.0000		
9/25/2019	01:45 PM	CA32445	Ten Mile River @ Roger Williams Ave.	CA32437	RIVER	0.540	0.29	20.98	8.35	112	4.59	107	46	15.3	1840	797	563	3.8		
9/25/2019	01:15 PM	CA32446	Phillipsdale Landing Surface	CA32437	BAY	0.500	16.27	21.84	7.49	285	13	272	72.7	91.2	1220	1450	575	5.4	22.773	4.9593
9/25/2019	01:15 PM	CA32447	Phillipsdale Landing Surface (Duplicate)	CA32437	BAY	0.500	16.27	21.84	7.49	286	12.9	273	72	92.9	1240	1400	479	5.6	21.966	3.4785
9/25/2019	01:20 PM	CA32448	Phillipsdale Landing Bottom	CA32437	BAY	1.970	21.96	21.62	7.55	179	10.8	168	84.6	76.9	1020	1210	338	8.8421		
10/9/2019	1:45 PM	CA33581	Nutrient Blank	CA33581	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/9/2019	01:30 PM	CA33589	Phillipsdale Landing Surface	CA33581	BAY	0.750	19.08	16.98	7.49	318	18.3	300	166	148	1280	965	649	6.8687	10.891	2.074
10/9/2019	2:00 PM	CA33595	Nutrient Blank	CA33595	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/9/2019	08:30 AM	CA33596	Blackstone River @ Slater Mill	CA33595	RIVER	0.548	0.29	15.896	8.1	994	3.36	991	<7.000	9.1	2050	1300	1190	<2.0000		
10/9/2019	10:35 AM	CA33598	Blackstone River @ Stateline	CA33595	RIVER	0.476	0.29	15.409	7.68	1010	3.65	1010	<7.000	14.3	1930	1330	1230	2.5287		
10/9/2019	09:45 AM	CA33599	Blackstone River @ Bikepath Bridge	CA33595	RIVER	0.491	0.29	16.135	7.69	1200	3.5	1200	<7.000	14	2340	1480	1410	<2.0000		
10/9/2019	02:40 PM	CA33600	Pawtuxet River @ Broad St.	CA33595	RIVER	0.465	0.33	16.145	7.95	146	9.83	136	142	98.9	1040	686	322	8.2609		
10/9/2019	01:25 PM	CA33601	Woonasquatucket River @ Valley St.	CA33595	RIVER	0.471	0.22	15.129	7.50	798	2.4	796	<7.000	<5.0	1790	975	912	<2.0000		
10/9/2019	12:55 PM	CA33602	Woonasquatucket River @ Manton Ave. Bridge	CA33595	RIVER	0.462	0.18	15.570	7.61	596	2.64	593	14	<5.0	1380	820	726	<2.0000		
10/9/2019	12:55 PM	CA33603	Woonasquatucket River @ Manton Ave. Bridge (Duplicate)	CA33595	RIVER	0.462	0.18	15.570	7.61	596	2.63	593	13.2	<5.0	1360	811	739	<2.0000		
10/9/2019	01:45 PM	CA33604	Moshassuck River @ Footbridge at Mill St.	CA33595	RIVER	0.448	0.23	14.789	7.41	648	36.8	611	70.4	8.72	3830	982	877	15.484		
10/9/2019	2:20 PM	CA33605	Nutrient Blank	CA33605	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/9/2019	10:35 AM	CA33606	Warren Reservoir/Kickemuit River	CA33605	RIVER	0.500	14.97	18.50	7.01	18.9	1.78	17.1	102	<5.0	348	1250	647	6.7368		
10/9/2019	10:00 AM	CA33607	Coles River @ Milford Rd.	CA33605	RIVER	0.500	0.13	15.63	8.86	496	5.92	490	<7.000	11.6	1680	879	797	<2.0000		
10/9/2019	12:30 PM	CA33608	Runnins River @ River Rd.	CA33605	RIVER	0.500	0.49	14.26	8.27	386	4.18	382	19.9	<5.0	5180	551	592	3.5417		
10/9/2019	09:00 AM	CA33609	Taunton River @ Berkley Bridge	CA33605	RIVER	0.500	14.53	17.39	7.82	681	9.57	671	78.2	89.6	1990	1260	938	3.299		
10/9/2019	09:00 AM	CA33610	Taunton River @ Berkley Bridge (Duplicate)	CA33605	RIVER	0.500	14.53	17.39	7.82	657	9.5	647	77.9	87.8	1990	1230	955	4.375		
10/9/2019	01:50 PM	CA33611	Ten Mile River @ Roger Williams Ave.	CA33605	RIVER	0.500	0.30	16.16	7.85	300	16.3	284	107	37	2040	940	798	11.915		
10/9/2019	01:15 PM	CA33612	Ten Mile River @ Central Ave.	CA33605	RIVER	0.500	0.39	15.24	7.84	1840	9.09	1830	<7.000	17.8	3260	2180	2070	<2.0000		
10/9/2019	12:00 PM	CA33613	Palmer River @ Rt. 6	CA33605	RIVER	0.500	20.04	16.45	7.34	125	5.2	120	14	13.4	863	719	345	8		
10/23/2019	8:45 AM	CA34332	Nutrient Blank	CA34332	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/23/2019	12:45 PM	CA34333	Blackstone River @ Exchange St.	CA34332	RIVER	0.5	0.17	13.42	8.11	421	4.55	416	13.6	12.5	2550	734	739	<2.0000		
10/23/2019	3:15 PM	CA34334	Pawtuxet River @ Broad St.	CA34332	RIVER	0.5	8.84	14.60	7.38	627	18.2	609	10.1	<5.0	2530	964	906	2.9474		
10/23/2019	2:00 PM	CA34335	Woonasquatucket River @ Valley St.	CA34332	RIVER	0.5	0.17	14.90	7.75	353	2.42	351	<7.000	<5.0	1890	566	576	<2.0000		
10/23/2019	2:30 PM	CA34336	Woonasquatucket River @ Manton Ave. Bridge	CA34332	RIVER	0.5	0.16	14.39	7.79	285	1.6	283	<7.000	<5.0	1770	530	509	<2.0000		
10/23/2019	1:15 PM	CA34337	Moshassuck River @ Footbridge at Mill St.	CA34332	RIVER	0.5	0.19	14.0	7.71	375	5.56	369	37.1	8.85	3040	886	998	5.7447		
10/23/2019	1:15 PM	CA34338	Moshassuck River @ Footbridge at Mill St. (Duplicate)	CA34332	RIVER	0.5	0.19	14.0	7.71	369	5.64	363	34.5	8.67	3080	881	877	5.8333		
10/23/2019	10:45 AM	CA34339	Moshassuck River @ Higginson Ave.	CA34332	RIVER	0.5	0.19	14.24	8.59	187	3.92	183	21.4	11.9	2370	504	439	5.9794		
10/23/2019	8:30 AM	CA34340	Ten Mile River @ Roger Williams Ave.	CA34332	RIVER	0.5	0.23	13.74	8.14	574	13.7	560	31	37.7	2370	1030	954	4.6753		
10/23/2019	9:15 AM	CA34341	Phillipsdale Landing Surface	CA34332	BAY	1.5	25.47	14.84	7.20	491	10.3	481	84.2	175	2060	1000	817	4.4681	0.6995	1.7682
10/23/2019	9:30 AM	CA34342	Phillipsdale Landing Bottom	CA34332	BAY	2.30	25.86	14.96	7.12	111	11.8	99.2	140	68.7	1120	1000	299	75.5		
10/24/2019	1:30 PM	CA34315	Nutrient Blank	CA34315	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/24/2019	9:00 AM	CA34316	Conimicut Point Surface	CA34315	BAY	0.5	26.88	13.71	7.70	119	9.01	110	75.1	57.7	996	584	240	6.1702	1.664	1.0739
10/24/2019	9:05 AM	CA34317	Conimicut Point Bottom	CA34315	BAY					42.5	6.35	36.1	40.7	43.8	654	440	<100.000	7.7778		
10/24/2019	10:00 AM	CA34318	Edgewood Yacht Club Surface	CA34315	BAY	0.5	26.25	14.77	7.68	125	10.3	115	109	67.2	1060	624	278	6.3043	1.2808	0.81132
10/24/2019	10:00 AM	CA34319	Edgewood Yacht Club Surface (Duplicate)	CA34315	BAY	0.5	26.25	14.77	7.68	127	10.5	116	108	67.5	1050	564	286	7.6087	1.3153	0.81477
10/24/2019	10:05 AM	CA34320	Edgewood Yacht Club Bottom	CA34315	BAY					59.6	8.69	50.9	80.9	62.2	835	447	144	7.3684		
10/24/2019	8:30 AM	CA34321	Pomham Rocks Surface	CA34315	BAY	0.5	25.56	15.10	7.48	145	12.6	132	255	95.2	1230	849	517	6.5934	1.1988	1.1091
10/24/2019	8:35 AM	CA34322	Pomham Rocks Bottom	CA34315	BAY					44.1	7.43	36.7	61.4	51.5	711	442	<100.000	9.6703		
10/24/2019	12:40 PM	CA34323	India Point Park Surface	CA34315	BAY	0.5	18.74	14.96	7.56	117	4.47	113	88.2	47.7	1300	664	252	5.1111	0.86235	1.1716

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS										
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
10/24/2019	12:45 PM	CA34324	India Point Park Bottom	CA34315	BAY					26.7	7.99	18.7	76.3	56.1	738	454	<100.000	11.556		
10/24/2019	9:25 AM	CA34325	Bullock Reach Buoy Surface	CA34315	BAY	0.5	25.86	14.40	7.70	122	8.72	113	80.2	60	1010	572	233	7.1111	2.0093	1.2463
10/24/2019	9:30 AM	CA34326	Bullock Reach Buoy Bottom	CA34315	BAY					50.2	6.75	43.4	48	48.2	718	453	<100.000	10.638		
10/24/2019	1:15 PM	CA34327	Pawtuxet Cove Surface	CA34315	BAY	0.5	10.03	14.57	7.29	571	20.7	550	60.3	19.5	1810	940	613	<2.0000	0.8854	1.1845
10/24/2019	1:20 PM	CA34328	Pawtuxet Cove Bottom	CA34315	BAY					55.5	6.72	48.8	79.6	55.7	385	520	<100.000	7.7895		
11/6/2019	10:00 AM	CA35358	Nutrient Blank	CA35358	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/6/2019	9:35 AM	CA35359	Conimicut Point Surface	CA35358	BAY	0.5	22.96	12.79	7.69	191	10.5	180	127	71.4	1270	724	400	6.1053	4.2442	0.31292
11/6/2019	10:35 AM	CA35360	Edgewood Yacht Club Surface	CA35358	BAY	0.5	24.68	13.86	7.68	146	10.9	135	129	71.2	1130	634	446	7.957	3.3892	1.0832
11/6/2019	9:10 AM	CA35361	Pomham Rocks Surface	CA35358	BAY	0.5	18.72	12.84	7.57	250	9.86	240	105	62.3	1520	708	546	7.0454	1.0859	0.94025
11/6/2019	1:00 PM	CA35362	India Point Park Surface	CA35358	BAY	0.5	17.3	13.28	7.59	356	9.73	346	106	70.3	1790	839	576	5.9574	1.7857	1.3933
11/6/2019	9:50 AM	CA35363	Bullock Reach Buoy Surface	CA35358	BAY	0.5	24.2	12.66	7.73	169	9.63	159	88.2	56.3	1160	626	380	5.8696	3.0255	1.5256
11/6/2019	2:05 PM	CA35364	Pawtuxet Cove Surface	CA35358	BAY	0.5	8.71	12.02	7.21	510	9.01	501	110	44.2	1650	997	736	5.6	4.3525	1.6057
11/6/2019	1:25 PM	CA35365	Phillipsdale Landing Surface	CA35358	BAY	0.5	3.36	11.37	7.22	665	9.14	656	108	90	2780	1170	1010	2.5532	1.8145	1.7631
11/6/2019	8:55 AM	CA35366	Edgewood Shoal Surface	CA35358	BAY	0.5	26.04	14.12	7.61	126	10.6	115	117	63.6	1040	619	292	7.3118	2.2211	1.1923
11/6/2019	8:55 AM	CA35367	Edgewood Shoal Surface (Duplicate)	CA35358	BAY	0.5	26.04	14.12	7.61	128	10.5	117	118	62.8	1050	591	288	5.5556	1.8388	0.9173
11/6/2019	9:00 AM	CA35368	Edgewood Shoal Bottom	CA35358	BAY					96.7	10	86.7	110	54.3	925	517	210	8.4091		
11/6/2019	1:55 PM	CA35372	Nutrient Blank	CA35372	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/6/2019	10:50 AM	CA35374	Blackstone River @ Stateline	CA35372	RIVER	0.562	0.16	9.552	7.68	445	3.26	442	<7.000	7.62	2790	691	714	3.0435		
11/6/2019	10:00 AM	CA35375	Blackstone River @ Bikepath Bridge	CA35372	RIVER	0.502	0.18	10.009	7.6	715	4.14	711	<7.000	9.62	2550	994	1030	3.299		
11/6/2019	10:00 AM	CA35376	Blackstone River @ Bikepath Bridge (Duplicate)	CA35372	RIVER	0.502	0.18	10.009	7.6	714	3.83	710	34.2	9.77	2880	991	1040	3.5051		
11/6/2019	2:20 PM	CA35377	Pawtuxet River @ Broad St.	CA35372	RIVER	0.546	1.17	10.872	7.99	948	3.67	944	61.6	13.7	3080	1380	1470	3.0107		
11/6/2019	1:10 PM	CA35378	Woonasquatucket River @ Valley St.	CA35372	RIVER	0.533	0.17	10.951	7.76	455	2.1	453	<7.000	<5.0	1910	619	648	<2.0000		
11/6/2019	1:35 PM	CA35379	Moshassuck River @ Footbridge at Mill St.	CA35372	RIVER	0.479	0.23	10.302	7.54	398	6.92	391	53.1	<5.0	3740	598	627	3.8298		
11/6/2019	12:30 PM	CA35380	Moshassuck River @ Higginson Ave.	CA35372	RIVER	0.524	0.23	10.319	7.71	132	3.16	129	24.7	<5.0	3160	433	459	3.4783		
11/6/2019	9:15 AM	CA35382	Blackstone River @ Exchange St.	CA35372	RIVER	0.495	0.18	9.914	7.75	676	4.2	672	18.1	9.34	2850	929	1100	3.8298		
11/6/2019	10:15 AM	CA35392	Nutrient Blank	CA35392	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/6/2019	1:00 PM	CA35393	Warren Reservoir/Kickemuit River	CA35392	RIVER	0.61	0.25	10.68	8.07	471	9.94	461	30.1	14.9	4640	1020	990	3.8298		
11/6/2019	2:00 PM	CA35394	Coles River @ Milford Rd.	CA35392	RIVER	0.78	0.11	11.15	8.70	63.6	3.46	60.1	18	14.4	4300	700	649	2.5		
11/6/2019	2:00 PM	CA35395	Coles River @ Milford Rd. (Duplicate)	CA35392	RIVER	0.78	0.11	11.15	8.70	62.9	3.57	59.3	12.8	14.1	4550	695	653	2.2988		
11/6/2019	1:45 PM	CA35396	Palmer River @ Rt. 6	CA35392	RIVER	0.53	6.79	11.03	7.04	130	5.43	125	<7.000	15.7	3770	703	463	14.545		
11/6/2019	1:30 PM	CA35397	Runnins River @ River Rd.	CA35392	RIVER	0.69	0.24	8.9	8.06	208	1.81	206	<7.000	<5.0	4760	531	551	2.3256		
11/6/2019	8:50 AM	CA35398	Taunton River @ Berkley Bridge	CA35392	RIVER	0.51	0.29	9.99	8.88	406	11.9	394	189	43.6	3940	1480	1020	82.308		
11/6/2019	9:35 AM	CA35399	Ten Mile River @ Roger Williams Ave.	CA35392	RIVER	0.84	0.25	11.2	8.4	704	14.8	689	20.2	24.4	3830	1100	1140	7.6		
11/6/2019	10:05 AM	CA35400	Ten Mile River @ Central Ave.	CA35392	RIVER	0.78	0.25	9.21	8.03	1560	10.1	1550	57.9	14.4	3490	1880	1960	5.9574		
11/20/2019	2:40 PM	CA36460	Nutrient Blank	CA36460	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/20/2019	8:30 AM	CA36461	Blackstone River @ Slater Mill	CA36460	RIVER					898	5.05	893	10.5	9.51	2750	1150	1170	5.7471		
11/20/2019	10:55 AM	CA36462	Pawtuxet River @ Broad St.	CA36460	RIVER	0.456	0.35	6.535	7.98	174	9.99	164	32.2	60.4	927	631	345	9.1111		
11/20/2019	3:00 PM	CA36463	Woonasquatucket River @ Valley St.	CA36460	RIVER	0.417	0.24	6.432	7.83	641	2.45	639	<7.000	<5.0	1660	787	840	<2.0000		
11/20/2019	2:30 PM	CA36464	Woonasquatucket River @ Manton Ave. Bridge	CA36460	RIVER	0.261	0.15	6.254	8.04	571	1.89	569	<7.000	<5.0	1560	754	771	<2.0000		
11/20/2019	11:25 AM	CA36465	Moshassuck River @ Footbridge at Mill St.	CA36460	RIVER	0.422	0.27	7.365	7.89	516	8.26	508	85	<5.0	4110	793	788	2.8889		
11/20/2019	1:45 PM	CA36466	Moshassuck River @ Higginson Ave.	CA36460	RIVER	0.496	0.24	6.508	7.75	153	2.81	150	10.6	<5.0	3290	629	359	6.3917		
11/20/2019	1:45 PM	CA36467	Moshassuck River @ Higginson Ave. (Duplicate)	CA36460	RIVER	0.496	0.24	6.508	7.75	153	2.75	150	9.27	<5.0	3290	653	362	6.8965		
11/20/2019	10:10 AM	CA36468	Ten Mile River @ Roger Williams Ave.	CA36460	RIVER	0.489	0.26	4.139	8.17	1390	11.8	1380	50.6	18	3520	1680	1760	2.9213		
11/20/2019	9:05 AM	CA36484	Phillipsdale Landing Surface	CA36460	BAY	0.512	12.47	6.909	6.98	662	8.59	653	67.7	95.6	1630	1040	912	15.484	2.3056	1.8735
11/20/2019	9:10 AM	CA36485	Phillipsdale Landing Bottom	CA36460	BAY	1.529	21.56	8.419	7.09	357	8.47	349	77.3	59.8	1220	744	525	25.652		
11/20/2019	10:15 AM	CA36470	Nutrient Blank	CA36470	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/20/2019	9:35 AM	CA36471	Conimicut Point Surface	CA36470	BAY	0.5	27.42	8.72	7.70	173	8.56	164	85.8	51.4	909	610	300	7.234	1.3815	0.57129
11/20/2019	9:40 AM	CA36472	Conimicut Point Bottom	CA36470	BAY					156	8.13	148	76.2	47.4	809	534	250	8.6598		
11/20/2019	1:25 PM	CA36473	Edgewood Yacht Club Surface	CA36470	BAY	0.5	26.95	9.19	7.78	182	8.02	174	136	71	751	635	358	8.5417	1.6924	0.60069
11/20/2019	1:30 PM	CA36474	Edgewood Yacht Club Bottom	CA36470	BAY					144	7.99	136	102	58.5	705	545	355	8.75		
11/20/2019	9:10 AM	CA36475	Pomham Rocks Surface	CA36470	BAY	0.5	26.69	9.0	7.66	210	8.27	202	49.4	47.9	857	554	393	31.158	1.1118	0.6156
11/20/2019	9:15 AM	CA36476	Pomham Rocks Bottom	CA36470	BAY					150	8.19	142	53.4	44.8	645	529	311	39.785		
11/20/2019	1:10 PM	CA36477	India Point Park Surface	CA36470	BAY	0.5	27.96	9.43	7.80	155	8.32	147	43.8	40.3	623	468	217	31.956	1.0656	0.58302
11/20/2019	1:15 PM	CA36478	India Point Park Bottom	CA36470	BAY					89.4	8.65	80.7	41.4	35.9	511	436	126	5.9794		
11/20/2019	9:55 AM	CA36479	Bullock Reach Buoy Surface	CA36470	BAY	0.5	27.38	8.54	7.73	180	9.29	171	87.4	49.9	731	573	296	32.211	3.624	1.4841
11/20/2019	10:00 AM	CA36480	Bullock Reach Buoy Bottom	CA36470	BAY					185	8.94	176	85.2	48.8	537	541	292	30.625		
11/20/2019	10:45 AM	CA36481	Pawtuxet Cove Surface	CA36470	BAY	0.5	10.82	7.29	7.40	561	9.01	552	216	44	1730	1050	898	4	2.1511	1.4761
11/20/2019	10:45 AM	CA36482	Pawtuxet Cove Surface (Duplicate)	CA36470	BAY	0.5	10.82	7.29	7.40	555	9.04	546	217	44.4	1330	1060	892	22.2	1.601	1.174
11/20/2019	10:50 AM	CA36483	Pawtuxet Cove Bottom	CA36470	BAY					328	8.7	319	149	50.2	1000	764	610	27.234		
12/4/2019	9:50 AM	CA37452	Nutrient Blank	CA37452	BAY					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/4/2019	1:35 PM	CA37453	Conimicut Point Surface	CA37452	BAY	0.5	28.08	5.84	7.79	157	7.35	150	75	38.4	832	492	132	7.2	0.62631	1.0237
12/4/2019	1:35 PM	CA37454	Conimicut Point Surface (Duplicate)	CA37452	BAY	0.5	28.08	5.84	7.79	156	7.25	149	74.7	37.7	509	505	124	8.8889	0.98061	0.55719
12/4/2019	2:10 PM	CA37455	Edgewood Yacht Club Surface	CA37452	BAY	0.5	22.18	5.16	7.77	301	7.45	294	113	50.7	885	714	333	11.8	0.94323	1.1167
12/4/2019	1:20 PM	CA37456	Pomham Rocks Surface	CA37452	BAY	0.5	25.84	5.12	7.74	269	7.23	262	102	49.6	904	698	342	8.2105	1.1401	0.71991

Table 31: River and Bay Nutrients Data

River-Bay Nutrient Results
2019

NR = Not Reportable

										NUTRIENT PARAMETERS											
Collection Date	Collection Time	Sample ID	Station	Associated Blank	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	NO3+NO2 (ppb)	Nitrite (ppb)	Nitrate (ppb)	NH3 (ppb)	Ortho-Phosphate (ppb)	Silicate (ppb)	Total Nitrogen (ppb)	Total Dissolved Nitrogen (ppb)	TSS (ppm)	Chl a (ug/L)	Phaeophytin (ug/L)
12/4/2019	1:00 PM	CA37457	India Point Park Surface	CA37452	BAY	0.5	13.86	4.12	7.64	551	7.48	544	68.5	58.7	1970	915	687	5.1064	0.43806	0.86733
12/4/2019	1:50 PM	CA37458	Bullock Reach Buoy Surface	CA37452	BAY	0.5	28.16	5.71	7.79	152	7.05	145	75.2	33.9	582	476	112	8.7755	0.81153	0.45198
12/4/2019	10:00 AM	CA37460	Phillipsdale Landing Surface	CA37452	BAY	0.56	11.66	3.78	7.58	782	9.65	772	74	42.1	2580	1170	1070	3.7113	1.0292	0.52266
12/4/2019	12:40 PM	CA37461	Edgewood Shoal Surface	CA37452	BAY	0.5	24.91	5.41	7.67	237	7.7	229	162	61.9	763	717	410	7.4227	1.8879	0.91335
12/4/2019	12:45 PM	CA37462	Edgewood Shoal Bottom	CA37452	BAY					244	7.47	237	171	60.8	857	699	358	7.6605		
12/4/2019	2:10 PM	CA37466	Nutrient Blank	CA37466	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/4/2019	8:45 AM	CA37467	Blackstone River @ Slater Mill	CA37466	RIVER	0.528	0.22	1.873	9.89	760	6.83	753	49.9	11.6	1990	1050	1040	12.723		
12/4/2019	10:30 AM	CA37468	Blackstone River @ Stateline	CA37466	RIVER	0.524	0.19	1.463	8.18	504	6.05	498	34	6.68	2290	719	750	2.2075		
12/4/2019	9:33 AM	CA37469	Blackstone River @ Bikepath Bridge	CA37466	RIVER	0.568	0.22	1.701	8.87	793	7.29	786	45.1	18.8	2010	1020	1080	<2.0000		
12/4/2019	11:40 AM	CA37470	Pawtuxet River @ Broad St.	CA37466	RIVER	0.55	0.25	2.662	8.07	933	4.87	928	188	17.6	2760	1260	1350	<2.0000		
12/4/2019	11:40 AM	CA37471	Pawtuxet River @ Broad St. (Duplicate)	CA37466	RIVER	0.55	0.25	2.662	8.07	936	5.05	931	187	17.7	2910	1280	1330	<2.0000		
12/4/2019	2:35 PM	CA37472	Woonasquatucket River @ Valley St.	CA37466	RIVER	0.355	0.21	2.601	8.00	401	1.75	399	<7.000	<5.0	990	572	587	<2.0000		
12/4/2019	1:55 PM	CA37473	Woonasquatucket River @ Manton Ave. Bridge	CA37466	RIVER	0.429	0.19	2.314	8.08	359	1.66	357	8.82	<5.0	1620	537	543	<2.0000		
12/4/2019	1:25 PM	CA37474	Moshassuck River @ Footbridge at Mill St.	CA37466	RIVER	0.212	0.45	3.328	7.93	471	4.73	466	106	<5.0	3820	784	771	3.7363		
12/4/2019	9:35 AM	CA37476	Nutrient Blank	CA37476	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/4/2019	11:10 AM	CA37477	Warren Reservoir/Kickemuit River	CA37476	RIVER	0.56	0.17	1.26	7.61	368	5.7	362	46.9	16.5	1550	819	882	<2.0000		
12/4/2019	10:30 AM	CA37478	Coles River @ Milford Rd.	CA37476	RIVER	0.49	0.09	1.43	8.18	148	3.43	145	15.5	11.5	2270	650	644	<2.0000		
12/4/2019	11:30 AM	CA37479	Palmer River @ Rt. 6	CA37476	RIVER	0.49	14.32	1.78	6.55	270	3.87	266	41.9	23.3	2740	777	720	2.1277		
12/4/2019	11:30 AM	CA37480	Palmer River @ Rt. 6 (Duplicate)	CA37476	RIVER	0.49	14.32	1.78	6.55	271	3.92	267	43.6	22.6	2900	786	703	<2.0000		
12/4/2019	12:45 PM	CA37481	Runnins River @ River Rd.	CA37476	RIVER	0.57	0.70	0.99	7.54	428	2.91	425	43.5	8.77	3470	697	790	<2.0000		
12/4/2019	9:45 AM	CA37482	Taunton River @ Berkley Bridge	CA37476	RIVER	0.58	0.28	1.52	8.08	504	7.29	497	48	23.8	2030	901	928	4.9661		
12/4/2019	2:20 PM	CA37483	Ten Mile River @ Roger Williams Ave.	CA37476	RIVER	0.49	0.23	2.42	7.83	1640	16.4	1620	94.2	25.2	3270	1880	2180	2.4719		
12/4/2019	1:20 PM	CA37484	Ten Mile River @ Central Ave.	CA37476	RIVER	0.48	0.43	2.95	7.63	2220	24	2200	314	16.7	3280	2820	3200	2.2883		
12/18/2019	10:40 AM	CA38135	Nutrient Blank	CA38135	RIVER					<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/18/2019	10:00 AM	CA38136	Blackstone River @ Slater Mill	CA38135	RIVER	0.5	0.21	2.47	8.32	528	11.7	516	183	9.7	2210	848	950	2.4719		
12/18/2019	10:00 AM	CA38137	Blackstone River @ Slater Mill (Duplicate)	CA38135	RIVER	0.5	0.21	2.47	8.32	529	11.7	517	167	9.71	2190	860	1020	2.7083		
12/18/2019	2:25 PM	CA38138	Pawtuxet River @ Broad St.	CA38135	RIVER	0.53	1.32	4.11	7.67	908	5.68	902	231	18.2	2700	1290	1400	2.2449		
12/18/2019	1:35 PM	CA38139	Woonasquatucket River @ Valley St.	CA38135	RIVER	0.5	0.24	3.69	8.18	411	2.29	409	<7.000	<5.0	2250	569	713	<2.0000		
12/18/2019	1:10 PM	CA38140	Woonasquatucket River @ Manton Ave. Bridge	CA38135	RIVER	0.52	0.23	3.44	8.49	363	2.58	360	<7.000	<5.0	2030	545	616	<2.0000		
12/18/2019	1:55 PM	CA38141	Moshassuck River @ Footbridge at Mill St.	CA38135	RIVER	0.053	0.46	3.31	7.87	630	4.89	625	102	5.97	3100	861	988	3.4043		
12/18/2019	10:30 AM	CA38142	Moshassuck River @ Higginson Ave.	CA38135	RIVER	0.5	0.26	3.04	7.88	526	3.74	522	13.7	6.5	3040	683	797	<2.0000		
12/18/2019	8:30 AM	CA38143	Ten Mile River @ Roger Williams Ave.	CA38135	RIVER	0.5	0.19	ND	8.29	962	15.2	947	128	19.2	2360	1310	1490	2.0619		
12/18/2019	9:00 AM	CA38144	Phillipsdale Landing Surface	CA38135	BAY	0.5	2.96	3.48	7.35	624	9.88	614	128	51.9	2550	999	1090	3.7113	0.61122	0.51081
12/18/2019	9:05 AM	CA38145	Phillipsdale Landing Bottom	CA38135	BAY	2.98	6.98	3.63	6.96	257	8.37	249	119	27.7	1420	679	398	3.5789		

Table 31: River and Bay Nutrients Data

River Fecal Coliform Results 2019

(MPN/100mL)

	Woonasquatucket River						West River			Providence River	Seekonk River
Date	W-9 - Manton Ave.	W-8D - Parking Bridge Olneyville	W-8C - Delaine St.	W7C-Eagle Street	W-7B - Pleasant Valley Pkwy.	W-7A - Kinsley St.	WE-10 - Douglas Ave. Bridge	WE-12 - Veazie St. Bridge	WE-11 - West River St. Bridge	PR-12 - Crawford St. Bridge	SR-5A - Pitman Street
1/2/2019				<30.0		<30.0	90.0	90.0	150.0	150.0	
1/7/2019	90.0	<30.0	40.0	34.6	40.0	40.0				40.0	
1/8/2019				<30.0		90.0	90.0	90.0	90.0	230.0	
1/14/2019	<30.0	<30.0	<30.0	34.6	<30.0	90.0				90.0	40.0
1/15/2019				<30.0		40.0	40.0	<30.0	430.0	90.0	
1/22/2019	<30.0	<30.0	<30.0	<30.0	40.0	<30.0					230.0
1/23/2019				<30.0		<30.0	40.0	40.0	230.0	90.0	
1/28/2019	40.0	30.0	40.0	40.0	40.0	150.0				<30.0	
1/29/2019				150.0		90.0	90.0	40.0	90.0	90.0	
2/4/2019	<30.0	90.0	90.0	30.0	<30.0	90.0				230.0	
2/5/2019				40.0		40.0	90.0	40.0	90.0	30.0	
2/11/2019	40.0	40.0	40.0	34.6	<30.0	90.0				90.0	
2/12/2019				40.0		40.0	40.0	<30.0	90.0	230.0	
2/19/2019	40.0	<30.0	<30.0	34.6	40.0	<30.0				40.0	
2/20/2019				40.0		230.0	<30.0	90.0	40.0	930.0	
2/25/2019	40.0	30.0	90.0	40.0	230.0	<30.0				150.0	
2/26/2019				40.0		<30.0	90.0	40.0	90.0	150.0	
3/5/2019	<30.0	<30.0	<30.0	52.0	<30.0	<30.0				230.0	
3/6/2019				<30.0		<30.0	40.0	90.0	230.0	90.0	
3/11/2019	40.0	<30.0	<30.0	60.0	40.0	<30.0				430.0	
3/12/2019				40.0		40.0	90.0	90.0	230.0	430.0	
3/18/2019	40.0	<30.0	<30.0	34.6	40.0	40.0				<30.0	
3/19/2019				40.0		40.0	<30.0	40.0	230.0	930.0	
3/25/2019	<30.0	<30.0	<30.0	34.6	<30.0	40.0				<30.0	
3/26/2019				<30.0		<30.0	<30.0	<30.0	40.0	<30.0	90.0
4/1/2019	<30.0	90.0	<30.0	30.0	40.0	230.0				90.0	
4/2/2019				<30.0		40.0	40.0	150.0	230.0	40.0	
4/8/2019	70.0	430.0	930.0	314.5	750.0	930.0				110000.0	
4/9/2019				40.0		230.0	70.0	150.0	90.0	430.0	430.0
4/15/2019	90.0	930.0	430.0	803.1	430.0	430.0				24000.0	
4/16/2019				40.0		90.0		90.0	90.0	2300.0	
4/22/2019	40.0	230.0	230.0	90.0	90.0	90.0				230.0	
4/23/2019				750.0		1500.0		430.0	430.0	930.0	2300.0
4/29/2019	230.0	30.0	90.0	77.5	90.0	230.0				700.0	
4/30/2019				90.0		<30.0		900.0	230.0	400.0	
5/6/2019	90.0	90.0	40.0	150.0	390.0	2300.0				930.0	
5/7/2019				70.0		40.0		930.0	430.0	230.0	
5/13/2019	430.0	230.0	430.0	1313.4	750.0	430.0				430.0	
5/14/2019				930.0		640.0		230.0	930.0	750.0	
5/20/2019	90.0	430.0	40.0	587.4	430.0	230.0				750.0	
5/21/2019				2300.0		930.0		430.0	930.0	1500.0	2300.0
5/28/2019	40.0	90.0	90.0	930.0	430.0	230.0				430.0	
5/29/2019				930.0		930.0		930.0	4300.0	930.0	
6/3/2019	230.0	230.0	430.0	1060.7	430.0	930.0				140.0	
6/4/2019				430.0		430.0		750.0	430.0	230.0	<30.0

Table 32: Woonasquatucket, West, Providence, and Seekonk Rivers Fecal Coliform Data

River Fecal Coliform Results 2019

(MPN/100mL)

	Woonasquatucket River						West River			Providence River	Seekonk River
Date	W-9 - Manton Ave.	W-8D - Parking Bridge Olneyville	W-8C - Delaine St.	W7C-Eagle Street	W-7B - Pleasant Valley Pkwy.	W-7A - Kinsley St.	WE-10 - Douglas Ave. Bridge	WE-12 - Veazie St. Bridge	WE-11 - West River St. Bridge	PR-12 - Crawford St. Bridge	SR-5A - Pitman Street
6/10/2019	430.0	230.0	430.0	314.5	230.0	230.0				930.0	
6/11/2019				24000.0		4300.0		4300.0	9300.0	24000.0	
6/17/2019	90.0	430.0	430.0	430.0	930.0	2300.0				930.0	
6/18/2019				4300.0		2300.0		430.0	2300.0	930.0	430.0
6/24/2019	230.0	430.0	9300.0	314.5	930.0	430.0				2300.0	
6/25/2019				930.0		430.0		930.0	430.0	930.0	
7/1/2019	230.0	2300.0	2300.0	1462.5	24000.0	930.0				2300.0	
7/2/2019				930.0		4300.0		930.0	9300.0	9300.0	430.0
7/8/2019	90.0	230.0	230.0	994.5	930.0	430.0				4300.0	
7/9/2019				2300.0		2300.0		2300.0	2300.0	1500.0	40.0
7/15/2019	70.0	430.0	930.0	1500.0	930.0	750.0				930.0	
7/16/2019				930.0		2300.0		930.0	930.0	2300.0	430.0
7/22/2019	930.0	430.0	230.0	632.4	390.0	4300.0				1500.0	
7/23/2019				2300.0		46000.0		46000.0	9300.0	24000.0	46000.0
7/29/2019	<30.0	230.0	210.0	994.5	430.0	430.0				930.0	
7/30/2019				9300.0		9300.0		24000.0	>240000.0	110000.0	
8/5/2019	230.0	430.0	430.0	750.0	7500.0	930.0				230.0	
8/6/2019				230.0		2100.0		930.0	930.0	390.0	<30.0
8/8/2019				21000.0	46000.0	>240000.0				110000.0	
8/13/2019	230.0	430.0	430.0	632.4	4300.0	4300.0				2300.0	
8/14/2019				430.0		230.0		430.0	9300.0	430.0	
8/19/2019	40.0	430.0	2300.0	1462.5	4300.0	2300.0				930.0	
8/20/2019				2300.0		3900.0		9300.0	46000.0	46000.0	930.0
8/26/2019	150.0	230.0	930.0	314.5	430.0	930.0				2300.0	
8/27/2019				90.0		9300.0		430.0	2300.0	9300.0	
9/3/2019	930.0	1500.0	4300.0	567.9	930.0	750.0				24000.0	
9/4/2019				230.0		1500.0		1500.0	2300.0	4300.0	930.0
9/9/2019	40.0	150.0		143.9	150.0	230.0				930.0	
9/10/2019				430.0		750.0		430.0	3900.0	750.0	90.0
9/16/2019	40.0	930.0	150.0	803.1	930.0	930.0				930.0	
9/17/2019				150.0		7500.0		150.0	2300.0	930.0	
9/23/2019	<30.0	430.0	930.0	314.5	930.0	930.0				2300.0	
9/24/2019				2300.0		15000.0		46000.0	15000.0	46000.0	46000.0
9/30/2019	<30.0	230.0	430.0	1999.7	430.0	930.0				4300.0	
10/1/2019				750.0		4300.0		430.0	930.0	750.0	
10/7/2019	<30.0	230.0	230.0	102.5	430.0	430.0				4300.0	
10/8/2019				430.0		2300.0		430.0	9300.0	24000.0	230.0
10/15/2019	90.0	230.0	40.0	150.0	430.0	430.0				230.0	
10/17/2019				21000.0		4300.0		9300.0	9300.0	46000.0	230.0
10/21/2019	90.0	90.0	230.0	95.9	430.0	230.0				2300.0	
10/22/2019				150.0		930.0		230.0	230.0	430.0	230.0
10/28/2019	1500.0	430.0	430.0	230.0	390.0	750.0				2300.0	
10/29/2019				90.0		390.0		90.0	430.0	430.0	
11/4/2019	40.0	150.0	40.0	60.0	40.0	90.0				90.0	
11/5/2019				40.0		40.0		40.0	90.0	90.0	90.0

Table 32: Woonasquatucket, West, Providence, and Seekonk Rivers Fecal Coliform Data

River Fecal Coliform Results 2019

(MPN/100mL)

	Woonasquatucket River						West River			Providence River	Seekonk River
Date	**W-9 - Manton Ave.**	**W-8D - Parking Bridge Olneyville**	**W-8C - Delaine St.**	**W7C-Eagle Street**	**W-7B - Pleasant Valley Pkwy.**	**W-7A - Kinsley St.**	**WE-10 - Douglas Ave. Bridge**	**WE-12 - Veazie St. Bridge**	**WE-11 - West River St. Bridge**	**PR-12 - Crawford St. Bridge**	**SR-5A - Pitman Street**
11/12/2019	<30.0	40.0	<30.0	185.7	40.0	<30.0				150.0	
11/13/2019				40.0		90.0		90.0	230.0	90.0	
11/18/2019	90.0	<30.0	40.0	34.6	430.0	40.0				1500.0	
11/19/2019				230.0		2300.0		930.0	9300.0		230.0
11/25/2019	930.0	90.0	90.0	430.0	390.0	230.0				1500.0	
11/26/2019				230.0		1500.0		40.0	750.0	930.0	750.0
12/2/2019	30.0	40.0	110.0	230.0	150.0	230.0				1500.0	
12/3/2019				40.0		40.0		230.0	390.0	230.0	
12/9/2019	40.0	<30.0	40.0	196.7	430.0	230.0				2300.0	
12/10/2019				430.0		150.0		430.0	390.0	230.0	
12/16/2019	90.0	90.0	230.0	131.1	90.0	90.0				930.0	
12/17/2019				90.0		230.0		<30.0	430.0	230.0	
12/23/2019	40.0	<30.0	40.0	<30.0	<30.0	90.0				230.0	
12/26/2019				<30.0		<30.0	90.0	90.0	24000.0	40.0	<30.0
12/30/2019	<30.0	90.0	230.0	1359.8	430.0	430.0				930.0	
12/31/2019				<30.0		<30.0	90.0	70.0	150.0	1500.0	

Table 32: Woonasquatucket, West, Providence, and Seekonk Rivers Fecal Coliform Data

River Fecal Coliform Results 2019

(MPN/100mL)

	Moshassuck River							Blackstone River				Pawtuxet River
Date	M-1- Higginson Ave. Bridge	M-4C - Grotto Ave. Bridge	M-4A - Grenville St.	M-4 - Cemetary St. Bridge	M-5A - Stevens St. Bridge	M-5 - Footbridge Mill St.	M-6 - Park Row Bridge	BL-2 - Whipple Bridge	BL-4 - Roosevelt St.	BL-4C - Central Ave.	B-3 - Slater Mill Dam	PX-13 - Broad St.
1/2/2019	40.0	150.0	185.7	90.0	90.0	60.0	150.0					
1/7/2019						126.9		150.0			150.0	45.8
1/8/2019	40.0	90.0	52.0	90.0	230.0	60.0	230.0					
1/14/2019						45.8		<30.0			<30.0	<30.0
1/15/2019	<30.0	2300.0	74.8	90.0	430.0	143.9	40.0					
1/22/2019						143.9		90.0			40.0	45.8
1/23/2019	230.0	150.0	67.1	40.0	90.0	95.9	390.0					
1/28/2019						52.0		40.0			90.0	52.0
1/29/2019		90.0	60.0	90.0	40.0	196.7	90.0					
2/4/2019						230.0		<30.0			30.0	34.6
2/5/2019	40.0	70.0	<30.0	<30.0	90.0	143.9	230.0					
2/11/2019						143.9		40.0			<30.0	34.6
2/12/2019	230.0	230.0	<30.0	<30.0	230.0	230.0	230.0					
2/19/2019						60.0		40.0	30.0	<30.0	<30.0	34.6
2/20/2019	40.0	90.0	90.0	40.0	930.0	462.5	430.0					
2/25/2019						415.3		<30.0	90.0	<30.0	40.0	83.1
2/26/2019	70.0	150.0	40.0	40.0	90.0	40.0	70.0					
3/5/2019						727.3		<30.0	<30.0	<30.0	40.0	40.0
3/6/2019	<30.0	230.0	60.0	90.0	230.0	314.5	430.0					
3/11/2019						727.3		40.0	90.0	40.0	40.0	
3/12/2019	230.0	40.0	52.0	<30.0	230.0	95.9	930.0					34.6
3/18/2019						314.5		90.0	<30.0	<30.0	40.0	
3/19/2019	<30.0	<30.0	143.9	40.0	2300.0	430.0	430.0					<30.0
3/21/2019					230.0							
3/25/2019						632.4		40.0	<30.0	40.0	<30.0	
3/26/2019	40.0	90.0	52.9	90.0	90.0	90.0	90.0					<30.0
4/1/2019						930.0		<30.0	40.0	<30.0	<30.0	
4/2/2019	40.0	90.0	40.0	40.0	750.0	632.4	930.0					60.0
4/8/2019						60000.0		<30.0	930.0	230.0	<30.0	
4/9/2019	2300.0	750.0	314.5	930.0	430.0	196.7	90.0					90.0
4/11/2019	<30.0			150.0	930.0							
4/15/2019						6323.8		70.0	700.0	3900.0	15000.0	
4/16/2019	40.0	40.0	230.0	430.0	430.0	230.0	150.0					34.6
4/22/2019						5678.9		90.0	<30.0	<30.0	40.0	
4/23/2019	1500.0	2300.0	727.3	1500.0	930.0	1462.5	930.0					430.0
4/29/2019						400.0		150.0	230.0	70.0	40.0	
4/30/2019	90.0	230.0	230.0	150.0	230.0	219.8	400.0					79.4
5/6/2019						803.1		40.0	<30.0	140.0	90.0	
5/7/2019	<30.0	930.0	230.0	90.0	40.0	60.0	90.0					34.6
5/13/2019						230.0		90.0	150.0		150.0	
5/14/2019	230.0	230.0	567.9	230.0	750.0	462.5	1500.0					1181.1
5/20/2019						567.9		90.0	150.0	40.0	90.0	
5/21/2019	390.0	2300.0	1500.0	930.0	930.0	6323.8	2300.0					230.0
5/28/2019						994.5		90.0	90.0	40.0	230.0	
5/29/2019	90.0	2300.0	1313.4	430.0	930.0	1462.5	2300.0					230.0
6/3/2019						835.2		70.0	90.0	90.0	70.0	
6/4/2019	150.0	930.0	415.3	230.0	2300.0	632.4	430.0					90.0
6/10/2019						2197.7		40.0	430.0	930.0	90.0	
6/11/2019	4300.0	46000.0	10158.7	46000.0	110000.0	14064.1	24000.0					14939.9
6/17/2019						10953.1		90.0	230.0	430.0	430.0	
6/18/2019	230.0	930.0	994.5	2300.0	2300.0	3144.8	9300.0					430.0
6/24/2019						6323.8		40.0	90.0	430.0	430.0	
6/25/2019	230.0	430.0	196.7	430.0	930.0	2300.0	430.0					230.0
7/1/2019						14939.9		430.0	2300.0	2300.0	4300.0	
7/2/2019	230.0	4300.0	2940.9	2300.0	4300.0	1462.5	4300.0					462.5
7/8/2019						2300.0		430.0	930.0	430.0	930.0	
7/9/2019	230.0	930.0	994.5	430.0	2300.0	1181.1	930.0					727.3
7/15/2019						3144.8		430.0	930.0	430.0	230.0	
7/16/2019	930.0	930.0	930.0	2300.0	930.0	1999.7	930.0					430.0
7/22/2019						1857.4		90.0	430.0	230.0	430.0	
7/23/2019	2300.0	110000.0	33226.5	24000.0	>240000.0	46000.0	24000.0					6323.8
7/29/2019						835.2		230.0	230.0	230.0	230.0	
7/30/2019	930.0	930.0	6323.8	4300.0	>240000.0	24000.0	110000.0					150.0
8/5/2019						314.5		40.0	430.0	390.0	90.0	
8/6/2019	40.0	930.0	430.0	1200.0	430.0	1500.0	930.0					90.0
8/8/2019			>240000.0	>240000.0		110000.0	>240000.0					
8/13/2019						2300.0		90.0	430.0	230.0	430.0	
8/14/2019	230.0	430.0	994.5	2300.0	2300.0	632.4	930.0					143.9
8/19/2019						9300.0		40.0	90.0	430.0	930.0	
8/20/2019	2300.0	9300.0	33226.5	9300.0	24000.0	20683.3	46000.0					4153.3
8/26/2019						2197.7		<30.0	40.0	90.0	90.0	
8/27/2019	430.0	390.0	632.4	1500.0	9300.0	1313.4	4300.0					185.7
9/3/2019						3144.8		230.0		430.0	1500.0	
9/4/2019	430.0	430.0	1462.5	930.0	2300.0	1795.8	1500.0					299.5
9/9/2019						835.2		90.0	150.0	90.0	930.0	
9/10/2019	90.0	930.0	803.1	930.0	930.0	1462.5	750.0					126.9
9/16/2019						8031.2		90.0	390.0	150.0	230.0	
9/17/2019	230.0	430.0	1857.4	430.0	1500.0	567.9	930.0					83.1
9/23/2019						632.4		70.0	40.0	40.0	<30.0	
9/24/2019	930.0	7500.0	14939.9	110000.0	21000.0	110000.0	24000.0					8031.2
9/30/2019						3735.0		150.0	40.0	150.0	230.0	
10/1/2019	230.0	390.0	525.4	930.0	1500.0	1857.4	930.0					52.9
10/7/2019						4624.9		40.0	90.0	70.0	230.0	

Table 33: Moshassuck, Blackstone, and Pawtuxet Rivers Fecal Coliform Data

River Fecal Coliform Results 2019
(MPN/100mL)

	Moshassuck River							Blackstone River				Pawtuxet River
Date	**M-1- Higginson Ave. Bridge**	**M-4C - Grotto Ave. Bridge**	**M-4A - Grenville St.**	**M-4 - Cemetary St. Bridge**	**M-5A - Stevens St. Bridge**	**M-5 - Footbridge Mill St.**	**M-6 - Park Row Bridge**	**BL-2 - Whipple Bridge**	**BL-4 - Roosevelt St.**	**BL-4C - Central Ave.**	**B-3 - Slater Mill Dam**	**PX-13 - Broad St.**
10/8/2019	430.0	430.0	4624.9	2300.0	6400.0	6323.8	12000.0					230.0
10/15/2019						430.0		70.0	<30.0	150.0	140.0	
10/17/2019	430.0	9300.0	3144.8	46000.0	4300.0	4624.9	7500.0					6323.8
10/21/2019		9300.0	150.0	930.0	15000.0	4624.9		150.0	150.0	430.0	430.0	
10/22/2019	750.0	390.0	373.5	150.0	430.0	430.0	930.0					40.0
10/28/2019						2300.0		390.0	430.0	390.0	430.0	
10/29/2019	90.0	4300.0	1462.5	2300.0	930.0	1313.4	1500.0					60.0
11/4/2019						185.7		40.0	<30.0	150.0	40.0	
11/5/2019	40.0	230.0	40.0	40.0	430.0	314.5	930.0					<30.0
11/12/2019						1857.4		40.0	<30.0	40.0	40.0	
11/13/2019	230.0	930.0	441.9	430.0	1500.0	1181.1	230.0					52.0
11/18/2019						764.9		90.0	70.0	930.0	150.0	
11/19/2019	90.0	4300.0	335.4	930.0	24000.0	11811.0	9300.0					34.6
11/25/2019						632.4		430.0	230.0	150.0	230.0	
11/26/2019	750.0	430.0	1181.1	930.0	9300.0	3144.8	3900.0					230.0
12/2/2019						2300.0		70.0	90.0	40.0	70.0	
12/3/2019	<30.0	230.0		140.0	430.0	230.0	430.0					95.9
12/9/2019						10158.7		<30.0	40.0	<30.0	<30.0	
12/10/2019	<30.0	230.0	930.0	230.0	430.0	254.0	230.0					314.5
12/16/2019						930.0		230.0	230.0	430.0	930.0	
12/17/2019	90.0	230.0		150.0	930.0	1462.5	430.0					196.7
12/23/2019						632.4		40.0	90.0	90.0	<30.0	
12/26/2019	90.0	930.0	52.0	140.0	90.0	430.0	430.0					90.0
12/30/2019						10158.7		90.0	930.0	230.0	<30.0	
12/31/2019	430.0	230.0	462.5	90.0	430.0	430.0	430.0					131.1

Table 33: Moshassuck, Blackstone, and Pawtuxet Rivers Fecal Coliform Data

River Enterococci Results 2019
(MPN/100mL)

	Moshassuck River			Blackstone River		Woonasquatucket River			West River		
Date	M-1-Higginson Ave. Bridge	M-5-Footbridge Mill St.	M-6- Park Row Bridge	BL-2-Whipple Bridge	BL-3-Slater Mill Dam	W-9-Manton Ave.	W-7A-Kinsley St.	W-7C-Eagle Street	WE-10-Douglas Ave. Bridge	WE-11-West River St. Bridge	River Fecal Trip Blank
1/2/2019	139.1	67.7	43.2						54.8	48.8	<1.0
1/7/2019				88.6	116.9	27.8	48	36.9			<1.0
1/8/2019	81.3	81.8	61.3						20.6	43.5	<1.0
1/14/2019				31.7	10.7	6.1	6.2	10.4			<1.0
1/15/2019	24.9	48.6	47.3						64.4	36.9	<1.0
1/22/2019				4.1	8.5	3.1	9.8	6.7			<1.0
1/23/2019	30.1	23.4	29.2						38.4	14.5	<1.0
1/28/2019				35.9	42.8	23.1	28.5	29.8			<1.0
1/29/2019		44.3	66.3						106.7	50.4	<1.0
2/4/2019				5.2	33.6	13.4	21.1	16.1			<1.0
2/5/2019	11	12.6	10.9						38.4	18.1	<1.0
2/11/2019				6.3	3.1	7.5	7.5	3.9			<1.0
2/12/2019	50.4	19.2	14.2						8.4	8.5	<1.0
2/19/2019				15.8	5.2	8.6	34.5	18.3			<1.0
2/20/2019	26.2	15.4	24.1						6.2	6.3	<1.0
2/25/2019				18.1	16.1	9.8	14.8	13.2			<1.0
2/26/2019	28.8	20.8	13.2						8.5	10.8	<1.0
3/5/2019				5.2	3.1	3.1	4.1	7.3			<1.0
3/6/2019	7.5	26.0	23.1						9.7	24.6	<1.0
3/11/2019				16	12.1	9.6	17.3	19.6			<1.0
3/12/2019	5.2	72.9	49.5						16.1	66.3	<1.0
3/18/2019				19.9	12	4.1	74.9	8.5			<1.0
3/19/2019	15.8	64.3	39.9						28.7	18.5	<1.0
3/25/2019				7.4	13.5	1	7.3	9.1			<1.0
3/26/2019	7.5	42.1	35						18.5	21.6	<1.0
4/1/2019				80.5	8.6	7.4	14.4	17.6			<1.0
4/2/2019	8.6	32.1	29.5						43.2	37.3	<1.0
4/8/2019				3	26.9	178.5	1046.2	1732.9			<1.0
4/9/2019	20.1	55.8	49.6						41.4	44.8	<1.0
4/15/2019				14.8	1986.3	461.1	1299.7	1061.2			<1.0
4/16/2019	39.3	121.2	158.5							111.9	<1.0
4/22/2019				16.1	29.5	24.3	24.9	24.0			<1.0
4/23/2019	920.8	630.8	816.4							866.4	<1.0
4/29/2019				54.6	73.8	47.3	45.7	54.2			<1.0
4/30/2019	74.3	149.0	185							137.6	<1.0
5/6/2019				36.8	2	72.7	79.4	86.0			<1.0
5/7/2019	19.7	33.9	30.5							45.7	<1.0
5/13/2019				137.6	178.2	167	238.2	140.9			<1.0
5/14/2019	63.1	920.8	1299.7							1299.7	<1.0
5/20/2019				7.4	22.6	32.7	1413.6	106.4			<1.0
5/21/2019	547.5	1318.8	1413.6							547.5	<1.0
5/28/2019				21.6	34.1	18.1	115.3	79.5			<1.0
5/29/2019	48.8	460.5	517.2							488.4	<1.0
6/3/2019				25.9	37.9	50.4	191.8	154.7			<1.0
6/4/2019	66.3	488.4	435.2							517.2	<1.0
6/10/2019				13.2	66.3	36.4	70.3	104.5			<1.0
6/11/2019	1413.6	>2419.6	>2419.6							>2419.6	<1.0
6/17/2019				28.5	60.2	49.6	162.4	110.2			<1.0
6/18/2019	290.9	355.1	307.6							547.5	<1.0
6/24/2019				73.8	122.3	70.3	165.8	163.4			<1.0
6/25/2019	86.2	387.0	547.5							686.7	<1.0
7/1/2019				770.1	648.8	162.4	2419.6	649.3			<1.0
7/2/2019	307.6	648.9	980.4							980.4	<1.0
7/8/2019				64.5	238.2	155.2	198.9	460.8			<1.0
7/9/2019	167	579.4	435.2							579.4	<1.0
7/15/2019				47.3	65	866.4	648.8	1140.9			<1.0
7/16/2019	178.9	398.8	435.2							980.4	<1.0
7/22/2019				38.8	105	686.7	387.3	562.9			<1.0
7/23/2019	>2419.6	>2419.6	>2419.6							>2419.6	<1.0
7/29/2019				36.4	50.4	121.1	307.6	251.1			<1.0
7/30/2019	155.3	>2419.6	>2419.6							>2419.6	<1.0
8/5/2019				178	45	185	>2419.6	502.2			<1.0
8/6/2019	137.6	271.5	280.9							547.5	<1.0
8/13/2019				24.1	39.3	84.2	980.4	291.6			<1.0
8/14/2019	162.4	219.4	307.6							195.6	<1.0
8/19/2019				27.9	29.2	123.4	1732.9	448.0			<1.0
8/20/2019	1413.6	2192.3	>2419.6							>2419.6	<1.0
8/26/2019				55.6	49.6	137.4	280.9	176.8			<1.0
8/27/2019	224.7	309.0	517.2							461.1	<1.0

NR = Not Reportable

Table 34: Moshassuck, Blackstone, Woonasquatucket, and West Rivers Enterococci Data

River Enterococci Results 2019
(MPN/100mL)

	Moshassuck River			Blackstone River		Woonasquatucket River			West River		
Date	M-1- Higginson Ave. Bridge	M-5- Footbridge Mill St.	M-6- Park Row Bridge	BL-2- Whipple Bridge	BL-3- Slater Mill Dam	W-9- Manton Ave.	W-7A- Kinsley St.	W-7C-Eagle Street	WE-10- Douglas Ave. Bridge	WE-11- West River St. Bridge	River Fecal Trip Blank
9/3/2019				866.4	866.4	920.8	1553.1	985.0			<1.0
9/4/2019	547.5	1553.1	1553.1							1986.3	<1.0
9/9/2019				43.7	42.8	139.6	290.9	150.1			<1.0
9/10/2019	224.7	448.0	579.4							770.1	<1.0
9/16/2019				32.3	72.7	72.7	517.2	175.3			<1.0
9/17/2019	128.1	435.1	328.2							648.8	<1.0
9/23/2019				59.4	43.2	117.8	648.8	217.8			<1.0
9/24/2019	613.1	2419.6	>2419.6							>2419.6	<1.0
9/30/2019				33.2	57.3	116.9	>2419.6	264.0			<1.0
10/1/2019	65	207.2	178.5							307.6	<1.0
10/7/2019				8.5	101.4	77.6	133.3	94.6			<1.0
10/8/2019	328.2	1640.5	>2419.6							1986.3	<1.0
10/15/2019				47.1	23.1	59.8	365.4	77.1			<1.0
10/17/2019	2419.6	2419.6	>2419.6							>2419.6	<1.0
10/21/2019				65.7	68.3	48.8	93.3	78.2			<1.0
10/22/2019	29.5	145.9	150							139.6	<1.0
10/28/2019				435.2	410.6	816.4	1413.6	447.6			<1.0
10/29/2019	161.6	502.2	435.2							770.1	<1.0
11/4/2019				19.9	25.6	12.2	38.9	34.3			<1.0
11/5/2019	51.2	50.5	65.7							52.9	<1.0
11/12/2019				7.4	12.1	9.7	35.5	66.5			<1.0
11/13/2019	31.8	179.0	122.3							51.2	<1.0
11/18/2019				9.7	21.3	14.6	47.1	20.6			<1.0
11/19/2019	461.1	2047.7	1986.3							>2419.6	<1.0
11/25/2019				866.4	1203.3	1119.9	224.7	1021.0			<1.0
11/26/2019	488.4	613.5	648.8							1046.2	<1.0
12/2/2019				20.1	42.2	29.2	275.5	502.4			<1.0
12/3/2019	90.8	562.9	344.8							248.1	<1.0
12/9/2019				13.4	9.8	17.1	365.4	92.8			<1.0
12/10/2019	410.6	727.2	770.1							980.4	<1.0
12/16/2019				272.3	290.9	178.5	161.6	170.8			<1.0
12/17/2019	290.9	308.2	488.4							307.6	<1.0
12/23/2019				12.2	12.2	22.6	17.3	13.9			<1.0
12/26/2019	14.5	33.0	86						17.5	60.9	<1.0
12/30/2019				25.3	32.3	167.4	755.6	820.5			<1.0
12/31/2019	93.3	165.8	248.1							307.6	<1.0

NR = Not Reportable

Table 34: Moshassuck, Blackstone, Woonasquatucket, and West Rivers Enterococci Data

Results are in MPN/100 mL or Most Probable Number/100 mL
Rainfall is in inches

	Station Name	1/9/2019	2/6/2019	3/20/2019	4/4/2019	4/17/2019	5/1/2019	5/15/2019	5/30/2019	6/12/2019	6/26/2019
Seekonk River	**Division St Dock**	43	15	43	230	93	90	93	93	4300	430
	Bishop Pt	43	23	23	43	230	90	93	150	930	230
	Off BP Outfall	93	93	43	93	930	90	230	2300	930	430
	Phillipsdale Landing	43	43	4	23	430	40	230	390	2300	430
	Phillipsdale Landing Duplicate	23	43	4	23	430	90	230	430	4300	93
	Narr Boating Center	43	93	7	43	230	90	430	430	2300	930
	Crook Pt	23	<3.0	43	150	230	40	430	230	930	230
Providence River	**Comm. Boating Center**	93	4	23	43	210	70	230	93	24000	230
	Point St Bridge	93	430	430	230	430	230	430	2300	4300	9300
	Collier Pt Park	93	93	230	43	230	230	430	230	930	430
	Off FP Outfall	93	93	9	9	70	40	430	43	2300	230
	South FP East	43	9	4	230	90	90	93	23	2300	93
	Save the Bay	23	4	9	4	23	90	430	15	230	23
	Edgewood Yacht Club	15	9	43	9	90	230	150	93	930	230
	Pawt/Prov Junction	15	4	93	9	90	150	230	430	930	93
	Gaspee Pt	15	15	43	23	150	40	230	430	430	430
	Bullock Neck	15	9	93	4	4	23	23	7	230	23
	Bullocks Reach Buoy	23	15	4	4	9	40	93	150	930	93
	Shawomet	23	9	4	<3.0	<3.0	40	230	9	2300	43
	North of Nayatt Point	23	9	14	4	9	40	93	7	93	43
	Conimicut Pt	23	9	4	4	4	23	93	43	930	23
	Conimicut Pt Duplicate	43	<3.0	<3.0	4	4	23	230	4	930	43
	Bay Fecal Coliform Blank	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Rain Data*	Rain total - day of sampling (in time prior to sampling)	0.09	0	0	0	0	0	0.04	0	0	0
	Rain total - 1 day prior to sampling	0.04	0	0	0.5	0	0.17	0.09	0.42	0.7	0.27
	Rain total - 2 days prior to sampling	0	0	0	0.15	0.49	0	0.87	0.23	0.69	0
	Rain total - 3 days prior to sampling	0	0	0	0	0.08	0.05	0.84	0	0	0
	Rain total - 4 days prior to sampling	1.04	0	0	0.14	0.73	0.46	0.01	0	0	0.13
	Rain total - 5 days prior to sampling	0	0	0.09	0	0.06	1.45	0	0	0	0.33
	Total Rainfall	**1.17**	**0**	**0.09**	**0.79**	**1.36**	**2.13**	**1.85**	**0.65**	**1.39**	**0.73**
Tides**	High Tide	10:06	8:59	8:17	8:25	7:05	6:30	5:44	6:27	4:18	3:01
	Low Tide	15:31	14:25	13:41	13:45	12:25	11:48	11:10	11:53	9:47	8:45

T = Trace rainfall
*Rain data are from TF Green
**Tide data are from USHarbors.com

Table 35: Bay Fecal Coliform Data

Results are in MPN/100 mL or Most Probable Number/100 mL
Rainfall is in inches

	Station Name	7/10/2019	7/24/2019	8/7/2019	8/21/2019	9/5/2019	9/18/2019	10/2/2019	10/16/2019	10/22/2019	10/30/2019
Seekonk River	**Division St Dock**	430	930	930	930	430	23	43	430		
	Bishop Pt	230	1500	230	930	430	150	230	43		
	Off BP Outfall	230	2300	43	93	430	39	230	43		
	Phillipsdale Landing	93	930	23	430	430	43	9	43		
	Phillipsdale Landing Duplicate	93	430	43	430	390	93	15	43		
	Narr Boating Center	430	430	39	230	230	43	15	43	230	
	Crook Pt	93	430	43	93	430	43	21	43	150	
Providence River	**Comm. Boating Center**	150	930	9	430	93	93	43	75	93	
	Point St Bridge	930	9300	430	2300	930	230	230	230	230	
	Collier Pt Park	43	1500	15	230	430	93	43	23	230	
	Off FP Outfall	21	930	43	93	93	9	<3.0	4	93	43
	South FP East	23	930	4	43	93	4	23	<3.0	43	93
	Save the Bay	4	1500	<3.0	93	230	4	43	9		93
	Edgewood Yacht Club	15	2300	4	23	23	9	23	4	43	93
	Pawt/Prov Junction	23	2300	3	43	230	<3.0	9	<3.0	43	75
	Gaspee Pt	43	75	4	23	43	3	4	4		93
	Bullock Neck	<3.0	93	4	23	9	<3.0	<3.0	<3.0		93
	Bullocks Reach Buoy	43	230	4	9	9	<3.0	4	4	23	230
	Shawomet	9	430	9	9	43	4	4	<3.0		93
	North of Nayatt Point	9	93	9	4	<3.0	<3.0	<3.0	<3.0		43
	Conimicut Pt	9	430	<3.0	<3.0	7	<3.0	4	<3.0	9	43
	Conimicut Pt Duplicate	9	430	4	<3.0	4	4	<3.0	<3.0	93	43
	Bay Fecal Coliform Blank	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Rain Data*	Rain total - day of sampling (in time prior to sampling)	0	0.01	0	0	0	0	0	0	0	0
	Rain total - 1 day prior to sampling	0	1	0	0	0	0	0	0	0	0
	Rain total - 2 days prior to sampling	0	0.81	0	0.41	0	0	0	0	0	0
	Rain total - 3 days prior to sampling	0	0	0	0	0.05	0.01	0	0	0	1.4
	Rain total - 4 days prior to sampling	0.02	0	0	0.1	0	0.14	0	0.04	0.01	0
	Rain total - 5 days prior to sampling	0	0	0	0	0	0	0.36	0.1	1.83	0
	Total Rainfall	**0.02**	**1.82**	**0**	**0.51**	**0.05**	**0.15**	**0.36**	**0.14**	**1.84**	**1.4**
Tides**	High Tide	2:57	14:01	14:14	12:42	13:50	13:50	11:37	10:10	3:02	10:21
	Low Tide	8:12	7:03	6:44	5:41	6:12	6:12	4:13	3:23	8:15	15:40

T = Trace rainfall
*Rain data are from TF Green
**Tide data are from USHarbors.com

Table 35: Bay Fecal Coliform Data

Results are in MPN/100 mL or Most Probable Number/100 mL
Rainfall is in inches

	Station Name	11/14/2019	12/24/2019
Seekonk River	**Division St Dock**	9	9
	Bishop Pt	23	15
	Off BP Outfall	23	15
	Phillipsdale Landing	43	43
	Phillipsdale Landing Duplicate	15	43
	Narr Boating Center	23	93
	Crook Pt	43	43
Providence River	**Comm. Boating Center**	9	23
	Point St Bridge	210	93
	Collier Pt Park	43	21
	Off FP Outfall	43	230
	South FP East	9	4
	Save the Bay	9	4
	Edgewood Yacht Club	9	4
	Pawt/Prov Junction	4	4
	Gaspee Pt	7	23
	Bullock Neck	<3.0	23
	Bullocks Reach Buoy	4	9
	Shawomet	4	9
	North of Nayatt Point	4	43
	Conimicut Pt	4	23
	Conimicut Pt Duplicate	4	9
	Bay Fecal Coliform Blank	<3.0	<3.0
Rain Data*	Rain total - day of sampling (in time prior to sampling)	0	0
	Rain total - 1 day prior to sampling	0.05	0
	Rain total - 2 days prior to sampling	0	0
	Rain total - 3 days prior to sampling	0	0
	Rain total - 4 days prior to sampling	0	0
	Rain total - 5 days prior to sampling	0	0
	Total Rainfall	**0.05**	**0**
Tides**	High Tide	8:45	11:38
	Low Tide	14:33	6:18

T = Trace rainfall
*Rain data are from TF Green
**Tide data are from USHarbors.com

Bay Enterococci Data 2019

Results are in MPN/100 mL or Most Probable Number/100 mL

Station Name	1/9/2019	2/6/2019	3/20/2019	4/4/2019	4/17/2019	5/1/2019	5/15/2019	5/30/2019	6/12/2019	6/26/2019	7/10/2019	7/24/2019
Phillipsdale Landing	41	<10	10	30	74	10	41	63	109	41	10	85
Phillipsdale Landing Duplicate	41	<10	<10	20	52	41	75	31	122	31	<10	96
Point St Bridge	97	63	141	41	52	97	121	813	1050	1063	171	1607
Off FP Outfall										41		
South FP East	10	<10	<10	<10	20	10	10	31	109	20	<10	253
Save The Bay										<10		
Gaspee Pt	<10	10	<10	<10	31	20	73	122	216	74	<10	85
Conimicut Pt	41	10	<10	<10	<10	41	63	<10	110	<10	<10	20
Conimicut Pt Duplicate	10	<10	<10	<10	<10	10	74	<10	62	10	<10	10
Blank	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Table 36: Bay Enterococci Data

Bay Enterococci Data 2019

Results are in MPN/100 mL or Most Probable Number/100 mL

Station Name	8/7/2019	8/21/2019	9/5/2019	9/18/2019	10/2/2019	10/16/2019	10/30/2019	11/14/2019	12/24/2019
Phillipsdale Landing	20	<10	52	<10	<10	52		10	10
Phillipsdale Landing Duplicate	20	10	30	<10	10	31		10	10
Point St Bridge	233	86	243	41	74	86		52	41
Off FP Outfall									
South FP East	10	<10	<10	<10	20	10	86	<10	10
Save The Bay									
Gaspee Pt	<10	<10	<10	<10	<10	<10	108	<10	<10
Conimicut Pt	10	<10	<10	<10	10	<10	10	<10	<10
Conimicut Pt Duplicate	<10	<10	<10	<10	<10	<10	10	<10	<10
Blank	<10	<10	<10	<10	<10	<10	<10	<10	<10

Table 36: Bay Enterococci Data

All samples are from CSO Wet Weather Overflow at Pitman Street (NBC CSO #23)

Sample Date	Sample Time	Parameter	Result	Units
12/30/2019	9:45:00 AM	(m & p) Xylene	<0.002	ppm
12/30/2019	9:45:00 AM	(o) Xylene	<0.001	ppm
12/30/2019	9:45:00 AM	1,1,1-Trichloroethane	<0.001	ppm
12/30/2019	9:45:00 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/30/2019	9:45:00 AM	1,1,2-Trichloroethane	<0.001	ppm
12/30/2019	9:45:00 AM	1,1-Dichloroethane	<0.001	ppm
12/30/2019	9:45:00 AM	1,1-Dichloroethene	<0.001	ppm
12/30/2019	9:45:00 AM	1,2-Dichlorobenzene	<0.001	ppm
12/30/2019	9:45:00 AM	1,2-Dichloroethane	<0.001	ppm
12/30/2019	9:45:00 AM	1,2-Dichloropropane	<0.001	ppm
12/30/2019	9:45:00 AM	1,3-Dichlorobenzene	<0.001	ppm
12/30/2019	9:45:00 AM	1,4-Dichlorobenzene	<0.001	ppm
12/30/2019	9:45:00 AM	2-Chloroethylvinylether	<0.001	ppm
12/30/2019	9:45:00 AM	Acetone	0.00454	ppm
12/30/2019	9:45:00 AM	Acrolein	<0.001	ppm
12/30/2019	9:45:00 AM	Acrylonitrile	<0.001	ppm
12/30/2019	9:45:00 AM	Aluminum	289.3	ppb
12/30/2019	9:45:00 AM	Aluminum, Dissolved	<50.000	ppb
12/30/2019	9:45:00 AM	Ammonia	<0.100	ppm_N
12/30/2019	9:45:00 AM	Arsenic	<5.000	ppb
12/30/2019	9:45:00 AM	Benzene	<0.001	ppm
12/30/2019	9:45:00 AM	BOD	<21.54	mg/l
12/30/2019	9:45:00 AM	Bromodichloromethane	<0.001	ppm
12/30/2019	9:45:00 AM	Bromoform	<0.001	ppm
12/30/2019	9:45:00 AM	Bromomethane	<0.002	ppm
12/30/2019	9:45:00 AM	Cadmium	<0.200	ppb
12/30/2019	9:45:00 AM	Cadmium, Dissolved	<0.200	ppb
12/30/2019	9:45:00 AM	Carbon Tetrachloride	<0.001	ppm
12/30/2019	9:45:00 AM	Chlorobenzene	<0.001	ppm
12/30/2019	9:45:00 AM	Chloroethane	<0.001	ppm
12/30/2019	9:45:00 AM	Chloroform	<0.001	ppm
12/30/2019	9:45:00 AM	Chloromethane	<0.001	ppm
12/30/2019	9:45:00 AM	Chromium	<3.000	ppb
12/30/2019	9:45:00 AM	Chromium, Dissolved	<3.000	ppb
12/30/2019	9:45:00 AM	cis-1,3-Dichloropropene	<0.001	ppm
12/30/2019	9:45:00 AM	Copper	4.325	ppb
12/30/2019	9:45:00 AM	Copper, Dissolved	<3.000	ppb
12/30/2019	9:45:00 AM	Cyanide, Total	<4.000	ppb
12/30/2019	9:45:00 AM	Dibromochloromethane	<0.001	ppm
12/30/2019	9:45:00 AM	Enterococci	41.0	MPN_100ml
12/30/2019	9:45:00 AM	Enterococci	4500.0	MPN_100ml
12/30/2019	9:45:00 AM	Ethylbenzene	<0.001	ppm
12/30/2019	9:45:00 AM	Fecal Coliform	150.0	MPN_100ml
12/30/2019	9:45:00 AM	Iron	709.2	ppb
12/30/2019	9:45:00 AM	Iron, Dissolved	67.18	ppb
12/30/2019	9:45:00 AM	Lead	<3.000	ppb
12/30/2019	9:45:00 AM	Lead, Dissolved	<3.000	ppb
12/30/2019	9:45:00 AM	Mercury	4.35	ppt
12/30/2019	9:45:00 AM	Methylene Chloride	<0.001	ppm
12/30/2019	9:45:00 AM	Molybdenum	3.368	ppb
12/30/2019	9:45:00 AM	Nickel	<3.000	ppb
12/30/2019	9:45:00 AM	Nickel, Dissolved	<3.000	ppb
12/30/2019	9:45:00 AM	Nitrate	0.485	ppm_N
12/30/2019	9:45:00 AM	Nitrate+Nitrite	0.485	ppm_N
12/30/2019	9:45:00 AM	Nitrite	<0.010	ppm_N
12/30/2019	9:45:00 AM	Nitrogen, Total	<0.500	ppm_N
12/30/2019	9:45:00 AM	Nitrogen, Total Kjeldahl	<0.500	ppm_N
12/30/2019	9:45:00 AM	Oil and Grease	<4.000	ppm

All samples are from CSO Wet Weather Overflow at Pitman Street (NBC CSO #23)

Sample Date	Sample Time	Parameter	Result	Units
12/30/2019	9:45:00 AM	Phosphorous, Total	<0.200	ppm
12/30/2019	9:45:00 AM	Selenium	<10.000	ppb
12/30/2019	9:45:00 AM	Silver	<0.200	ppb
12/30/2019	9:45:00 AM	Silver, Dissolved	<0.200	ppb
12/30/2019	9:45:00 AM	Tetrachloroethene	<0.001	ppm
12/30/2019	9:45:00 AM	Toluene	<0.001	ppm
12/30/2019	9:45:00 AM	trans-1,2-Dichloroethene	<0.001	ppm
12/30/2019	9:45:00 AM	trans-1,3-Dichloropropene	<0.001	ppm
12/30/2019	9:45:00 AM	Trichloroethene	<0.001	ppm
12/30/2019	9:45:00 AM	Trichlorofluoromethane	<0.001	ppm
12/30/2019	9:45:00 AM	TSS	14.429	mg/l
12/30/2019	9:45:00 AM	Vinyl Chloride	<0.001	ppm
12/30/2019	9:45:00 AM	Zinc	<50.000	ppb
12/30/2019	9:45:00 AM	Zinc, Dissolved	<50.000	ppb
12/30/2019	10:20:00 AM	(m & p) Xylene	<0.002	ppm
12/30/2019	10:20:00 AM	(o) Xylene	<0.001	ppm
12/30/2019	10:20:00 AM	1,1,1-Trichloroethane	<0.001	ppm
12/30/2019	10:20:00 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/30/2019	10:20:00 AM	1,1,2-Trichloroethane	<0.001	ppm
12/30/2019	10:20:00 AM	1,1-Dichloroethane	<0.001	ppm
12/30/2019	10:20:00 AM	1,1-Dichloroethene	<0.001	ppm
12/30/2019	10:20:00 AM	1,2-Dichlorobenzene	<0.001	ppm
12/30/2019	10:20:00 AM	1,2-Dichloroethane	<0.001	ppm
12/30/2019	10:20:00 AM	1,2-Dichloropropane	<0.001	ppm
12/30/2019	10:20:00 AM	1,3-Dichlorobenzene	<0.001	ppm
12/30/2019	10:20:00 AM	1,4-Dichlorobenzene	<0.001	ppm
12/30/2019	10:20:00 AM	2-Chloroethylvinylether	<0.001	ppm
12/30/2019	10:20:00 AM	Acetone	0.00450	ppm
12/30/2019	10:20:00 AM	Acrolein	<0.001	ppm
12/30/2019	10:20:00 AM	Acrylonitrile	<0.001	ppm
12/30/2019	10:20:00 AM	Aluminum	380.8	ppb
12/30/2019	10:20:00 AM	Aluminum, Dissolved	<50.000	ppb
12/30/2019	10:20:00 AM	Ammonia	<0.100	ppm_N
12/30/2019	10:20:00 AM	Arsenic	<5.000	ppb
12/30/2019	10:20:00 AM	Benzene	<0.001	ppm
12/30/2019	10:20:00 AM	Bromodichloromethane	<0.001	ppm
12/30/2019	10:20:00 AM	Bromoform	<0.001	ppm
12/30/2019	10:20:00 AM	Bromomethane	<0.002	ppm
12/30/2019	10:20:00 AM	Cadmium	<0.200	ppb
12/30/2019	10:20:00 AM	Cadmium, Dissolved	<0.200	ppb
12/30/2019	10:20:00 AM	Carbon Tetrachloride	<0.001	ppm
12/30/2019	10:20:00 AM	Chlorobenzene	<0.001	ppm
12/30/2019	10:20:00 AM	Chloroethane	<0.001	ppm
12/30/2019	10:20:00 AM	Chloroform	<0.001	ppm
12/30/2019	10:20:00 AM	Chloromethane	<0.001	ppm
12/30/2019	10:20:00 AM	Chromium	<3.000	ppb
12/30/2019	10:20:00 AM	Chromium, Dissolved	<3.000	ppb
12/30/2019	10:20:00 AM	cis-1,3-Dichloropropene	<0.001	ppm
12/30/2019	10:20:00 AM	Copper	5.403	ppb
12/30/2019	10:20:00 AM	Copper, Dissolved	<3.000	ppb
12/30/2019	10:20:00 AM	Cyanide, Total	<4.000	ppb
12/30/2019	10:20:00 AM	Dibromochloromethane	<0.001	ppm
12/30/2019	10:20:00 AM	Enterococci	75.0	MPN_100ml
12/30/2019	10:20:00 AM	Enterococci	10810.0	MPN_100ml
12/30/2019	10:20:00 AM	Ethylbenzene	<0.001	ppm
12/30/2019	10:20:00 AM	Fecal Coliform	430.0	MPN_100ml
12/30/2019	10:20:00 AM	Iron	804.1	ppb
12/30/2019	10:20:00 AM	Iron, Dissolved	52.69	ppb

Table 37: CSO Wet Weather Overflow Pitman Street NBC CSO 23

All samples are from CSO Wet Weather Overflow at Pitman Street (NBC CSO #23)

Sample Date	Sample Time	Parameter	Result	Units
12/30/2019	10:20:00 AM	Lead	3.148	ppb
12/30/2019	10:20:00 AM	Lead, Dissolved	<3.000	ppb
12/30/2019	10:20:00 AM	Mercury	4.18	ppt
12/30/2019	10:20:00 AM	Methylene Chloride	<0.001	ppm
12/30/2019	10:20:00 AM	Molybdenum	<3.000	ppb
12/30/2019	10:20:00 AM	Nickel	<3.000	ppb
12/30/2019	10:20:00 AM	Nickel, Dissolved	<3.000	ppb
12/30/2019	10:20:00 AM	Nitrate	0.260	ppm_N
12/30/2019	10:20:00 AM	Nitrate+Nitrite	0.260	ppm_N
12/30/2019	10:20:00 AM	Nitrite	<0.010	ppm_N
12/30/2019	10:20:00 AM	Nitrogen, Total	<0.500	ppm_N
12/30/2019	10:20:00 AM	Nitrogen, Total Kjeldahl	<0.500	ppm_N
12/30/2019	10:20:00 AM	Oil and Grease	<4.000	ppm
12/30/2019	10:20:00 AM	Phosphorous, Total	<0.200	ppm
12/30/2019	10:20:00 AM	Selenium	<10.000	ppb
12/30/2019	10:20:00 AM	Silver	<0.200	ppb
12/30/2019	10:20:00 AM	Silver, Dissolved	<0.200	ppb
12/30/2019	10:20:00 AM	Tetrachloroethene	<0.001	ppm
12/30/2019	10:20:00 AM	Toluene	<0.001	ppm
12/30/2019	10:20:00 AM	trans-1,2-Dichloroethene	<0.001	ppm
12/30/2019	10:20:00 AM	trans-1,3-Dichloropropene	<0.001	ppm
12/30/2019	10:20:00 AM	Trichloroethene	<0.001	ppm
12/30/2019	10:20:00 AM	Trichlorofluoromethane	<0.001	ppm
12/30/2019	10:20:00 AM	TSS	15.333	mg/l
12/30/2019	10:20:00 AM	Vinyl Chloride	<0.001	ppm
12/30/2019	10:20:00 AM	Zinc	<50.000	ppb
12/30/2019	10:20:00 AM	Zinc, Dissolved	<50.000	ppb
12/30/2019	11:00:00 AM	(m & p) Xylene	<0.002	ppm
12/30/2019	11:00:00 AM	(o) Xylene	<0.001	ppm
12/30/2019	11:00:00 AM	1,1,1-Trichloroethane	<0.001	ppm
12/30/2019	11:00:00 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/30/2019	11:00:00 AM	1,1,2-Trichloroethane	<0.001	ppm
12/30/2019	11:00:00 AM	1,1-Dichloroethane	<0.001	ppm
12/30/2019	11:00:00 AM	1,1-Dichloroethene	<0.001	ppm
12/30/2019	11:00:00 AM	1,2-Dichlorobenzene	<0.001	ppm
12/30/2019	11:00:00 AM	1,2-Dichloroethane	<0.001	ppm
12/30/2019	11:00:00 AM	1,2-Dichloropropane	<0.001	ppm
12/30/2019	11:00:00 AM	1,3-Dichlorobenzene	<0.001	ppm
12/30/2019	11:00:00 AM	1,4-Dichlorobenzene	<0.001	ppm
12/30/2019	11:00:00 AM	2-Chloroethylvinylether	<0.001	ppm
12/30/2019	11:00:00 AM	Acetone	0.00375	ppm
12/30/2019	11:00:00 AM	Acrolein	<0.001	ppm
12/30/2019	11:00:00 AM	Acrylonitrile	<0.001	ppm
12/30/2019	11:00:00 AM	Aluminum	305.5	ppb
12/30/2019	11:00:00 AM	Aluminum, Dissolved	<50.000	ppb
12/30/2019	11:00:00 AM	Ammonia	<0.100	ppm_N
12/30/2019	11:00:00 AM	Arsenic	<5.000	ppb
12/30/2019	11:00:00 AM	Benzene	<0.001	ppm
12/30/2019	11:00:00 AM	Bromodichloromethane	<0.001	ppm
12/30/2019	11:00:00 AM	Bromoform	<0.001	ppm
12/30/2019	11:00:00 AM	Bromomethane	<0.002	ppm
12/30/2019	11:00:00 AM	Cadmium	<0.200	ppb
12/30/2019	11:00:00 AM	Cadmium, Dissolved	<0.200	ppb
12/30/2019	11:00:00 AM	Carbon Tetrachloride	<0.001	ppm
12/30/2019	11:00:00 AM	Chlorobenzene	<0.001	ppm
12/30/2019	11:00:00 AM	Chloroethane	<0.001	ppm
12/30/2019	11:00:00 AM	Chloroform	<0.001	ppm
12/30/2019	11:00:00 AM	Chloromethane	<0.001	ppm

All samples are from CSO Wet Weather Overflow at Pitman Street (NBC CSO #23)

Sample Date	Sample Time	Parameter	Result	Units
12/30/2019	11:00:00 AM	Chromium	<3.000	ppb
12/30/2019	11:00:00 AM	Chromium, Dissolved	<3.000	ppb
12/30/2019	11:00:00 AM	cis-1,3-Dichloropropene	<0.001	ppm
12/30/2019	11:00:00 AM	cis-1,3-Dichloropropene	<0.001	ppm
12/30/2019	11:00:00 AM	Copper	4.230	ppb
12/30/2019	11:00:00 AM	Copper, Dissolved	<3.000	ppb
12/30/2019	11:00:00 AM	Cyanide, Total	<4.000	ppb
12/30/2019	11:00:00 AM	Dibromochloromethane	<0.001	ppm
12/30/2019	11:00:00 AM	Enterococci	110.0	MPN_100ml
12/30/2019	11:00:00 AM	Enterococci	8130.0	MPN_100ml
12/30/2019	11:00:00 AM	Ethylbenzene	<0.001	ppm
12/30/2019	11:00:00 AM	Fecal Coliform	230.0	MPN_100ml
12/30/2019	11:00:00 AM	Iron	557.2	ppb
12/30/2019	11:00:00 AM	Iron, Dissolved	70.80	ppb
12/30/2019	11:00:00 AM	Lead	<3.000	ppb
12/30/2019	11:00:00 AM	Lead, Dissolved	<3.000	ppb
12/30/2019	11:00:00 AM	Mercury	5.74	ppt
12/30/2019	11:00:00 AM	Methylene Chloride	<0.001	ppm
12/30/2019	11:00:00 AM	Molybdenum	<3.000	ppb
12/30/2019	11:00:00 AM	Nickel	<3.000	ppb
12/30/2019	11:00:00 AM	Nickel, Dissolved	<3.000	ppb
12/30/2019	11:00:00 AM	Nitrate	0.209	ppm_N
12/30/2019	11:00:00 AM	Nitrate+Nitrite	0.220	ppm_N
12/30/2019	11:00:00 AM	Nitrite	0.0112	ppm_N
12/30/2019	11:00:00 AM	Nitrogen, Total	<0.500	ppm_N
12/30/2019	11:00:00 AM	Nitrogen, Total Kjeldahl	<0.500	ppm_N
12/30/2019	11:00:00 AM	Oil and Grease	<4.000	ppm
12/30/2019	11:00:00 AM	Phosphorous, Total	<0.200	ppm
12/30/2019	11:00:00 AM	Selenium	<10.000	ppb
12/30/2019	11:00:00 AM	Silver	<0.200	ppb
12/30/2019	11:00:00 AM	Silver, Dissolved	<0.200	ppb
12/30/2019	11:00:00 AM	Tetrachloroethene	<0.001	ppm
12/30/2019	11:00:00 AM	Toluene	<0.001	ppm
12/30/2019	11:00:00 AM	trans-1,2-Dichloroethene	<0.001	ppm
12/30/2019	11:00:00 AM	trans-1,3-Dichloropropene	<0.001	ppm
12/30/2019	11:00:00 AM	Trichloroethene	<0.001	ppm
12/30/2019	11:00:00 AM	Trichlorofluoromethane	<0.001	ppm
12/30/2019	11:00:00 AM	TSS	12.571	mg/l
12/30/2019	11:00:00 AM	Vinyl Chloride	<0.001	ppm
12/30/2019	11:00:00 AM	Zinc	<50.000	ppb
12/30/2019	11:00:00 AM	Zinc, Dissolved	<50.000	ppb

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	10:55:56 AM	(m & p) Xylene	<0.002	ppm
7/23/2019	10:55:56 AM	(o) Xylene	<0.001	ppm
7/23/2019	10:55:56 AM	1,1,1-Trichloroethane	<0.001	ppm
7/23/2019	10:55:56 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/23/2019	10:55:56 AM	1,1,2-Trichloroethane	<0.001	ppm
7/23/2019	10:55:56 AM	1,1-Dichloroethane	<0.001	ppm
7/23/2019	10:55:56 AM	1,1-Dichloroethene	<0.001	ppm
7/23/2019	10:55:56 AM	1,2,4-Trichlorobenzene	<5.0	ppm
7/23/2019	10:55:56 AM	1,2-Dichlorobenzene	<0.001	ppm
7/23/2019	10:55:56 AM	1,2-Dichloroethane	<0.001	ppm
7/23/2019	10:55:56 AM	1,2-Dichloropropane	<0.001	ppm
7/23/2019	10:55:56 AM	1,2-Diphenylhydrazine	<5.0	ppm
7/23/2019	10:55:56 AM	1,3-Dichlorobenzene	<0.001	ppm
7/23/2019	10:55:56 AM	1,4-Dichlorobenzene	<0.001	ppm
7/23/2019	10:55:56 AM	2,2'-Oxybis)1-chloropropane	<5.0	ppm
7/23/2019	10:55:56 AM	2,4,6-Trichlorophenol	<5.0	ppm
7/23/2019	10:55:56 AM	2,4-Dichlorophenol	<5.0	ppm
7/23/2019	10:55:56 AM	2,4-Dimethylphenol	<5.0	ppm
7/23/2019	10:55:56 AM	2,4-Dinitrophenol	<5.0	ppm
7/23/2019	10:55:56 AM	2,4-Dinitrotoluene	<5.0	ppm
7/23/2019	10:55:56 AM	2,6-Dinitrotoluene	<5.0	ppm
7/23/2019	10:55:56 AM	2-Chloronaphthalene	<5.0	ppm
7/23/2019	10:55:56 AM	2-Chlorophenol	<5.0	ppm
7/23/2019	10:55:56 AM	2-Methyl-4,6-dinitrophenol	<5.0	ppm
7/23/2019	10:55:56 AM	2-Nitrophenol	<5.0	ppm
7/23/2019	10:55:56 AM	3,3'-Dichlorobenzidine	<5.0	ppm
7/23/2019	10:55:56 AM	4-Bromophenyl phenyl ether	<5.0	ppm
7/23/2019	10:55:56 AM	4-Chloro-3-methylphenol	<5.0	ppm
7/23/2019	10:55:56 AM	4-Chlorophenyl phenyl ether	<5.0	ppm
7/23/2019	10:55:56 AM	4-Nitrophenol	<5.0	ppm
7/23/2019	10:55:56 AM	Acenaphthene	<5.0	ppm
7/23/2019	10:55:56 AM	Acenaphthylene	<5.0	ppm
7/23/2019	10:55:56 AM	Acetone	0.0181	ppm
7/23/2019	10:55:56 AM	Acrylonitrile	<0.001	ppm
7/23/2019	10:55:56 AM	Aluminum	481.8	ppb
7/23/2019	10:55:56 AM	Aluminum, Dissolved	31.49	ppb
7/23/2019	10:55:56 AM	Ammonia	1.81	ppm_N
7/23/2019	10:55:56 AM	Anthracene	<5.0	ppm
7/23/2019	10:55:56 AM	Arsenic	0.8377	ppb
7/23/2019	10:55:56 AM	Benzene	<0.001	ppm
7/23/2019	10:55:56 AM	Benzidine	<5.0	ppm
7/23/2019	10:55:56 AM	Benzo(a)fluoranthene	<5.0	ppm
7/23/2019	10:55:56 AM	Benzo(a)pyrene	<5.0	ppm
7/23/2019	10:55:56 AM	Benzo(b)fluoranthene	<5.0	ppm
7/23/2019	10:55:56 AM	Benzo(g,h,i)perylene	<5.0	ppm
7/23/2019	10:55:56 AM	Benzo(k)fluoranthene	<5.0	ppm
7/23/2019	10:55:56 AM	Bis(2-Chloroethoxy)methane	<5.0	ppm
7/23/2019	10:55:56 AM	bis(2-Chloroethyl)Ether	<5.0	ppm
7/23/2019	10:55:56 AM	Bis(2-ethylhexyl)phthalate	<5.0	ppm
7/23/2019	10:55:56 AM	BOD	19.48	mg/l
7/23/2019	10:55:56 AM	Bromodichloromethane	<0.001	ppm
7/23/2019	10:55:56 AM	Bromoform	<0.001	ppm
7/23/2019	10:55:56 AM	Bromomethane	<0.002	ppm
7/23/2019	10:55:56 AM	Buthylbenzyl phthalate	<5.0	ppm
7/23/2019	10:55:56 AM	Cadmium	0.07132	ppb
7/23/2019	10:55:56 AM	Cadmium, Dissolved	<0.020	ppb
7/23/2019	10:55:56 AM	Carbon Tetrachloride	<0.001	ppm
7/23/2019	10:55:56 AM	Chlorobenzene	<0.001	ppm

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	10:55:56 AM	Chloroethane	<0.001	ppm
7/23/2019	10:55:56 AM	Chloroform	<0.001	ppm
7/23/2019	10:55:56 AM	Chloromethane	<0.001	ppm
7/23/2019	10:55:56 AM	Chromium	3.568	ppb
7/23/2019	10:55:56 AM	Chromium, Dissolved	2.175	ppb
7/23/2019	10:55:56 AM	Chrysene	<5.0	ppm
7/23/2019	10:55:56 AM	cis-1,3-Dichloropropene	<0.001	ppm
7/23/2019	10:55:56 AM	Copper	13.95	ppb
7/23/2019	10:55:56 AM	Copper, Dissolved	4.221	ppb
7/23/2019	10:55:56 AM	Cyanide, Total	<4.000	ppb
7/23/2019	10:55:56 AM	Dibenzo(a,h)anthracene	<5.0	ppm
7/23/2019	10:55:56 AM	Dibromochloromethane	<0.001	ppm
7/23/2019	10:55:56 AM	Diethyl phthalate	<5.0	ppm
7/23/2019	10:55:56 AM	Dimethyl phthalate	<5.0	ppm
7/23/2019	10:55:56 AM	Di-n-butyl phthalate	<5.0	ppm
7/23/2019	10:55:56 AM	Di-n-octyl phthalate	<5.0	ppm
7/23/2019	10:55:56 AM	Enterococci	>24196.0	MPN_100ml
7/23/2019	10:55:56 AM	Ethylbenzene	<0.001	ppm
7/23/2019	10:55:56 AM	Fecal Coliform	>240000.0	MPN_100ml
7/23/2019	10:55:56 AM	Fluoranthene	<5.0	ppm
7/23/2019	10:55:56 AM	Fluorene	<5.0	ppm
7/23/2019	10:55:56 AM	Hexachlorobenzene	<5.0	ppm
7/23/2019	10:55:56 AM	Hexachlorobutadiene	<5.0	ppm
7/23/2019	10:55:56 AM	Hexachlorocyclopentadiene	<5.0	ppm
7/23/2019	10:55:56 AM	Hexachloroethane	<5.0	ppm
7/23/2019	10:55:56 AM	Indeno(1,2,3-cd)pyrene	<5.0	ppm
7/23/2019	10:55:56 AM	Iron	829.9	ppb
7/23/2019	10:55:56 AM	Iron, Dissolved	113.2	ppb
7/23/2019	10:55:56 AM	Isophorone	<5.0	ppm
7/23/2019	10:55:56 AM	Lead	13.07	ppb
7/23/2019	10:55:56 AM	Lead, Dissolved	1.284	ppb
7/23/2019	10:55:56 AM	Mercury	2.55	ppt
7/23/2019	10:55:56 AM	Methylene Chloride	<0.001	ppm
7/23/2019	10:55:56 AM	Molybdenum	0.7739	ppb
7/23/2019	10:55:56 AM	Naphthalene	<5.0	ppm
7/23/2019	10:55:56 AM	Nickel	2.480	ppb
7/23/2019	10:55:56 AM	Nickel, Dissolved	1.488	ppb
7/23/2019	10:55:56 AM	Nitrate	0.151	ppm_N
7/23/2019	10:55:56 AM	Nitrate+Nitrite	0.167	ppm_N
7/23/2019	10:55:56 AM	Nitrite	0.0156	ppm_N
7/23/2019	10:55:56 AM	Nitrobenzene	<5.0	ppm
7/23/2019	10:55:56 AM	Nitrogen, Total	4.58	ppm_N
7/23/2019	10:55:56 AM	Nitrogen, Total Kjeldahl	4.41	ppm_N
7/23/2019	10:55:56 AM	N-nitrododi-n-propylamine	<5.0	ppm
7/23/2019	10:55:56 AM	N-nitrosodimethylamine	<5.0	ppm
7/23/2019	10:55:56 AM	N-nitrosodiphenylamine	<5.0	ppm
7/23/2019	10:55:56 AM	Oil and Grease	<4.000	ppm
7/23/2019	10:55:56 AM	Pentachlorophenol	<5.0	ppm
7/23/2019	10:55:56 AM	Phenanthrene	<5.0	ppm
7/23/2019	10:55:56 AM	Phenol	<5.0	ppm
7/23/2019	10:55:56 AM	Phosphorous, Total	0.949	ppm
7/23/2019	10:55:56 AM	Pyrene	<5.0	ppm
7/23/2019	10:55:56 AM	Selenium	<1.000	ppb
7/23/2019	10:55:56 AM	Silver	0.2091	ppb
7/23/2019	10:55:56 AM	Silver, Dissolved	<0.020	ppb
7/23/2019	10:55:56 AM	Tetrachloroethene	<0.001	ppm
7/23/2019	10:55:56 AM	Toluene	<0.001	ppm
7/23/2019	10:55:56 AM	trans-1,2-Dichloroethene	<0.001	ppm

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	10:55:56 AM	trans-1,3-Dichloropropene	<0.001	ppm
7/23/2019	10:55:56 AM	Trichloroethene	<0.001	ppm
7/23/2019	10:55:56 AM	Trichlorofluoromethane	<0.001	ppm
7/23/2019	10:55:56 AM	TSS	45.500	mg/l
7/23/2019	10:55:56 AM	Vinyl Chloride	<0.001	ppm
7/23/2019	10:55:56 AM	Zinc	77.34	ppb
7/23/2019	10:55:56 AM	Zinc, Dissolved	18.84	ppb
7/23/2019	11:15:23 AM	(m & p) Xylene	<0.002	ppm
7/23/2019	11:15:23 AM	(o) Xylene	<0.001	ppm
7/23/2019	11:15:23 AM	1,1,1-Trichloroethane	<0.001	ppm
7/23/2019	11:15:23 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/23/2019	11:15:23 AM	1,1,2-Trichloroethane	<0.001	ppm
7/23/2019	11:15:23 AM	1,1-Dichloroethane	<0.001	ppm
7/23/2019	11:15:23 AM	1,1-Dichloroethene	<0.001	ppm
7/23/2019	11:15:23 AM	1,2,4-Trichlorobenzene	<5	ppm
7/23/2019	11:15:23 AM	1,2-Dichlorobenzene	<0.001	ppm
7/23/2019	11:15:23 AM	1,2-Dichloroethane	<0.001	ppm
7/23/2019	11:15:23 AM	1,2-Dichloropropane	<0.001	ppm
7/23/2019	11:15:23 AM	1,2-Diphenylhydrazine	<5	ppm
7/23/2019	11:15:23 AM	1,3-Dichlorobenzene	<0.001	ppm
7/23/2019	11:15:23 AM	1,4-Dichlorobenzene	<0.001	ppm
7/23/2019	11:15:23 AM	2,2'-Oxybis)1-chloropropane	<5	ppm
7/23/2019	11:15:23 AM	2,4,6-Trichlorophenol	<5	ppm
7/23/2019	11:15:23 AM	2,4-Dichlorophenol	<5	ppm
7/23/2019	11:15:23 AM	2,4-Dimethylphenol	<5	ppm
7/23/2019	11:15:23 AM	2,4-Dinitrophenol	<5	ppm
7/23/2019	11:15:23 AM	2,4-Dinitrotoluene	<5	ppm
7/23/2019	11:15:23 AM	2,6-Dinitrotoluene	<5	ppm
7/23/2019	11:15:23 AM	2-Chloronaphthalene	<5	ppm
7/23/2019	11:15:23 AM	2-Chlorophenol	<5	ppm
7/23/2019	11:15:23 AM	2-Methyl-4,6-dinitrophenol	<5	ppm
7/23/2019	11:15:23 AM	2-Nitrophenol	<5	ppm
7/23/2019	11:15:23 AM	3,3'-Dichlorobenzidine	<5	ppm
7/23/2019	11:15:23 AM	4-Bromophenyl phenyl ether	<5	ppm
7/23/2019	11:15:23 AM	4-Chloro-3-methylphenol	<5	ppm
7/23/2019	11:15:23 AM	4-Chlorophenyl phenyl ether	<5	ppm
7/23/2019	11:15:23 AM	4-Nitrophenol	<5	ppm
7/23/2019	11:15:23 AM	Acenaphthene	<5	ppm
7/23/2019	11:15:23 AM	Acenaphthylene	<5	ppm
7/23/2019	11:15:23 AM	Acetone	0.0233	ppm
7/23/2019	11:15:23 AM	Acrylonitrile	<0.001	ppm
7/23/2019	11:15:23 AM	Aluminum	430.1	ppb
7/23/2019	11:15:23 AM	Aluminum, Dissolved	28.48	ppb
7/23/2019	11:15:23 AM	Ammonia	2.41	ppm_N
7/23/2019	11:15:23 AM	Anthracene	<5	ppm
7/23/2019	11:15:23 AM	Arsenic	0.8257	ppb
7/23/2019	11:15:23 AM	Benzene	<0.001	ppm
7/23/2019	11:15:23 AM	Benzidine	<5	ppm
7/23/2019	11:15:23 AM	Benzo(a)fluoranthene	<5	ppm
7/23/2019	11:15:23 AM	Benzo(a)pyrene	<5	ppm
7/23/2019	11:15:23 AM	Benzo(b)fluoranthene	<5	ppm
7/23/2019	11:15:23 AM	Benzo(g,h,i)perylene	<5	ppm
7/23/2019	11:15:23 AM	Benzo(k)fluoranthene	<5	ppm
7/23/2019	11:15:23 AM	Bis(2-Chloroethoxy)methane	<5	ppm
7/23/2019	11:15:23 AM	bis(2-Chloroethyl)Ether	<5	ppm
7/23/2019	11:15:23 AM	Bis(2-ethylhexyl)phthalate	<5	ppm
7/23/2019	11:15:23 AM	BOD	19.61	mg/l
7/23/2019	11:15:23 AM	Bromodichloromethane	<0.001	ppm

Table 38: CSO Wet Weather Overflow North Diversion Structure NBC CSO 002A

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	11:15:23 AM	Bromoform	<0.001	ppm
7/23/2019	11:15:23 AM	Bromomethane	<0.002	ppm
7/23/2019	11:15:23 AM	Buthylbenzyl phthalate	<5	ppm
7/23/2019	11:15:23 AM	Cadmium	0.08596	ppb
7/23/2019	11:15:23 AM	Cadmium, Dissolved	<0.020	ppb
7/23/2019	11:15:23 AM	Carbon Tetrachloride	<0.001	ppm
7/23/2019	11:15:23 AM	Chlorobenzene	<0.001	ppm
7/23/2019	11:15:23 AM	Chloroethane	<0.001	ppm
7/23/2019	11:15:23 AM	Chloroform	<0.001	ppm
7/23/2019	11:15:23 AM	Chloromethane	<0.001	ppm
7/23/2019	11:15:23 AM	Chromium	3.751	ppb
7/23/2019	11:15:23 AM	Chromium, Dissolved	2.147	ppb
7/23/2019	11:15:23 AM	Chrysene	<5	ppm
7/23/2019	11:15:23 AM	cis-1,3-Dichloropropene	<0.001	ppm
7/23/2019	11:15:23 AM	Copper	12.46	ppb
7/23/2019	11:15:23 AM	Copper, Dissolved	4.317	ppb
7/23/2019	11:15:23 AM	Cyanide, Total	<4.000	ppb
7/23/2019	11:15:23 AM	Dibenzo(a,h)anthracene	<5	ppm
7/23/2019	11:15:23 AM	Dibromochloromethane	<0.001	ppm
7/23/2019	11:15:23 AM	Diethyl phthalate	<5	ppm
7/23/2019	11:15:23 AM	Dimethyl phthalate	<5	ppm
7/23/2019	11:15:23 AM	Di-n-butyl phthalate	<5	ppm
7/23/2019	11:15:23 AM	Di-n-octyl phthalate	<5	ppm
7/23/2019	11:15:23 AM	Enterococci	>24196.0	MPN_100ml
7/23/2019	11:15:23 AM	Ethylbenzene	<0.001	ppm
7/23/2019	11:15:23 AM	Fecal Coliform	>240000.0	MPN_100ml
7/23/2019	11:15:23 AM	Fluoranthene	<5	ppm
7/23/2019	11:15:23 AM	Fluorene	<5	ppm
7/23/2019	11:15:23 AM	Hexachlorobenzene	<5	ppm
7/23/2019	11:15:23 AM	Hexachlorobutadiene	<5	ppm
7/23/2019	11:15:23 AM	Hexachlorocyclopentadiene	<5	ppm
7/23/2019	11:15:23 AM	Hexachloroethane	<5	ppm
7/23/2019	11:15:23 AM	Indeno(1,2,3-cd)pyrene	<5	ppm
7/23/2019	11:15:23 AM	Iron	792.4	ppb
7/23/2019	11:15:23 AM	Iron, Dissolved	133.2	ppb
7/23/2019	11:15:23 AM	Isophorone	<5	ppm
7/23/2019	11:15:23 AM	Lead	11.15	ppb
7/23/2019	11:15:23 AM	Lead, Dissolved	1.285	ppb
7/23/2019	11:15:23 AM	Mercury	3.72	ppt
7/23/2019	11:15:23 AM	Methylene Chloride	<0.001	ppm
7/23/2019	11:15:23 AM	Molybdenum	0.8371	ppb
7/23/2019	11:15:23 AM	Naphthalene	<5	ppm
7/23/2019	11:15:23 AM	Nickel	2.629	ppb
7/23/2019	11:15:23 AM	Nickel, Dissolved	1.843	ppb
7/23/2019	11:15:23 AM	Nitrate	0.146	ppm_N
7/23/2019	11:15:23 AM	Nitrate+Nitrite	0.160	ppm_N
7/23/2019	11:15:23 AM	Nitrite	0.0144	ppm_N
7/23/2019	11:15:23 AM	Nitrobenzene	<5	ppm
7/23/2019	11:15:23 AM	Nitrogen, Total	5.46	ppm_N
7/23/2019	11:15:23 AM	Nitrogen, Total Kjeldahl	5.30	ppm_N
7/23/2019	11:15:23 AM	N-nitrododi-n-propylamine	<5	ppm
7/23/2019	11:15:23 AM	N-nitrosodimethylamine	<5	ppm
7/23/2019	11:15:23 AM	N-nitrosodiphenylamine	<5	ppm
7/23/2019	11:15:23 AM	Oil and Grease	5.000	ppm
7/23/2019	11:15:23 AM	Pentachlorophenol	<5	ppm
7/23/2019	11:15:23 AM	Phenanthrene	<5	ppm
7/23/2019	11:15:23 AM	Phenol	<5	ppm
7/23/2019	11:15:23 AM	Phosphorous, Total	1.03	ppm

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	11:15:23 AM	Pyrene	<5	ppm
7/23/2019	11:15:23 AM	Selenium	<1.000	ppb
7/23/2019	11:15:23 AM	Silver	0.1399	ppb
7/23/2019	11:15:23 AM	Silver, Dissolved	<0.020	ppb
7/23/2019	11:15:23 AM	Tetrachloroethene	<0.001	ppm
7/23/2019	11:15:23 AM	Toluene	<0.001	ppm
7/23/2019	11:15:23 AM	trans-1,2-Dichloroethene	<0.001	ppm
7/23/2019	11:15:23 AM	trans-1,3-Dichloropropene	<0.001	ppm
7/23/2019	11:15:23 AM	Trichloroethene	0.00102	ppm
7/23/2019	11:15:23 AM	Trichlorofluoromethane	<0.001	ppm
7/23/2019	11:15:23 AM	TSS	47.500	mg/l
7/23/2019	11:15:23 AM	Vinyl Chloride	<0.001	ppm
7/23/2019	11:15:23 AM	Zinc	64.09	ppb
7/23/2019	11:15:23 AM	Zinc, Dissolved	19.66	ppb
7/23/2019	11:45:04 AM	(m & p) Xylene	<0.002	ppm
7/23/2019	11:45:04 AM	(o) Xylene	<0.001	ppm
7/23/2019	11:45:04 AM	1,1,1-Trichloroethane	<0.001	ppm
7/23/2019	11:45:04 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
7/23/2019	11:45:04 AM	1,1,2-Trichloroethane	<0.001	ppm
7/23/2019	11:45:04 AM	1,1-Dichloroethane	<0.001	ppm
7/23/2019	11:45:04 AM	1,1-Dichloroethene	<0.001	ppm
7/23/2019	11:45:04 AM	1,2,4-Trichlorobenzene	<5	ppm
7/23/2019	11:45:04 AM	1,2-Dichlorobenzene	<0.001	ppm
7/23/2019	11:45:04 AM	1,2-Dichloroethane	<0.001	ppm
7/23/2019	11:45:04 AM	1,2-Dichloropropane	<0.001	ppm
7/23/2019	11:45:04 AM	1,2-Diphenylhydrazine	<5	ppm
7/23/2019	11:45:04 AM	1,3-Dichlorobenzene	<0.001	ppm
7/23/2019	11:45:04 AM	1,4-Dichlorobenzene	<0.001	ppm
7/23/2019	11:45:04 AM	2,2'-Oxybis)1-chloropropane	<5	ppm
7/23/2019	11:45:04 AM	2,4,6-Trichlorophenol	<5	ppm
7/23/2019	11:45:04 AM	2,4-Dichlorophenol	<5	ppm
7/23/2019	11:45:04 AM	2,4-Dimethylphenol	<5	ppm
7/23/2019	11:45:04 AM	2,4-Dinitrophenol	<5	ppm
7/23/2019	11:45:04 AM	2,4-Dinitrotoluene	<5	ppm
7/23/2019	11:45:04 AM	2,6-Dinitrotoluene	<5	ppm
7/23/2019	11:45:04 AM	2-Chloronaphthalene	<5	ppm
7/23/2019	11:45:04 AM	2-Chlorophenol	<5	ppm
7/23/2019	11:45:04 AM	2-Methyl-4,6-dinitrophenol	<5	ppm
7/23/2019	11:45:04 AM	2-Nitrophenol	<5	ppm
7/23/2019	11:45:04 AM	3,3'-Dichlorobenzidine	<5	ppm
7/23/2019	11:45:04 AM	4-Bromophenyl phenyl ether	<5	ppm
7/23/2019	11:45:04 AM	4-Chloro-3-methylphenol	<5	ppm
7/23/2019	11:45:04 AM	4-Chlorophenyl phenyl ether	<5	ppm
7/23/2019	11:45:04 AM	4-Nitrophenol	<5	ppm
7/23/2019	11:45:04 AM	Acenaphthene	<5	ppm
7/23/2019	11:45:04 AM	Acenaphthylene	<5	ppm
7/23/2019	11:45:04 AM	Acetone	0.0264	ppm
7/23/2019	11:45:04 AM	Acrylonitrile	<0.001	ppm
7/23/2019	11:45:04 AM	Aluminum	395.5	ppb
7/23/2019	11:45:04 AM	Aluminum, Dissolved	24.61	ppb

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	11:45:04 AM	Ammonia	2.74	ppm_N
7/23/2019	11:45:04 AM	Anthracene	<5	ppm
7/23/2019	11:45:04 AM	Arsenic	0.8560	ppb
7/23/2019	11:45:04 AM	Benzene	<0.001	ppm
7/23/2019	11:45:04 AM	Benzidine	<5	ppm
7/23/2019	11:45:04 AM	Benzo(a)fluoranthene	<5	ppm
7/23/2019	11:45:04 AM	Benzo(a)pyrene	<5	ppm
7/23/2019	11:45:04 AM	Benzo(b)fluoranthene	<5	ppm
7/23/2019	11:45:04 AM	Benzo(g,h,i)perylene	<5	ppm
7/23/2019	11:45:04 AM	Benzo(k)fluoranthene	<5	ppm
7/23/2019	11:45:04 AM	Bis(2-Chloroethoxy)methane	<5	ppm
7/23/2019	11:45:04 AM	bis(2-Chloroethyl)Ether	<5	ppm
7/23/2019	11:45:04 AM	Bis(2-ethylhexyl)phthalate	<5	ppm
7/23/2019	11:45:04 AM	BOD	23.18	mg/l
7/23/2019	11:45:04 AM	Bromodichloromethane	<0.001	ppm
7/23/2019	11:45:04 AM	Bromoform	<0.001	ppm
7/23/2019	11:45:04 AM	Bromomethane	<0.002	ppm
7/23/2019	11:45:04 AM	Buthylbenzyl phthalate	13	ppm
7/23/2019	11:45:04 AM	Cadmium	0.07134	ppb
7/23/2019	11:45:04 AM	Cadmium, Dissolved	<0.020	ppb
7/23/2019	11:45:04 AM	Carbon Tetrachloride	<0.001	ppm
7/23/2019	11:45:04 AM	Chlorobenzene	<0.001	ppm
7/23/2019	11:45:04 AM	Chloroethane	<0.001	ppm
7/23/2019	11:45:04 AM	Chloroform	<0.001	ppm
7/23/2019	11:45:04 AM	Chloromethane	<0.001	ppm
7/23/2019	11:45:04 AM	Chromium	3.081	ppb
7/23/2019	11:45:04 AM	Chromium, Dissolved	1.995	ppb
7/23/2019	11:45:04 AM	Chrysene	<5	ppm
7/23/2019	11:45:04 AM	cis-1,3-Dichloropropene	<0.001	ppm
7/23/2019	11:45:04 AM	Copper	12.36	ppb
7/23/2019	11:45:04 AM	Copper, Dissolved	4.447	ppb
7/23/2019	11:45:04 AM	Cyanide, Total	<4.000	ppb
7/23/2019	11:45:04 AM	Dibenzo(a,h)anthracene	<5	ppm
7/23/2019	11:45:04 AM	Dibromochloromethane	<0.001	ppm
7/23/2019	11:45:04 AM	Diethyl phthalate	<5	ppm
7/23/2019	11:45:04 AM	Dimethyl phthalate	<5	ppm
7/23/2019	11:45:04 AM	Di-n-butyl phthalate	<5	ppm
7/23/2019	11:45:04 AM	Di-n-octyl phthalate	<5	ppm
7/23/2019	11:45:04 AM	Enterococci	>24196.0	MPN_100ml
7/23/2019	11:45:04 AM	Ethylbenzene	<0.001	ppm
7/23/2019	11:45:04 AM	Fecal Coliform	>240000.0	MPN_100ml
7/23/2019	11:45:04 AM	Fluoranthene	<5	ppm
7/23/2019	11:45:04 AM	Fluorene	<5	ppm
7/23/2019	11:45:04 AM	Hexachlorobenzene	<5	ppm
7/23/2019	11:45:04 AM	Hexachlorobutadiene	<5	ppm
7/23/2019	11:45:04 AM	Hexachlorocyclopentadiene	<5	ppm

All samples are from CSO Wet Weather Overflow at North Diversion Structure (NBC CSO #002A)

Sample Date	Sample Time	Parameter	Result	Units
7/23/2019	11:45:04 AM	Hexachloroethane	<5	ppm
7/23/2019	11:45:04 AM	Indeno(1,2,3-cd)pyrene	<5	ppm
7/23/2019	11:45:04 AM	Iron	733.0	ppb
7/23/2019	11:45:04 AM	Iron, Dissolved	127.8	ppb
7/23/2019	11:45:04 AM	Isophorone	<5	ppm
7/23/2019	11:45:04 AM	Lead	10.10	ppb
7/23/2019	11:45:04 AM	Lead, Dissolved	1.168	ppb
7/23/2019	11:45:04 AM	Mercury	2.74	ppt
7/23/2019	11:45:04 AM	Methylene Chloride	<0.001	ppm
7/23/2019	11:45:04 AM	Molybdenum	1.251	ppb
7/23/2019	11:45:04 AM	Naphthalene	<5	ppm
7/23/2019	11:45:04 AM	Nickel	2.658	ppb
7/23/2019	11:45:04 AM	Nickel, Dissolved	1.792	ppb
7/23/2019	11:45:04 AM	Nitrate	0.144	ppm_N
7/23/2019	11:45:04 AM	Nitrate+Nitrite	0.160	ppm_N
7/23/2019	11:45:04 AM	Nitrite	0.0158	ppm_N
7/23/2019	11:45:04 AM	Nitrobenzene	<5	ppm
7/23/2019	11:45:04 AM	Nitrogen, Total	6.35	ppm_N
7/23/2019	11:45:04 AM	Nitrogen, Total Kjeldahl	6.19	ppm_N
7/23/2019	11:45:04 AM	N-nitrododi-n-propylamine	<5	ppm
7/23/2019	11:45:04 AM	N-nitrosodimethylamine	<5	ppm
7/23/2019	11:45:04 AM	N-nitrosodiphenylamine	<5	ppm
7/23/2019	11:45:04 AM	Oil and Grease	4.390	ppm
7/23/2019	11:45:04 AM	Pentachlorophenol	<5	ppm
7/23/2019	11:45:04 AM	Phenanthrene	<5	ppm
7/23/2019	11:45:04 AM	Phenol	<5	ppm
7/23/2019	11:45:04 AM	Phosphorous, Total	1.13	ppm
7/23/2019	11:45:04 AM	Pyrene	<5	ppm
7/23/2019	11:45:04 AM	Selenium	<1.000	ppb
7/23/2019	11:45:04 AM	Silver	0.1488	ppb
7/23/2019	11:45:04 AM	Silver, Dissolved	<0.020	ppb

Secchi Depth 2019

				1st Reading			*2nd Reading*			*3rd Reading*			
Date	Site	Time	Meters or Feet	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	**Comments**
1/3/19	Edgewood Shoals	8:30 AM	M	2.2	2	2.1	2.2	2	2.1	2.4	2.2	2.3	
1/3/19	Pomham Rocks	8:45 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
1/3/19	Pawtuxet Cove	9:00 AM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.4	2.2	2.3	
1/3/19	Conimicut Point	9:15 AM	M	3.6	3.4	3.5	3.8	3.6	3.7	3.6	3.4	3.5	
1/3/19	Bullock Reach	9:30 AM	M	3.8	3.6	3.7	3.6	3.4	3.5	3.8	3.6	3.7	
1/3/19	India Point Park	1:10 PM	M	2.2	2	2.1	2.4	2.2	2.3	2.2	2	2.1	
1/3/19	Edgewood Yacht Club	1:30 PM	M	2.2	2	2.1	2.4	2.2	2.3	2.2	2	2.1	
1/9/19	Edgewood Yacht Club		M	3.8	3.6	3.7	3.6	3.4	3.5	3.4	3.2	3.3	Time not recorded
1/9/19	Bullock Reach		M	3.4	3.2	3.3	3.4	3.2	3.3	3.2	3	3.1	Time not recorded
1/9/19	Conimicut Point		M	3	2.8	2.9	3	2.8	2.9	3	2.8	2.9	Time not recorded
1/9/19	Point St. Bridge		M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	Time not recorded
1/9/19	India Point Park		M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.6	2.7	Time not recorded
1/9/19	Phillipsdale Landing		M	2.6	2.4	2.5	2.6	2.2	2.4	2.6	2.4	2.5	Time not recorded
2/6/19	Edgewood Yacht Club	8:38 AM	M	2	1.8	1.9	2	1.8	1.9	1.8	1.6	1.7	
2/6/19	Bullock Reach	8:55 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
2/6/19	Conimicut Point	9:02 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
2/6/19	Pomham Rocks	9:23 AM	M	1.96	1.4	1.68	1.6	1.4	1.5	1.6	1.4	1.5	
2/6/19	Point St. Bridge	9:41 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
2/6/19	India Point Park	9:49 AM	M	2.2	2	2.1	2.2	2	2.1	2.2	2	2.1	
2/6/19	Phillipsdale Landing	10:05 AM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
3/13/19	Conimicut Point	10:10 AM	M	3	2.8	2.9	3.2	3	3.1	3	2.8	2.9	
3/13/19	Bullock Reach	10:30 AM	M	4	3.8	3.9	4	3.8	3.9	4.2	3.8	4	
3/13/19	India Point Park	1:00 PM	M	3	2.8	2.9	2.8	2.6	2.7	2.8	2.6	2.7	
3/13/19	Pomham Rocks	1:30 PM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.4	2.2	2.3	
3/13/19	Pawtuxet Cove	1:45 PM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.4	2.2	2.3	
3/13/19	Edgewood Yacht Club	2:00 PM	M	3.2	3	3.1	3.4	3.2	3.3	3.4	3.2	3.3	
3/27/19	Pomham Rocks	9:50 AM	M	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	Touched Bottom
3/27/19	Conimicut Point	10:05 AM	M	3.6	3.4	3.5	3.4	3.2	3.3	3.6	3.4	3.5	
3/27/19	Bullock Reach	10:15 AM	M	3.4	3.2	3.3	3.2	3	3.1	3.4	3.2	3.3	
3/27/19	Phillipsdale Landing	1:00 PM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
3/27/19	India Point Park	1:15 PM	M	3.6	3.4	3.5	3.4	3.2	3.3	3.6	3.4	3.5	
3/27/19	Pawtuxet Cove	1:35 PM	M	3.2	3	3.1	3	2.8	2.9	3.2	3	3.1	
3/27/19	Edgewood Yacht Club	1:35 PM	M	3	2.8	2.9	3.2	3	3.1	3	2.8	2.9	
3/27/19	Edgewood Shoals	2:10 PM	M	3.6	3.4	3.5	3.4	3.2	3.3	3.6	3.4	3.5	
4/10/19	Conimicut Point	9:00 AM	M	3	2.8	2.9	3	2.8	2.9	3	2.8	2.9	
4/10/19	Bullock Reach	9:25 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
4/10/19	Pomham Rocks	10:20 AM	M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.6	2.7	
4/10/19	India Point Park	1:00 PM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
4/10/19	Edgewood Yacht Club	1:25 PM	M	2.2	2	2.1	2.4	2.2	2.3	2.4	2.2	2.3	
4/10/19	Pawtuxet Cove	1:55 PM	M	2.2	2	2.1	2.4	2.2	2.3	2.4	2.2	2.3	
4/24/19	Edgewood Shoals	8:35 AM	M	2.2	2	2.1	2.2	2	2.1	2.2	2	2.1	
4/24/19	Pomham Rocks	9:00 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
4/24/19	Conimicut Point	9:15 AM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.8	2.6	2.7	
4/24/19	Bullock Reach	9:25 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
4/24/19	Edgewood Yacht Club	10:10 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
4/24/19	Phillipsdale Landing	1:00 PM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	
4/24/19	India Point Park	1:30 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.2	1	1.1	
4/24/19	Pawtuxet Cove	1:50 PM	M	2	1.8	1.9	2.2	2	2.1	2.2	2	2.1	
5/8/19	Edgewood Yacht Club	9:30 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
5/8/19	Conimicut Point	9:50 AM	M	3	2.8	2.9	3	2.8	2.9	3	2.8	2.9	
5/8/19	Bullock Reach	10:10 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
5/8/19	India Point Park	12:45 PM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
5/8/19	Pomham Rocks	1:10 PM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
5/8/19	Pawtuxet Cove	1:35 PM	M	2.2	2	2.1	2.2	2	2.1	2.2	2	2.1	
5/15/19	Bullock Reach	8:00 AM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.6	2.4	2.5	
5/15/19	Conimicut Point	8:15 AM	M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.6	2.7	
5/15/19	Point St. Bridge	9:00 AM	M	2.6	2.4	2.5	2.8	2.6	2.7	2.6	2.4	2.5	
5/15/19	India Point Park	9:15 AM	M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.6	2.7	
5/15/19	Phillipsdale Landing	10:15 AM	M	1	0.8	0.9	1.2	0.8	1	1.4	1.2	1.3	
5/15/19	Pomham Rocks	11:15 AM	M	3.6	3.4	3.5	3.4	3.2	3.3	3.6	3.4	3.5	
5/15/19	Pawtuxet Cove	1:35 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
5/15/19	Edgewood Yacht Club	1:50 PM	M	3.2	3	3.1	3	2.8	2.9	3.2	3	3.1	
5/21/19	Pawtuxet Cove	8:40 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
5/21/19	Phillipsdale Landing	9:30 AM	M	1	0.8	0.9	0.8	0.6	0.7	1	0.8	0.9	
5/21/19	India Point Park	10:00 AM	M	3	2.8	2.9	2.8	2.6	2.7	3	2.8	2.9	
5/21/19	Conimicut Point	1:00 PM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
5/21/19	Bullock Reach	1:30 PM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
5/21/19	Edgewood Yacht Club	1:40 PM	M	2	1.8	1.9	2.2	2	2.1	2.2	2	2.1	
5/21/19	Edgewood Shoals	2:00 PM	M	2.2	2	2.1	2	1.8	1.9	2.2	2	2.1	
5/30/19	Bullock Reach	8:32 AM	M	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	
5/30/19	Conimicut Point	8:50 AM	M	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	
5/30/19	Point St. Bridge	9:30 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
5/30/19	India Point Park	9:37 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.6	1.4	1.5	
5/30/19	Phillipsdale Landing	10:03 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
5/30/19	Pawtuxet Cove	1:36 PM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.6	1.8	
5/30/19	Pomham Rocks	1:49 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
5/30/19	Edgewood Yacht Club	2:00 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
6/5/19	Pomham Rocks	8:50 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.6	2.4	2.5	
6/5/19	Conimicut Point	9:30 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
6/5/19	Bullock Reach	9:50 AM	M	3	2.8	2.9	2.8	2.6	2.7	3	2.8	2.9	
6/5/19	Edgewood Yacht Club	10:30 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
6/5/19	India Point Park	1:05 PM	M	2	1.8	1.9	2.2	2	2.1	2	1.8	1.9	
6/5/19	Pawtuxet Cove	1:35 PM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.8	1.6	1.7	
6/12/19	Bullock Reach	8:00 AM	M	2	1.8	1.9	1.8	1.6	1.7	2.2	2	2.1	
6/12/19	Conimicut Point	8:05 AM	M	2.2	2	2.1	2.4	2.2	2.3	2.2	2	2.1	
6/12/19	Point St. Bridge	8:30 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
6/12/19	India Point Park	9:10 AM	M	2	1.8	1.9	2.2	2	2.1	2	1.8	1.9	
6/12/19	Phillipsdale Landing	9:35 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
6/12/19	Pomham Rocks	1:10 PM	M	2.2	2	2.1	2	1.8	1.9	2	1.8	1.9	

Table 39: Bay Secchi Depth

Secchi Depth 2019

				1st Reading			*2nd Reading*			*3rd Reading*			
Date	Site	Time	Meters or Feet	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	**Comments**
6/12/19	Pawtuxet Cove	1:25 PM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.6	1.4	1.5	
6/12/19	Edgewood Yacht Club	1:40 PM	M	2	1.8	1.9	1.8	1.6	1.7	2.2	2	2.1	
6/19/19	Edgewood Shoals	8:30 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
6/19/19	Pawtuxet Cove	8:55 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.6	1.4	1.5	
6/19/19	Conimicut Point	9:10 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.8	1.6	1.7	
6/19/19	Bullock Reach	9:30 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
6/19/19	Edgewood Yacht Club	12:50 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
6/19/19	Pomham Rocks	1:00 PM	M	1.4	1.2	1.3	1.2	1	1.1	1	0.8	0.9	
6/19/19	India Point Park	1:15 PM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
6/19/19	Phillipsdale Landing	1:35 PM	M	0.8	0.6	0.7	0.6	0.4	0.5	0.8	0.6	0.7	
6/26/19	Bullock Reach	8:10 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
6/26/19	Conimicut Point	8:20 AM	M	2.1	1.8	1.95	2.1	1.8	1.95	2.1	1.8	1.95	
6/26/19	Point St. Bridge	9:07 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
6/26/19	India Point Park	9:15 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
6/26/19	Phillipsdale Landing	10:45 AM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	
6/26/19	Pawtuxet Cove	1:55 PM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
6/26/19	Pomham Rocks	2:20 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
6/26/19	Edgewood Yacht Club	2:31 PM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
7/3/19	Pomham Rocks	8:50 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
7/3/19	Conimicut Point	9:00 AM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.4	2.2	2.3	
7/3/19	Bullock Reach	9:45 AM	M	2.6	2.4	2.5	2.8	2.4	2.6	2.6	2.4	2.5	
7/3/19	India Point Park	1:05 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
7/3/19	Pawtuxet Cove	1:50 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
7/3/19	Edgewood Yacht Club	2:00 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
7/10/19	Edgewood Yacht Club	8:08 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
7/10/19	Bullock Reach	8:23 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
7/10/19	Conimicut Point	8:36 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
7/10/19	Pomham Rocks	9:00 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.8	1.6	1.7	
7/10/19	Point St. Bridge	9:17 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
7/10/19	India Point Park	9:25 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
7/10/19	Phillipsdale Landing	9:47 AM	M	0.6	0.4	0.5	0.6	0.4	0.5	0.6	0.4	0.5	
7/17/19	India Point Park	7:50 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
7/17/19	Pomham Rocks	8:08 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
7/17/19	Edgewood Shoals	8:20 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
7/17/19	Edgewood Yacht Club	8:30 AM	M	1.8	1.6	1.7	1.4	1.6	1.5	2	1.8	1.9	
7/17/19	Conimicut Point	9:10 AM	M	1.8	1.4	1.6	1.4	1.2	1.3	1.6	1.4	1.5	
7/17/19	Bullock Reach	9:40 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.8	1.4	1.6	
7/24/19	Edgewood Yacht Club	8:13 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
7/24/19	Bullock Reach	8:32 AM	M	2.4	2.3	2.35	2.4	2.3	2.35	2.4	2.3	2.35	
7/24/19	Conimicut Point	8:45 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
7/24/19	Point St. Bridge	9:28 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.2	2	2.1	
7/24/19	India Point Park	9:38 AM	M	1.5	1.4	1.45	1.6	1.4	1.5	1.6	1.4	1.5	
7/24/19	Phillipsdale Landing	9:58 AM	M	0.4	0.2	0.3	0.6	0.4	0.5	0.4	0.2	0.3	
7/24/19	Pawtuxet Cove	1:00 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
7/24/19	Pomham Rocks	1:24 PM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
7/31/19	India Point Park	8:00 AM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
7/31/19	Pomham Rocks	8:15 AM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	
7/31/19	Pawtuxet Cove	8:40 AM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	
7/31/19	Conimicut Point	9:20 AM	M	2.2	2.1	2.15	2.2	2.1	2.15	2.2	2.1	2.15	
7/31/19	Bullock Reach	9:30 AM	M	2	1.8	1.9	2	1.6	1.8	2	1.8	1.9	
7/31/19	Edgewood Yacht Club	1:25 PM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	
8/7/19	Bullock Reach	8:00 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
8/7/19	Conimicut Point	8:15 AM	M	2	1.8	1.9	2.2	2	2.1	2	1.8	1.9	
8/7/19	Point St. Bridge	8:55 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
8/7/19	India Point Park	9:10 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
8/7/19	Phillipsdale Landing	9:30 AM	M	1	0.8	0.9	0.8	0.6	0.7	1	0.8	0.9	
8/7/19	Pomham Rocks		M										Too Rough for Proper Result at PR
8/15/19	Edgewood Shoals	8:20 AM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
8/15/19	Pomham Rocks	8:35 AM	M	2	1.8	1.9	2.2	1.8	2	2	1.8	1.9	
8/15/19	Conimicut Point	9:00 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
8/15/19	Bullock Reach	9:10 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
8/15/19	Pawtuxet Cove	9:35 AM	M	0.8	0.6	0.7	1	0.8	0.9	0.8	0.6	0.7	
8/15/19	Edgewood Yacht Club	10:00 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
8/15/19	India Point Park	1:20 PM	M	0.8	0.6	0.7	1	0.8	0.9	0.8	0.6	0.7	
8/15/19	Phillipsdale Landing	1:40 PM	M	1	0.8	0.9	1.2	1	1.1	1	0.8	0.9	
8/21/19	Bullock Reach	8:30 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
8/21/19	Conimicut Point	8:40 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
8/21/19	Point St. Bridge	9:20 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
8/21/19	India Point Park	9:30 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
8/21/19	Phillipsdale Landing	9:50 AM	M	0.6	0.4	0.5	0.4	0.2	0.3	0.6	0.4	0.5	
8/21/19	Pomham Rocks	10:35 AM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
8/28/19	India Point Park	8:50 AM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
8/28/19	Edgewood Yacht Club	9:10 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
8/28/19	Conimicut Point	9:25 AM	M	2.8	2.6	2.7	2.6	2.5	2.55	2.8	2.6	2.7	
8/28/19	Bullock Reach	9:40 AM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
8/28/19	Pawtuxet Cove	10:30 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
8/28/19	Pomham Rocks	10:45 AM	M	2	1.8	1.9	2.2	2	2.1	2.2	2	2.1	
9/11/19	Edgewood Shoals	9:10 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
9/11/19	Pomham Rocks	9:30 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
9/11/19	Conimicut Point	9:50 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
9/11/19	Bullock Reach	10:10 AM	M	2.2	2	2.1	2	1.8	1.9	2.2	2	2.1	
9/11/19	Phillipsdale Landing	1:25 PM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.8	1.6	1.7	
9/11/19	India Point Park	1:55 PM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
9/11/19	Pawtuxet Cove	2:10 PM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
9/11/19	Edgewood Yacht Club	2:30 PM	M	2	1.8	1.9	1.8	1.4	1.6	2.2	2	2.1	
9/25/19	Conimicut Point	9:25 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
9/25/19	Bullock Reach	9:55 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.8	1.6	1.7	
9/25/19	Pomham Rocks	10:20 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
9/25/19	Edgewood Yacht Club	10:45 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
9/25/19	India Point Park	1:10 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
9/25/19	Pawtuxet Cove	1:50 PM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	

Secchi Depth 2019

				1st Reading			*2nd Reading*			*3rd Reading*			
Date	Site	Time	Meters or Feet	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	Depth-disk no longer visible (nearest tenth of a meter)	Depth-just visible (nearest tenth of a meter)	Average	**Comments**
10/24/19	Pomham Rocks	8:30 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
10/24/19	Conimicut Point	9:00 AM	M	4.8	4.6	4.7	4.8	4.6	4.7	4.8	4.6	4.7	
10/24/19	Bullock Reach	9:25 AM	M	4.4	4.2	4.3	4.4	4.2	4.3	4.4	4.2	4.3	
10/24/19	Edgewood Yacht Club	10:00 AM	M	3.4	3.2	3.3	3.4	3.2	3.3	3.4	3.2	3.3	
10/24/19	India Point Park	12:40 PM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.8	2.6	2.7	
10/24/19	Pawtuxet Cove	1:15 PM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
11/6/19	Edgewood Shoals	9:00 AM	M	4	3.8	3.9	4	3.8	3.9	4	3.8	3.9	
11/6/19	Pomham Rocks	9:10 AM	M	3.2	3	3.1	3.2	3	3.1	3.2	3	3.1	
11/6/19	Conimicut Point	9:35 AM	M	3.6	3.4	3.5	3.6	3.4	3.5	3.4	3.2	3.3	
11/6/19	Bullock Reach	9:50 AM	M	3.4	3.2	3.3	3.4	3.2	3.3	3.4	3.2	3.3	
11/6/19	Edgewood Yacht Club	10:35 AM	M	3.6	3.4	3.5	3.6	3.4	3.5	3.6	3.4	3.5	
11/6/19	India Point Park	1:00 PM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
11/6/19	Phillipsdale Landing	1:25 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
11/6/19	Pawtuxet Cove	2:05 PM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
11/20/19	Pomham Rocks	9:10 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.4	2.2	2.3	
11/20/19	Conimicut Point	9:35 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
11/20/19	Bullock Reach	10:00 AM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
11/20/19	Pawtuxet Cove	10:50 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
11/20/19	India Point Park	1:10 PM	M	2.8	2.6	2.7	2.8	2.6	2.7	2.8	2.6	2.7	
11/20/19	Edgewood Yacht Club	1:25 PM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.6	2.4	2.5	
12/4/19	Edgewood Shoals	12:50 PM	M	3.6	3.4	3.5	3.4	3.2	3.3	3.6	3.4	3.5	
12/4/19	India Point Park	1:00 PM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.8	2.6	2.7	
12/4/19	Pomham Rocks	1:20 PM	M	3.4	3.2	3.3	3.2	3	3.1	3.4	3.2	3.3	
12/4/19	Conimicut Point	1:45 PM	M	3.8	3.6	3.7	3.6	3.4	3.5	3.8	3.6	3.7	
12/4/19	Bullock Reach	1:55 PM	M	3.6	3.4	3.5	3.4	3.2	3.3	3.6	3.4	3.5	
12/4/19	Edgewood Yacht Club	2:15 PM	M	3.2	3	3.1	3.6	3.4	3.5	3.2	3	3.1	
12/24/19	Edgewood Yacht Club	7:50 AM	M	2.2	2	2.1	2	1.8	1.9	2.2	2	2.1	
12/24/19	Bullock Reach	8:08 AM	M	3	2.8	2.9	2.8	2.6	2.7	3.2	3	3.1	
12/24/19	Point St. Bridge	9:17 AM	M	2.2	2	2.1	2.4	2.2	2.3	2.2	2	2.1	
12/24/19	India Point Park	9:23 AM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.4	1.2	1.3	

Table 39: Bay Secchi Depth