Narragansett Bay Commission
2018 Data Report

Prepared by the Staff of the
Environmental Monitoring & Data Analysis Section

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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 2018, the average daily flow to the facility was 51.1 MGD.

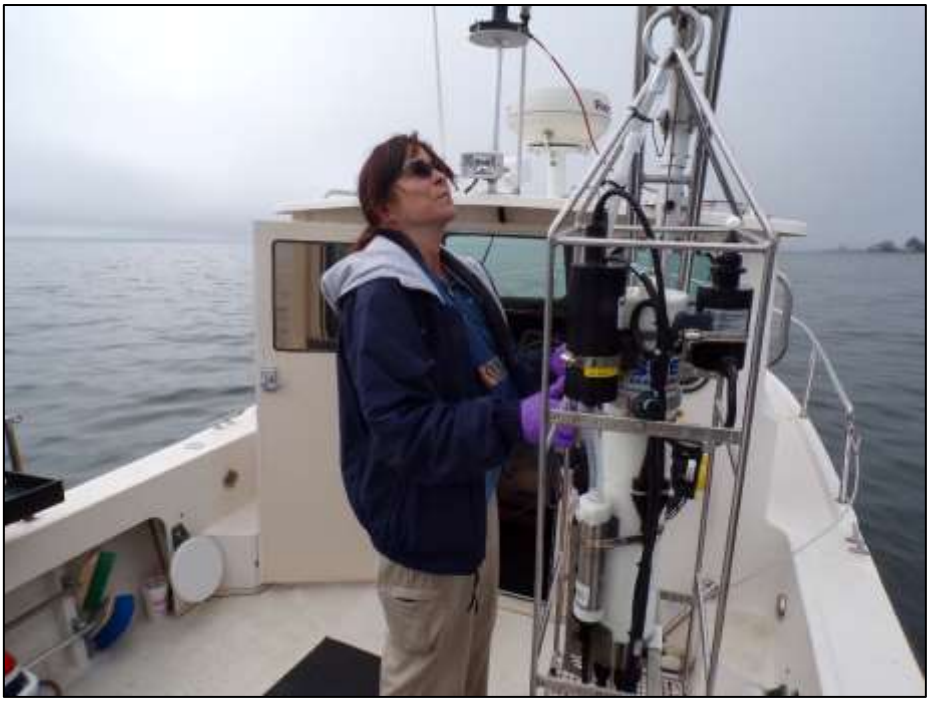
In 1992, the Rhode Island General Assembly expanded the NBC's mission by placing it in charge of the Bucklin Point WWTF in East Providence. In 1999, supervisory management of this plant was privatized to Professional Services Group (PSG) and was managed by Suez Environment/United Water. On July 1, 2015, 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 2018, the average daily flow to the facility was 23.5 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 Division. Over the years, the EMDA section continued to evolve, and in 2018 it was responsible not only for industrial and manhole monitoring activities, but for all aspects of environmental monitoring for the NBC, outlined further below. EMDA staff also conducts many sampling initiatives to evaluate effectiveness of new technologies, such as nutrient removal and UV disinfection.

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 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



Environmental monitor deploying the Seabird water column profiler onboard the NBC's research vessel, the R/V Monitor

statewide. Therefore, as water quality compliance issues become more complex, the NBC EMDA section's role in environmental monitoring and compliance issues continues to expand.

In 2016, the NBC EMDA and Laboratory sections moved into a centralized building, the Water Quality Science Building (WQSB), 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 all sampling, monitoring, and analysis needs of the NBC.

The EMDA Section continued to perform the following monitoring activities throughout 2018:

- 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;
- Annual stormwater monitoring at NBC's two WWTFs to satisfy RIPDES requirements;
- Weekly sampling of 21 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 14 sites on rivers entering the upper Bay from Massachusetts and Rhode Island for nutrients once to twice per month;
- Sampling of 7 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 Bullocks 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 a special study station on the Seekonk River to ensure accurate data for state partners and the public.

The NBC EMDA section has always done an excellent job of implementing monitoring initiatives. Since 2007, the section has produced a streamlined annual report to share the annual monitoring data with the public in a timely manner. This report serves as the public dissemination of all 2018 EMDA monitoring data.

Acknowledgements

This report has been prepared by the staff of the EMDA section, under the general direction of Thomas P. Uva, Director of Environmental Science & Compliance (ES&C). This report is a summation of the collective efforts by the Environmental Monitors and Monitoring Field Supervisors that collected 28,358 samples during 2018. It represents the countless hours of processing, compiling, analyzing, and interpreting all the data by the Environmental Scientists and Assistant Manager, and data entry and general assistance by clerical staff.

The laboratory staff analyzed all of the samples collected by the EMDA section. In total, during 2018, the laboratory generated 115,099 analyses from the samples it received. A special acknowledgement and thank you to the NBC EMDA, Laboratory, and other ES&C staff that made this report possible:

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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 and Data Analysis (EMDA) 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.

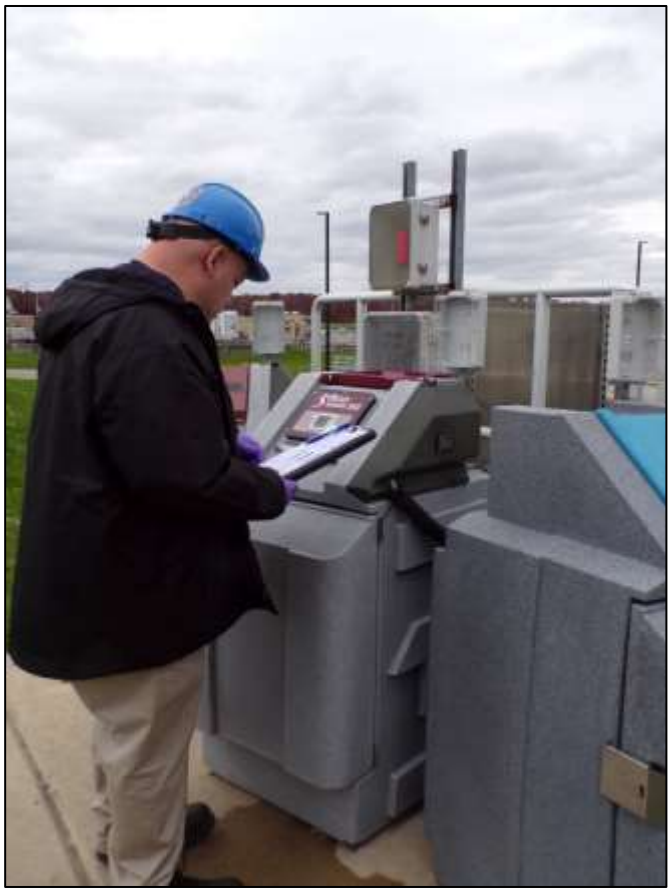
NBC's continuing goal is to improve receiving water quality by limiting the impact of WWTF effluent on Narragansett Bay. The NBC has analyzed and tracked the toxic pollutant loading trends at its treatment facilities since the creation of the agency. EMDA works in conjunction with the Pretreatment, Laboratory, Operations, and Engineering 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 EMDA section collected 28,358 samples and the NBC lab conducted 115,099 analyses during 2018. WWTF sampling data for 2018 are attached and can be found in Tables 1–41. 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. EMDA 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 EMDA 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 EMDA 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. EMDA 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. EMDA 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 2018 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 2018 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 2018 May through October season. The seasonal effluent total nitrogen average for Field's Point was 2.4 mg/L and for Bucklin Point was 3.2 mg/L. WWTF nutrients data for 2018 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 EMDA 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 2018 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 2018, 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 lab 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 2018 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 2018 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 2018 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, EMDA 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 EMDA picks up the sample the next morning. EMDA 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 2018 can be found in attached Tables 20-23. Note that the laboratory's calculation methodology for results below detection was modified between 2017 and 2018; this modification led to apparent increases in beryllium, cadmium, molybdenum, and silver, which are largely artificial, due to the change in calculation methods.

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 2018 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 volatile organic compounds (VOCs), a subset of the EPA Priority Pollutants. 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 2018 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, EMDA 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, selenium, and tin were measured in both Field's Point and Bucklin Point district sanitary manholes in 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 2018 can be found in Table 27.

Significant Industrial User (SIU) Sampling

The EPA requires that all significant industrial users (SIUs) be sampled at least once every twelve months. NBC has established a more stringent goal to sample each SIU twice per year. Information regarding industrial flows to NBC facilities is gathered through SIU 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 183 sets of SIU samples in 2018. SIU data for 2018 can be found in Tables 28A and 28B.

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 manholes in 2018 resulted in 267 sets of data, with 2,113 individual parameters analyzed within both service districts.

Environmental monitors conducting sanitary manhole sampling

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 EMDA SIU 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 EMDA 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 EMDA 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 2018, 158 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 2018 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. As part of the permit requirements, the NBC conducts annual stormwater sampling at two monitoring locations at the Field's Point facility and one monitoring location at the Bucklin Point facility. Storm samples are taken within the first 30 minutes of discharge. Storm sampling occurs following a storm that was not preceded by measurable rainfall within the prior 72 hours. Stormwater is monitored for fecal coliform, total nitrogen, TKN, and nitrate-nitrite. Results of the stormwater sampling are displayed in Table 31.

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 (CSOs) 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 EMDA section's role in environmental monitoring and compliance issues also continues to expand as compliance issues become ever more complex.

In 2018, EMDA 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 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 combined sewer outfalls (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.

EMDA 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 likely 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 located at a dock at Phillipsdale Landing in the Seekonk River and a buoy at Bullock Reach in the Providence River. EMDA 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 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 the 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 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 as well as planned future facility upgrades at both the Bucklin Point and Field's Point facilities. These data will also contribute to developing a thorough understanding of nutrient fluxes to Narragansett Bay.

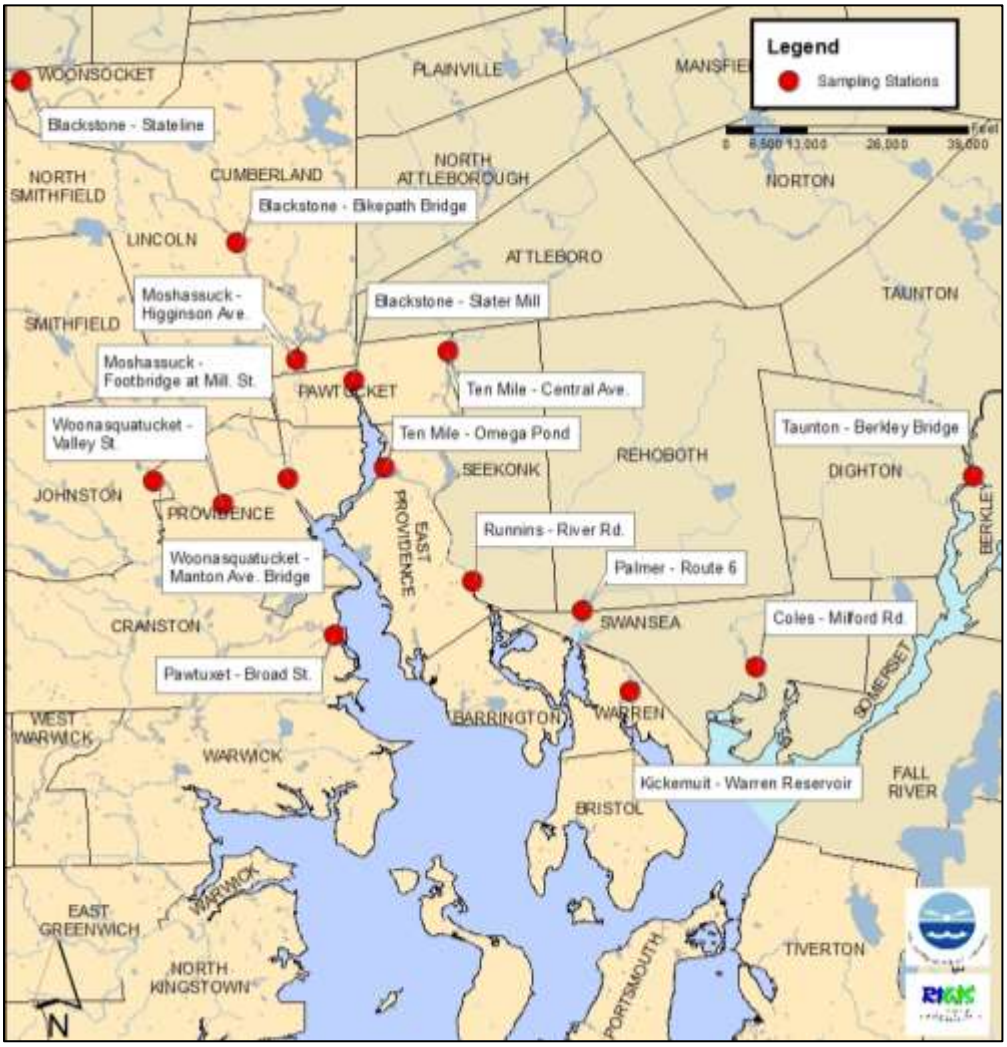
The NBC initiated nutrient monitoring of the local urban rivers in 2005, and expanded the sampling locations and increased the frequency of sampling in 2006. In the beginning of the program in 2005 and 2006, sample splits were also submitted to both the NBC and the University of Rhode Island Graduate 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

Environmental monitor (left) collecting a river nutrient sample with a collaborator from the University of Massachusetts.

became inaccessible to NBC environmental monitoring staff; a new site, at Roger William's Ave. was initiated in August 2018 to take its place. In 2018, 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 new plastic sample bottles. Water is first pumped into a large (e.g., 2-liter) bottle, then split into individual sample bottles for each set of analyses. All tubing and sample bottles are acid-washed and then rinsed with DI water before the sampling event, and 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 EMDA's quality assurance efforts for this program, field blanks and duplicates are collected in order to determine the accuracy and precision of sampling methods and sample handling techniques. Field blanks are collected by each team during each nutrient

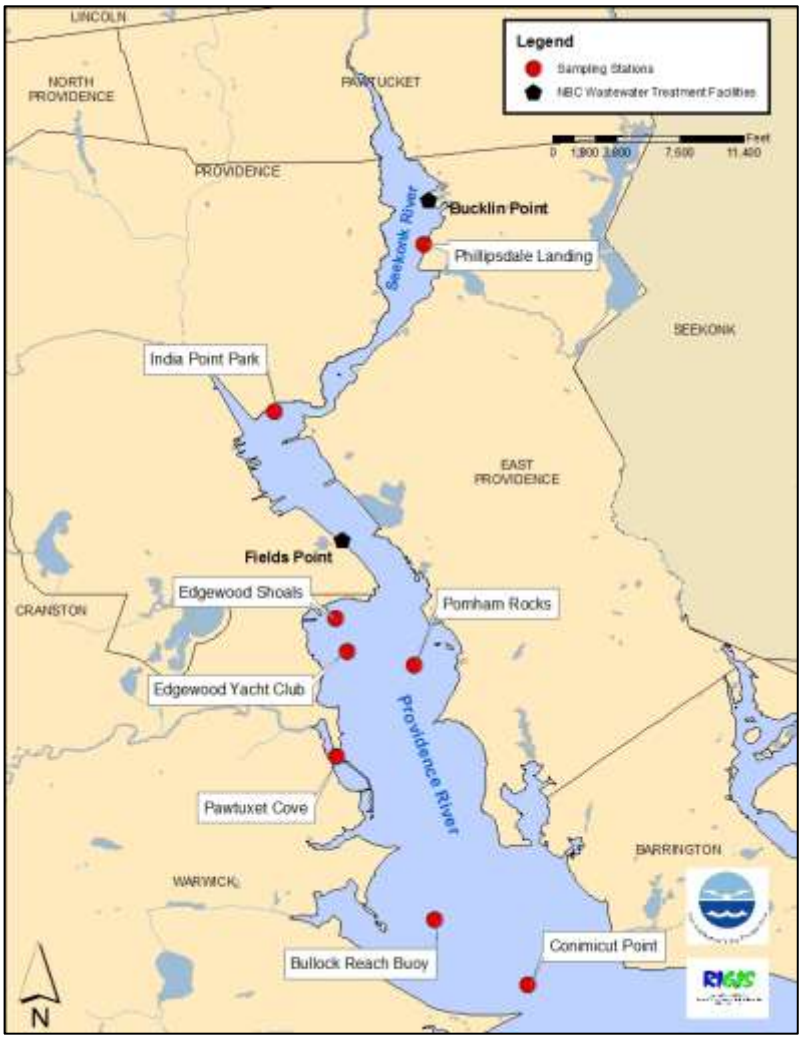
Figure 1: NBC River Nutrient Sampling Stations



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 taken 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 bottle of sample water into two sets of sample bottles for analysis. In addition to these sampling QA/QC measures, the NBC laboratory has a rigorous analytical QA/QC program in place for all nutrient samples.

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,

Figure 2: NBC Bay Nutrient Sampling Stations



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 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. As seen in Figure 2, the Conimicut Point, Bullock Reach Buoy, Pawtuxet Cove, 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.

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 attached to the boat davit with sample water then poured off into a sample bottle. All tubing and sample bottles are acid- washed and then rinsed with DI water before the sampling event, and tubing is rinsed with DI water between sample stations. DI water field blanks and duplicates 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. In addition to sampling QA/QC measures, the NBC laboratory has a rigorous analytical QA/QC program in place for all nutrient samples. Bay samples were collected, filtered, and preserved on-board the NBC research vessel, the *R/V Monitor*.

The NBC laboratory analyzes both freshwater and saltwater nutrient samples for nitrite+nitrate, nitrite, total dissolved nitrogen, ammonia, orthophosphate, silicate, and total nitrogen. With the exception of total nitrogen, all of the nutrients analyses are performed on filtered samples; therefore, the results represent the dissolved (or soluble) concentrations of these parameters. Total nitrogen, including both dissolved and particulate phases, has been analyzed in these samples since 2012. Freshwater nutrients are analyzed using the laboratory methods described in the Field's Point and Bucklin Point WWTF sample collection sections. In terms of saltwater parameters, the laboratory also 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 on EPA Method 366.0. Grab samples for TSS, chlorophyll *a*, and phaeophytin a are also collected at the same time as nutrient samples and analyzed by the NBC Laboratory. 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 at the time of sample collection using a YSI 600XLM sonde. All data from 2018 River and Bay Nutrient sampling can be found in the attached Table 32.

Urban River Pathogen Monitoring

Consistent NBC monitoring for fecal coliform in the Providence area urban rivers began in 1997 and became the responsibility of EMDA in 1998. It 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 other unforeseen circumstance arising that would prevent sampling under the regular schedule, the sampling routine will begin the next day sampling is possible. Samples are collected by EMDA staff in the morning and delivered to the lab at Field's Point no later than 11:30 AM the day of sampling. All stations sampled on the same river on the same day are collected within a two-hour interval. NBC's IM, Construction, EMDA, and Engineering sections determine locations to be added or omitted as needed.

Samples are collected regularly from six sites on the Woonasquatucket River, two 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 2018, a total of 1,637 river bacteria samples were collected and analyzed.

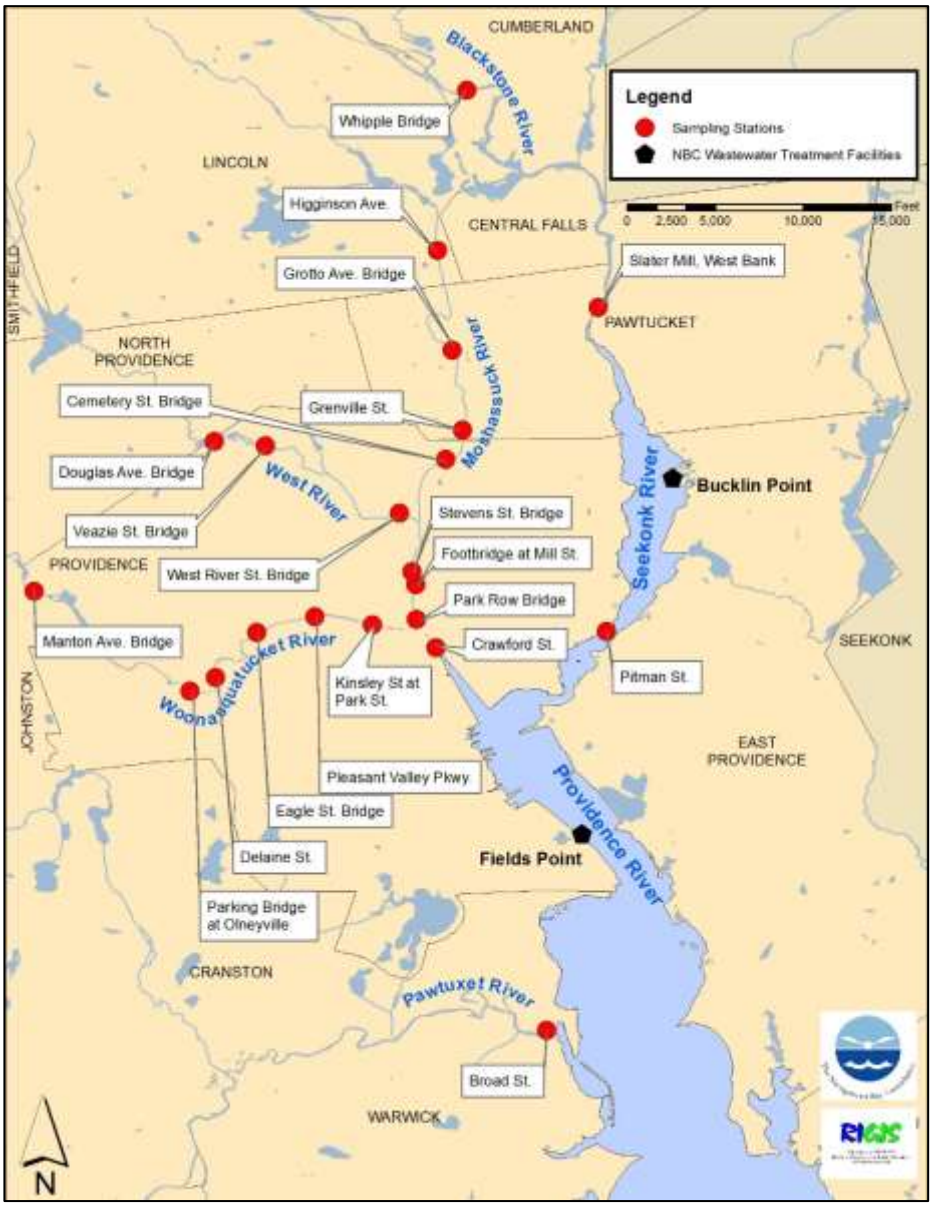
In order to improve NBC's identification of dry weather overflow (DWO) discharges and to identify other sources of bacterial contamination in the rivers, in 2002 EMDA began resampling weekly river collections when DWOs are suspected. Rivers are not resampled when collections have occurred in times of wet weather, because analytical results are expected to be high due to the normal functioning of CSOs. When results from collections are high (greater than 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), EMDA 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, fecal 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 in the water stream by hand. The sample is taken from the surface as close to the center of the water stream as possible.

Once the sample has been collected, the sample container is sealed, and a label with site ID, sample number, date and time of collection, and collector's initials is placed on the container. The samples are held at 4°C in a portable cooler with ice packs for transfer to the lab. All samples are brought to the laboratory 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 EMDA's quality assurance for this program, collection and analysis of DI field blanks and duplicate bacteria samples occurs on all regular sampling days. These collections and analyses are used to help determine analytical and sampling 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

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.



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 riverbank in 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 33 and 34. Enterococci data for the urban rivers can be found in Table 35. For the purpose of this report, duplicate sample results are shown as the geometric mean of the two samples.

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 interval on the same day. In the event of a holiday or any other unforeseen circumstance arising that would prevent sampling under the regular schedule, the sampling will resume on the next regular work day. Samples are collected by EMDA staff and delivered to the lab at Field's Point 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 Field's Point WWTF, and ten sites in the Providence River south of Field's Point WWTF; these sampling locations are shown in Figure 4. During special events, including after some heavy rainfalls, 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 event, the sample stations may include all or some of the usual stations and/or additional stations further down the bay.

Water samples for bacteria analysis are collected from the port or starboard side of the EMDA research vessel. A sterile, 120-mL sample container is used for the sample collection. Collections are made by placing the 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 techniques is placed on the container. The samples are held at 4°C in a portable cooler with ice packs or a portable refrigerated cooler 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 taken 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 bacteria analysis. During 2018, 448 bay fecal coliform samples and 142 enterococci samples were collected and analyzed. 2018 bay fecal coliform and enterococci data are shown in the attached Tables 36 and 37, 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 implementing NBC's policy of protection of Narragansett Bay and its tributary rivers, and to fulfill the requirements of the EPA and DEM Nine Minimum Controls Program, a program that implements technology-based measures to reduce the impact of CSOs on receiving water quality, the EMDA staff sampled CSO wet weather overflows from three different CSOs in 2018. The aim of such wet weather sampling is to characterize the impact of CSO discharges and to evaluate the success of the NBC Pretreatment and Pollution Prevention programs at controlling the discharge of pollutants through CSOs. The CSO Abatement Project, once fully implemented,

will effectively eliminate 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 2018, wet weather monitoring was conducted at three different CSOs: Outfall 002A (Bucklin Point North Diversion Structure), Outfall 218A, and Outfall 23. Sampling at Outfall 23 took place on March 2nd, with 2.55 inches of rainfall as measured by the National Weather Service at T.F. Green Airport (4.01 inches measured at Field's Point). Outfall 23 is located in the Field's Point service district, discharging into the Seekonk River. Sampling at Outfall 218A took place on September 18th, with 0.52 inches of rainfall as measured by the National Weather Service at T.F. Green Airport (1.06 inches measured at Field's Point). Sampling at Outfall 002A took place on November 13th, with 2.00 inches of rainfall as measured by the National Weather Service at T.F. Green Airport (1.92 inches measured at Field's Point). Outfalls 002A and 218A are located in the Bucklin Point service district, and discharge to 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 23 and 218 successfully included all three phases; however, sampling of Outfall 002A did not include the first flush. Each sample was tested for BOD, TSS, metals, nutrients, and VOCs. The data for CSO 218 can be found in Table 38, data for CSO 23 can be found in Table 39, and data for CSO 002A can be found in Table 40.

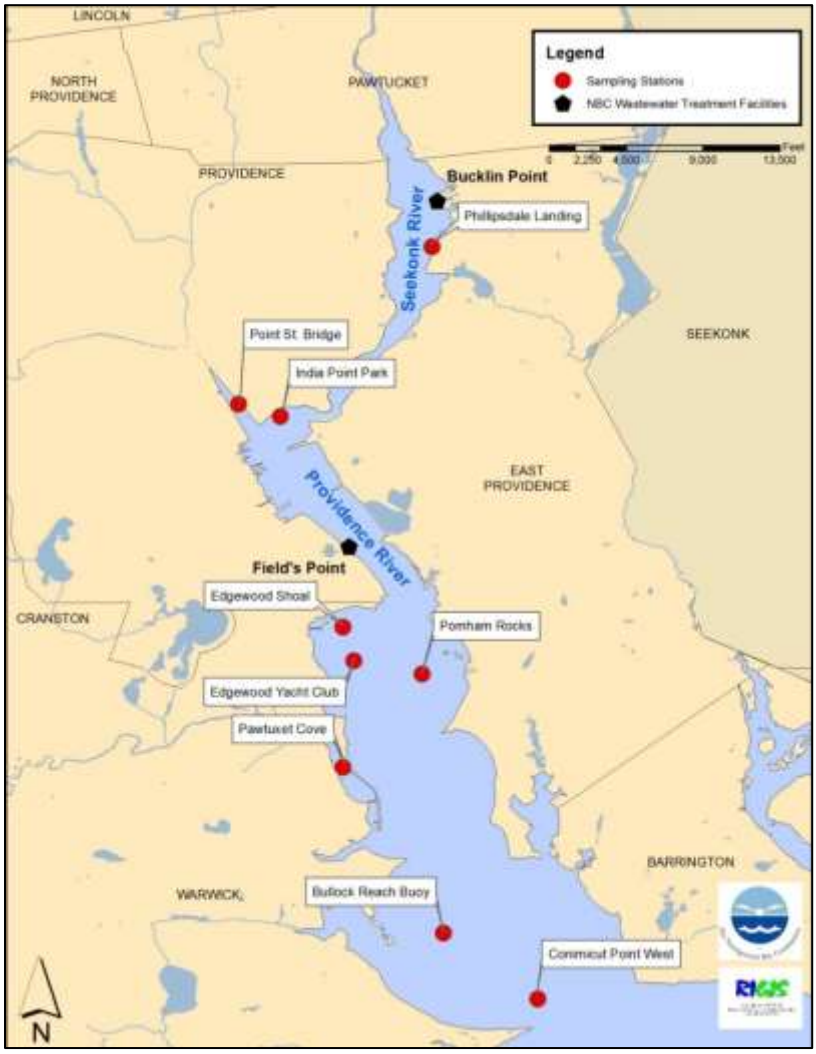
Water Column Profile Monitoring

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 data analyst 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 2018 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 other substances with anthropogenic sources including waste discharge and urban runoff. High turbidity reduces the amount of light available for photosynthesis by algae and submerged aquatic plants which in turn can decrease oxygen levels in the water. Suspended materials can also affect aquatic organisms by clogging fish gills, affect egg and larval development, lower growth rates, and reduce 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 2018, NBC collected 234 Secchi depth measurements in the Providence and Seekonk Rivers. These data can be found in Table 41.

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 the 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 2018, the NBC collected approximately six 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.

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 NBC's trained biologist. In 2018, 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 maintains two fixed-site water quality monitoring stations, one in the Providence River and one in the Seekonk River. These stations were created in 2000 as part of a formerly 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 have been established in proximity to the Field's Point and Bucklin Point wastewater treatment plant 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 2018, an additional temporary site was added in the Seekonk River located near the East Providence Yacht Club. This site was added to support data collection for the URI/NBC 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

sites are shown in Figure 7. These monitoring stations directly benefit Narragansett Bay research by allowing for continuous, real-time water quality monitoring 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 across seasons and reveal yearly trends. The two permanent locations are part of a larger, bay-wide monitoring network of water quality instruments deployed and maintained by other agencies.

The NBC has used 6600-series YSI water quality sondes to collect measurements of depth, temperature, salinity, pH, dissolved oxygen, turbidity, and fluorescence (a proxy for chlorophyll and phytoplankton activity) at each fixed site since the project began. During the 2016 and 2017 seasons the NBC tested instrumentation from Seabird Scientific (HydroCAT EP) alongside the

Figure 7: NBC Fixed Site Station Locations

6600-series YSI sondes; these test results proved the Seabird instruments were unreliable in this application. In 2018, the sondes at Bullock Reach were upgraded from the 6600-series equipment to the newest YSI EXO technology.

Data collected by the water quality instruments at both the Bullock Reach buoy and Phillipsdale Landing stations is recorded every 15 minutes and transmitted via cell-phone communications from Bullock Reach and via LAN-line connection from Phillipsdale Landing to a base station at Field's Point every hour. The EMDA staff is continually making improvements to equipment, infrastructure, and the QA/QC protocols to ensure the reliability of data collected.

As part of a statewide monitoring network collectively known as the Narragansett Bay Fixed-Site Water Quality Monitoring Network (Fixed-Site Network), EMDA currently works in partnership with the DEM, URI, and Narragansett Bay National Estuarine Research Reserve (NBNERR) to uphold 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 all of these fixed sites in one central location. This can be accessed at http://www.dem.ri.gov/bart/stations.htm. The DEM Bay Awareness and Response Team (BART) website currently displays a map showing station locations, weekly summaries of data from all network sites, monthly graphs of summer data, and all Fixed-Site Network data in raw, edited, and corrected formats. In addition to the DEM BART website, the NBC also shares these data on its Snapshot website . Data from the two water quality monitoring stations are available on Snapshot in near real-time in an easy-to-use and easy-to-understand format, including graphs and downloadable data tables.

As WWTFs reduce nitrogen input into the Bay, monitoring water quality can help researchers better understand the response of the bay to these reductions. Nitrogen is often associated with eutrophication and hypoxia. Hypoxia is the condition that occurs when dissolved oxygen concentrations in water fall below a critical level, negatively affecting marine organisms. As part of the larger network of agencies continuously monitoring water quality in the bay, 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.

Data from 2018 were sent to the DEM biweekly during the critical summer months to keep them updated on the water quality status at the Bullock Reach site. Throughout the years, data from the Bullock Reach buoy have been useful in DEM's analysis of water quality changes in the upper Bay, and for periodic fish kills occurring in the upper Bay and rivers. The data from these sondes are also being used in the joint NBC-URI ROMS hydrodynamic modeling project that provides information on currents, flushing, and predicted tracks of WWTF effluent in the Providence and Seekonk Rivers.

Phillipsdale Landing Dock Site

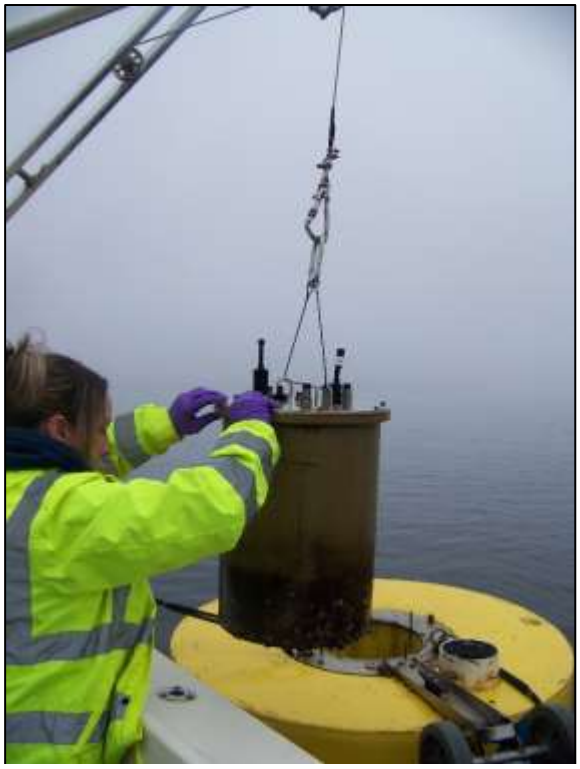
The Phillipsdale Landing site is located on the east side of the channel of the estuarine Seekonk River in East Providence. The monitoring location is very close to large freshwater river sources and is also open to the tidal estuarine Providence River. Therefore, it receives seawater flushing during the tidal cycle and the transport of saltier bottom waters in the form of a salt wedge. 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, which is north of the Phillipsdale Landing site and feeds directly into the Seekonk River as its major source, 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. Two YSI sondes collect water quality data from two depths, one located near the surface and one just off the bottom. With these instruments attached to a dock, staff has easy access to the water quality instruments from shore, allowing them to get to the instruments quickly in the event of any problems. The Phillipsdale Landing site will be upgraded to the new YSI/EXO equipment and data collection platform for the 2019 season.

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 less proximate to freshwater sources. The nearest freshwater source is the Pawtuxet River, located to the northwest of the buoy site. The position of the buoy is to the northwest 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. The buoy was retrofitted during the off season to accommodate the new YSI sondes and a new communications platform. The surface YSI sonde was placed 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 the sonde to keep it in an upright position. Power to the buoy is maintained by a solar-powered battery.

Seekonk River – Temporary Site

A temporary water quality location was set up from June 29th until November 20th in the Seekonk River, south/downstream of the Phillipsdale Landing location. This site consisted of two YSI sondes, surface and bottom, that internally logged data. These sondes were not able to transmit data in real-time as there was no communication platform associated with the site, but were changed out every two weeks with the data download occurring at the EMDA lab. The surface sonde was located at an approximate depth of 0.71 m, while the bottom sonde was at an approximate depth of 6.9 m. The parameters collected included water temperature, specific conductance, salinity, depth, pH, and dissolved oxygen.



Monitoring staff servicing the Bullock Reach fixed-site buoy

Data Collection

The continuous monitoring site at Phillipsdale Landing collects water quality data from two depths, 0.60 m below the surface and at the bottom, at an average depth of 2.0 m, in 15 minute intervals. The surface sonde measures depth, water temperature, specific conductance (salinity), pH, dissolved oxygen, chlorophyll *a*, and fluorescence. The bottom sonde measures depth, water temperature, pH, and dissolved oxygen. As with the Bullock Reach data, Phillipsdale Landing data are transferred to a computer in the Field's Point Operations Building via LAN line and are then viewed by EMDA personnel utilizing YSI software. For the 2018 season, the sondes began collecting data on February 20th and continued collecting data the rest of the year until they were removed from the water on January 15th, 2019 due to concerns of ice buildup at the site.

At Bullock Reach there are three water quality instruments at three depths: with the surface sonde at an approximate depth of 1.0 meters, a mid-depth sonde at approximately 3.9 meters, and sonde at the bottom at an approximate depth of 7.8 meters. The surface and mid-depth sondes measure depth (m), water temperature (°C), specific conductance (salinity; mS/cm and ppt), pH (s.u.), dissolved oxygen (% and mg/L), chlorophyll *a* (µg/L), and fluorescence (%). The bottom sonde also measures the same parameters with the exception of chlorophyll which is replaced by turbidity (NTU). This data are recorded every 15 minutes from all three depths. The buoy is serviced via NBC's research vessel the *R/V Monitor*. Data from the buoy are transferred to a computer in the Field's Point Operations Building via cell-phone communications every hour and are then viewed by EMDA personnel. For the 2018 season, the buoy was deployed in the

water in late May and data collection began on June 14 until they were removed for the season on November 6th.

Lab and Field Procedures

YSI sondes are typically calibrated the day before deployment for each site at the lab in the EMDA office. 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 NBC EMDA staff in the EMDA laboratory. Sondes are designated for each specific site, deployed, and then retrieved after approximately two weeks in the water. Upon returning to the EMDA lab, sondes undergo post-deployment checks, which consist of testing each parameter on the instrument for any issues with performance. The post-deployment check involves 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-calibration check, sondes are cleaned and re-calibrated just before the next deployment period. Calibration and post-calibration results are recorded and kept for reference and data editing purposes.

Once at the deployment site, a vertical water quality profile is measured using another YSI sonde instrument that measures depth, water temperature, pH, and dissolved oxygen. This instrument can be lowered to the approximate depths of the sondes and can display readings for the parameters on a small handheld computer. These measurements can be compared to the newly deployed sonde to ensure the sonde is taking proper readings. Once the sondes are in the water, data can be viewed regularly back at the EMDA offices while the sondes are deployed. 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 Management

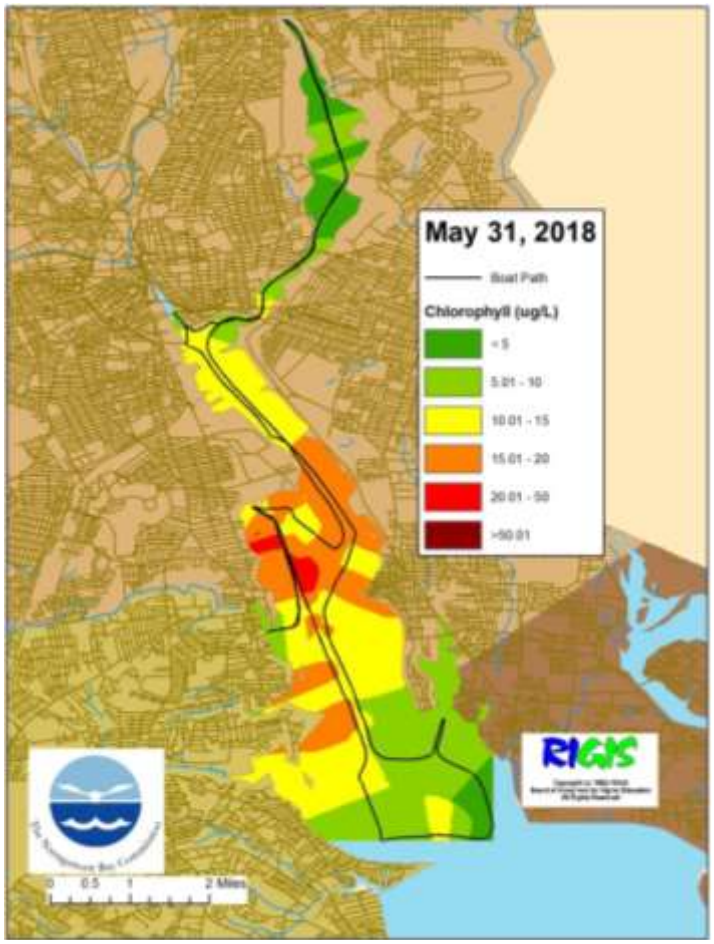
Currently, the Bullock Reach and Phillipsdale Landing sites are programmed to transmit data every hour to a computer at NBC. The data can be uploaded and viewed by EMDA staff anytime in order to assess and troubleshoot problems. The data are also available hourly to the public on the Snapshot website. Data files are also downloaded from sondes once back in the lab. A cursory review of the data is made until all data are synthesized at the end of the season, except when particular instances of hypoxia occur that warrant immediate and further evaluation. For Edgewood Shoals, data are not available on the NBC Snapshot website but can be requested directly from the NBC scientists.

During the summer months, the raw unedited data are also sent to the Fixed-Site Network coordinator to determine if the Bay is experiencing hypoxic conditions and to be posted on the DEM's BART website. At the conclusion of the season, all data is transmitted to the Fixed-Site Network coordinator for further editing and correcting.

Fixed-site data are not included in paper format with this report as with the other tables due to the extensive nature of this sampling.

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



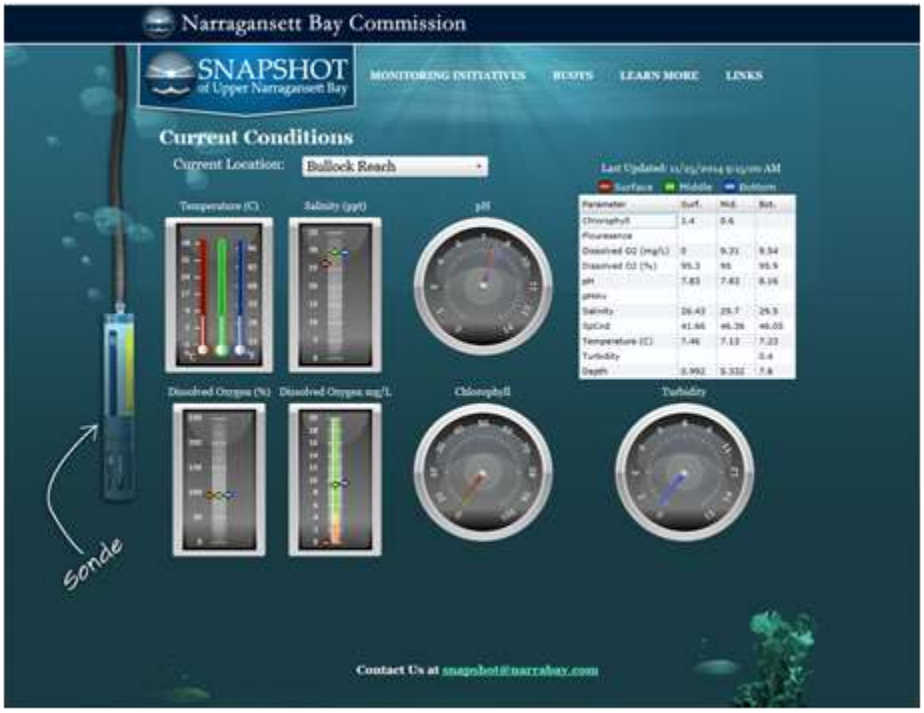
An example of a chlorophyll a *map from surface mapping on May 31, 2018*

12 nearest neighbors. The interpolation of data all the way to the shoreline is for visual clarity, though is also highly artificial. In 2018, the NBC mapped surface water quality on 39 days.

NBC Snapshot of Upper Narragansett Bay Website

In 2011, a webpage was created by the NBC called "Snapshot of Upper Narragansett Bay" (http://snapshot.narrabay.com/app/) which was continually updated through 2018 with the most recent data from the receiving waters monitoring program. The webpage includes information and data for all of the NBC receiving waters monitoring, including 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 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 chart wizard also allows users to choose which fixed-site water quality parameters to chart and display, and users can also choose 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: NBC's "Snapshot of Upper Narragansett Bay" Website.



Field's Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
1/1/2018	3.51	2.00	28.97	129.33	140.17	2.60	<2.00
1/2/2018	4.62	2.00	31.38	165.33	168.15	2.83	<2.00
1/3/2018	7.17	2.00	31.46	130.67	164.09	2.80	<2.00
1/4/2018	8.28	2.00	30.72	171.33	184.29	3.53	2.25
1/5/2018	3.22	2.00	30.75	158.00	199.14	3.67	2.14
1/6/2018	4.68	2.00	30.35	136.67	204.64	3.23	2.48
1/7/2018	6.93	2.00	35.39	150.67	141.50	3.10	2.24
1/8/2018	4.57	2.00	32.02	297.33	194.21	3.13	2.14
1/9/2018	5.72	4.00	31.10	139.33	155.27	3.03	2.22
1/10/2018	6.10	2.00	31.56	144.67	179.38	3.00	2.63
1/11/2018	4.42	2.00	38.86	174.67	151.64	2.83	2.57
1/12/2018	11.23	2.00	86.14	203.33	125.96	6.49	3.41
1/13/2018	22.34	2.00	79.44	64.00	84.59	4.43	2.81
1/14/2018	51.71	4.00	65.90	72.67	96.81	3.90	2.34
1/15/2018	36.28	2.00	71.26	80.00	85.70	3.83	2.40
1/16/2018	32.69	2.00	61.56	69.33	87.49	<2.000	2.51
1/17/2018	23.52	2.00	46.57	97.33	117.98	2.83	2.29
1/18/2018	20.23	2.00	43.07	100.00	114.88	3.63	2.42
1/19/2018	17.54	2.00	40.57	98.67	187.68	3.43	2.19
1/20/2018	13.09	2.00	40.04	112.00	144.46	3.07	2.82
1/21/2018	13.36	2.00	40.69	95.33	129.85	2.90	2.51
1/22/2018	9.04	2.00	41.05	120.67	154.99	3.97	3.29
1/23/2018	19.35	2.00	69.63	98.00	91.95	2.97	2.36
1/24/2018	126.20	2.00	70.90	63.33	77.13	2.83	2.03
1/25/2018	127.92	2.00	69.97	59.33	78.01	3.70	2.36
1/26/2018	47.25	4.00	53.61	82.67	144.50	3.33	2.42
1/27/2018	8.94	2.00	43.99	112.67	129.98	3.57	2.51
1/28/2018	14.27	2.00	42.74	100.67	125.85	3.73	2.40
1/29/2018	9.04	2.00	41.45	106.00	125.62	2.67	2.32
1/30/2018	12.45	2.00	42.90	119.33	127.40	3.13	2.14
1/31/2018	43.80	2.00	42.05	108.67	129.89	3.93	2.60
2/1/2018	19.87	2.00	47.43	170.00	137.85	3.83	2.04
2/2/2018	23.45	2.00	42.41	107.33	150.74	3.17	2.45
2/3/2018	12.51	2.00	39.48	111.33	129.62	3.87	2.31
2/4/2018	29.99	2.00	57.49	147.33	139.34	3.37	2.45
2/5/2018	29.73	2.00	66.25	81.33	121.20	3.87	2.53
2/6/2018	48.32	2.00	64.69	95.33	107.77	3.53	2.40
2/7/2018	12.35	2.00	60.39	116.00	143.20	3.97	2.93
2/8/2018	13.28	7.00	59.87	86.67	101.33	4.73	2.37
2/9/2018	26.20	2.00	43.69	104.67	178.90	3.20	2.82
2/10/2018	22.20	2.00	55.03	112.67	136.50	2.83	2.90
2/11/2018	17.70	2.00	72.35	97.33	86.02	4.00	2.44
2/12/2018	18.74	2.00	73.28	102.00	101.32	3.87	2.44
2/13/2018	20.41	2.00	69.38	75.33	97.97	4.37	2.84
2/14/2018	10.32	2.00	50.92	96.00	117.29	3.00	2.53
2/15/2018	10.55	8.00	50.74	118.67	130.18	2.97	2.50
2/16/2018	7.87	2.00	52.54	95.33	133.55	2.03	2.28
2/17/2018	9.48	2.00	46.95	102.67	133.35	2.93	2.60
2/18/2018	47.96	2.00	57.03	112.00	90.79	6.63	4.07
2/19/2018	10.43	2.00	54.42	105.33	127.74	4.90	2.95
2/20/2018	6.83	2.00	48.16	104.00	101.40	2.20	<2.00
2/21/2018	6.58	2.00	47.44	99.33	128.83	2.70	2.09
2/22/2018	9.56	2.00	47.90	112.00	101.91	2.93	<2.00
2/23/2018	13.25	2.00	54.94	115.33	106.78	3.90	2.08
2/24/2018	2.74	2.00	52.47	86.00	119.05	2.90	2.46
2/25/2018	20.25	2.00	71.41	76.67	92.51	3.30	2.14
2/26/2018	22.37	4.00	65.22	80.67	110.97	3.23	2.32
2/27/2018	17.29	2.00	49.76	108.67	128.63	3.47	2.43
2/28/2018	9.52	2.00	47.48	106.67	120.45	2.67	2.03
3/1/2018	19.15	2.00	51.71	132.67	122.75	2.80	<2.00
3/2/2018	5.62	2.00	99.89	71.33	79.62	4.67	2.41
3/3/2018	5.42	2.00	84.90	45.33	79.11	3.40	<2.00
3/4/2018	6.78	8.00	74.68	60.00	83.185	4.33	<2.00
3/5/2018	8.32	2.00	72.89	72.00	91.08	3.60	2.11
3/6/2018	11.58	2.00	74.78	65.33	86.71	4.10	2.14
3/7/2018	6.40	2.00	75.13	97.33	92.10	2.97	<2.00
3/8/2018	25.89	2.00	87.67	68.67	80.62	9.40	3.21
3/9/2018	17.28	2.00	74.55	70.67	82.77	5.27	2.43
3/10/2018	11.11	2.00	71.54	77.33	98.27	5.07	2.49
3/11/2018	21.24	2.00	72.07	84.00	89.97	4.87	3.00
3/12/2018	24.78	2.00	73.53	98.67	107.33	4.17	2.80
3/13/2018	18.52	2.00	62.89	91.33	89.12	3.97	2.53
3/14/2018	9.34	2.00	64.91	113.33	97.66	5.33	3.18
3/15/2018	22.62	2.00	65.16	92.67	114.79	4.13	2.86
3/16/2018	19.34	2.00	55.64	90.67	121.51	4.00	3.00
3/17/2018	23.12	2.00	54.40	96.00	123.69	3.87	2.98
3/18/2018	12.06	2.00	54.36	105.33	104.73	4.00	2.74
3/19/2018	6.03	2.00	52.21	108.00	126.71	4.33	3.44
3/20/2018	41.16	2.00	49.89	114.00	120.54	4.37	3.01
3/21/2018	35.32	2.00	49.72	110.00	122.125	4.30	2.85
3/22/2018	52.14	2.00	52.51	248.00	146.73	2.77	2.61
3/23/2018	14.52	2.00	47.33	106.00	127.74	4.13	2.68
3/24/2018	13.20	2.00	45.73	117.33	139.20	5.47	2.76
3/25/2018	8.51	2.00	47.68	121.33	136.36	3.63	2.61

Field's Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
3/26/2018	25.02	4.00	44.10	118.00	138.37	3.63	2.83
3/27/2018	25.99	2.00	44.64	141.33	145.36	3.47	2.60
3/28/2018	29.40	2.00	43.67	132.67	177.965	4.00	2.61
3/29/2018	8.03	2.00	45.69	150.00	133.35	3.03	2.06
3/30/2018	7.27	2.00	41.86	127.33	136.53	3.47	2.70
3/31/2018	4.43	2.00	41.74	118.67	171.02	2.53	2.40
4/1/2018	4.48	2.00	42.56	255.33	205.85	2.80	2.40
4/2/2018	23.52	2.00	45.31	144.00	156.48	3.43	2.07
4/3/2018	22.44	2.00	55.36	173.33	152.59	4.40	2.74
4/4/2018	34.17	2.00	54.80	134.67	128.01	4.60	2.54
4/5/2018	8.66	2.00	43.46	118.67	143.33	2.87	2.27
4/6/2018	12.03	2.00	49.88	112.67	152.19	3.51	2.59
4/7/2018	13.94	2.00	41.74	113.33	155.44	2.63	2.27
4/8/2018	13.39	2.00	43.91	123.33	149.945	2.43	2.33
4/9/2018	18.34	2.00	41.37	145.33	175.49	2.73	2.57
4/10/2018	12.50	2.00	39.35	158.67	171.70	2.87	2.38
4/11/2018	10.70	2.00	39.60	137.33	151.20	2.77	2.30
4/12/2018	25.57	2.00	41.89	158.67	165.34	2.27	2.13
4/13/2018	3.57	2.00	39.29	130.00	195.76	2.47	2.24
4/14/2018	4.01	2.00	37.72	148.67	192.17	2.10	2.39
4/15/2018	6.24	2.00	44.65	165.33	179.94	2.83	2.145
4/16/2018	3.32	2.00	78.08	159.33	85.34	5.07	3.99
4/17/2018	7.37	4.00	71.38	85.33	96.66	3.77	2.05
4/18/2018	3.98	2.00	71.08	77.33	100.80	3.97	2.52
4/19/2018	2.74	2.00	70.36	88.67	84.79	4.07	2.19
4/20/2018	2.92	4.00	59.56	94.00	131.09	3.63	2.64
4/21/2018	1.00	2.00	45.57	103.33	146.29	<2.000	2.12
4/22/2018	2.28	4.00	44.64	112.00	124.37	2.90	2.83
4/23/2018	7.04	2.00	46.19	122.67	117.85	2.93	<2.00
4/24/2018	4.10	2.00	45.19	144.67	144.38	3.43	2.32
4/25/2018	1.26	2.00	76.53	120.67	74.505	5.03	2.55
4/26/2018	2.92	4.00	73.13	68.00	91.51	2.67	2.40
4/27/2018	1.00	2.00	77.22	200.67	72.55	4.73	2.28
4/28/2018	5.08	2.00	73.31	68.00	101.69	2.20	2.80
4/29/2018	1.00	7.00	72.91	76.00	104.23	2.93	2.55
4/30/2018	1.00	4.00	70.10	81.33	92.72	2.97	2.48
5/1/2018	1.00	2.00	55.26	110.00	113.06	3.00	2.47
5/2/2018	1.46	4.00	49.02	111.33	122.10	2.73	5.00
5/3/2018	2.02	9.00	50.42	112.00	117.54	2.13	4.00
5/4/2018	2.02	2.00	46.53	113.33	160.13	<2.000	3.38
5/5/2018	1.00	4.00	45.93	123.33	134.83	2.10	3.56
5/6/2018	3.22	2.00	52.18	154.67	170.445	3.50	2.56
5/7/2018	4.68	2.00	52.48	106.67	137.95	2.50	2.56
5/8/2018	1.76	8.00	43.32	130.67	145.45	2.20	2.61
5/9/2018	1.26	2.83	42.23	135.33	148.23	2.73	2.55
5/10/2018	1.00	4.00	44.89	130.67	148.35	<2.000	2.25
5/11/2018	3.55	2.00	40.47	146.00	193.55	2.30	2.59
5/12/2018	1.73	2.00	45.87	139.33	156.61	3.17	2.57
5/13/2018	2.45	4.00	42.39	126.67	129.70	2.73	2.20
5/14/2018	3.55	2.00	39.61	139.33	159.11	2.10	2.45
5/15/2018	3.55	2.00	51.96	194.67	169.00	4.80	3.28
5/16/2018	2.00	2.00	52.29	136.00	141.59	3.20	2.72
5/17/2018	2.86	2.00	41.71	120.00	146.10	2.07	2.56
5/18/2018	4.62	2.00	41.02	153.33	173.35	3.67	2.53
5/19/2018	2.02	2.00	50.25	153.33	150.54	3.43	2.83
5/20/2018	2.49	2.00	41.94	97.33	135.87	<2.000	2.33
5/21/2018	6.12	2.00	38.70	134.00	156.32	<2.000	3.14
5/22/2018	10.67	2.00	38.84	147.33	152.00	2.47	2.44
5/23/2018	6.26	2.00	38.71	111.33	154.42	2.10	2.50
5/24/2018	2.51	2.00	39.80	138.00	141.70	<2.000	<2.00
5/25/2018	5.51	2.00	38.28	149.33	185.39	2.30	2.30
5/26/2018	4.62	2.00	36.66	143.33	184.89	<2.000	3.06
5/27/2018	3.32	2.00	42.32	142.67	146.49	2.07	<2.00
5/28/2018	2.49	2.00	37.19	140.67	160.23	2.13	2.46
5/29/2018	4.62	2.00	36.00	170.00	182.16	2.23	3.21
5/30/2018	4.80	2.00	36.52	163.33	169.90	2.13	2.85
5/31/2018	3.57	2.00	37.49	142.00	161.39	<2.000	2.42
6/1/2018	5.00	2.00	37.07	154.00	162.59	2.83	2.62
6/2/2018	4.01	2.00	35.30	141.33	183.27	3.07	2.74
6/3/2018	2.51	2.00	37.27	145.33	153.77	2.63	2.15
6/4/2018	5.79	2.00	59.88	149.33	121.60	4.90	2.77
6/5/2018	2.02	2.00	54.34	146.00	124.40	4.77	2.72
6/6/2018	1.84	7.00	48.26	120.67	140.69	2.60	2.23
6/7/2018	2.28	8.00	34.93	146.00	143.05	2.97	2.37
6/8/2018	4.01	2.00	33.03	120.00	177.08	2.67	4.33
6/9/2018	4.62	2.00	37.47	113.33	156.25	2.10	2.87
6/10/2018	3.87	2.00	35.23	134	129.48	2.7000	2.46
6/11/2018	2.49	2.00	34.15	143	172.32	2.2500	2.23
6/12/2018	6.29	4.50	35.96	151	157.25	2.0500	2.23
6/13/2018	6.56	2.00	33.47	156	162.55	2.7000	2.12
6/14/2018	3.51	2.00	34.82	159	159.57	2.4500	2.19
6/15/2018	4.82	2.00	33.44	121	150.39	<2	2.10
6/16/2018	2.02	2.00	32.68	138	164.29	<2	2.40
6/17/2018	1.41	2.00	34.98	127	146.78	2.0500	2.56

Field's Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
6/18/2018	2.02	2.00	36.31	205	167.92	3.2500	2.37
6/19/2018	1.00	4.00	33.15	170	189.90	2.4000	2.01
6/20/2018	2.02	2.00	32.51	158	207.40	2.3500	<2
6/21/2018	2.02	2.00	35.64	174	160.21	2.6500	<2
6/22/2018	1.41	2.00	32.02	152	147.96	2.4500	<2
6/23/2018	5.08	13.00	30.69	183	171.77	2.2000	<2
6/24/2018	3.85	4.50	41.24	164	140.77	5.6000	2.54
6/25/2018	3.55	2.00	33.43	155	189.13	3	2.33
6/26/2018	2.86	2.00	31.53	143	185.78	2.7500	2.12
6/27/2018	4.14	2.00	33.66	207	194.50	2.6000	2.34
6/28/2018	2.28	2.00	70.51	141	93.42	4.1000	2.93
6/29/2018	1.00	23.00	59.20	83	103.40	2.8000	2.85
6/30/2018	1.00	13.00	58.51	77	98.94	2.8500	2.74
7/1/2018	1.00	13.00	41.08	100	134.01	2.3000	2.77
7/2/2018	1.76	2.00	33.03	116	171.46	2.5500	2.18
7/3/2018	3.55	2.00	34.34	145	169.81	2.8000	2.55
7/4/2018	1.00	2.00	33.21	134	153.98	2.6000	2.70
7/5/2018	2.74	2.00	36.30	145	170.04	2.7000	2.80
7/6/2018	11.34	2.00	44.66	197	171.14	4.6500	2.88
7/7/2018	2.51	7.80	32.71	153	176.34	2.8500	2.56
7/8/2018	6.83	2.00	31.66	132	181.73	2.6500	<2
7/9/2018	2.51	2.00	32.43	169	184.81	3.7500	<2
7/10/2018	2.86	2.00	34.04	180	171.10	3.1500	2.21
7/11/2018	4.03	2.00	32.03	164	202.57	2.8500	2.14
7/12/2018	1.73	11.00	32.21	193	202.79	3.3000	2.17
7/13/2018	2.51	2.00	31.38	160	223.46	2.6500	2.35
7/14/2018	2.51	2.00	30.53	165	198.83	3.1500	2.27
7/15/2018	1.00	2.00	39.14	158	188.85	3.4000	2.40
7/16/2018	3.57	4.50	34.72	217	176.65	3.2500	<2
7/17/2018	5.20	2.00	48.31	160	148.87	24.500	3.77
7/18/2018	3.60	3.95	41.86	115	149.56	2.1000	<2
7/19/2018	3.13	2.00	31.40	149	185.05	2.7000	<2
7/20/2018	1.00	7.80	30.46	158	200.02	2.2000	2.30
7/21/2018	1.41	2.00	32.34	151	179.01	<2	2.49
7/22/2018	1.41	2.00	41.80	154	159.48	2.9500	2.33
7/23/2018	3.30	2.00	30.97	157	197.55	2.5000	2.58
7/24/2018	5.72	2.00	32.57	134	164.09	2.0500	2.30
7/25/2018	6.60	2.00	35.02	193	197.41	2.2000	2.57
7/26/2018	2.02	2.00	33.37	146	153.66	<2	2.45
7/27/2018	1.00	2.00	30.52	128	166.92	2.3500	3.04
7/28/2018	1.00	2.00	30.14	134	176.51	<2	2.64
7/29/2018	1.00	4.50	31.48	157	183.15	<2	2.53
7/30/2018	1.00	2.00	29.92	141	193.33	2.2500	2.20
7/31/2018	1.00	2.00	30.58	156	200.05	2.1000	2.49
8/1/2018	1.00	3.95	30.43	162	204.49	<2	2.34
8/2/2018	2.02	4.50	33.04	134	190.68	<2	2.86
8/3/2018	4.79	2.00	30.15	164	196.15	3.2500	2.59
8/4/2018	1.73	2.00	54.67	119	115.33	10	3.94
8/5/2018	2.51	4.00	57.52	90	98.89	3.1500	2.66
8/6/2018	1.76	4.50	49.94	90.714	135.41	2.9500	3.06
8/7/2018	6.34	2.00	32.76	171.50	187.73	2.8500	2.62
8/8/2018	4.30	3.00	36.51	185	197.72	3.2000	2.93
8/9/2018	2.49	2.00	34.25	157	175.79	2.4500	2.34
8/10/2018	9.08	2.00	40.84	174	166.73	4.2000	3
8/11/2018	7.33	2.00	61.69	114	93.19	5	2.84
8/12/2018	2.02	13.00	64.27	84	87.17	3.4500	2.37
8/13/2018	1.41	4.00	64.22	101	105.74	3.7500	2.20
8/14/2018	1.41	14.00	61.57	79	99.49	2.7000	2.24
8/15/2018	2.14	8.52	44.86	119	138.47	3	2.24
8/16/2018	2.93	4.50	34.39	135.50	165.57	2.7500	2.45
8/17/2018	1.76	2.00	33.75	147	151.93	3.2000	2.67
8/18/2018	3.85	2.00	53.43	126	109.58	4.4000	2.97
8/19/2018	1.00	4.50	57.89	76	92.11	2.8000	2.08
8/20/2018	2.45	4.50	57.57	88.500	104.33	2.6000	2.36
8/21/2018	1.76	7.80	36.96	133.50	167.74	2.0500	<2
8/22/2018	1.00	13.67	50.92	129	141.57	2.5000	<2
8/23/2018	2.02	4.50	33.28	127	167.92	3.0500	<2
8/24/2018	2.28	4.50	31.48	134.50	183.80	2.2500	3.20
8/25/2018	1.00	2.00	32.10	135	162.75	2.6000	2.82
8/26/2018	1.00	1.80	33.77	120	170.99	<2	2.66
8/27/2018	3.66	4.50	32.54	142.50	199.59	2.7000	3.54
8/28/2018	10.14	2.00	34.65	141.50	182.35	2.4500	3.98
8/29/2018	6.17	2.00	31.96	166	239.91	2.4500	3.82
8/30/2018	5.55	2.00	33.66	160	178.40	<2	3.26
8/31/2018	4.62	2.00	30.45	149	188.50	2.6000	2.88
9/1/2018	5.81	2.00	31.34	150	181.90	2.4000	3.19
9/2/2018	7.53	2.00	31.30	152	235.82	<2	3.17
9/3/2018	3.57	2.00	31.19	157	187.16	2.7000	3.15
9/4/2018	2.72	4.50	31.93	155	176.15	3.1000	3.16
9/5/2018	10.53	2.00	30.79	139	195.45	3.3000	3.44
9/6/2018	54.32	2.00	48.45	170	137.23	4.8000	3.85
9/7/2018	17.73	1.80	34.68	121	147.88	3.3000	2.88
9/8/2018	16.80	2.00	31.08	128	174.42	3.0500	2.74
9/9/2018	15.42	2.00	31.91	131	158.19	2.7000	2.72

Field's Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
9/10/2018	16.00	2.00	54.65	156	142.83	5.6500	3.05
9/11/2018	6.95	2.00	59.47	131	94.84	3.6500	3.14
9/12/2018	5.47	2.00	62.21	115	90.40	5.4666	3.38
9/13/2018	11.40	11.00	66.88	85	90.81	3.6500	2.94
9/14/2018	11.31	2.00	61.78	78	85.64	4	3.18
9/15/2018	1.41	4.50	53.79	96	115.72	3.8000	3.67
9/16/2018	3.32	4.50	36.72	110	136.69	3.3000	3.67
9/17/2018	3.63	2.00	37.64	150	144.67	3.4000	4.23
9/18/2018	3.67	2.00	58.51	121	86.52	7.3000	4.54
9/19/2018	5.32	2.00	64.10	72	94.48	4.3000	3.45
9/20/2018	4.32	4.00	60.17	158	98.84	3.5000	2.05
9/21/2018	7.20	2.00	36.83	141	137.46	2.3000	2.16
9/22/2018	3.48	2.00	34.47	116	139.88	2.3000	2.44
9/23/2018	2.93	4.50	36.12	126	152.39	<2	2.90
9/24/2018	4.38	2.00	36.65	166	156	2.4500	2.89
9/25/2018	2.02	2.00	85.80	161	95.25	7.8000	4.49
9/26/2018	1.26	3.69	80.68	96	94.17	3.1500	5.21
9/27/2018	2.00	2.00	73.39	54	60.67	2.0500	4.27
9/28/2018	1.41	7.80	73.21	67.500	72.74	2.8500	4.05
9/29/2018	1.41	2.00	71.41	82	78.25	3.6000	5.53
9/30/2018	1.00	2.00	71.74	87	68.41	3.2000	2
10/1/2018	5.59	2.00	61.47	103	112.72	3.3500	5.33
10/2/2018	2.74	11.00	67.71	120	110.94	5.9500	6.01
10/3/2018	4.32	5.10	64.51	81.500	92.50	4.1000	5.74
10/4/2018	9.12	4.50	69.67	79	80.51	5	6.80
10/5/2018	1.41	17.00	71.64	88	73.71	4.8500	5.51
10/6/2018	3.95	23.00	66.77	80	81.19	4.3500	6.58
10/7/2018	1.00	6.80	47.25	93	102.08	3	6.90
10/8/2018	1.00	4.50	44.03	113.50	136.70	3.4500	5.44
10/9/2018	1.00	4.50	46.70	128	128.39	3.5000	7.29
10/10/2018	2.31	2.00	45.21	123	143.73	3.5000	6.40
10/11/2018	3.05	2.00	59.50	147	119.69	7.9000	6.41
10/12/2018	5.37	21.00	77.16	64	67.52	13	6.73
10/13/2018	2.28	11.00	65.42	69	107.47	8.3000	5.49
10/14/2018	8.59	23.00	71.62	68.500	59.90	6.0500	4.59
10/15/2018	1.76	21.00	71.84	90	95.93	5.1000	4.81
10/16/2018	1.41	13.00	47.13	109.50	124.03	3.6500	4.18
10/17/2018	1.84	7.80	46.05	116	129.54	3.8500	4.41
10/18/2018	1.76	2.00	45.74	134	154.66	3.5500	3.69
10/19/2018	1.00	4.50	41.87	148	125.76	3.8000	3.79
10/20/2018	1.00	2.00	41.22	116	128.61	2.7000	4.41
10/21/2018	1.41	4.50	46.24	130	114.94	2.8000	3.72
10/22/2018	1.00	4.00	41.55	128.50	151.21	3.1500	3.67
10/23/2018	1.41	7.80	40.61	124.50	147.14	5.1000	5.19
10/24/2018	2.02	3.95	38.93	126.50	167.33	2.6500	2.84
10/25/2018	2.51	4.50	41.75	126.50	124.96	2.1500	2.15
10/26/2018	1.00	7.80	40.20	143	148.17	2.5500	2.40
10/27/2018	1.41	11.00	67.65	103	75.32	3.6500	2.42
10/28/2018	4.35	13.00	66.68	85	96.92	3.6000	2.58
10/29/2018	6.10	22.00	70.82	96	140.16	4	2.95
10/30/2018	4.43	4.00	61.54	96.500	132.60	3.4500	4.78
10/31/2018	2.65	2.83	41.71	126	142.31	2.2000	4.64
11/1/2018	2.93	2.00	47.46	150	120.51	2.5500	4.39
11/2/2018	8.77	14.00	58.07	148	118.95	3.2500	4.84
11/3/2018	3.62	2.00	77.59	67	72.59	3.8500	3.65
11/4/2018	1.41	2.00	68.05	57	75.25	3.2000	3.78
11/5/2018	2.28	7.80	72.63	88	87.32	3.0500	4.51
11/6/2018	1.41	4.50	75.28	62	55.24	3.5500	4.94
11/7/2018	5.39	3.00	72.91	62	89.08	3.6500	5.07
11/8/2018	12.87	2.00	78.37	57	72.75	4.9500	4.76
11/9/2018	5.94	2.00	80.46	82	77.97	3.6500	4.89
11/10/2018	3.30	13.00	77.71	51.666	62.96	4.8500	4.49
11/11/2018	17.72	2.00	77.03	66.500	65.71	5.2000	4.34
11/12/2018	10.67	2.00	78.51	83	78.58	4.8500	5.33
11/13/2018	13.25	2.00	97.15	52	40.48	4.1500	4.70
11/14/2018	4.79	7.65	74.23	56	73.36	4.5500	3.87
11/15/2018	7.01	4.50	75.28	70.500	79.32	4.9000	3.81
11/16/2018	23.83	2.00	88.89	63	62.78	5.2000	4.47
11/17/2018	12.54	2.00	74.91	62.500	76.60	4.8000	5.78
11/18/2018	7.64	2.00	76.86	64	73.26	<2	4.92
11/19/2018	16.68	7.80	73.64	80	88.14	4.2500	5.27
11/20/2018	12.37	2.00	75.56	88	80.43	4.2500	4.21
11/21/2018	13.44	2.00	74.72	78	87.88	5.2000	3.48
11/22/2018	9.64	2.00	66.81	80.500	134.15	4.8500	3.72
11/23/2018	34.58	11.00	60.99	92	97.81	4.2000	2.75
11/24/2018	36.61	2.00	61.52	124	110.86	3.8000	2.41
11/25/2018	58.15	2.00	78.21	59	71.86	5.3000	2.86
11/26/2018	12.23	2.00	88.84	64.500	66.68	3.0500	2.44
11/27/2018	5.34	2.00	79.97	53.500	74.30	4.4000	2.42
11/28/2018	10.30	2.00	74.17	62	67.84	3.8500	2.41
11/29/2018	35.08	2.00	75.91	63	74.36	3.5500	2.84
11/30/2018	32.03	4.50	75.13	81	83.83	4	3.27
12/1/2018	64.57	4.50	76.69	81	82.22	3.8000	3.86
12/2/2018	43.61	2.00	75.44	64	76.97	3.9500	5.40

Field's Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
12/3/2018	43.38	2.00	75.55	64	82.03	3.5000	6.04
12/4/2018	56.73	2.00	72.67	70	79.15	4.1000	4.49
12/5/2018	32.87	2.00	55.17	96	75.62	3.1500	4.24
12/6/2018	9.51	2.00	56.53	97	100.89	2.3500	4.65
12/7/2018	16.38	2.00	48.22	96	111.28	2.7500	4.30
12/8/2018	19.33	2.00	48.28	106	131.38	2.8500	3.31
12/9/2018	21.59	2.00	54.22	98	89.50	2.4500	3.70
12/10/2018	42.91	4.00	47.23	109	120.85	2.7000	4.04
12/11/2018	32.85	2.00	49.79	106	131.69	<2	4.88
12/12/2018	14.33	2.83	45.26	120	142.15	2.2500	4.35
12/13/2018	7.21	2.00	45.80	109	125.88	2.0500	4.61
12/14/2018	12.25	2.00	44.23	136	132.03	2.6000	5.85
12/15/2018	11.40	2.00	44.73	115	140.30	2.2000	6.77
12/16/2018	5.00	2.00	57.75	133	112.74	<2	5.50
12/17/2018	15.65	2.00	62.88	81	112.45	2.6500	4.82
12/18/2018	8.80	6.10	44.28	113	133.84	2.8000	2.93
12/19/2018	7.94	2.00	41.54	110	144.96	2.0500	2.59
12/20/2018	5.00	2.00	45.68	135	143.25	<2	2.08
12/21/2018	7.07	2.00	77.06	91	66.64	3.3500	2.69
12/22/2018	8.80	6.80	76.11	65	83.73	<2	2.69
12/23/2018	10.00	2.00	73.49	61	86.30	3.1500	2.57
12/24/2018	7.07	2.00	70.07	82	105.53	2.8000	2.67
12/25/2018	5.00	2.00	44.89	77	95.60	2.1000	2.37
12/26/2018	5.00	2.00	45.14	90	111.13	<2	2.25
12/27/2018	5.00	2.00	51.90	121	121.12	2.2000	2.27
12/28/2018	5.00	7.80	65.30	104	92.19	3.0500	2.52
12/29/2018	10.12	4.50	68.21	56	93.82	3.4000	3.11
12/30/2018	7.07	2.00	50.86	104	124.60	<2	2.83
12/31/2018	5.00	2.00	58.71	126	126.24	2.6000	3.57

Table 1: Field's Point TSS, CBOD, and Bacteria Data

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
1/1/2018	4.1	2.0	13.75	136.00	180.82	2.93	<2.00
1/2/2018	2.5	2.0	14.24	144.00	187.55	2.97	<2.00
1/3/2018	1.3	2.8	13.77	152.00	271.99	3.53	<2.00
1/4/2018	3.1	2.0	14.08	155.33	221.51	4.70	<2.00
1/5/2018	2.5	2.0	13.59	149.33	190.17	4.49	<2.00
1/6/2018	4.4	2.0	13.99	152.67	227.99	3.90	<2.00
1/7/2018	4.4	2.0	14.70	130.00	197.17	3.93	<2.00
1/8/2018	3.5	2.0	14.62	151.33	230.37	3.07	<2.00
1/9/2018	1.8	4.0	14.40	168.67	214.54	2.50	<2.00
1/10/2018	5.6	2.0	15.09	162.67	198.44	4.00	<2.00
1/11/2018	6.9	4.0	17.77	178.00	223.70	2.87	<2.00
1/12/2018	4.1	8.0	59.72	142.00	90.38	12.22	2.37
1/13/2018	10.2	2.0	59.71	164.00	146.67	12.80	3.12
1/14/2018	11.2	2.0	23.52	140.67	119.065	8.67	2.11
1/15/2018	4.4	2.0	22.52	72.00	118.17	6.87	<2.00
1/16/2018	4.1	8.0	20.93	82.00	122.78	4.17	<2.00
1/17/2018	3.1	2.0	21.74	108.67	133.82	4.13	<2.00
1/18/2018	4.1	2.0	19.03	99.33	127.56	5.03	<2.00
1/19/2018	3.5	2.0	18.66	118.00	142.585	3.87	<2.00
1/20/2018	5.1	2.0	18.90	100.67	141.94	3.10	<2.00
1/21/2018	2.0	2.0	17.92	77.33	129.95	4.13	<2.00
1/22/2018	2.3	2.0	19.39	123.33	160.20	4.27	<2.00
1/23/2018	5.7	4.0	45.13	150.00	149.90	8.20	<2.00
1/24/2018	7.4	4.0	22.31	81.33	98.91	6.43	<2.00
1/25/2018	6.7	8.0	20.60	97.33	121.25	4.43	<2.00
1/26/2018	1.4	4.0	19.33	90.67	162.59	4.70	<2.00
1/27/2018	3.5	2.0	20.17	112.00	153.24	3.83	<2.00
1/28/2018	2.5	2.0	20.19	103.33	149.71	3.82	<2.00
1/29/2018	1.0	2.0	19.64	106.67	142.82	2.60	<2.00
1/30/2018	2.7	2.0	19.60	118.00	152.83	3.13	<2.00
1/31/2018	4.3	2.0	18.19	116.67	142.96	3.20	<2.00
2/1/2018	4.6	2.0	19.52	142.00	158.90	6.13	<2.00
2/2/2018	10.0	22.0	22.60	124.67	165.76	3.43	<2.00
2/3/2018	3.0	4.0	18.18	122.67	159.29	4.18	<2.00
2/4/2018	3.2	2.0	27.10	122.00	183.81	4.93	<2.00
2/5/2018	5.5	2.0	35.09	136.00	152.09	6.71	<2.00
2/6/2018	9.8	4.0	18.92	117.33	158.53	4.89	<2.00
2/7/2018	2.9	2.0	36.24	102.67	149.83	6.98	2.39
2/8/2018	2.9	2.0	22.49	97.33	94.05	6.13	<2.00
2/9/2018	2.4	2.0	19.94	104.00	149.14	3.57	<2.00
2/10/2018	2.5	2.0	21.33	100.67	178.19	6.47	2.43
2/11/2018	9.1	2.0	51.77	112.67	101.92	12.73	2.62
2/12/2018	2.0	2.0	25.10	92.67	121.55	5.87	<2.00
2/13/2018	4.6	2.0	22.58	101.33	123.40	4.67	<2.00
2/14/2018	2.0	2.0	23.38	98.67	138.12	4.04	<2.00
2/15/2018	3.5	13.0	23.39	118.67	139.41	4.84	<2.00
2/16/2018	5.2	2.0	23.95	116.00	154.11	4.83	<2.00
2/17/2018	1.8	2.0	21.02	104.00	148.27	4.47	<2.00
2/18/2018	1.8	2.0	25.09	116.00	135.84	9.00	<2.00
2/19/2018	2.4	8.0	24.85	96.67	135.59	8.13	<2.00
2/20/2018	2.4	2.0	22.45	103.33	124.54	5.64	<2.00
2/21/2018	3.9	5.7	21.69	108.67	140.57	3.96	<2.00
2/22/2018	1.4	2.0	21.78	105.33	141.84	4.89	<2.00
2/23/2018	2.5	2.0	27.70	124.67	133.32	8.67	2.09

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

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
2/24/2018	3.6	2.0	22.24	122.00	136.68	4.10	<2.00
2/25/2018	5.5	2.0	43.52	89.33	116.32	10.53	2.62
2/26/2018	6.2	8.0	23.47	80.67	116.37	4.00	<2.00
2/27/2018	1.7	2.0	22.02	81.33	240.89	3.56	<2.00
2/28/2018	1.8	4.0	22.21	106.67	136.43	3.69	<2.00
3/1/2018	2.0	2.0	21.66	110.67	128.08	3.64	<2.00
3/2/2018	4.9	11.0	85.31	125.33	129.35	19.33	3.24
3/3/2018	4.0	2.0	44.02	69.33	64.45	29.07	3.44
3/4/2018	33.4	7.0	35.35	58.67	86.81	8.73	<2.00
3/5/2018	7.1	2.0	32.27	68.00	94.73	9.33	2.04
3/6/2018	4.6	9.0	29.13	76.67	103.09	9.47	2.06
3/7/2018	3.7	2.0	39.79	76.67	111.86	14.00	2.35
3/8/2018	3.8	2.0	44.50	76.67	96.10	9.00	2.14
3/9/2018	4.6	4.0	31.56	66.00	95.53	14.27	2.65
3/10/2018	4.3	4.0	29.57	72.67	106.57	6.27	<2.00
3/11/2018	1.4	2.0	27.58	76.67	105.50	5.24	<2.00
3/12/2018	2.3	2.0	27.76	94.00	126.88	15.47	4.74
3/13/2018	20.4	8.0	31.19	86.00	152.29	9.53	2.12
3/14/2018	2.7	2.0	32.29	66.67	96.36	9.60	2.11
3/15/2018	5.1	2.0	29.82	83.33	110.60	7.93	2.01
3/16/2018	2.0	2.0	27.30	84.67	122.03	7.53	<2.00
3/17/2018	5.1	2.0	26.49	82.67	111.19	7.13	2.03
3/18/2018	2.4	2.0	25.46	82.67	106.63	4.84	<2.00
3/19/2018	1.4	4.0	24.87	92.00	122.52	5.07	<2.00
3/20/2018	5.1	2.0	24.94	132.67	114.38	8.07	<2.00
3/21/2018	3.7	2.8	25.67	112.67	125.55	10.27	<2.00
3/22/2018	3.9	4.0	26.48	82.67	146.09	6.20	<2.00
3/23/2018	4.7	2.0	23.63	104.67	128.24	5.33	<2.00
3/24/2018	1.7	2.0	23.50	106.00	147.63	6.07	<2.00
3/25/2018	2.9	4.0	23.57	102.67	133.11	5.13	<2.00
3/26/2018	2.0	2.0	22.25	104.67	157.24	5.07	4.75
3/27/2018	7.9	4.0	21.72	126.67	146.36	5.00	<2.00
3/28/2018	2.4	3.7	22.09	117.33	155.69	5.60	<2.00
3/29/2018	2.5	11.0	21.92	135.33	155.47	5.20	<2.00
3/30/2018	6.2	2.0	22.26	120.67	177.24	4.07	<2.00
3/31/2018	4.3	2.0	20.62	114.00	168.29	3.83	<2.00
4/1/2018	2.3	2.0	20.74	160.00	161.42	3.70	<2.00
4/2/2018	5.2	2.0	22.78	140.00	146.60	6.49	<2.00
4/3/2018	7.8	11.0	32.70	134.00	130.00	8.67	2.13
4/4/2018	6.1	4.0	26.11	142.00	111.47	8.47	2.06
4/5/2018	4.4	2.0	20.40	114.00	125.545	6.33	<2.00
4/6/2018	7.2	2.0	26.69	126.00	172.92	7.40	2.07
4/7/2018	6.8	4.0	20.32	98.67	127.31	5.07	<2.00
4/8/2018	2.0	2.0	20.38	126.67	146.46	5.87	<2.00
4/9/2018	2.9	8.0	19.29	119.33	151.56	6.07	<2.00
4/10/2018	4.3	4.0	20.86	141.33	159.60	6.87	<2.00
4/11/2018	8.8	2.8	19.61	137.33	141.31	5.87	<2.00
4/12/2018	4.3	2.0	19.61	141.33	131.55	6.93	<2.00
4/13/2018	3.5	4.0	19.59	130.67	204.77	3.20	<2.00
4/14/2018	8.5	2.0	19.01	134.67	229.01	3.73	<2.00
4/15/2018	4.6	2.0	19.65	125.33	177.36	6.13	<2.00
4/16/2018	19.0	23.0	60.69	173.33	123.13	26.33	4.69
4/17/2018	4.6	4.0	25.01	114.00	92.65	5.60	<2.00
4/18/2018	3.2	2.0	23.35	84.67	125.76	4.03	<2.00

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

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
4/19/2018	2.0	4.0	33.95	98.67	118.59	9.47	2.18
4/20/2018	2.4	2.0	22.57	98.67	146.66	5.87	2.13
4/21/2018	4.1	2.0	21.91	95.33	132.22	10.53	2.30
4/22/2018	2.5	4.0	21.65	88.67	117.47	8.87	2.85
4/23/2018	4.9	2.0	21.71	108.67	124.69	7.07	2.06
4/24/2018	23.0	11.0	22.30	126.00	136.43	6.53	2.01
4/25/2018	10.7	2.0	54.13	150.00	133.96	13.87	2.83
4/26/2018	6.2	8.0	31.36	84.67	74.85	7.13	2.16
4/27/2018	1.4	2.0	37.86	108.00	111.95	25.47	5.20
4/28/2018	1.4	2.0	26.34	75.33	103.64	7.13	2.37
4/29/2018	2.0	2.0	26.99	98.67	126.20	9.33	2.47
4/30/2018	1.0	8.0	26.72	90.67	122.15	15.33	3.85
5/1/2018	1.0	2.0	24.70	114.00	117.35	15.20	3.14
5/2/2018	12.6	8.0	23.89	120.67	117.70	17.00	3.53
5/3/2018	1.4	2.0	23.29	109.33	118.94	9.40	2.76
5/4/2018	2.7	2.0	23.11	107.33	160.70	8.33	2.55
5/5/2018	7.0	4.0	21.80	134.00	136.17	5.93	2.19
5/6/2018	1.8	2.0	26.61	126.67	149.57	7.00	2.38
5/7/2018	2.9	2.0	23.44	136.67	154.04	9.80	2.62
5/8/2018	2.5	2.0	20.86	101.33	149.55	6.40	2.77
5/9/2018	4.6	2.8	20.60	150.67	154.68	9.27	2.99
5/10/2018	1.8	2.0	20.77	147.33	130.45	8.20	2.31
5/11/2018	2.5	2.0	19.79	143.33	207.10	7.47	2.125
5/12/2018	4.0	2.0	23.79	168.00	178.01	11.33	2.84
5/13/2018	35.2	34.0	20.22	138.67	139.745	16.13	3.08
5/14/2018	17.6	11.0	19.99	132.67	177.36	12.60	3.10
5/15/2018	10.9	4.0	27.07	176.67	155.28	10.40	2.46
5/16/2018	1.7	2.0	20.43	164.00	143.82	9.40	2.55
5/17/2018	3.9	2.0	22.92	139.33	149.71	6.93	3.23
5/18/2018	3.2	2.0	19.05	143.33	186.29	7.20	2.87
5/19/2018	4.0	4.0	24.38	126.00	177.65	9.60	3.29
5/20/2018	2.7	4.0	22.03	109.33	125.38	9.33	3.19
5/21/2018	8.3	8.0	18.67	139.33	144.07	8.00	2.80
5/22/2018	13.8	17.0	19.94	148.67	159.44	7.93	2.93
5/23/2018	7.1	4.0	18.36	153.33	188.04	5.93	2.17
5/24/2018	5.9	17.0	18.03	150.67	161.36	5.87	2.07
5/25/2018	6.2	13.0	18.02	163.33	182.71	6.13	<2.00
5/26/2018	4.0	11.0	16.90	158.67	185.55	3.00	<2.00
5/27/2018	4.1	2.0	18.01	134.00	179.58	5.20	<2.00
5/28/2018	3.1	2.0	18.11	152.67	158.69	5.33	<2.00
5/29/2018	4.6	6.0	16.83	170.67	189.09	5.20	<2.00
5/30/2018	5.4	4.0	16.62	192.00	214.25	5.20	<2.00
5/31/2018	7.3	13.0	16.91	173.33	197.13	5.47	2.14
6/1/2018	4.8	30.0	17.50	192.00	227.22	4.80	<2.00
6/2/2018	3.2	4.0	16.25	179.33	201.11	4.00	2.12
6/3/2018	1.4	4.0	16.03	162.67	193.45	4.93	2.05
6/4/2018	2.3	2.0	29.36	182.67	172.93	10.67	2.76
6/5/2018	6.8	13.0	20.63	149.33	154.02	8.27	2.35
6/6/2018	8.3	3.7	16.69	170.67	163.63	5.13	<2.00
6/7/2018	12.3	11.0	16.54	196.00	178.28	5.33	<2.00
6/8/2018	1.0	2.0	15.70	162.67	216.28	3.87	<2.00
6/9/2018	2.5	2.0	15.23	162.67	224.06	3.97	2.80
6/10/2018	3.3	4.0	15.56	158	147.31	4.6667	<2
6/11/2018	3.2	13.0	15.59	169	161.55	4.4000	<2

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
6/12/2018	2.9	2.0	15.80	184	172.56	5.1000	<2
6/13/2018	1.4	7.6	16.32	204	161.25	4.8500	<2
6/14/2018	4.3	11.0	15.44	186	152.47	4.5333	<2
6/15/2018	2.0	2.0	15.57	135	193.81	3.5333	2.14
6/16/2018	5.5	4.5	14.71	175	215.36	6.6000	2.22
6/17/2018	1.7	2.0	14.11	140	153.27	6.2000	2.19
6/18/2018	3.0	2.0	15.79	169	166.51	6	2.18
6/19/2018	4.1	2.0	15.01	200	161.17	6.3333	2.51
6/20/2018	2.5	8.5	14.39	175	181.73	5.6000	2.17
6/21/2018	4.6	11.0	14.46	179	190.15	5.4666	2.14
6/22/2018	5.7	2.0	14.34	175	209.50	5.8000	2.14
6/23/2018	3.2	6.1	15.04	176	231.64	5.8000	2.38
6/24/2018	2.5	4.5	16.78	164	158.15	5.6666	2.09
6/25/2018	9.6	17.0	14.64	184	201.32	5.0666	2.41
6/26/2018	3.9	6.8	14.27	183	288.25	4.6667	2.11
6/27/2018	8.8	23.7	14.74	178	223.20	5.2666	2.17
6/28/2018	3.2	2.0	38.51	199	174.49	6.1333	2.68
6/29/2018	1.4	2.0	15.56	121	107.19	4.2500	3.57
6/30/2018	4.4	4.5	14.52	133	166.78	3.6500	<2
7/1/2018	4.6	23.0	13.49	137	169.70	3.4500	<2
7/2/2018	4.4	4.0	14.19	144	176.20	3.6500	<2
7/3/2018	2.9	7.8	14.61	164	205.29	4.1500	<2
7/4/2018	3.5	15.9	12.90	161	175.24	3.4500	<2
7/5/2018	2.5	7.8	14.25	162	150.40	3.7333	<2
7/6/2018	2.5	4.5	23.48	173	150.07	5.4667	<2
7/7/2018	5.7	4.5	14.29	147	185.14	2.6500	<2
7/8/2018	2.3	4.0	13.74	131	155.11	3.3500	<2
7/9/2018	5.7	2.0	14.35	148	191.79	3.8500	<2
7/10/2018	3.5	4.5	13.97	180	178.74	4.1000	<2
7/11/2018	3.1	5.2	13.97	242	229.81	4.5000	<2
7/12/2018	6.7	13.0	13.47	184	201.02	4.3500	<2
7/13/2018	2.9	13.0	14.10	160	214.55	4.7333	<2
7/14/2018	5.5	9.3	14.12	185	203.25	5.0500	<2
7/15/2018	1.4	13.0	13.52	138	167.73	5.4000	<2
7/16/2018	5.8	13.0	13.37	169	190.16	4.9333	<2
7/17/2018	4.0	17.0	24.15	173	223.67	7.7333	<2
7/18/2018	5.7	22.5	14.41	130	145.86	4.2666	<2
7/19/2018	3.5	7.8	13.48	160	187.42	5	<2
7/20/2018	2.0	33.0	13.38	155	199.73	4.3500	<2
7/21/2018	6.2	7.8	13.10	162	225.96	4.9000	<2
7/22/2018	6.3	7.8	21.15	165	179.04	6.7500	2.50
7/23/2018	4.3	4.5	14.64	146	182.51	4.3500	<2
7/24/2018	1.4	2.0	14.19	154	206.15	4.5000	<2
7/25/2018	3.4	19.1	14.62	175	228.37	5.0500	<2
7/26/2018	2.0	2.0	19.91	200	172.10	5.0500	<2
7/27/2018	15.7	170.0	14.16	177	169.39	4.2666	<2
7/28/2018	4.5	49.0	13.75	160	230.76	3.6000	<2
7/29/2018	6.3	33.0	12.98	123	200.92	4.5500	<2
7/30/2018	1.0	11.0	13.62	158	198.85	4	<2
7/31/2018	2.9	11.0	13.34	178	249.93	2.8500	<2
8/1/2018	6.7	46.6	14.24	170	225.56	2.8000	<2
8/2/2018	1.0	4.5	14.03	171	232.25	2.5500	<2
8/3/2018	1.0	2.0	14.05	177	208.76	2.5000	<2
8/4/2018	1.0	4.5	30.56	186	204.89	3.9500	<2

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
8/5/2018	3.2	17.0	13.09	110.71	161.55	2.1500	<2
8/6/2018	2.7	17.0	12.98	137.50	176.63	2.5000	<2
8/7/2018	5.5	49.0	13.56	192	215.18	2.2000	<2
8/8/2018	1.6	9.8	13.45	169	254.79	3.1000	<2
8/9/2018	3.2	17.0	17.11	186	193.15	2.4000	<2
8/10/2018	2.5	170.0	13.13	183	228.91	2.7000	<2
8/11/2018	2.5	4.5	30.54	179	197.77	3.7000	<2
8/12/2018	2.0	4.5	22.15	99	103.81	3.2500	<2
8/13/2018	2.0	13.0	24.95	105	134.18	3	<2
8/14/2018	1.0	4.5	16.38	106	159.98	<2	<2
8/15/2018	2.2	6.5	14.73	153	213.04	2.1500	<2
8/16/2018	1.4	23.0	14.17	165	194.90	2	<2
8/17/2018	2.0	7.8	14.26	171	175.98	<2	<2
8/18/2018	1.4	2.0	21.17	159	169.04	2.7000	<2
8/19/2018	2.0	2.0	14.61	132.50	142.27	2.1500	<2
8/20/2018	1.0	4.5	14.09	145	163.31	2.5000	<2
8/21/2018	1.0	13.0	14.43	168	202.25	2.3000	<2
8/22/2018	3.4	42.6	22.11	189	200.17	3.2500	<2
8/23/2018	1.0	33.0	14.18	145	167.01	2.8500	<2
8/24/2018	2.3	23.0	13.60	158	198.94	2.1500	<2
8/25/2018	2.4	6.8	13.66	151	203.08	<2	<2
8/26/2018	1.4	13.0	13.44	143	174.37	<2	<2
8/27/2018	1.0	13.0	13.32	162	202.76	2.1500	<2
8/28/2018	1.4	7.8	13.62	178	204.81	<2	<2
8/29/2018	1.7	6.1	13.36	186	218.50	<2	<2
8/30/2018	4.4	6.8	13.41	189	206.62	2.1500	<2
8/31/2018	1.0	33.0	13.08	194	228.42	2.4000	<2
9/1/2018	1.8	7.8	12.55	155	185.08	2.0500	<2
9/2/2018	1.0	17.0	12.48	150	226.93	<2	<2
9/3/2018	1.0	2.0	13.22	177	185.46	2.4000	<2
9/4/2018	1.7	13.0	13.09	166	216.70	2.6500	<2
9/5/2018	1.6	3.0	13.22	194	233.40	2.4000	<2
9/6/2018	2.0	4.0	19.87	179	200.81	3.2500	<2
9/7/2018	2.4	13.0	15.31	170	177.12	2.7500	<2
9/8/2018	3.1	49.0	13.79	146	202.45	2.3000	<2
9/9/2018	1.4	4.5	13.60	126	200.49	2.1500	<2
9/10/2018	1.4	11.0	23.05	167	207.93	6.8500	<2
9/11/2018	8.0	7.8	30.42	132	136.79	3.2500	<2
9/12/2018	1.8	7.8	36.64	145	174.85	6.6666	<2
9/13/2018	3.9	49.0	30.63	113	89.36	3.1000	<2
9/14/2018	2.0	6.8	16.41	135	132.13	2.6000	<2
9/15/2018	3.1	70.0	15.32	139	156.59	2.2000	<2
9/16/2018	1.7	2.0	14.89	152	150.17	2.2000	<2
9/17/2018	1.0	23.0	15.18	156	155.17	2.2000	<2
9/18/2018	1.0	49.0	27.93	166	162.10	4.5500	<2
9/19/2018	1.3	5.9	17.33	126	97.65	2.7500	<2
9/20/2018	1.0	17.0	16.28	134	149.42	2.3500	<2
9/21/2018	1.7	33.0	15.87	159	176.50	2.1500	<2
9/22/2018	2.7	13.0	15.49	145	176.65	<2	<2
9/23/2018	1.0	2.0	15.92	124	168.83	2.2500	<2
9/24/2018	2.0	13.0	15.78	133	160.97	2.5500	<2
9/25/2018	1.0	7.8	46.83	184	161.28	5.5000	<2
9/26/2018	2.2	5.9	43.39	86	63.28	9.6000	<2
9/27/2018	2.0	4.5	30.83	89	84.60	3.5500	<2

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
9/28/2018	1.0	11.0	32.32	89	86.14	5.4167	<2
9/29/2018	1.4	7.8	21.26	108	105.97	3.4500	<2
9/30/2018	1.7	79.0	20.27	109	93.69	<2	<2
10/1/2018	1.4	11.0	22.40	104	164.30	4.0500	<2
10/2/2018	1.4	7.8	37.01	111	134.30	5.2000	<2
10/3/2018	2.0	24.8	38.98	94	76.11	7	<2
10/4/2018	1.0	4.5	23.96	106	114.18	2.3500	<2
10/5/2018	2.5	4.5	22.22	104	116.53	2.2000	<2
10/6/2018	1.0	2.0	21.23	110	114.69	2.2500	<2
10/7/2018	1.8	2.0	20.57	114	129.27	<2	<2
10/8/2018	1.4	2.0	20.84	98	139.79	4.1333	<2
10/9/2018	1.0	7.8	20.60	122	139.22	2.6000	<2
10/10/2018	1.3	3.9	19.55	129	130.57	2.1500	<2
10/11/2018	1.0	2.0	37.88	161	133.88	17.800	2.41
10/12/2018	2.5	17.0	43.21	85	76.38	13.600	<2
10/13/2018	1.0	2.0	24.53	84	108.73	7.1000	<2
10/14/2018	1.8	7.8	22.94	92	101.76	5.3000	<2
10/15/2018	2.5	6.8	23.67	112	147.34	15.200	2.08
10/16/2018	223.7	40.2	26.96	126	130.18	5.1000	<2
10/17/2018	1.7	11.5	21.35	109	144.15	3.4666	<2
10/18/2018	1.4	4.0	20.33	103	147.89	3	<2
10/19/2018	1.4	6.8	20.33	123	162.48	3.6000	<2
10/20/2018	2.4	2.0	19.68	114	140.80	4.6500	<2
10/21/2018	2.3	4.0	20.51	113	150.47	5.9334	<2
10/22/2018	5.0	7.8	20.09	112	172.74	4.0500	<2
10/23/2018	5.1	17.0	21.14	126	200.91	4.3500	<2
10/24/2018	4.6	9.3	19.60	162	201.86	3.8500	<2
10/25/2018	3.2	7.8	18.58	141	169.75	4.5500	<2
10/26/2018	4.1	4.5	18.51	137	186.08	6.4000	<2
10/27/2018	6.2	13.0	52.83	119	137.13	16.100	2.31
10/28/2018	2.4	7.8	22.26	60	111.28	4.4000	<2
10/29/2018	3.0	2.0	29.03	107	158.94	5.9166	<2
10/30/2018	2.9	2.0	21.66	110	149.55	5.1000	<2
10/31/2018	2.3	9.3	20.42	113	182.26	3.2500	<2
11/1/2018	1.4	4.5	20.24	113	138.90	6.3750	<2
11/2/2018	3.5	7.8	25.84	158	149.61	10.800	2.23
11/3/2018	15.0	33.0	51.35	103	123.71	8.0666	<2
11/4/2018	1.0	6.8	24.20	73	101.68	5.2667	<2
11/5/2018	2.9	2.0	29.99	81	105.96	5.2000	<2
11/6/2018	2.0	7.8	48.46	99	100.70	9.5333	<2
11/7/2018	3.8	23.0	27.48	79	84.31	7.3000	<2
11/8/2018	2.3	1.8	26.06	80	114.14	5.3000	<2
11/9/2018	5.1	46.0	37.72	93	115.27	9.8000	<2
11/10/2018	2.0	11.0	45.39	79	76.06	10.400	2.36
11/11/2018	9.0	13.0	30.36	39.666	81.96	6.0500	<2
11/12/2018	1.8	7.8	29.17	73	86.04	7.7000	<2
11/13/2018	9.8	17.0	71.13	63	78.47	10.700	<2
11/14/2018	12.9	14.9	35.75	57	80.47	15.300	3.08
11/15/2018	8.5	23.0	33.37	56	93.70	14.200	2.35
11/16/2018	10.8	17.0	54.71	80	78.13	24.250	3.33
11/17/2018	24,000,000.0	33.0	36.08	52	82.51	79	7.46
11/18/2018	6.5	63.0	33.63	57	86.70	21.500	3.12
11/19/2018	26.8	22.0	32.62	74	101.13	11.857	<2
11/20/2018	3.5	20.0	36.01	89.500	110.68	6.9000	<2

Bucklin Point 2018 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 TSS (mg/L)	Final Effluent CBOD (mg/L)
11/21/2018	6.0	3.0	30.96	75	104.42	5.7000	<2
11/22/2018	11.7	4.5	28.51	94	98.12	11.200	2.15
11/23/2018	7.6	6.8	26.63	75	132.82	4.6500	<2
11/24/2018	4.8	4.0	27.23	95	125.38	6.2667	<2
11/25/2018	3.6	2.0	52.44	100	110.81	7.9000	<2
11/26/2018	7.8	2.0	47.26	90	134.61	9.8000	<2
11/27/2018	4.5	13.0	48.13	72	70.62	9.8000	<2
11/28/2018	8.0	36.4	34.43	64	86.94	9.8000	<2
11/29/2018	17.5	17.0	31.69	76	86.10	11.100	<2
11/30/2018	13.2	7.8	30.26	85	108.99	7.3500	<2
12/1/2018	6.2	7.8	28.61	85	104.85	5.3500	<2
12/2/2018	7.9	49.0	51.49	77	102.80	5.6000	<2
12/3/2018	9.1	7.8	30.68	60	97.73	6.6000	<2
12/4/2018	15.8	13.0	28.56	90	107.66	7.5000	<2
12/5/2018	1.3	2.0	27.83	79	97.34	5.6000	<2
12/6/2018	5.2	4.5	27.29	74.500	124.32	4.2500	<2
12/7/2018	4.6	2.0	25.98	92	131.58	4.3000	<2
12/8/2018	2.5	9.2	25.78	86	138.31	4.5500	<2
12/9/2018	3.5	4.5	25.73	92	113.40	5.2500	<2
12/10/2018	8.2	2.0	24.87	90	124.22	4.5500	<2
12/11/2018	8.3	11.0	24.41	90	153.50	5.2000	<2
12/12/2018	4.8	5.6	23.59	96.500	140.40	4.7500	<2
12/13/2018	4.4	2.0	23.39	104.50	161.54	4.5000	<2
12/14/2018	8.8	13.0	22.88	129	160.35	5.9500	<2
12/15/2018	5.0	6.8	23.45	106	175.57	6.1500	<2
12/16/2018	12.4	7.8	36.42	113	157.36	6.7000	2.07
12/17/2018	11.4	4.5	25.41	111	134.28	6.7000	<2
12/18/2018	8.8	6.8	22.36	105	153.95	3.0500	<2
12/19/2018	9.1	2.8	22.07	111.50	187.22	5.2500	2.16
12/20/2018	5.0	2.0	22.27	125	176.83	7.6000	2.01
12/21/2018	13.7	23.0	63.58	143	156.99	24	5.65
12/22/2018	7.1	2.0	29.46	67	100.46	7.6000	2
12/23/2018	7.1	7.8	25.57	64	151.85	2.8000	<2
12/24/2018	5.0	2.0	26.46	76	159.37	5.1000	<2
12/25/2018	5.0	7.8	23.63	86	186.02	5.4000	<2
12/26/2018	5.0	2.8	23.79	103	163.65	6.2000	<2
12/27/2018	5.0	17.0	23.27	110	172.19	6.3500	<2
12/28/2018	7.1	4.5	42.04	115	192.08	9.5000	2.27
12/29/2018	12.4	4.5	24.77	76	102.82	6.6206	<2
12/30/2018	5.0	2.0	23.85	75	162.93	5.9334	<2
12/31/2018	5.0	4.5	31.10	93	144.06	10.500	2.39

Field's Point Bacteria Data 2018

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*)
1/1/2018	Monday	<2		3		4.1
1/2/2018	Tuesday	<2		4.1		5.2
1/3/2018	Wednesday	<2	<2	8.5	5.1	8.5
1/4/2018	Thursday	2		13.2		5.2
1/5/2018	Friday	<2		5.2		2
1/6/2018	Saturday	<2		7.3		3
1/7/2018	Sunday	<2		3.1		15.5
1/8/2018	Monday	<2		5.1		4.1
1/9/2018	Tuesday	4		5.2		6.3
1/10/2018	Wednesday	<2	<2	8.4	5.2	5.2
1/11/2018	Thursday	<2		6.3		3.1
1/12/2018	Friday	<2		9.7		13
1/13/2018	Saturday	2		9.6		52
1/14/2018	Sunday	4		30.7		87.1
1/15/2018	Monday	<2		23.3		56.5
1/16/2018	Tuesday	2		39.3		27.2
1/17/2018	Wednesday	<2	2	16.3	22.8	35
1/18/2018	Thursday	2		9.5		43.1
1/19/2018	Friday	2		20.1		15.3
1/20/2018	Saturday	<2		6.3		27.2
1/21/2018	Sunday	<2		5.1		35
1/22/2018	Monday	<2		10.9		7.5
1/23/2018	Tuesday	2		4.1		91.3
1/24/2018	Wednesday	<2	2	132	124.6	122.2
1/25/2018	Thursday	2		68.7		238.2
1/26/2018	Friday	4		98.8		22.6
1/27/2018	Saturday	2		10.8		7.4
1/28/2018	Sunday	2		4.1		49.7
1/29/2018	Monday	2		10.9		7.5
1/30/2018	Tuesday	<2		6.3		24.6
1/31/2018	Wednesday	2	<2	58.5	56.1	25.6
2/1/2018	Thursday	<2		6.3		62.7
2/2/2018	Friday	<2		57.3		9.6
2/3/2018	Saturday	<2		5.2		30.1
2/4/2018	Sunday	<2		17.3		52
2/5/2018	Monday	<2		9.7		91.1
2/6/2018	Tuesday	<2		33.6		69.5
2/7/2018	Wednesday	2	2	9.5	8.5	23.3
2/8/2018	Thursday	7		23.5		7.5
2/9/2018	Friday	<2		30.1		22.8
2/10/2018	Saturday	<2		10.9		45.2
2/11/2018	Sunday	<2		37.3		8.4
2/12/2018	Monday	2		13.2		26.6
2/13/2018	Tuesday	<2		9.4		44.3
2/14/2018	Wednesday	<2	<2	8.4	10.8	12.1
2/15/2018	Thursday	8		13.1		8.5
2/16/2018	Friday	<2		11.9		5.2
2/17/2018	Saturday	<2		10.7		8.4
2/18/2018	Sunday	<2		29.8		77.2
2/19/2018	Monday	<2		14.5		7.5
2/20/2018	Tuesday	2		7.4		6.3

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

all results are in MPN/100 mL

		Fecal Coliform		Enterococci		
Date	Day of the Week	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
2/21/2018	Wednesday	<2	2	7.3	5.2	7.5
2/22/2018	Thursday	<2		4.1		22.3
2/23/2018	Friday	<2		20.9		8.4
2/24/2018	Saturday	<2		1		7.5
2/25/2018	Sunday	2		20.4		20.1
2/26/2018	Monday	4		10.9		45.9
2/27/2018	Tuesday	2		13.4		22.3
2/28/2018	Wednesday	<2	<2	8.4	10.8	9.5
3/1/2018	Thursday	<2		14.5		25.3
3/2/2018	Friday	2		15.8		2
3/3/2018	Saturday	<2		3		9.8
3/4/2018	Sunday	8		7.3		6.3
3/5/2018	Monday	2		6.3		11
3/6/2018	Tuesday	<2		6.3		21.3
3/7/2018	Wednesday	<2	<2	5.2	5.2	9.7
3/8/2018	Thursday	<2		7.4		90.6
3/9/2018	Friday	<2		20.6		14.5
3/10/2018	Saturday	<2		4.1		30.1
3/11/2018	Sunday	<2		9.7		46.5
3/12/2018	Monday	<2		21.1		29.1
3/13/2018	Tuesday	2		25.6		13.4
3/14/2018	Wednesday	<2	2	5.2	6.3	24.9
3/15/2018	Thursday	2		13.5		37.9
3/16/2018	Friday	<2		17.9		20.9
3/17/2018	Saturday	<2		17.3		30.9
3/18/2018	Sunday	<2		4.1		35.5
3/19/2018	Monday	2		1		36.4
3/20/2018	Tuesday	<2		22.8		74.3
3/21/2018	Wednesday	2	<2	56.3	35.9	21.8
3/22/2018	Thursday	<2		46		59.1
3/23/2018	Friday	<2		28.5		7.4
3/24/2018	Saturday	<2		12.1		14.4
3/25/2018	Sunday	<2		5.1		14.2
3/26/2018	Monday	4		21.3		29.4
3/27/2018	Tuesday	2		13.4		50.4
3/28/2018	Wednesday	<2	<2	13.5	31.1	60.5
3/29/2018	Thursday	<2		8.6		7.5
3/30/2018	Friday	<2		8.4		6.3
3/31/2018	Saturday	<2		2		9.8
4/1/2018	Sunday	<2		<1		20.1
4/2/2018	Monday	2		10.8		51.2
4/3/2018	Tuesday	<2		23.1		21.8
4/4/2018	Wednesday	<2	<2	26.2	14.6	104.3
4/5/2018	Thursday	<2		4.1		18.3
4/6/2018	Friday	<2		13.4		10.8
4/7/2018	Saturday	2		14.5		13.4
4/8/2018	Sunday	2		8.5		21.1
4/9/2018	Monday	<2		16.9		19.9
4/10/2018	Tuesday	<2		16.1		9.7
4/11/2018	Wednesday	<2	<2	9.7	7.3	17.3
4/12/2018	Thursday	2		26.9		24.3

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

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*)
4/13/2018	Friday	<2		4.1		3.1
4/14/2018	Saturday	<2		5.2		3.1
4/15/2018	Sunday	2		5.2		7.5
4/16/2018	Monday	2		11		<1
4/17/2018	Tuesday	4		3.1		17.5
4/18/2018	Wednesday	2	2	5.2	1	12.1
4/19/2018	Thursday	<2		<1		7.5
4/20/2018	Friday	4		<1		8.5
4/21/2018	Saturday	<2		<1		1
4/22/2018	Sunday	4		<1		5.2
4/23/2018	Monday	<2		4.1		12.1
4/24/2018	Tuesday	<2		4.1		4.1
4/25/2018	Wednesday	2	<2	1	<1	2
4/26/2018	Thursday	4		<1		8.5
4/27/2018	Friday	2		<1		<1
4/28/2018	Saturday	2		6.3		4.1
4/29/2018	Sunday	7		<1		1
4/30/2018	Monday	4		<1		1
5/1/2018	Tuesday	2		<1		<1
5/2/2018	Wednesday	4	4	1	<1	3.1
5/3/2018	Thursday	9		<1		4.1
5/4/2018	Friday	2		<1		4.1
5/5/2018	Saturday	4		1		1
5/6/2018	Sunday	<2		2		5.2
5/7/2018	Monday	<2		3		7.3
5/8/2018	Tuesday	8		<1		3.1
5/9/2018	Wednesday	2	4	<1	<1	2
5/10/2018	Thursday	4		<1		1
5/11/2018	Friday	<2		6.3		2
5/12/2018	Saturday	<2		1		3
5/13/2018	Sunday	4		3		2
5/14/2018	Monday	<2		2		6.3
5/15/2018	Tuesday	<2		6.3		2
5/16/2018	Wednesday	2	<2	2	2	2
5/17/2018	Thursday	<2		2		4.1
5/18/2018	Friday	<2		5.2		4.1
5/19/2018	Saturday	<2		1		4.1
5/20/2018	Sunday	<2		2		3.1
5/21/2018	Monday	2		3.1		12.1
5/22/2018	Tuesday	<2		13.4		8.5
5/23/2018	Wednesday	2	2	6.3	7.5	5.2
5/24/2018	Thursday	<2		6.3		1
5/25/2018	Friday	<2		7.4		4.1
5/26/2018	Saturday	<2		5.2		4.1
5/27/2018	Sunday	2		1		11
5/28/2018	Monday	<2		2		3.1
5/29/2018	Tuesday	<2		5.2		4.1
5/30/2018	Wednesday	2	<2	5.2	4.1	5.2
5/31/2018	Thursday	<2		3.1		4.1
6/1/2018	Friday	<2		4.1		6.1
6/2/2018	Saturday	<2		5.2		3.1

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

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*)
6/3/2018	Sunday	<2		<1		6.3
6/4/2018	Monday	<2		3.1		10.8
6/5/2018	Tuesday	2		<1		4.1
6/6/2018	Wednesday	7	7	2	<1	3.1
6/7/2018	Thursday	8		<1		5.2
6/8/2018	Friday	<2		5.2		3.1
6/9/2018	Saturday	2		5.2		4.1
6/10/2018	Sunday	<2		2		7.5
6/11/2018	Monday	<2.00		2		3.1
6/12/2018	Tuesday	4.5		3		13.2
6/13/2018	Wednesday	<2.00	<2.00	8.6	6.3	5.2
6/14/2018	Thursday	2		4.1		3
6/15/2018	Friday	2		7.5		3.1
6/16/2018	Saturday	<2.00		4.1		<1.00
6/17/2018	Sunday	2		<1.00		2
6/18/2018	Monday	2		<1.00		4.1
6/19/2018	Tuesday	4		<1.00		1
6/20/2018	Wednesday	<2.00	2	2	<1.00	4.1
6/21/2018	Thursday	2		<1.00		4.1
6/22/2018	Friday	<2.00		2		<1.00
6/23/2018	Saturday	13		4.1		6.3
6/24/2018	Sunday	4.5		2		7.4
6/25/2018	Monday	2		6.3		2
6/26/2018	Tuesday	<2.00		2		4.1
6/27/2018	Wednesday	<2.00	<2.00	7.3	9.7	<1.00
6/28/2018	Thursday	<2.00		5.2		1
6/29/2018	Friday	23		1		<1.00
6/30/2018	Saturday	13		1		1
7/1/2018	Sunday	13		<1.00		<1.00
7/2/2018	Monday	2		<1.00		3.1
7/3/2018	Tuesday	<2.00		2		6.3
7/4/2018	Wednesday	<2.00	<2.00	<1.00	1	<1.00
7/5/2018	Thursday	<2.00		<1.00		7.5
7/6/2018	Friday	<2.00		10.8		11.9
7/7/2018	Saturday	7.8		<1.00		6.3
7/8/2018	Sunday	<2.00		7.4		6.3
7/9/2018	Monday	<2.00		1		6.3
7/10/2018	Tuesday	<2.00		2		4.1
7/11/2018	Wednesday	<2.00	<2.00	2	6.3	5.2
7/12/2018	Thursday	11		<1.00		3
7/13/2018	Friday	<2.00		1		6.3
7/14/2018	Saturday	<2.00		<1.0000		6.3
7/15/2018	Sunday	<2.00		<1.0000		1
7/16/2018	Monday	4.5		3.1		4.1
7/17/2018	Tuesday	<2.00		5.2		5.2
7/18/2018	Wednesday	2	7.8	1	6.3	7.4
7/19/2018	Thursday	<2.00		<1.0000		9.8
7/20/2018	Friday	7.8		1		1
7/21/2018	Saturday	<2.00		<1.0000		2
7/22/2018	Sunday	2		2		<1.0000
7/23/2018	Monday	<2.00		<1.0000		10.9

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

all results are in MPN/100 mL

		Fecal Coliform		Enterococci		
Date	Day of the Week	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 1 (08:00*)	Grab 1 Duplicate (08:00*)	Grab 2 (04:00*)
7/24/2018	Tuesday	<2.00		6.3		5.2
7/25/2018	Wednesday	2	2	5.2	4.1	13.5
7/26/2018	Thursday	<2.00		1		4.1
7/27/2018	Friday	<2.00		1		<1.0000
7/28/2018	Saturday	2		<1.0000		<1.0000
7/29/2018	Sunday	4.5		<1.0000		<1.0000
7/30/2018	Monday	<2.00		1		<1.0000
7/31/2018	Tuesday	2		<1.0000		1
8/1/2018	Wednesday	2	7.8	<1.0000	1	<1.0000
8/2/2018	Thursday	4.5		<1.0000		4.1
8/3/2018	Friday	<2.00		7.4		3.1
8/4/2018	Saturday	<2.00		1		3
8/5/2018	Sunday	4		1		6.3
8/6/2018	Monday	4.5		1		3.1
8/7/2018	Tuesday	<2.00		9.8		4.1
8/8/2018	Wednesday	4.5	<2.00	2	4.1	9.7
8/9/2018	Thursday	<2.00		2		3.1
8/10/2018	Friday	<2.00		9.7		8.5
8/11/2018	Saturday	2		26.9		2
8/12/2018	Sunday	13		4.1		1
8/13/2018	Monday	4		2		1
8/14/2018	Tuesday	14		2		1
8/15/2018	Wednesday	7.8	9.3	1	1	9.8
8/16/2018	Thursday	4.5		1		8.6
8/17/2018	Friday	2		1		3.1
8/18/2018	Saturday	<2.00		7.4		2
8/19/2018	Sunday	4.5		<1.0000		<1.0000
8/20/2018	Monday	4.5		3		2
8/21/2018	Tuesday	7.8		1		3.1
8/22/2018	Wednesday	17	11	1	1	1
8/23/2018	Thursday	4.5		1		4.1
8/24/2018	Friday	4.5		1		5.2
8/25/2018	Saturday	2		1		<1.0000
8/26/2018	Sunday	1.8		<1.0000		1
8/27/2018	Monday	4.5		1		13.4
8/28/2018	Tuesday	<2.00		12.1		8.5
8/29/2018	Wednesday	<2.00	<2.00	12	3.1	6.3
8/30/2018	Thursday	<2.00		7.5		4.1
8/31/2018	Friday	<2.00		4.1		5.2
9/1/2018	Saturday	<2.00		10.9		3.1
9/2/2018	Sunday	<2.00		5.2		10.9
9/3/2018	Monday	<2.00		3.1		4.1
9/4/2018	Tuesday	4.5		1		7.4
9/5/2018	Wednesday	<2.00	2	11	4.1	25.9
9/6/2018	Thursday	<2.00		190.4		15.5
9/7/2018	Friday	1.8		15.8		19.9
9/8/2018	Saturday	<2.00		13.5		20.9
9/9/2018	Sunday	<2.00		18.3		13
9/10/2018	Monday	2		16		16
9/11/2018	Tuesday	2		3.1		15.6
9/12/2018	Wednesday	<2.00	2	7.5	10.9	2

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

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*)
9/13/2018	Thursday	11		2		65
9/14/2018	Friday	2		5.2		24.6
9/15/2018	Saturday	4.5		1		2
9/16/2018	Sunday	4.5		1		11
9/17/2018	Monday	<2.0		<1.0		13.2
9/18/2018	Tuesday	<2.0		13.5		1
9/19/2018	Wednesday	2	<2.0	2	5.2	14.5
9/20/2018	Thursday	4		<1.0		18.7
9/21/2018	Friday	<2.0		2		25.9
9/22/2018	Saturday	<2.0		12.1		1
9/23/2018	Sunday	4.5		<1.0		8.6
9/24/2018	Monday	2		3.1		6.2
9/25/2018	Tuesday	<2.0		1		4.1
9/26/2018	Wednesday	2	6.8	2	1	1
9/27/2018	Thursday	2		2		2
9/28/2018	Friday	7.8		2		1
9/29/2018	Saturday	2		1		2
9/30/2018	Sunday	2		<1.0		1
10/1/2018	Monday	2		<1.0		31.3
10/2/2018	Tuesday	11		1		7.5
10/3/2018	Wednesday	13	2	2	2	20.1
10/4/2018	Thursday	4.5		20.3		4.1
10/5/2018	Friday	17		<1.0		2
10/6/2018	Saturday	23		5.2		3
10/7/2018	Sunday	6.8		1		<1.0
10/8/2018	Monday	4.5		<1.0		<1.0
10/9/2018	Tuesday	4.5		1		<1.0
10/10/2018	Wednesday	2	2	3	<1.0	4.1
10/11/2018	Thursday	2		3		3.1
10/12/2018	Friday	21		9.6		3
10/13/2018	Saturday	11		5.2		<1.0
10/14/2018	Sunday	23		14.2		5.2
10/15/2018	Monday	21		3.1		1
10/16/2018	Tuesday	13		2		1
10/17/2018	Wednesday	7.8	7.8	1	2	3.1
10/18/2018	Thursday	2		1		3.1
10/19/2018	Friday	4.5		<1.0		<1.0
10/20/2018	Saturday	<2.0		1		1
10/21/2018	Sunday	4.5		<1.0		2
10/22/2018	Monday	4		<1.0		1
10/23/2018	Tuesday	7.8		2		1
10/24/2018	Wednesday	2	7.8	4.1	2	<1.0
10/25/2018	Thursday	4.5		<1.0		6.3
10/26/2018	Friday	7.8		<1.0		1
10/27/2018	Saturday	11		1		2
10/28/2018	Sunday	13		3		6.3
10/29/2018	Monday	22		3.1		12
10/30/2018	Tuesday	4		2		9.8
10/31/2018	Wednesday	2	4	2	3.1	3
11/1/2018	Thursday	<2.0		<1.0		8.6
11/2/2018	Friday	14		6.3		12.2

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

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*)
11/3/2018	Saturday	2		1		13.1
11/4/2018	Sunday	2		1		2
11/5/2018	Monday	7.8		<1.0		5.2
11/6/2018	Tuesday	4.5		<1.0		2
11/7/2018	Wednesday	4.5	2	5.2	3.1	9.7
11/8/2018	Thursday	<2.0		9.8		16.9
11/9/2018	Friday	<2.0		8.6		4.1
11/10/2018	Saturday	13		1		10.9
11/11/2018	Sunday	2		10.9		28.8
11/12/2018	Monday	2		8.5		13.4
11/13/2018	Tuesday	<2.0		10.9		16.1
11/14/2018	Wednesday	13	4.5	2	4.1	13.4
11/15/2018	Thursday	4.5		4.1		12
11/16/2018	Friday	<2.0		16		35.5
11/17/2018	Saturday	<2.0		13.1		12
11/18/2018	Sunday	2		2		29.2
11/19/2018	Monday	7.8		11		25.3
11/20/2018	Tuesday	2		4.1		37.3
11/21/2018	Wednesday	<2.0	2	7.5	9.5	34.1
11/22/2018	Thursday	<2.0		10.8		8.6
11/23/2018	Friday	11		7.4		161.6
11/24/2018	Saturday	<2.0		17.1		78.4
11/25/2018	Sunday	2		63.8		53
11/26/2018	Monday	2		17.4		8.6
11/27/2018	Tuesday	2		1		28.5
11/28/2018	Wednesday	<2.0	<2.0	9.7	4.1	27.5
11/29/2018	Thursday	2		12.1		101.7
11/30/2018	Friday	4.5		41.7		24.6
12/1/2018	Saturday	4.5		36.9		113
12/2/2018	Sunday	<2.0		59.8		31.8
12/3/2018	Monday	<2.0		16.1		116.9
12/4/2018	Tuesday	<2.0		36.4		88.4
12/5/2018	Wednesday	<2.0	2	26.2	34.5	39.3
12/6/2018	Thursday	<2.0		29.2		3.1
12/7/2018	Friday	2		14.5		18.5
12/8/2018	Saturday	<2.0		14.6		25.6
12/9/2018	Sunday	<2.0		4.1		113.7
12/10/2018	Monday	4		56.3		32.7
12/11/2018	Tuesday	2		9.6		112.4
12/12/2018	Wednesday	4	<2.0	16.9	12.1	14.4
12/13/2018	Thursday	<2.0		5.2		10
12/14/2018	Friday	2		10		15
12/15/2018	Saturday	<2.0		5		26
12/16/2018	Sunday	<2.0		<5.0		<5.0
12/17/2018	Monday	<2.0		<5.0		49
12/18/2018	Tuesday	6.1		5		15.5
12/19/2018	Wednesday	<2.0	2	10	10	5
12/20/2018	Thursday	<2.0		5		5
12/21/2018	Friday	<2.0		10		<5.0
12/22/2018	Saturday	6.8		<5.0		15.5
12/23/2018	Sunday	<2.0		10		10

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Field's Point Bacteria Data 2018

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*)
12/24/2018	Monday	<2.0		5		10
12/25/2018	Tuesday	2		<5.0		<5.0
12/26/2018	Wednesday	<2.0	<2.0	5	5	<5.0
12/27/2018	Thursday	2		<5.0		5
12/28/2018	Friday	7.8		5		<5.0
12/29/2018	Saturday	4.5		<5.0		20.5
12/30/2018	Sunday	<2.0		10		5
12/31/2018	Monday	<2.0		<5.0		5

*Sample times are approximate

Table 3: Field's Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
1/1/2018	Monday	2			4.1	4.1		
1/2/2018	Tuesday	2			2	3.1		
1/3/2018	Wednesday	4	<2		1	<1	2	
1/4/2018	Thursday	<2			3.1	3.1		
1/5/2018	Friday	<2			6.3	<1		
1/6/2018	Saturday	2			2	9.6		
1/7/2018	Sunday	2			6.3	3.1		
1/8/2018	Monday	<2			2	6.3		
1/9/2018	Tuesday	4			3.1	1		
1/10/2018	Wednesday	2	2		3.1	10.9	5.2	
1/11/2018	Thursday	4			6.3	7.5		
1/12/2018	Friday	8			4.1	4.1		
1/13/2018	Saturday	2			9.6	10.9		
1/14/2018	Sunday	2			8.5	14.8		
1/15/2018	Monday	2			9.7	2		
1/16/2018	Tuesday	8			4.1	4.1		
1/17/2018	Wednesday	<2	2		7.5	1	4.1	
1/18/2018	Thursday	<2			8.4	2		
1/19/2018	Friday	2			2	6.3		
1/20/2018	Saturday	<2			6.3	4.1		
1/21/2018	Sunday	<2			1	4.1		
1/22/2018	Monday	<2			<1	5.2		
1/23/2018	Tuesday	4			5.2	6.3		
1/24/2018	Wednesday	4	4		7.5	8.5	6.3	
1/25/2018	Thursday	8			5.2	8.6		
1/26/2018	Friday	4			1	2		
1/27/2018	Saturday	2			6.3	2		
1/28/2018	Sunday	2			1	6.3		
1/29/2018	Monday	<2			1	1		
1/30/2018	Tuesday	2			7.5	1		
1/31/2018	Wednesday	2	<2		3.1	3.1	8.5	
2/1/2018	Thursday	<2			4.1	5.2		
2/2/2018	Friday	22			6.3	16		
2/3/2018	Saturday	4			3	3.1		
2/4/2018	Sunday	<2			5.1	2		
2/5/2018	Monday	2			7.5	4.1		
2/6/2018	Tuesday	4			13.2	7.3		
2/7/2018	Wednesday	<2	2		2	3.1	4.1	
2/8/2018	Thursday	<2			2	4.1		
2/9/2018	Friday	<2			3	2		
2/10/2018	Saturday	<2			2	3.1		
2/11/2018	Sunday	2			5.2	15.8		
2/12/2018	Monday	2			4.1	1		
2/13/2018	Tuesday	<2			4.1	5.2		
2/14/2018	Wednesday	2	2		2	1	4.1	
2/15/2018	Thursday	13			6.3	2		
2/16/2018	Friday	<2			5.2	5.2		
2/17/2018	Saturday	<2			3.1	1		
2/18/2018	Sunday	2			1	3.1		
2/19/2018	Monday	8			3	2		
2/20/2018	Tuesday	2			2	3		
2/21/2018	Wednesday	8	4		4.1	7.5	2	
2/22/2018	Thursday	<2			2	<1		
2/23/2018	Friday	<2			3.1	2		
2/24/2018	Saturday	<2			3.1	4.1		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
2/25/2018	Sunday	2			7.4	4.1		
2/26/2018	Monday	8			5.2	7.4		
2/27/2018	Tuesday	2			3	1		
2/28/2018	Wednesday	4	4		3	1	2	
3/1/2018	Thursday	<2			2	2		
3/2/2018	Friday	11			2	12.1		
3/3/2018	Saturday	<2			16	1		
3/4/2018	Sunday	7			115.3	9.7		
3/5/2018	Monday	<2			9.7	5.2		
3/6/2018	Tuesday	9			5.2	4.1		
3/7/2018	Wednesday	2	2		4.1	2	6.3	
3/8/2018	Thursday	<2			14.5	<1		
3/9/2018	Friday	4			5.1	4.1		
3/10/2018	Saturday	4			6.3	3		
3/11/2018	Sunday	<2			2	<1		
3/12/2018	Monday	<2			5.1	<1		
3/13/2018	Tuesday	8			29.2	14.2		
3/14/2018	Wednesday	<2	<2		3.1	6.3	<1	
3/15/2018	Thursday	<2			4.1	6.3		
3/16/2018	Friday	2			4.1	1		
3/17/2018	Saturday	<2			6.3	4.1		
3/18/2018	Sunday	<2			2	3		
3/19/2018	Monday	4			2	<1		
3/20/2018	Tuesday	<2			8.5	3.1		
3/21/2018	Wednesday	4	2		6.3	2	4.1	
3/22/2018	Thursday	4			7.5	2		
3/23/2018	Friday	2			7.5	3		
3/24/2018	Saturday	2			1	3		
3/25/2018	Sunday	4			4.1	2		
3/26/2018	Monday	2			4.1	1		
3/27/2018	Tuesday	4			8.5	7.3		
3/28/2018	Wednesday	7	2		<1	7.3	2	
3/29/2018	Thursday	11			3.1	2		
3/30/2018	Friday	<2			7.4	5.2		
3/31/2018	Saturday	<2			6.3	3		
4/1/2018	Sunday	2			1	5.2		
4/2/2018	Monday	2			5.2	5.2		
4/3/2018	Tuesday	11			6.3	9.7		
4/4/2018	Wednesday	4	4		5.2	8.4	5.2	
4/5/2018	Thursday	2			9.8	2		
4/6/2018	Friday	<2			7.2	7.3		
4/7/2018	Saturday	4			6.3	7.4		
4/8/2018	Sunday	2			4.1	<1		
4/9/2018	Monday	8			2	4.1		
4/10/2018	Tuesday	4			3	6.2		
4/11/2018	Wednesday	4	2		16.9	6.3	6.3	
4/12/2018	Thursday	<2			3	6.1		
4/13/2018	Friday	4			3	4.1		
4/14/2018	Saturday	2			9.7	7.5		
4/15/2018	Sunday	2			5.2	4.1		
4/16/2018	Monday	23			7.4	48.8		
4/17/2018	Tuesday	4			4.1	5.2		
4/18/2018	Wednesday	<2	2		3.1	5.2	2	
4/19/2018	Thursday	4			<1	4.1		
4/20/2018	Friday	<2			3	2		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
4/21/2018	Saturday	<2			4.1	4.1		
4/22/2018	Sunday	4			6.3	<1		
4/23/2018	Monday	2			12.2	2		
4/24/2018	Tuesday	11			18.5	28.5		
4/25/2018	Wednesday	<2	<2		26.2	6.3	7.5	
4/26/2018	Thursday	8			5.2	7.5		
4/27/2018	Friday	2			1	2		
4/28/2018	Saturday	<2			2	<1		
4/29/2018	Sunday	<2			2	2		
4/30/2018	Monday	8			1	1		
5/1/2018	Tuesday	<2			1	<1		
5/2/2018	Wednesday	8	8		39.3	9.7	5.2	
5/3/2018	Thursday	<2			2	1		
5/4/2018	Friday	<2			7.4	<1		
5/5/2018	Saturday	4			4.1	12		
5/6/2018	Sunday	2			<1	3.1		
5/7/2018	Monday	<2			4.1	2		
5/8/2018	Tuesday	<2			3.1	2		
5/9/2018	Wednesday	2	4		3.1	5.2	6.2	
5/10/2018	Thursday	2			3.1	1		
5/11/2018	Friday	2			6.3	1		
5/12/2018	Saturday	2			5.2	3.1		
5/13/2018	Sunday	34			34.1	36.4		
5/14/2018	Monday	11			13.4	23.1		
5/15/2018	Tuesday	4			18.7	6.3		
5/16/2018	Wednesday	2	<2		5.2	1	1	
5/17/2018	Thursday	<2			7.5	2		
5/18/2018	Friday	<2			5.2	2		
5/19/2018	Saturday	4			3.1	5.2		
5/20/2018	Sunday	4			7.5	1		
5/21/2018	Monday	8			22.1	3.1		
5/22/2018	Tuesday	17			7.4	25.9		
5/23/2018	Wednesday	4	4		10.7	3.1	10.8	
5/24/2018	Thursday	17			4.1	8.6		
5/25/2018	Friday	13			7.5	5.2		
5/26/2018	Saturday	11			3.1	5.2		
5/27/2018	Sunday	<2			4.1	4.1		
5/28/2018	Monday	<2			3.1	3.1		
5/29/2018	Tuesday	6			4.1	5.2		
5/30/2018	Wednesday	4	4		9.8	3.1	5.2	
5/31/2018	Thursday	13			8.4	6.3		
6/1/2018	Friday	30			3.1	7.4		
6/2/2018	Saturday	4			2	5.2		
6/3/2018	Sunday	4			1	2		
6/4/2018	Monday	2			1	5.2		
6/5/2018	Tuesday	13			6.3	7.4		
6/6/2018	Wednesday	7	2		6.3	6.2	14.5	
6/7/2018	Thursday	11			7.5	20.3		
6/8/2018	Friday	2			1	1		
6/9/2018	Saturday	<2			3.1	2		
6/10/2018	Sunday	4			10.9	1		
6/11/2018	Monday	13			5.2	2		
6/12/2018	Tuesday	2			4.1	2		
6/13/2018	Wednesday	13	4.5		1	1	3	
6/14/2018	Thursday	11			6.3	3		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
6/15/2018	Friday	2			4.1	1		
6/16/2018	Saturday	4.5			9.6	3.1		
6/17/2018	Sunday	2			1	3		
6/18/2018	Monday	2			3	3.1		
6/19/2018	Tuesday	2			4.1	4.1		
6/20/2018	Wednesday	7.8	9.3		5.2	3.1	1	
6/21/2018	Thursday	11			5.2	4.1		
6/22/2018	Friday	2			5.2	6.3		
6/23/2018	Saturday	6.1			2	5.1		
6/24/2018	Sunday	4.5			3.1	2		
6/25/2018	Monday	17			14.6	6.3		
6/26/2018	Tuesday	6.8			5.2	3		
6/27/2018	Wednesday	33	17		4.1	9.7	17.1	
6/28/2018	Thursday	2			5.2	2		
6/29/2018	Friday	<2.00			2	<1.00		
6/30/2018	Saturday	4.5			3.1	6.3		
7/1/2018	Sunday	23			4.1	5.1		
7/2/2018	Monday	4			9.6	2		
7/3/2018	Tuesday	7.8			2	4.1		
7/4/2018	Wednesday	23	11		10.9	2	2	
7/5/2018	Thursday	7.8			3.1	2		
7/6/2018	Friday	4.5			2	3.1		
7/7/2018	Saturday	4.5			6.3	5.1		
7/8/2018	Sunday	4			1	5.2		
7/9/2018	Monday	2			6.3	5.2		
7/10/2018	Tuesday	4.5			6.3	2		
7/11/2018	Wednesday	4	6.8		5.2	3	2	
7/12/2018	Thursday	13			8.6	5.2		
7/13/2018	Friday	13			8.5	<1.0000		
7/14/2018	Saturday	9.3			7.5	4.1		
7/15/2018	Sunday	13			2	1		
7/16/2018	Monday	13			11	3.1		
7/17/2018	Tuesday	17			5.2	3.1		
7/18/2018	Wednesday	22	23		9.7	3.1	6.3	
7/19/2018	Thursday	7.8			6.2	2		
7/20/2018	Friday	33			4.1	<1.0000		
7/21/2018	Saturday	7.8			7.4	5.2		
7/22/2018	Sunday	7.8			4.1	9.7		
7/23/2018	Monday	4.5			6.3	3		
7/24/2018	Tuesday	2			1	2		
7/25/2018	Wednesday	11	33		2	6.3	3.1	
7/26/2018	Thursday	2			2	2		
7/27/2018	Friday	170			5.2	47.3		
7/28/2018	Saturday	49			4	5		
7/29/2018	Sunday	33			6.3	6.3		
7/30/2018	Monday	11			1	1		
7/31/2018	Tuesday	11			4.1	2		
8/1/2018	Wednesday	31	70		2	8.6	17.3	
8/2/2018	Thursday	4.5			1	<1.0000		
8/3/2018	Friday	<2.00			1	1		
8/4/2018	Saturday	4.5			1	1		
8/5/2018	Sunday	17			5.1	2		
8/6/2018	Monday	17			7.5	<1.0000		
8/7/2018	Tuesday	49			4.1	7.5		
8/8/2018	Wednesday	14	6.8		4.1	1	1	

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
8/9/2018	Thursday	17			5.2	2		
8/10/2018	Friday	170			1	6.3		
8/11/2018	Saturday	4.5			3.1	2		
8/12/2018	Sunday	4.5			1	4.1		
8/13/2018	Monday	13			<1.0000	4.1		
8/14/2018	Tuesday	4.5			<1.0000	<1.0000		
8/15/2018	Wednesday	4.5	9.3		5.2	2	<1.0000	
8/16/2018	Thursday	23			2	<1.0000		
8/17/2018	Friday	7.8			2	2		
8/18/2018	Saturday	2			2	1		
8/19/2018	Sunday	<2.00			1	4.1		
8/20/2018	Monday	4.5			<1.0000	1		
8/21/2018	Tuesday	13			1	1		
8/22/2018	Wednesday	23	79		<1.0000	6.1	6.3	
8/23/2018	Thursday	33			<1.0000	<1.0000		
8/24/2018	Friday	23			<1.0000	5.2		
8/25/2018	Saturday	6.8			2	3		
8/26/2018	Sunday	13			2	<1.0000		
8/27/2018	Monday	13			1	1		
8/28/2018	Tuesday	7.8			1	2		
8/29/2018	Wednesday	9.3	4		<1.0000	5.2	<1.0000	
8/30/2018	Thursday	6.8			9.8	2		
8/31/2018	Friday	33			1	<1.0000		
9/1/2018	Saturday	7.8			3.1	<1.0000		
9/2/2018	Sunday	17			<1.0000	<1.0000		
9/3/2018	Monday	2			<1.0000	<1.0000		
9/4/2018	Tuesday	13			3	1		
9/5/2018	Wednesday	4.5	<2.00		1	1	4	
9/6/2018	Thursday	4			2	2		
9/7/2018	Friday	13			3	2		
9/8/2018	Saturday	49			<1.0000	9.4		
9/9/2018	Sunday	4.5			2	1		
9/10/2018	Monday	11			2	1		
9/11/2018	Tuesday	7.8			31.8	2		
9/12/2018	Wednesday	7.8	7.8		3	2	1	
9/13/2018	Thursday	49			1	15.5		
9/14/2018	Friday	6.8			<1.0	4.1		
9/15/2018	Saturday	70			<1.0	9.7		
9/16/2018	Sunday	<2.0			<1.0	3		
9/17/2018	Monday	23			<1.0	<1.0		
9/18/2018	Tuesday	49			<1.0	1		
9/19/2018	Wednesday	4.5	7.8		1	2	1	
9/20/2018	Thursday	17			1	1		
9/21/2018	Friday	33			3	<1.0		
9/22/2018	Saturday	13			<1.0	7.5		
9/23/2018	Sunday	2			<1.0	1		
9/24/2018	Monday	13			4.1	<1.0		
9/25/2018	Tuesday	7.8			1	<1.0		
9/26/2018	Wednesday	4.5	7.8		5.2	<1.0	2	
9/27/2018	Thursday	4.5			2	2		
9/28/2018	Friday	11			<1.0	<1.0		
9/29/2018	Saturday	7.8			2	<1.0		
9/30/2018	Sunday	79			3	<1.0		
10/1/2018	Monday	11			2	1		
10/2/2018	Tuesday	7.8			1	2		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
10/3/2018	Wednesday	79	7.8		8.5	1	<1.0	
10/4/2018	Thursday	4.5			<1.0	<1.0		
10/5/2018	Friday	4.5			6.3	1		
10/6/2018	Saturday	2			1	1		
10/7/2018	Sunday	<2.0			<1.0	3.1		
10/8/2018	Monday	2			<1.0	2		
10/9/2018	Tuesday	7.8			<1.0	1		
10/10/2018	Wednesday	2	7.8		<1.0	2	<1.0	
10/11/2018	Thursday	2			<1.0	1		
10/12/2018	Friday	17			<1.0	6.3		
10/13/2018	Saturday	<2.0			1	1		
10/14/2018	Sunday	7.8			3.1	<1.0		
10/15/2018	Monday	6.8			2	3.1		
10/16/2018	Tuesday	33		49	37.9	20.9		14136
10/17/2018	Wednesday	7.8	17		<1.0	1	5.2	
10/18/2018	Thursday	4			1	2		
10/19/2018	Friday	6.8			2	1		
10/20/2018	Saturday	2			3	2		
10/21/2018	Sunday	4			1	5.2		
10/22/2018	Monday	7.8			6.2	4.1		
10/23/2018	Tuesday	17			6.3	4.1		
10/24/2018	Wednesday	7.8	11		3	6.3	5.2	
10/25/2018	Thursday	7.8			5.1	2		
10/26/2018	Friday	4.5			8.5	2		
10/27/2018	Saturday	13			7.3	5.2		
10/28/2018	Sunday	7.8			2	3		
10/29/2018	Monday	2			3	3.1		
10/30/2018	Tuesday	2			4.1	2		
10/31/2018	Wednesday	11	7.8		3.1	2	2	
11/1/2018	Thursday	4.5			<1.0	2		
11/2/2018	Friday	7.8			2	6.3		
11/3/2018	Saturday	33			12.1	18.7		
11/4/2018	Sunday	6.8			1	<1.0		
11/5/2018	Monday	2			4.1	2		
11/6/2018	Tuesday	7.8			2	2		
11/7/2018	Wednesday	23	23		1	5.2	10.8	
11/8/2018	Thursday	1.8			5.2	1		
11/9/2018	Friday	46			6.3	4.1		
11/10/2018	Saturday	11			1	4.1		
11/11/2018	Sunday	13			7.4	11		
11/12/2018	Monday	7.8			<1.0	3.1		
11/13/2018	Tuesday	17			12.1	7.9		
11/14/2018	Wednesday	13	17		12.2	11.6	15.2	
11/15/2018	Thursday	23			3	24.1		
11/16/2018	Friday	17			9.7	12		
11/17/2018	Saturday	33			>2419.6	>2419.6		
11/18/2018	Sunday	63			2	21		
11/19/2018	Monday	22			42.6	16.9		
11/20/2018	Tuesday	20			12.1	1		
11/21/2018	Wednesday	2	4.5		5.2	4.1	10.2	
11/22/2018	Thursday	4.5			9.7	14		
11/23/2018	Friday	6.8			9.2	6.3		
11/24/2018	Saturday	4			7.5	3.1		
11/25/2018	Sunday	<2.0			4.1	3.1		
11/26/2018	Monday	2			6.3	9.6		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Bucklin Point Bacteria Data 2018

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**
11/27/2018	Tuesday	13			1	20		
11/28/2018	Wednesday	27	49		2	16.6	15.3	
11/29/2018	Thursday	17			26.5	11.6		
11/30/2018	Friday	7.8			23.5	7.4		
12/1/2018	Saturday	7.8			7.5	5.2		
12/2/2018	Sunday	49			6.4	9.8		
12/3/2018	Monday	7.8			9.7	8.6		
12/4/2018	Tuesday	13			83.7	3		
12/5/2018	Wednesday	2	<2.0		1	2	1	
12/6/2018	Thursday	4.5			5.2	5.2		
12/7/2018	Friday	<2.0			5.2	4.1		
12/8/2018	Saturday	9.2			2	3.2		
12/9/2018	Sunday	4.5			6.2	2		
12/10/2018	Monday	2			9.1	7.4		
12/11/2018	Tuesday	11			9.6	7.2		
12/12/2018	Wednesday	4	7.8		5.2	4.1	5.2	
12/13/2018	Thursday	2			2	9.7		
12/14/2018	Friday	13			15.5	<5.0		
12/15/2018	Saturday	6.8			5	5		
12/16/2018	Sunday	7.8			10	15.5		
12/17/2018	Monday	4.5			26	5		
12/18/2018	Tuesday	6.8			5	15.5		
12/19/2018	Wednesday	2	4		15	<5.0	10	
12/20/2018	Thursday	2			5	<5.0		
12/21/2018	Friday	23			5	37.5		
12/22/2018	Saturday	2			10	5		
12/23/2018	Sunday	7.8			<5.0	10		
12/24/2018	Monday	2			5	5		
12/25/2018	Tuesday	7.8			5	5		
12/26/2018	Wednesday	4	2		5	5	<5.0	
12/27/2018	Thursday	17			5	5		
12/28/2018	Friday	4.5			5	10		
12/29/2018	Saturday	4.5			15.5	10		
12/30/2018	Sunday	2			5	5		
12/31/2018	Monday	4.5			5	5		

*Sample times are approximate

Table 4: Bucklin Point Bacteria Data

Field's Point Influent Metals (Cd-Zn) and Cyanide, 2018
all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/2/2018	Tuesday	31.38	0.229	8.215		38.778	5.428		25.230	0.937	125.983	10.50	<4.00
1/3/2018	Wednesday	31.46	0.192	5.757		44.175	4.604		41.075	0.742	92.753	9.810	<4.00
1/9/2018	Tuesday	31.10	0.216	5.851	43	31.485	5.264	0.01520	29.351	0.543	102.519	9.130	<4.00
1/10/2018	Wednesday	31.56	0.224	7.399		37.669	5.063		45.190	0.735	131.978	9.110	<4.00
1/16/2018	Tuesday	61.56	0.169	5.212		20.259	4.739		22.294	0.384	74.352	12.60	<8.00
1/17/2018	Wednesday	46.57	0.305	4.403		31.176	5.358		17.588	0.512	113.050	18.80	<8.00
1/23/2018	Tuesday	69.63	0.234	4.872		35.523	25.564		11.867	0.920	108.848	19.00	<4.00
1/24/2018	Wednesday	70.90	0.175	4.558		29.313	7.748		12.968	0.337	78.956	12.80	<4.00
1/30/2018	Tuesday	42.90	0.258	3.517		25.304	3.750		22.773	0.400	77.849	8.030	<4.00
1/31/2018	Wednesday	42.05	0.214	5.090		22.579	3.347		23.965	0.555	84.803	23.60	<8.00
2/6/2018	Tuesday	64.69	0.185	5.687	16	21.198	6.556	0.007740	14.326	0.334	68.552	33.50	<8.00
2/7/2018	Wednesday	60.39	0.208	6.889		33.270	9.630		13.592	0.612	93.849	12.40	<8.00
2/13/2018	Tuesday	69.38	0.177	2.786		20.657	3.336		10.539	0.400	69.200	9.020	<4.00
2/14/2018	Wednesday	50.92	0.192	2.362		14.807	2.671		13.271	0.309	52.538	9.010	<4.00
2/20/2018	Tuesday	48.16	0.344	6.182		20.834	2.533		15.778	0.572	117.962	10.00	<4.00
2/21/2018	Wednesday	47.44	0.229	6.239		34.657	2.476		17.437	0.506	92.806	9.970	<4.00
2/27/2018	Tuesday	49.76	0.253	4.723		28.549	10.091		21.162	0.318	82.630	36.70	11.9
2/28/2018	Wednesday	47.48	0.232	2.577		22.727	2.708		21.689	0.735	66.968	14.50	<8.00
3/6/2018	Tuesday	74.78	0.199	3.358	14	19.660	3.154	0.02060	12.132	0.248	55.071	8.160	<8.00
3/7/2018	Wednesday	75.13	0.236	4.009		26.914	7.206		12.850	0.376	80.701	15.10	<8.00
3/13/2018	Tuesday	62.89	0.252	2.398		12.968	4.700		7.599	0.154	48.761	16.7	<8.00
3/14/2018	Wednesday	64.91	0.246	4.038		19.633	5.408		15.143	0.324	80.439	13.6	<8.00
3/20/2018	Tuesday	49.89	0.229	5.906		26.139	3.275		14.202	0.419	79.671	7.870	<8.00
3/21/2018	Wednesday	49.72	0.228	3.580		35.837	2.815		14.607	0.278	63.764	20.00	<8.00
3/27/2018	Tuesday	44.64	0.223	4.839		29.229	3.609		26.756	1.121	74.557	8.220	<4.00
3/28/2018	Wednesday	43.67	0.281	3.860		33.859	2.976		26.721	0.629	103.657	21.50	<4.00
4/3/2018	Tuesday	55.36	0.277	5.423	12	40.316	9.930	0.01500	23.576	0.697	110.182	12.70	<4.00
4/4/2018	Wednesday	54.80	0.237	4.059		29.145	13.383		19.827	2.621	80.824	10.50	<4.00
4/10/2018	Tuesday	39.35	0.326	6.108		30.067	3.232		25.702	0.804	90.868	11.50	<8.00
4/11/2018	Wednesday	39.60	0.247	6.433		32.464	4.014		20.958	0.789	96.802	7.300	<8.00
4/17/2018	Tuesday	71.38	0.181	3.238		22.547	6.422		20.046	0.545	63.298	23.90	5
4/18/2018	Wednesday	71.08	0.163	2.636		21.414	4.770		21.614	0.947	58.888	31.30	13.1
4/24/2018	Tuesday	45.19	0.234	4.343		30.880	4.372		18.110	0.599	109.436	6.930	<4.00
4/25/2018	Wednesday	76.53	0.176	4.175		26.104	14.877		11.661	0.660	82.757	7.390	<4.00
5/1/2018	Tuesday	55.26	0.216	2.170		17.376	3.642		18.185	0.476	63.477	7.750	<4.00
5/2/2018	Wednesday	49.02	0.240	2.861		23.091	3.577		26.167	0.358	65.111	8.530	<4.00
5/8/2018	Tuesday	43.32	0.254	2.474	24	32.030	2.925	0.01590	15.168	0.500	66.537	7.430	<8.00
5/9/2018	Wednesday	42.23	0.218	2.805		28.965	2.908		39.223	0.532	67.984	7.120	<8.00
5/15/2018	Tuesday	51.96	0.294	4.019		36.481	15.895		13.216	0.863	101.647	7.190	<8.00
5/16/2018	Wednesday	52.29	0.204	2.914		30.442	7.672		18.435	0.533	73.967	9.560	<8.00
5/22/2018	Tuesday	38.84	0.229	4.990		34.700	4.662		22.346	0.483	84.642	11.50	<8.00
5/23/2018	Wednesday	38.71	0.212	8.134		32.164	2.893		28.239	0.667	134.932	8.220	<8.00

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

Field's Point Influent Metals (Cd-Zn) and Cyanide, 2018
all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
5/29/2018	Tuesday	36.00	0.211	6.050		40.708	3.991		25.564	2.447	81.827	9.360	<8.00
5/30/2018	Wednesday	36.52	0.228	23.406		45.494	7.031		105.730	1.079	105.906	10.20	<8.00
6/5/2018	Tuesday	54.34	0.249	10.734	13	36.355	23.947	0.006440	19.097	1.280	136.704	7.670	<8.00
6/6/2018	Wednesday	48.26	0.182	6.099		45.248	10.254		18.681	0.454	99.100	9.840	<8.00
6/12/2018	Tuesday	35.96	0.1898	6.459		48.37	4.957		23.55	0.4514	101.3	10.4	<4.000
6/13/2018	Wednesday	33.47	0.1916	7.635		60.05	5.137		33.24	1.201	117.1	9.02	<4.000
6/19/2018	Tuesday	33.15	0.1844	6.259		69.07	5.249		26.41	1.211	144.3	75	51.5
6/20/2018	Wednesday	32.51	0.1981	6.220		44.12	4.371		21.27	1.112	135.7	7.93	<4.000
6/26/2018	Tuesday	31.53	0.1850	3.442		38.72	4.090		23.72	0.6153	97.72	12.4	<4.000
6/27/2018	Wednesday	33.66	0.2157	4.505		52.23	8.938		18.07	0.6559	117.8	10.3	<4.000
7/3/2018	Tuesday	34.34	0.1990	5.215		32.58	5.700		13.91	0.5125	111.4	8.03	<4.000
7/4/2018	Wednesday	33.21	0.1698	2.049		19.79	4.378		7.973	0.1790	71.29	7.44	<4.000
7/10/2018	Tuesday	34.04	0.2009	2.912	34.0	37.78	7.668	0.00652	18.34	0.5435	116.8	9.12	<4.000
7/11/2018	Wednesday	32.03	0.2334	3.611		39.34	8.687		17.99	0.8462	107.7	9.63	<4.000
7/17/2018	Tuesday	48.31	0.2373	4.578		48.04	19.38		13.63	0.9174	124.7	14.6	<4.000
7/18/2018	Wednesday	41.86	0.1571	2.769		32.02	7.264		18.30	0.6357	89.22	8.13	<4.000
7/24/2018	Tuesday	32.57	0.2027	6.954		45.88	5.467		17.88	0.6427	104.7	15.1	<4.000
7/25/2018	Wednesday	35.02	0.2205	4.888		52.46	10.99		19.90	0.5790	137	12.5	<4.000
7/31/2018	Tuesday	30.58	0.1975	2.464		33.88	4.814		26.95	0.9400	109.5	8.16	<4.000
8/1/2018	Wednesday	30.43	0.2439	3.175		35.32	5.691		21.39	1.172	113.3	10.6	<4.000
8/7/2018	Tuesday	32.76	0.2088	4.894	30.0	43.12	5.977	0.0101	22.28	1.119	177.3	11	<4.000
8/8/2018	Wednesday	36.51	0.2122	8.498		44.17	14.41		21.49	1.288	130.2	19.1	<4.000
8/14/2018	Tuesday	61.57	0.1336	2.739		21.40	7.119		11.47	0.3740	63.62	9.26	<4.000
8/15/2018	Wednesday	44.86	0.1619	2.726		22.47	5.987		19.34	0.4220	75.66	8.55	<4.000
8/21/2018	Tuesday	36.96	0.1724	4.210		37.31	5.812		17.07	0.6992	89.61	25	<4.000
8/22/2018	Wednesday	50.92	0.1649	3.623		34.51	13.62		14.40	0.7912	92.30	11.8	<4.000
8/28/2018	Tuesday	34.65	0.1843	4.079		43.20	6.411		49.69	2.280	117.2	16.5	<4.000
8/29/2018	Wednesday	31.96	0.1890	5.296		43.10	6.076		31.77	0.9244	108.2	12.4	<4.000
9/4/2018	Tuesday	31.93	0.2180	5.496		47.94	5.493		25.24	2.031	140.8	15.1	<4.000
9/5/2018	Wednesday	30.79	0.2139	7.214		41.96	7.212		33.56	2.273	189.4	10.2	<4.000
9/11/2018	Tuesday	59.47	0.2514	9.529	10.0	47.75	26.95	0.00861	25.57	1.795	138.5	8.39	<4.000
9/12/2018	Wednesday	62.21	0.1911	6.073		40.09	23.13		17.50	1.301	97.53	7.29	<4.000
9/18/2018	Tuesday	58.51	0.2725	5.347		43.11	35.03		17.73	0.7755	113.6	8.62	<4.000
9/19/2018	Wednesday	64.10	0.1246	2.531		26.73	8.261		14.55	0.4600	57.61	10.2	<4.000
9/25/2018	Tuesday	85.80	0.2348	4.893		44.66	26.51		20.38	1.218	113.6	16.9	<4.000
9/26/2018	Wednesday	80.68	0.2216	4.109		31.18	15.14		23.16	1.017	81.09	15.4	<4.000
10/2/2018	Tuesday	67.71	0.2226	3.957		24.73	17.15		18.64	0.5523	82.75	9.71	<4.000
10/3/2018	Wednesday	64.51	0.1169	3.647		25.15	7.597		5.089	1.387	64.64	6.74	<4.000
10/9/2018	Tuesday	46.70	0.1739	3.235		29.19	5.521		18.15	0.4969	63.31	10.1	<4.000
10/10/2018	Wednesday	45.21	0.2652	3.115		21.74	4.823		22.72	0.7777	74.47	10.5	<4.000
10/16/2018	Tuesday	47.13	0.2083	3.808	<10.000	19.19	4.602	0.0132	27.43	0.6691	57.70	8.81	<4.000
10/17/2018	Wednesday	46.05	0.2003	3.815		19.70	3.315		37.37	0.4354	60.26	12.4	<4.000

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

Field's Point Influent Metals (Cd-Zn) and Cyanide, 2018
all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
10/23/2018	Tuesday	40.61	0.2366	3.775		29.96	5.326		22.85	0.6421	77.14	21	<4.000
10/24/2018	Wednesday	38.93	0.2271	3.342		25.31	3.536		25.95	0.7412	67.66	14.3	<4.000
10/30/2018	Tuesday	61.54	0.1584	4.155		21.03	5.235		14.27	0.3695	57.73	8.95	<4.000
10/31/2018	Wednesday	41.71	0.2080	5.036		20.18	3.114		22.24	0.4427	83.64	10.3	<4.000
11/6/2018	Tuesday	75.28	0.1489	2.718	<10.000	19.06	9.691	0.0221	12.88	0.3152	61.54	7.94	<4.000
11/7/2018	Wednesday	72.91	0.1749	1.998		22.49	3.528		14.64	0.6981	51.67	9.26	<4.000
11/13/2018	Tuesday	97.15	0.1603	2.444		16.06	5.172		13.65	0.6596	55.15	11.7	<4.000
11/14/2018	Wednesday	74.23	0.1614	2.579		14.69	2.444		16.51	0.4668	46.53	12.6	<4.000
11/20/2018	Tuesday	75.56	0.2067	3.354		19.33	4.637		20.22	0.4032	56.40	9.22	<4.000
11/21/2018	Wednesday	74.72	0.2891	2.910		20.15	2.512		22.31	0.4408	54.78	15.4	4.3
11/27/2018	Tuesday	79.97	0.1649	2.109		18.01	2.455		13.50	0.2749	44.08	16.2	<4.000
11/28/2018	Wednesday	74.17	0.2090	2.469		19.10	2.449		18.30	0.2854	52.88	29.8	<4.000
12/4/2018	Tuesday	72.67	0.2829	7.617	13.0	26.40	2.412	0.0192	18.68	0.6084	67.81	10.7	<4.000
12/5/2018	Wednesday	55.17	0.2982	4.037		33.69	8.263		26.22	0.4475	74.83	26.7	<4.000
12/11/2018	Tuesday	49.79	0.2915	4.329		38.03	10.84		31.68	0.4009	82.19	14.3	<4.000
12/12/2018	Wednesday	45.26	0.2723	3.689		35.67	5.842		37.70	0.4421	79.68	11.6	<4.000
12/18/2018	Tuesday	44.28	0.2664	3.614		29.51	6.737		21.60	0.3894	72.91	26.2	<4.000
12/19/2018	Wednesday	41.54	0.2742	4.138		27.62	4.586	0.00444	30.42	0.4708	72.64	8.85	<4.000
12/25/2018	Tuesday	44.89	0.1864	1.813		9.806	2.452		8.496	0.1098	39.14	7.90	<4.000
12/26/2018	Wednesday	45.14	0.2146	2.774		21.29	2.314		13.77	0.6045	59.19	28.8	<4.000

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

Field's Point Influent Metals, Al-Mo, 2018
all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo
1/2/2018	Tuesday	31.38	233.601		2.404	1.979	6.630
1/3/2018	Wednesday	31.46	250.544		2.265	1.768	6.753
1/9/2018	Tuesday	31.10	269.613	1443.635	1.877	2.079	2.699
1/10/2018	Wednesday	31.56	234.759		2.006	2.026	2.178
1/16/2018	Tuesday	61.56	175.983		1.469	1.766	2.218
1/17/2018	Wednesday	46.57	253.170		2.319	2.010	4.317
1/23/2018	Tuesday	69.63	818.498		1.968	1.935	2.842
1/24/2018	Wednesday	70.90	290.281		2.674	1.636	1.519
1/30/2018	Tuesday	42.90	244.269		1.181	2.136	1.947
1/31/2018	Wednesday	42.05	161.065		1.507	2.083	1.731
2/6/2018	Tuesday	64.69	274.118	1243.923	1.934	1.538	3.082
2/7/2018	Wednesday	60.39	561.685		2.603	1.703	2.754
2/13/2018	Tuesday	69.38	149.163		6.439	1.508	7.725
2/14/2018	Wednesday	50.92	130.083		1.632	1.581	2.272
2/20/2018	Tuesday	48.16	158.790		1.439	1.874	5.740
2/21/2018	Wednesday	47.44	145.754		4.165	1.940	8.086
2/27/2018	Tuesday	49.76	229.248		1.634	1.633	3.534
2/28/2018	Wednesday	47.48	139.071		2.469	1.593	4.121
3/6/2018	Tuesday	74.78	154.987	948.146	1.108	1.541	1.525
3/7/2018	Wednesday	75.13	312.576		1.351	1.592	2.290
3/13/2018	Tuesday	62.89	208.151		<1.000	2.017	1.726
3/14/2018	Wednesday	64.91	258.030		1.736	1.865	2.677
3/20/2018	Tuesday	49.89	162.656		2.816	2.364	3.268
3/21/2018	Wednesday	49.72	186.545		2.320	2.082	3.757
3/27/2018	Tuesday	44.64	342.491		3.335	2.146	5.755
3/28/2018	Wednesday	43.67	207.854		1.971	2.041	4.138
4/3/2018	Tuesday	55.36	441.584	1701.928	2.324	2.204	2.988
4/4/2018	Wednesday	54.80	472.440		1.218	2.092	2.283
4/10/2018	Tuesday	39.35	217.301		3.101	2.142	4.820
4/11/2018	Wednesday	39.60	182.955		3.102	2.126	3.937
4/17/2018	Tuesday	71.38	221.913		1.862	1.638	2.688
4/18/2018	Wednesday	71.08	168.976		2.379	1.438	2.707
4/24/2018	Tuesday	45.19	183.667		2.253	1.866	2.646
4/25/2018	Wednesday	76.53	468.347		1.442	1.662	2.781
5/1/2018	Tuesday	55.26	165.503		1.811	1.624	2.569
5/2/2018	Wednesday	49.02	149.627		2.886	1.589	4.129
5/8/2018	Tuesday	43.32	147.968	1220.739	1.312	1.735	3.663
5/9/2018	Wednesday	42.23	172.905		1.417	1.827	3.460
5/15/2018	Tuesday	51.96	475.258		2.052	1.988	8.363
5/16/2018	Wednesday	52.29	258.516		1.699	1.804	7.246
5/22/2018	Tuesday	38.84	234.039		2.115	2.087	5.708
5/23/2018	Wednesday	38.71	170.187		2.347	2.002	8.020
5/29/2018	Tuesday	36.00	217.542		3.736	2.035	13.920
5/30/2018	Wednesday	36.52	251.229		2.458	2.060	7.819
6/5/2018	Tuesday	54.34	653.389	1953.461	2.640	2.205	5.091
6/6/2018	Wednesday	48.26	313.845		2.011	1.939	4.950
6/12/2018	Tuesday	35.96	209.2		2.009	2.093	5.576
6/13/2018	Wednesday	33.47	246.6		2.320	2.033	6.837
6/19/2018	Tuesday	33.15	215.8		2.024	2.018	5.846
6/20/2018	Wednesday	32.51	200		2.234	2.088	6.977
6/26/2018	Tuesday	31.53	202.8		7.180	1.889	6.315
6/27/2018	Wednesday	33.66	284.2		2.325	2.036	4.872
7/3/2018	Tuesday	34.34	228.1		<1	1.866	3.886
7/4/2018	Wednesday	33.21	170.4		<1	1.943	3.100
7/10/2018	Tuesday	34.04	316.4	1515	2.334	1.994	4.844
7/11/2018	Wednesday	32.03	338.4		2.053	2.151	3.304
7/17/2018	Tuesday	48.31	531.2		1.618	1.786	3.887

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

Field's Point Influent Metals, Al-Mo, 2018
all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo
7/18/2018	Wednesday	41.86	254.8		1.240	1.573	4.192
7/24/2018	Tuesday	32.57	219		1.971	1.921	5.915
7/25/2018	Wednesday	35.02	328.9		1.985	1.988	4.671
7/31/2018	Tuesday	30.58	239		2.071	1.810	3.921
8/1/2018	Wednesday	30.43	281.3		1.836	1.741	5.054
8/7/2018	Tuesday	32.76	477.6	1485	3.209	2.025	6.972
8/8/2018	Wednesday	36.51	465.6		2.267	1.682	5.851
8/14/2018	Tuesday	61.57	223.5		<1	1.606	2.734
8/15/2018	Wednesday	44.86	204.2		1.539	1.761	3.375
8/21/2018	Tuesday	36.96	231.6		1.945	1.665	4.954
8/22/2018	Wednesday	50.92	381.9		1.491	1.722	3.333
8/28/2018	Tuesday	34.65	261.7		2.449	1.956	4.850
8/29/2018	Wednesday	31.96	256.3		2.827	1.866	5.229
9/4/2018	Tuesday	31.93	259.2		1.733	2.184	4.369
9/5/2018	Wednesday	30.79	321.6		1.844	1.919	3.965
9/11/2018	Tuesday	59.47	712.5	1965	1.390	1.823	3.423
9/12/2018	Wednesday	62.21	659.1		1.046	1.871	3.138
9/18/2018	Tuesday	58.51	836.5		1.696	2.136	3.792
9/19/2018	Wednesday	64.10	244.4		1.698	1.457	3.876
9/25/2018	Tuesday	85.80	712.2		1.732	1.989	3.971
9/26/2018	Wednesday	80.68	440.7		1.742	2.282	3.541
10/2/2018	Tuesday	67.71	487.7		1.055	2.060	2.232
10/3/2018	Wednesday	64.51	381.7		<1	0.8878	1.878
10/9/2018	Tuesday	46.70	250.7		1.875	1.682	3.624
10/10/2018	Wednesday	45.21	230.5		2.676	2.143	5.562
10/16/2018	Tuesday	47.13	172.8	1241	1.355	2.217	3.964
10/17/2018	Wednesday	46.05	161.4		1.354	2.539	3.047
10/23/2018	Tuesday	40.61	194.8		2.970	2.734	5.304
10/24/2018	Wednesday	38.93	163.1		2.960	2.561	4.405
10/30/2018	Tuesday	61.54	181		1.674	2.357	2.395
10/31/2018	Wednesday	41.71	154.8		1.635	2.644	3.459
11/6/2018	Tuesday	75.28	262	1053	1.378	1.682	2.742
11/7/2018	Wednesday	72.91	136.3		1.221	1.767	3.084
11/13/2018	Tuesday	97.15	222.9		<1	1.681	3.501
11/14/2018	Wednesday	74.23	120.8		1.314	1.989	3.887
11/20/2018	Tuesday	75.56	177.6		2.005	2.296	8.347
11/21/2018	Wednesday	74.72	122.1		2.131	2.282	11.64
11/27/2018	Tuesday	79.97	118		1.755	2.234	3.681
11/28/2018	Wednesday	74.17	170.8		1.550	2.424	4.588
12/4/2018	Tuesday	72.67	120.1	1123	2.361	2.846	4.068
12/5/2018	Wednesday	55.17	284.2		1.906	3.340	3.308
12/11/2018	Tuesday	49.79	322.7		1.461	3.501	3.564
12/12/2018	Wednesday	45.26	214.2		1.640	3.326	2.928
12/18/2018	Tuesday	44.28	221.7		2.590	3.239	4.815
12/19/2018	Wednesday	41.54	205.2		3.300	3.001	5.417
12/25/2018	Tuesday	44.89	100.1		<1	2.656	1.828
12/26/2018	Wednesday	45.14	150.2		<1	2.751	2.443

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

Field's Point Effluent Metals (Cd-Zn) and Cyanide, 2018
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
1/2/2018	Tuesday	31.38	<0.020	1.029		3.038	0.327		16.836	0.024	32.722	8.550	<4.00
1/3/2018	Wednesday	31.46	<0.020	1.232		3.297	0.362		23.111	0.026	34.625	10.50	<4.00
1/9/2018	Tuesday	31.10	<0.020	1.134	<10	2.963	0.354	0.002820	23.145	0.026	35.120	8.880	<4.00
1/10/2018	Wednesday	31.56	<0.020	1.437		3.223	0.341		30.650	0.037	42.033	8.550	<4.00
1/16/2018	Tuesday	61.56	0.023	1.192		2.767	0.543		18.186	0.025	35.937	10.60	<4.00
1/17/2018	Wednesday	46.57	0.025	1.211		2.997	0.559		18.349	0.029	43.371	10.90	<4.00
1/23/2018	Tuesday	69.63	0.032	1.121		4.376	0.575		11.218	0.026	30.611	7.760	<4.00
1/24/2018	Wednesday	70.90	0.039	1.047		5.432	0.617		11.478	0.030	34.428	8.820	<4.00
1/30/2018	Tuesday	42.90	0.076	0.899		5.110	0.418		17.719	0.031	42.848	9.620	<4.00
1/31/2018	Wednesday	42.05	0.059	0.956		4.145	0.380		18.799	0.040	42.040	11.00	<4.00
2/6/2018	Tuesday	64.69	0.049	0.971	<10	4.188	0.384	0.002010	11.384	0.022	29.700	9.350	<4.00
2/7/2018	Wednesday	60.39	0.061	0.957		4.772	0.513		10.655	0.031	32.902	10.70	<4.00
2/13/2018	Tuesday	69.38	0.052	0.735		4.151	0.403		10.026	0.020	32.838	9.290	<4.00
2/14/2018	Wednesday	50.92	0.062	0.680		3.987	0.321		11.667	0.024	33.151	9.730	<4.00
2/20/2018	Tuesday	48.16	0.069	0.936		4.611	0.360		15.127	0.024	45.261	8.210	<4.00
2/21/2018	Wednesday	47.44	0.075	1.008		5.039	<0.300		14.937	0.021	43.368	6.890	<4.00
2/27/2018	Tuesday	49.76	0.068	0.769		3.247	0.301		14.463	0.021	39.136	7.740	<4.00
2/28/2018	Wednesday	47.48	0.059	0.733		3.842	<0.300		16.360	0.020	38.564	9.680	<4.00
3/6/2018	Tuesday	74.78	0.058	0.830	<10	4.254	0.373	0.003410	12.029	0.025	33.461	7.670	<4.00
3/7/2018	Wednesday	75.13	0.087	0.845		5.313	0.420		11.863	0.036	40.994	9.330	<4.00
3/13/2018	Tuesday	62.89	0.079	0.733		4.864	0.354		9.702	0.026	31.594	10.8	<4.00
3/14/2018	Wednesday	64.91	0.074	0.951		4.700	0.458		12.072	0.034	37.764	8.26	<4.00
3/20/2018	Tuesday	49.89	0.054	1.198		3.879	0.344		13.264	0.030	35.346	8.670	<4.00
3/21/2018	Wednesday	49.72	0.055	0.947		3.768	0.320		12.654	0.023	32.310	8.860	<4.00
3/27/2018	Tuesday	44.64	0.040	1.170		2.841	0.333		17.860	0.027	35.954	8.270	<4.00
3/28/2018	Wednesday	43.67	0.038	0.935		2.785	<0.300		19.488	0.025	37.525	8.460	<4.00
4/3/2018	Tuesday	55.36	0.026	0.899	<10	2.952	0.404	0.002150	16.810	0.029	30.235	8.900	<4.00
4/4/2018	Wednesday	54.78	0.049	0.938		2.764	0.424		16.877	0.079	29.639	11.20	<4.00
4/10/2018	Tuesday	39.35	0.035	1.336		2.577	<0.300		20.348	0.034	39.212	7.940	<4.00
4/11/2018	Wednesday	39.60	0.051	1.359		2.800	<0.300		18.404	0.031	39.372	6.580	<4.00
4/17/2018	Tuesday	71.38	0.030	0.964		2.971	0.427		15.834	0.066	34.171	4.600	<4.00
4/18/2018	Wednesday	71.08	0.028	0.902		3.028	0.507		16.409	0.072	32.061	4.660	<4.00
4/24/2018	Tuesday	45.19	0.026	1.133		2.952	0.389		15.035	0.074	34.750	5.960	<4.00
4/25/2018	Wednesday	73.16	0.021	0.876		2.723	0.422		10.369	0.045	29.541	7.550	<4.00
5/1/2018	Tuesday	55.26	0.030	0.779		2.235	0.369		13.457	0.028	31.721	9.830	<4.00
5/2/2018	Wednesday	49.02	0.029	0.808		2.428	0.331		15.999	0.024	30.824	5.920	<4.00
5/8/2018	Tuesday	43.32	0.024	0.830	<10	2.198	<0.300	0.001840	12.332	0.020	28.407	6.150	<4.00
5/9/2018	Wednesday	42.23	0.021	0.666		1.980	<0.300		20.724	<0.020	27.057	7.230	<4.00
5/15/2018	Tuesday	51.96	0.026	0.861		2.693	0.462		11.544	0.034	25.125	4.790	<4.00
5/16/2018	Wednesday	52.29	<0.020	0.794		2.160	0.338		13.280	0.023	23.432	7.930	<4.00
5/22/2018	Tuesday	38.84	<0.020	1.358		2.705	0.446		17.873	0.024	29.207	6.960	<4.00

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

Field's Point Effluent Metals (Cd-Zn) and Cyanide, 2018
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
5/23/2018	Wednesday	38.71	<0.020	1.322		2.373	0.367		20.610	0.029	30.592	7.340	<4.00
5/29/2018	Tuesday	36.00	<0.020	1.108		2.318	0.329		16.528	0.040	28.473	<4.00	<4.00
5/30/2018	Wednesday	36.52	<0.020	1.440		2.486	0.313		42.557	0.034	26.929	7.310	<4.00
6/5/2018	Tuesday	54.34	<0.020	2.669	<10	2.713	0.487	0.003210	14.058	0.037	27.477	5.490	<4.00
6/6/2018	Wednesday	48.26	<0.020	1.771		1.865	0.369		14.790	<0.020	28.301	10.30	<8.00
6/12/2018	Tuesday	35.96	<0.020	1.678		2.152	0.3189		17.17	0.02422	27.80	9.80	<4.000
6/13/2018	Wednesday	33.47	<0.020	1.250		2.492	0.3411		20.63	0.03442	29.62	12.2	<4.000
6/19/2018	Tuesday	33.15	<0.020	1.552		2.630	0.3420		18.35	0.02921	27.95	10	<4.000
6/20/2018	Wednesday	32.51	<0.020	1.348		2.217	0.3099		17.64	0.02315	32.01	9.43	<4.000
6/26/2018	Tuesday	31.53	<0.020	1.021		1.864	0.3279		19.54	<0.020	25.58	9.34	<4.000
6/27/2018	Wednesday	33.66	<0.020	1.257		3.448	0.5501		16.59	0.04909	26.71	9	<4.000
7/3/2018	Tuesday	34.34	<0.020	0.7950		1.709	0.4341		11.93	<0.020	29.16	8.85	<4.000
7/4/2018	Wednesday	33.21	<0.020	0.6595		1.443	0.3220		9.971	<0.020	24.92	19.2	<4.000
7/10/2018	Tuesday	34.04	<0.020	0.8792	<10.000	1.417	0.3398	0.00252	12.85	<0.020	26.93	10.5	<4.000
7/11/2018	Wednesday	32.03	<0.020	0.8671		1.490	0.3439		13.25	<0.020	20.87	8.39	<4.000
7/17/2018	Tuesday	48.31	0.04461	1.322		6.861	1.692		10.93	0.1056	27.99	6.85	<4.000
7/18/2018	Wednesday	41.86	<0.020	0.8166		1.342	0.4606		13.02	<0.020	30.59	10.6	<4.000
7/24/2018	Tuesday	32.57	<0.020	1.828		2.190	0.4181		14.70	<0.020	25.87	13	<4.000
7/25/2018	Wednesday	35.02	<0.020	1.238		2.143	0.4661		14.48	<0.020	24.51	9.81	<4.000
7/31/2018	Tuesday	30.58	<0.020	0.6359		1.737	<0.300		18.64	<0.020	22.60	9.33	<4.000
8/1/2018	Wednesday	30.43	<0.020	0.7357		1.860	<0.300		18.39	0.02006	25.19	9.01	<4.000
8/7/2018	Tuesday	32.76	<0.020	1.226	<10.000	1.760	0.3456	0.00145	15.34	<0.020	35.28	8.30	<4.000
8/8/2018	Wednesday	36.51	<0.020	1.108		1.971	0.3603		16.17	0.02295	26.12	9.27	<4.000
8/14/2018	Tuesday	61.57	<0.020	0.7977		1.631	0.3756		9.213	<0.020	19.86	9.59	<4.000
8/15/2018	Wednesday	44.86	<0.020	0.8481		1.534	0.4206		13.50	<0.020	21.67	10.1	<4.000
8/21/2018	Tuesday	36.96	<0.020	1.118		1.772	0.4047		10.60	<0.020	21.87	7.44	<4.000
8/22/2018	Wednesday	50.92	0.04556	0.9463		1.928	0.3893		11.33	<0.020	21.14	9	<4.000
8/28/2018	Tuesday	34.65	<0.020	0.8178		2.289	0.3552		37.29	0.03020	22.86	9.58	<4.000
8/29/2018	Wednesday	31.96	<0.020	0.9279		2.086	0.3133		30.14	0.02046	22.63	6.52	<4.000
9/4/2018	Tuesday	31.93	<0.020	1.003		2.067	0.4676		16.33	<0.020	20.49	8.93	<4.000
9/5/2018	Wednesday	30.79	<0.020	0.8846		2.413	0.4286		20.82	0.03071	23.80	8.87	<4.000
9/11/2018	Tuesday	59.47	<0.020	1.640	<10.000	2.383	0.4465	0.00224	16.84	0.07788	27.63	7.49	<4.000
9/12/2018	Wednesday	62.21	<0.020	0.9245		2.265	0.4941		12.06	0.05365	23.84	7.45	<4.000
9/18/2018	Tuesday	58.51	<0.020	0.7011		2.599	0.5430		10.71	0.04203	20.17	8.97	<4.000
9/19/2018	Wednesday	64.10	<0.020	0.6158		2.016	0.4098		10.89	0.02713	19.27	8.64	<4.000
9/25/2018	Tuesday	66.68	<0.020	1.175		3.492	0.6674		11.53	0.05411	22.84	9.41	<4.000
9/26/2018	Wednesday	73.48	<0.020	0.6457		2.182	0.3704		13.17	0.03015	22.74	7.81	<4.000
10/2/2018	Tuesday	66.83	<0.020	0.7424		2.898	0.7222		11.71	0.04545	18.46	8.16	<4.000
10/3/2018	Wednesday	64.51	<0.020	0.9331		2.210	0.5008		12.12	0.03855	18.58	8.52	<4.000
10/9/2018	Tuesday	46.70	0.02325	0.6358		1.873	0.3553		11.04	<0.020	17.77	9.24	<4.000
10/10/2018	Wednesday	45.21	<0.020	0.6229		1.747	0.4476		13.39	0.02005	19.40	4.91	<4.000

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

Field's Point Effluent Metals (Cd-Zn) and Cyanide, 2018
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
10/16/2018	Tuesday	47.13	0.02689	0.9535	<10.000	1.733	0.4420	0.00159	16.37	0.02510	17.68	9.33	<4.000
10/17/2018	Wednesday	46.05	<0.020	0.8147		1.520	0.3857		19.85	<0.020	17.07	11.1	<4.000
10/23/2018	Tuesday	40.61	<0.020	0.9624		1.596	0.3152		15.58	<0.020	18.59	9	<4.000
10/24/2018	Wednesday	38.93	<0.020	0.9420		1.559	0.3206		17.26	<0.020	19.19	10.4	<4.000
10/30/2018	Tuesday	61.54	<0.020	0.9253		1.691	0.4038		12.21	<0.020	19.57	8.90	<4.000
10/31/2018	Wednesday	41.71	<0.020	0.8796		1.335	0.3226		14.49	<0.020	20.38	7.94	<4.000
11/6/2018	Tuesday	75.28	<0.020	0.8296	<10.000	2.432	0.4951	0.00129	9.971	0.02329	19.39	5.25	<4.000
11/7/2018	Wednesday	72.91	<0.020	0.7323		2.392	0.4574		10.94	0.02552	19.51	5.50	5.5
11/13/2018	Tuesday	76.15	0.02034	0.6845		2.908	0.5331		10.38	0.03538	22.63	8.07	<4.000
11/14/2018	Wednesday	74.23	0.02535	0.8478		2.972	0.4922		12.41	0.03506	22.96	12.8	<4.000
11/20/2018	Tuesday	75.56	0.02438	0.8870		2.678	0.4367		16.97	0.03160	19.82	6.52	<4.000
11/21/2018	Wednesday	74.72	0.02788	0.8777		2.468	0.4447		16.87	0.03917	19.75	7.13	<4.000
11/27/2018	Tuesday	75.95	0.03012	0.8337		2.716	0.3994		11.74	0.02579	22.77	7.08	<4.000
11/28/2018	Wednesday	74.17	0.03166	0.8374		2.616	0.3683		13.38	0.02843	23.65	8.75	<4.000
12/4/2018	Tuesday	72.67	0.03416	1.700	<10.000	2.975	0.3743	0.00234	13.73	0.03145	24.96	6.13	<4.000
12/5/2018	Wednesday	55.17	0.02922	1.288		2.949	0.3457		17.95	0.02960	23.68	6.53	<4.000
12/11/2018	Tuesday	49.79	0.02822	1.355		2.686	<0.300		19.29	0.02169	23.26	8	<4.000
12/12/2018	Wednesday	45.26	0.03169	1.246		3.003	<0.300		23.68	<0.020	26.09	10	<4.000
12/18/2018	Tuesday	44.28	0.03288	1.198		2.629	0.3174		16.47	0.02155	26.37	8.80	<4.000
12/19/2018	Wednesday	41.54	0.03554	1.581		3.551	0.3354	0.00299	19.41	0.02147	31.46	7.70	<4.000
12/25/2018	Tuesday	44.89	0.03004	0.9042		1.633	<0.300		9.018	<0.020	17.44	10.2	<4.000
12/26/2018	Wednesday	45.14	0.02707	1.145		2.206	<0.300		11.14	<0.020	22.69	7.40	<4.000

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

Field's Point Effluent Metals, Al - Mo, 2018
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Al	Fe	Se	As	Mo
1/2/2018	Tuesday	31.38	9.278		1.413	1.594	5.786
1/3/2018	Wednesday	31.46	10.616		1.653	1.515	5.930
1/9/2018	Tuesday	31.10	9.109	100.887	<1.000	1.532	2.825
1/10/2018	Wednesday	31.56	8.223		1.257	1.493	2.665
1/16/2018	Tuesday	61.56	21.679		1.345	1.320	2.339
1/17/2018	Wednesday	46.57	16.272		1.834	1.565	4.196
1/23/2018	Tuesday	69.63	17.701		1.398	1.107	1.715
1/24/2018	Wednesday	70.90	19.173		1.829	1.501	1.742
1/30/2018	Tuesday	42.90	15.271		<1.000	1.781	2.269
1/31/2018	Wednesday	42.05	13.972		<1.000	1.607	1.911
2/6/2018	Tuesday	64.69	12.252	78.307	1.770	1.349	2.535
2/7/2018	Wednesday	60.39	18.596		1.590	1.194	2.157
2/13/2018	Tuesday	69.38	13.540		3.359	1.248	4.813
2/14/2018	Wednesday	50.92	11.290		1.442	1.298	2.734
2/20/2018	Tuesday	48.16	85.816		1.158	1.520	5.289
2/21/2018	Wednesday	47.44	7.877		2.867	1.448	6.562
2/27/2018	Tuesday	49.76	9.594		1.244	1.342	3.322
2/28/2018	Wednesday	47.48	8.001		1.604	1.270	3.719
3/6/2018	Tuesday	74.78	14.740	90.580	<1.000	1.298	1.599
3/7/2018	Wednesday	75.13	16.899		1.439	1.162	2.299
3/13/2018	Tuesday	62.89	14.117		<1.000	1.058	2.204
3/14/2018	Wednesday	64.91	17.113		1.835	1.502	2.727
3/20/2018	Tuesday	49.89	12.188		2.409	1.716	4.068
3/21/2018	Wednesday	49.72	12.789		1.828	1.684	3.705
3/27/2018	Tuesday	44.64	11.197		2.727	2.012	4.709
3/28/2018	Wednesday	43.67	9.506		1.631	1.707	3.860
4/3/2018	Tuesday	55.36	12.358	90.216	1.002	1.521	2.178
4/4/2018	Wednesday	54.78	12.854		<1.000	1.461	1.821
4/10/2018	Tuesday	39.35	9.252		2.058	1.704	3.810
4/11/2018	Wednesday	39.60	8.953		1.894	1.573	3.532
4/17/2018	Tuesday	71.38	16.521		1.387	1.379	2.479
4/18/2018	Wednesday	71.08	16.264		1.452	1.254	2.219
4/24/2018	Tuesday	45.19	11.288		1.594	1.563	2.339
4/25/2018	Wednesday	73.16	12.682		1.014	1.109	2.129
5/1/2018	Tuesday	55.26	9.183		1.483	1.188	1.889
5/2/2018	Wednesday	49.02	9.007		2.266	1.360	3.656
5/8/2018	Tuesday	43.32	8.112	69.065	<1.000	1.359	2.974
5/9/2018	Wednesday	42.23	6.958		<1.000	1.419	2.720
5/15/2018	Tuesday	51.96	12.841		1.135	1.496	7.575
5/16/2018	Wednesday	52.29	7.030		1.115	1.382	6.961
5/22/2018	Tuesday	38.84	9.482		1.131	1.652	5.432
5/23/2018	Wednesday	38.71	9.193		1.328	1.659	6.874
5/29/2018	Tuesday	36.00	8.442		1.267	1.538	10.525
5/30/2018	Wednesday	36.52	7.731		1.375	1.605	7.598
6/5/2018	Tuesday	54.34	36.317	142.188	1.539	1.367	4.015
6/6/2018	Wednesday	48.26	7.739		1.135	1.394	3.960
6/12/2018	Tuesday	35.96	7.622		1.328	1.551	5.122

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

Field's Point Effluent Metals, Al - Mo, 2018
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Al	Fe	Se	As	Mo
6/13/2018	Wednesday	33.47	8.818		1.208	1.621	5.256
6/19/2018	Tuesday	33.15	9.311		<1	1.654	5.550
6/20/2018	Wednesday	32.51	6.582		1.194	1.604	6.068
6/26/2018	Tuesday	31.53	6.911		2.892	1.479	9.160
6/27/2018	Wednesday	33.66	16.23		1.287	1.482	6.391
7/3/2018	Tuesday	34.34	7.230		<1	1.468	3.579
7/4/2018	Wednesday	33.21	6.542		<1	1.277	2.780
7/10/2018	Tuesday	34.04	7.317	200.7	<1	1.583	3.921
7/11/2018	Wednesday	32.03	7.049		<1	1.652	3.320
7/17/2018	Tuesday	48.31	51.69		<1	1.344	3.065
7/18/2018	Wednesday	41.86	7.215		<1	1.276	3.502
7/24/2018	Tuesday	32.57	7.310		<1	1.352	5.434
7/25/2018	Wednesday	35.02	7.284		<1	1.379	4.523
7/31/2018	Tuesday	30.58	6.600		<1	1.175	3.381
8/1/2018	Wednesday	30.43	13.78		1.097	1.333	4.406
8/7/2018	Tuesday	32.76	8.785	298.5	1.181	1.088	5.359
8/8/2018	Wednesday	36.51	9.150		<1	1.271	5.253
8/14/2018	Tuesday	61.57	7.360		<1	1.165	2.517
8/15/2018	Wednesday	44.86	7.049		<1	1.330	3.077
8/21/2018	Tuesday	36.96	7.448		<1	1.287	3.843
8/22/2018	Wednesday	50.92	7.534		<1	1.158	3.021
8/28/2018	Tuesday	34.65	6.921		<1	1.444	4.383
8/29/2018	Wednesday	31.96	5.920		1.018	1.248	4.238
9/4/2018	Tuesday	31.93	6.092		<1	1.340	3.534
9/5/2018	Wednesday	30.79	6.414		1.007	1.414	4.012
9/11/2018	Tuesday	59.47	11.64	199.7	<1	1.181	2.932
9/12/2018	Wednesday	62.21	16.07		<1	1.116	2.445
9/18/2018	Tuesday	58.51	13.60		<1	1.071	2.713
9/19/2018	Wednesday	64.10	8.885		1.069	1.112	2.959
9/25/2018	Tuesday	66.68	21.71		1.047	1.141	2.730
9/26/2018	Wednesday	73.48	10.82		1.043	1.221	3.183
10/2/2018	Tuesday	66.83	20.20		<1	1.309	1.904
10/3/2018	Wednesday	64.51	15.11		<1	1.413	2.095
10/9/2018	Tuesday	46.70	7.350		<1	1.665	3.162
10/10/2018	Wednesday	45.21	9.849		1.181	1.606	3.908
10/16/2018	Tuesday	47.13	10.56	157.7	<1	1.519	3.104
10/17/2018	Wednesday	46.05	9.419		<1	1.478	2.303
10/23/2018	Tuesday	40.61	7.298		1.988	2.164	4.244
10/24/2018	Wednesday	38.93	8.626		2.114	2.022	3.954
10/30/2018	Tuesday	61.54	17.45		1.018	1.468	2.088
10/31/2018	Wednesday	41.71	7.347		<1	1.560	2.494
11/6/2018	Tuesday	75.28	12.32	103	<1	1.210	2.532
11/7/2018	Wednesday	72.91	13.33		<1	1.339	2.890
11/13/2018	Tuesday	76.15	16.73		<1	1.132	2.970
11/14/2018	Wednesday	74.23	17.18		<1	1.701	4.214
11/20/2018	Tuesday	75.56	13.85		1.462	1.710	10.89
11/21/2018	Wednesday	74.72	13.97		<1	1.684	8.578

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

Field's Point Effluent Metals, Al - Mo, 2018
all analyses in ppb

Date	Day of the Week	Total Eff Flow	Al	Fe	Se	As	Mo
11/27/2018	Tuesday	75.95	13.92		1.165	1.763	3.643
11/28/2018	Wednesday	74.17	11.34		<1	1.874	3.336
12/4/2018	Tuesday	72.67	11.54	120.7	1.221	2.029	3.296
12/5/2018	Wednesday	55.17	10.06		1.029	2.304	2.889
12/11/2018	Tuesday	49.79	9.982		<1	2.766	3.016
12/12/2018	Wednesday	45.26	7.686		<1	2.550	2.891
12/18/2018	Tuesday	44.28	8.022		1.402	2.371	4.017
12/19/2018	Wednesday	41.54	9.912		2.100	2.182	4.731
12/25/2018	Tuesday	44.89	8.090		<1	1.001	1.357
12/26/2018	Wednesday	45.14	8.031		<1	2.294	1.826

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

Bucklin Point Influent Metals (Cd-Zn) and Cyanide, 2018

all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/2/2018	Tuesday	14.24	0.131	1.588		31.445	2.934		3.141	0.545	80.202		
1/3/2018	Wednesday	13.77	0.197	2.144		40.933	2.938		4.732	1.293	90.383	5.030	<4.00
1/4/2018	Thursday	14.08										9.870	<4.00
1/9/2018	Tuesday	14.40	0.163	3.253	63.00	52.920	4.629	0.04220	9.368	2.102	100.690	5.680	<4.00
1/10/2018	Wednesday	15.09	0.170	4.511		41.935	3.978		8.620	2.293	101.319	6.270	<4.00
1/16/2018	Tuesday	20.93	0.153	2.568		28.137	2.841		7.737	1.548	69.309	6.410	<4.00
1/17/2018	Wednesday	21.74	0.169	2.458		33.627	3.032		7.627	0.690	69.659	7.480	<4.00
1/23/2018	Tuesday	45.13	0.168	4.898		38.759	12.769		10.079	2.069	96.266	10.10	<4.00
1/24/2018	Wednesday	22.31	0.156	3.029		25.514	6.262		7.190	0.922	70.313	8.850	<4.00
1/30/2018	Tuesday	19.60	0.159	2.147		45.471	2.635		8.778	0.617	82.195	6.870	<4.00
1/31/2018	Wednesday	18.19	0.140	2.638		33.411	2.208		7.724	0.718	65.650	7.360	<4.00
2/6/2018	Tuesday	18.92	0.146	2.873	30.00	26.697	3.841	0.007350	6.376	0.936	67.378	6.470	<4.00
2/7/2018	Wednesday	36.24	0.328	4.030		34.963	2.312		12.351	0.731	64.167	6.040	<4.00
2/13/2018	Tuesday	22.58	0.196	1.873		24.546	2.285		5.099	0.831	60.002	7.560	<4.00
2/14/2018	Wednesday	23.38	0.178	3.125		23.186	1.731		5.633	0.987	69.865	5.530	<4.00
2/20/2018	Tuesday	22.45	0.178	2.011		25.432	3.407		5.900	1.009	64.272	7.900	<4.00
2/21/2018	Wednesday	21.69	0.365	5.180		23.259	2.045		7.775	0.915	59.591	10.50	<4.00
2/27/2018	Tuesday	22.02	0.208	0.791		14.921	1.361		7.976	0.722	61.007	6.200	<4.00
2/28/2018	Wednesday	22.21	0.200	1.656		26.258	1.892		5.571	1.055	60.319	7.470	<4.00
3/6/2018	Tuesday	29.13	0.162	0.997	16.00	16.548	1.620	0.005220	4.870	0.968	46.193	5.840	<4.00
3/7/2018	Wednesday	39.79	0.167	2.340		20.509	1.776		4.949	0.635	51.667	6.160	<4.00
3/13/2018	Tuesday	31.19	0.180	1.748		28.671	5.039		7.779	1.156	61.843	5.86	<4.00
3/14/2018	Wednesday	32.29	0.155	1.165		15.297	2.443		3.323	0.391	49.394	5.87	<4.00
3/20/2018	Tuesday	24.94	0.162	3.156		29.677	2.533		5.919	1.092	65.136	4.880	<4.00
3/21/2018	Wednesday	25.67	0.164	2.897		30.178	2.343		6.418	0.776	65.042	6.380	<4.00
3/27/2018	Tuesday	21.72	0.157	2.195		27.527	2.463		5.940	0.958	62.864	5.240	<4.00
3/28/2018	Wednesday	22.09	0.156	2.247		29.568	2.414		6.239	1.433	68.551	5.250	<4.00
4/3/2018	Tuesday	32.70	0.170	1.730	22.00	43.329	4.824	0.02270	5.932	1.244	89.739	5.540	<4.00
4/4/2018	Wednesday	26.11	0.160	13.941		33.447	11.248		6.061	1.741	98.412	6.050	<4.00
4/10/2018	Tuesday	20.86	0.151	1.620		33.838	2.422		14.477	1.548	71.529	5.140	<4.00
4/11/2018	Wednesday	19.61	0.158	3.614		28.162	2.331		8.647	1.261	69.992	5.500	<4.00
4/17/2018	Tuesday	25.01	0.154	2.975		24.198	12.725		5.110	1.177	68.124	6.850	<4.00
4/18/2018	Wednesday	23.35	0.146	1.386		27.207	3.242		4.855	1.503	61.023	7.160	<4.00
4/24/2018	Tuesday	22.30	0.146	1.908		31.967	2.744		7.940	1.224	67.523	4.820	<4.00
4/25/2018	Wednesday	54.13	0.175	3.974		42.093	6.039		6.297	1.364	92.634	5.770	<4.00
5/1/2018	Tuesday	24.70	0.170	1.558		29.672	2.648		4.967	0.737	69.556	5.280	<4.00
5/2/2018	Wednesday	23.89	0.164	1.366		58.558	2.546		5.513	0.749	68.204	7.250	<4.00
5/8/2018	Tuesday	20.86	0.161	1.479	16.00	30.049	2.541	0.01650	7.178	1.302	73.900	8.710	<4.00
5/9/2018	Wednesday	20.60	0.178	1.580		38.930	2.663		7.248	1.198	88.977	4.400	<4.00
5/15/2018	Tuesday	27.07	0.181	3.849		44.726	3.753		10.333	2.030	93.518	5.500	<4.00
5/16/2018	Wednesday	20.43	0.182	6.205		43.463	11.795		10.212	2.065	100.111	6.060	<4.00
5/22/2018	Tuesday	19.94	0.177	4.166		44.192	4.889		8.356	2.002	91.401	5.600	<4.00
5/23/2018	Wednesday	18.36	0.166	4.046		42.253	3.665		7.002	1.418	88.809	5.120	<4.00

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

Bucklin Point Influent Metals (Cd-Zn) and Cyanide, 2018

all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
5/29/2018	Tuesday	16.83	0.140	1.745		38.612	3.002		3.542	1.314	77.870	<4.00	<4.00
5/30/2018	Wednesday	16.62	0.173	3.556		43.445	4.316		6.484	1.920	103.779	4.660	<4.00
6/5/2018	Tuesday	20.63	0.135	4.760	24.00	33.960	5.382	0.007210	12.165	1.134	77.403	5.220	<4.00
6/6/2018	Wednesday	16.69	0.173	97.870		81.055	11.541		142.079	7.884	96.295	4.530	<4.00
6/12/2018	Tuesday	15.80	0.2068	2.934		46.97	4.515		6.480	1.041	100.7	5.09	<4.000
6/13/2018	Wednesday	16.32	0.1836	2.331		46.24	5.136		5.782	0.5625	101.9	6.09	<4.000
6/19/2018	Tuesday	15.01	0.2202	2.720		57.71	5.929		9.469	1.177	152.4	6.75	<4.000
6/20/2018	Wednesday	14.39	0.1908	45.76		63.66	4.822		53.51	2.072	106.2	5.57	<4.000
6/26/2018	Tuesday	14.27	0.1841	11.15		68.03	4.735		20.64	2.521	112.4	6.74	<4.000
6/27/2018	Wednesday	14.74	0.1676	5.043		50.79	3.852		11.17	1.546	100.7	5.81	<4.000
7/3/2018	Tuesday	14.61	0.1591	1.705		45.09	3.998		6.608	1.066	105.9	6.62	<4.000
7/4/2018	Wednesday	12.90	0.1711	1.737		45.56	4.212		5.125	0.8643	101.9	6.83	<4.000
7/10/2018	Tuesday	13.97	0.2077	1.816		51.28	4.793	0.00372	12.19	0.7213	117	8.25	<4.000
7/11/2018	Wednesday	13.97	0.3016	2.545	45	53.13	5.263		12.93	1.051	123.6	5.55	<4.000
7/17/2018	Tuesday	24.15	0.1737	3.181		76.15	4.025		15.09	0.8029	117.2	4.14	<4.000
7/18/2018	Wednesday	14.41	0.1644	3.022		49.12	9.792		6.353	1.145	116.8	<4	<4.000
7/24/2018	Tuesday	14.19	0.1725	2.213	34	45.41	3.703		7.391	0.6911	105.6	8.11	<4.000
7/25/2018	Wednesday	14.62	0.1514	1.934		40.82	4.015		5.850	0.9110	101.4	6.06	<4.000
7/31/2018	Tuesday	13.34	0.1648	2.119		50.45	3.979		6.480	0.8628	105.5	5.24	<4.000
8/1/2018	Wednesday	14.24	0.1725	68.89		69.20	4.721		63.13	1.086	122	5.34	<4.000
8/7/2018	Tuesday	13.56	0.1814	3.219	48	55.26	8.324	0.0512	12.02	2.638	135.1	7.53	<4.000
8/8/2018	Wednesday	13.45	0.1743	3.518		50.90	4.513		7.164	0.8377	108.3	11.1	<4.000
8/14/2018	Tuesday	16.38	0.1294	1.786		32.11	4.175		2.985	0.7728	80	6.53	<4.000
8/15/2018	Wednesday	14.73	0.1766	3.204		52.27	5.469		13.23	1.365	113	6.34	<4.000
8/21/2018	Tuesday	14.43	0.3431	3.409		55.62	3.207		11.66	1.707	108.2	7.56	<4.000
8/22/2018	Wednesday	22.11	0.2377	4.566		50.57	8.742		10.59	1.608	113.8	5.19	<4.000
8/28/2018	Tuesday	13.62	0.1605	2.668		52.54	4.425		8.969	1.513	108.7	8.88	<4.000
8/29/2018	Wednesday	13.36	0.1761	43.11		205.3	5.395		162.5	1.798	117.6	6.94	<4.000
9/4/2018	Tuesday	13.09	0.1332	1.986		39.72	3.698		4.498	0.4797	97.98	7.61	<4.000
9/5/2018	Wednesday	13.22	0.1762	3.142		67.10	4.370		12.44	2.152	120.5	7.36	<4.000
9/11/2018	Tuesday	30.42	0.1295	70.43	22	40.96	6.653	0.00966	8.468	1.599	89.51	13.4	<4.000
9/12/2018	Wednesday	36.64	0.1849	6.101		50.12	8.679		10.30	1.493	103.9	6.78	<4.000
9/18/2018	Tuesday	27.93	0.1691	2.517		78.18	4.394		9.167	1.520	114.4	8.34	<4.000
9/19/2018	Wednesday	17.33	0.1593	3.164		36.03	8.742		6.703	1.898	85.09	6.81	<4.000
9/25/2018	Tuesday	46.83	0.1597	5.144		55.19	4.215		11.92	1.587	98.92	10.9	<4.000
9/26/2018	Wednesday	43.39	0.1245	3.261		27.57	10.93		5.008	1.029	72.59	7.06	<4.000
10/2/2018	Tuesday	37.01	0.1480	1.907		38.64	4.092		5.202	1.161	79.57	5.95	<4.000
10/3/2018	Wednesday	38.98	0.5589	3.268		18.88	6.289		16.21	0.6311	54.33	5.44	<4.000
10/9/2018	Tuesday	20.60	0.1462	1.276		29.07	2.427		3.927	0.3482	67.49	6.73	<4.000
10/10/2018	Wednesday	19.55	0.1632	2.538		53.34	3.012		8.638	0.7753	87.88	8.58	<4.000
10/16/2018	Tuesday	26.96	0.1662	3.445	10	35.49	4.880	0.00728	7.117	0.5742	80.52	8.31	<4.000
10/17/2018	Wednesday	21.35	0.1649	2.216		40.44	2.933		6.189	0.6084	74.77	7.66	<4.000
10/23/2018	Tuesday	21.14	0.1571	6.814		37.75	2.537		8.700	0.8051	74.47	7.53	<4.000

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

Bucklin Point Influent Metals (Cd-Zn) and Cyanide, 2018

all analyses in ppb

Date	Day of the Week	Influent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
10/24/2018	Wednesday	19.60	0.2228	7.739		54.58	5.606		9.827	0.6849	114.7	8.70	<4.000
10/30/2018	Tuesday	21.66	0.1384	1.865		28.90	2.310		5.222	0.6700	63.49	6.41	<4.000
10/31/2018	Wednesday	20.42	0.1428	2.256		37.14	3.301		4.497	0.5742	77.02	6.60	<4.000
11/6/2018	Tuesday	48.46	0.1189	3.778	<10	36.91	3.596	0.0282	6.280	0.3824	62.78	11.9	<4.000
11/7/2018	Wednesday	27.48	0.1291	16.42		28.19	6.426		14.31	0.5456	67.05	7.93	<4.000
11/13/2018	Tuesday	71.13	0.1061	2.301		20.32	3.809		3.941	0.4610	52.05	7.65	<4.000
11/14/2018	Wednesday	35.75	0.1219	6.972		20.46	2.442		4.081	0.3468	53.50	6.48	<4.000
11/20/2018	Tuesday	36.01	0.1372	2.232		23.61	3.354		4.005	0.4192	54.77	8.19	<4.000
11/21/2018	Wednesday	30.96	0.1262	2.334		21.16	2.117		4.339	0.5546	48.09	7.61	<4.000
11/27/2018	Tuesday	48.13	0.1330	1.888		19.76	5.028		3.574	0.4101	58.49	4.43	<4.000
11/28/2018	Wednesday	34.43	0.1314	1.484		21.71	2.683		7.513	0.5039	48.23	6.32	<4.000
12/4/2018	Tuesday	28.56	0.1628	2.470	16	29.66	4.051	0.0322	4.055	0.4808	73.26	12.2	<4.000
12/5/2018	Wednesday	27.83	0.1448	2.318		29.43	3.952		4.016	0.5419	66.44	12.1	<4.000
12/11/2018	Tuesday	24.41	0.1505	2.716		30.89	2.730		14.32	0.8297	65.16	6.56	<4.000
12/12/2018	Wednesday	23.59	0.1489	2.348		27.76	3.846		10.17	0.7733	63.61	5.93	<4.000
12/18/2018	Tuesday	22.36	0.1550	2.202		46.73	2.313		10.14	0.8323	81.56	10.3	<4.000
12/19/2018	Wednesday	22.07	0.1810	2.349		29.21	2.585	0.0133	5.182	0.7138	71.06	7.59	<4.000
12/25/2018	Tuesday	23.63	0.1364	0.6110		24.76	3.454		2.745	0.1507	56.51		
12/26/2018	Wednesday	23.79	0.1136	0.9365		22.95	1.544		2.941	0.1904	52.42		
12/27/2018	Thursday	23.27						0.04490	<10.000	<4.0	85.93	7.45	<4.000
12/28/2018	Friday	42.04						0.01750	17.719	3.441	93.770	7.13	<4.000

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

Bucklin Point Influent Metals, Al-Sn, 2018

all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo	Sn
1/2/2018	Tuesday	14.24	208.989		<1.000	0.866	3.455	
1/3/2018	Wednesday	13.77	237.090		<1.000	0.874	4.785	
1/9/2018	Tuesday	14.40	279.314	1236.027	<1.000	0.884	2.125	<5.00
1/10/2018	Wednesday	15.09	382.493		<1.000	0.920	6.164	
1/16/2018	Tuesday	20.93	209.191		<1.000	0.882	3.281	
1/17/2018	Wednesday	21.74	216.809		<1.000	0.911	3.120	
1/23/2018	Tuesday	45.13	667.379		<1.000	1.106	3.847	
1/24/2018	Wednesday	22.31	390.761		<1.000	1.010	3.803	
1/30/2018	Tuesday	19.60	219.107		<1.000	0.883	7.853	
1/31/2018	Wednesday	18.19	184.809		<1.000	0.825	4.899	
2/6/2018	Tuesday	18.92	215.917	827.147	<1.000	0.799	3.259	<5.00
2/7/2018	Wednesday	36.24	197.752		<1.000	0.722	4.199	
2/13/2018	Tuesday	22.58	170.705		<1.000	0.740	7.162	
2/14/2018	Wednesday	23.38	169.532		<1.000	0.673	1.709	
2/20/2018	Tuesday	22.45	254.572		<1.000	0.784	2.313	
2/21/2018	Wednesday	21.69	183.598		<1.000	0.779	4.666	
2/27/2018	Tuesday	22.02	141.398		<1.000	0.518	1.947	
2/28/2018	Wednesday	22.21	182.829		<1.000	2.205	2.883	
3/6/2018	Tuesday	29.13	154.547	712.167	<1.000	0.848	1.498	<5.00
3/7/2018	Wednesday	39.79	187.838		<1.000	0.924	3.064	
3/13/2018	Tuesday	31.19	221.337		<1.000	0.866	1.727	
3/14/2018	Wednesday	32.29	219.622		<1.000	0.847	1.903	
3/20/2018	Tuesday	24.94	209.817		<1.000	0.825	3.290	
3/21/2018	Wednesday	25.67	580.983		<1.000	0.803	3.779	
3/27/2018	Tuesday	21.72	315.083		<1.000	0.753	1.846	
3/28/2018	Wednesday	22.09	213.042		<1.000	0.726	1.860	
4/3/2018	Tuesday	32.70	285.090	1014.685	<1.000	0.996	5.850	<5.00
4/4/2018	Wednesday	26.11	514.382		<1.000	1.063	1.575	
4/10/2018	Tuesday	20.86	193.557		<1.000	0.781	2.161	
4/11/2018	Wednesday	19.61	186.988		<1.000	0.789	2.230	
4/17/2018	Tuesday	25.01	491.579		<1.000	1.022	2.041	
4/18/2018	Wednesday	23.35	212.598		<1.000	0.813	2.443	
4/24/2018	Tuesday	22.30	442.011		<1.000	0.750	3.731	
4/25/2018	Wednesday	54.13	358.181		<1.000	0.869	2.286	
5/1/2018	Tuesday	24.70	21.724		<1.000	0.695	2.641	
5/2/2018	Wednesday	23.89	209.366		<1.000	0.731	3.124	
5/8/2018	Tuesday	20.86	194.075	781.421	<1.000	0.735	3.440	<5.00
5/9/2018	Wednesday	20.60	246.021		<1.000	0.796	3.385	
5/15/2018	Tuesday	27.07	298.185		<1.000	0.972	6.589	
5/16/2018	Wednesday	20.43	476.985		<1.000	1.042	2.926	

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

Bucklin Point Influent Metals, Al-Sn, 2018

all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo	Sn
5/22/2018	Tuesday	19.94	268.121		<1.000	0.870	3.011	
5/23/2018	Wednesday	18.36	285.805		<1.000	0.922	2.926	
5/29/2018	Tuesday	16.83	214.960		<1.000	0.869	1.969	
5/30/2018	Wednesday	16.62	336.167		<1.000	0.937	5.999	
6/5/2018	Tuesday	20.63	242.596	937.664	<1.000	0.879	5.475	<5.00
6/6/2018	Wednesday	16.69	453.041		<1.000	1.017	3.351	
6/12/2018	Tuesday	15.80	641.7		<1	0.7830	2.871	
6/13/2018	Wednesday	16.32	320.9		<1	0.8910	3.620	
6/19/2018	Tuesday	15.01	321.3		<1	0.9404	4.037	
6/20/2018	Wednesday	14.39	273		<1	0.8888	2.247	
6/26/2018	Tuesday	14.27	299		<1	0.9288	4.954	
6/27/2018	Wednesday	14.74	299.8		<1	0.9334	2.154	
7/3/2018	Tuesday	14.61	235.3		<1	0.9842	5.331	
7/4/2018	Wednesday	12.90	232.2		<1	0.9443	3.865	
7/10/2018	Tuesday	13.97	274.3	1017	<1	0.9456	6.896	<5
7/11/2018	Wednesday	13.97	337.4		<1	1.008	5.239	
7/17/2018	Tuesday	24.15	263		<1	1.067	5.156	
7/18/2018	Wednesday	14.41	402		<1	1.118	2.754	
7/24/2018	Tuesday	14.19	251.9		<1	1.066	2.927	
7/25/2018	Wednesday	14.62	241.8		<1	1.080	2.806	
7/31/2018	Tuesday	13.34	242.5		<1	1.093	3.808	
8/1/2018	Wednesday	14.24	272.6		<1	1.136	4.247	
8/7/2018	Tuesday	13.56	317.8	1706	<1	1.161	3.107	<5
8/8/2018	Wednesday	13.45	261.3		<1	1.029	3.088	
8/14/2018	Tuesday	16.38	272.2		<1	1.261	1.985	
8/15/2018	Wednesday	14.73	315.4		<1	1.076	7.177	
8/21/2018	Tuesday	14.43	239.9		<1	1.176	2.807	
8/22/2018	Wednesday	22.11	350.4		<1	0.9932	5.032	
8/28/2018	Tuesday	13.62	285.9		<1	0.8511	5.681	
8/29/2018	Wednesday	13.36	709.9		<1	0.9168	9.317	
9/4/2018	Tuesday	13.09	239		<1	0.8131	2.443	
9/5/2018	Wednesday	13.22	283.4		<1	0.9079	4.193	
9/11/2018	Tuesday	30.42	357.2	934.4	<1	0.8220	2.160	<5
9/12/2018	Wednesday	36.64	487.8		<1	0.9340	5.392	
9/18/2018	Tuesday	27.93	306.7		<1	0.8978	2.784	
9/19/2018	Wednesday	17.33	405.7		<1	0.9853	3.604	
9/25/2018	Tuesday	46.83	785.8		<1	0.8663	3.856	
9/26/2018	Wednesday	43.39	443.5		<1	1.041	1.587	
10/2/2018	Tuesday	37.01	228.3		<1	0.9168	2.427	

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

Bucklin Point Influent Metals, Al-Sn, 2018

all analyses in ppb

Date	Day of the Week	Influent Flow	Al	Fe	Se	As	Mo	Sn
10/3/2018	Wednesday	38.98	229.4		1.199	2.412	2.101	
10/9/2018	Tuesday	20.60	202.9		<1	0.8095	1.314	
10/10/2018	Wednesday	19.55	265		<1	0.9241	2.791	
10/16/2018	Tuesday	26.96	314.1	989.9	<1	0.8431	2.775	<5
10/17/2018	Wednesday	21.35	235.2		<1	0.8256	3.100	
10/23/2018	Tuesday	21.14	227.5		<1	0.7243	2.069	
10/24/2018	Wednesday	19.60	907.5		<1	0.8855	8.249	
10/30/2018	Tuesday	21.66	202.1		<1	0.7042	3.478	
10/31/2018	Wednesday	20.42	206.3		<1	0.7367	2.290	
11/6/2018	Tuesday	48.46	194.1	759.6	<1	0.6996	2.537	<5
11/7/2018	Wednesday	27.48	404.1		<1	0.8075	1.310	
11/13/2018	Tuesday	71.13	183.8		<1	0.6249	0.8089	
11/14/2018	Wednesday	35.75	175.6		<1	0.7808	2.740	
11/20/2018	Tuesday	36.01	189.4		<1	0.7748	1.687	
11/21/2018	Wednesday	30.96	161.9		<1	0.7671	2.742	
11/27/2018	Tuesday	48.13	249.6		<1	0.7350	1.309	
11/28/2018	Wednesday	34.43	147.5		<1	0.7527	2.251	
12/4/2018	Tuesday	28.56	168.3	701.3	<1	0.7401	2.491	<5
12/5/2018	Wednesday	27.83	173.8		<1	0.7391	2.511	
12/11/2018	Tuesday	24.41	181.3		<1	0.7379	3.764	
12/12/2018	Wednesday	23.59	179.4		<1	0.7085	1.407	
12/18/2018	Tuesday	22.36	201.4		<1	0.7104	1.656	
12/19/2018	Wednesday	22.07	225.2		<1	0.7253	2.968	
12/25/2018	Tuesday	23.63	118.2		<1	0.7143	0.9608	
12/26/2018	Wednesday	23.79	120.7		<1	0.6951	0.8332	

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

Bucklin Point Effluent Metals (Cd-Zn) and Cyanide, 2018

all analyses in ppb

Date	Day of the Week	Effluent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
1/2/2018	Tuesday	14.24	0.035	0.318		4.033	0.475		2.519	0.035	37.766		
1/3/2018	Wednesday	13.77	0.043	0.582		7.191	0.565		3.533	0.046	47.228	6.040	<4.00
1/4/2018	Thursday	14.08										5.890	<4.00
1/9/2018	Tuesday	14.40	0.031	0.638	<10.000	3.798	0.488	0.002360	4.661	0.094	39.849	9.250	<4.00
1/10/2018	Wednesday	15.09	0.030	0.899		3.706	0.476		4.880	0.067	41.843	7.030	<4.00
1/16/2018	Tuesday	20.93	0.026	0.475		3.170	0.464		6.398	0.078	42.436	5.440	<4.00
1/17/2018	Wednesday	21.74	0.026	0.503		3.227	0.431		6.202	0.059	42.735	8.630	<4.00
1/23/2018	Tuesday	30.28	0.042	0.698		4.686	0.560		5.751	0.082	38.816	5.480	<4.00
1/24/2018	Wednesday	22.31	0.034	0.771		4.848	0.523		5.696	0.073	42.495	8.460	<4.00
1/30/2018	Tuesday	19.60	0.039	0.531		3.483	0.446		7.792	0.034	41.256	6.640	<4.00
1/31/2018	Wednesday	18.19	0.043	0.812		4.017	0.444		7.168	0.039	41.455	6.740	<4.00
2/6/2018	Tuesday	18.92	0.024	0.656	<10.000	2.886	0.478	0.001690	4.365	0.041	32.776	6.300	<4.00
2/7/2018	Wednesday	28.83	0.054	0.766		4.141	0.526		5.725	0.062	36.957	7.200	<4.00
2/13/2018	Tuesday	22.58	0.033	0.558		2.587	0.434		4.348	0.038	35.125	6.660	<4.00
2/14/2018	Wednesday	23.38	0.033	0.569		2.602	0.512		5.818	0.038	35.876	6.710	<4.00
2/20/2018	Tuesday	22.45	0.044	0.679		2.922	0.441		4.959	0.050	36.020	7.390	<8.00
2/21/2018	Wednesday	21.69	0.038	0.576		2.520	0.390		5.402	0.039	35.140	10.54	<8.00
2/27/2018	Tuesday	22.02	0.037	0.365		2.404	0.390		4.323	0.044	35.989	7.240	<4.00
2/28/2018	Wednesday	22.21	0.047	0.384		2.406	0.384		4.249	0.040	34.872	6.460	<4.00
3/6/2018	Tuesday	29.13	0.037	0.477	<10.000	3.381	0.524	0.004490	4.446	0.067	33.670	6.630	<4.00
3/7/2018	Wednesday	34.92	0.046	0.707		4.574	0.707		4.237	0.135	36.373	6.350	<4.00
3/13/2018	Tuesday	31.19	0.041	0.458		3.959	0.550		4.228	0.081	33.154	6.89	<4.00
3/14/2018	Wednesday	32.29	0.043	0.495		4.299	0.523		3.966	0.082	30.540	5.06	<4.00
3/20/2018	Tuesday	24.94	0.050	0.520		3.760	0.512		4.777	0.094	34.736	6.240	<4.00
3/21/2018	Wednesday	25.67	0.045	0.511		3.980	0.521		5.192	0.059	36.181	6.720	<4.00
3/27/2018	Tuesday	21.72	0.044	0.399		2.999	0.409		4.419	0.038	35.022	6.140	<4.00
3/28/2018	Wednesday	22.09	0.039	0.454		3.086	0.437		4.931	0.045	34.041	9.620	<4.00
4/3/2018	Tuesday	28.92	0.041	0.413	<10.000	4.575	0.467	0.003510	3.846	0.066	32.286	6.390	<4.00
4/4/2018	Wednesday	26.11	0.034	0.766		4.287	0.497		3.942	0.064	34.622	8.380	<4.00
4/10/2018	Tuesday	20.86	0.037	0.419		4.181	0.443		7.723	0.104	34.162	7.150	<4.00
4/11/2018	Wednesday	19.61	0.040	0.712		4.277	0.439		7.607	0.070	38.169	6.970	<4.00
4/17/2018	Tuesday	25.01	0.036	0.419		4.190	0.514		3.899	0.052	35.982	<4.00	<4.00
4/18/2018	Wednesday	23.35	0.044	0.307		3.322	0.412		4.326	0.048	37.931	4.550	<4.00
4/24/2018	Tuesday	22.30	0.029	0.524		3.403	0.438		4.565	0.056	33.133	5.140	<4.00
4/25/2018	Wednesday	35.27	0.030	0.793		5.093	0.710		3.778	0.119	30.028	4.540	<4.00
5/1/2018	Tuesday	24.70	0.038	0.683		5.574	0.813		3.883	0.142	34.135	4.860	<4.00
5/2/2018	Wednesday	23.89	0.039	0.719		6.423	0.903		4.357	0.149	36.589	5.780	<4.00
5/8/2018	Tuesday	20.86	0.024	0.582	<10.000	4.328	0.588	0.004150	4.853	0.093	29.328	4.680	<4.00
5/9/2018	Wednesday	20.60	0.026	0.650		3.746	0.519		5.863	0.068	30.323	4.290	<4.00
5/15/2018	Tuesday	25.66	0.031	0.581		4.445	0.564		5.032	0.109	33.877	5.510	<4.00
5/16/2018	Wednesday	20.43	0.025	0.975		4.464	0.712		5.649	0.077	34.286	4.540	<4.00
5/22/2018	Tuesday	19.94	0.032	0.660		4.026	0.488		4.415	0.063	33.832	5.440	<4.00
5/23/2018	Wednesday	18.36	0.032	0.607		4.109	0.492		4.559	0.058	35.773	5.290	<4.00
5/29/2018	Tuesday	16.83	0.031	0.406		3.438	0.396		2.784	0.039	34.983	5.510	<4.00
5/30/2018	Wednesday	16.62	0.039	0.558		4.021	0.449		4.913	0.054	41.820	4.020	<4.00

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

Bucklin Point Effluent Metals (Cd-Zn) and Cyanide, 2018

all analyses in ppb

Date	Day of the Week	Effluent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
6/5/2018	Tuesday	20.63	0.024	0.738	<10.000	3.876	0.463	0.002980	8.141	0.057	32.504	5.420	<4.00
6/6/2018	Wednesday	16.69	0.021	0.691		3.036	0.366		7.745	0.045	33.574	7.010	<4.00
6/12/2018	Tuesday	15.80	0.03164	0.8405		4.863	0.4982		4.762	0.04949	40.63	<4	<4.000
6/13/2018	Wednesday	16.32	0.03063	0.6271		4.860	0.4768		5.995	0.04383	37.92	5.07	<4.000
6/19/2018	Tuesday	15.01	0.02806	0.5622		4.284	0.4850		5.027	0.05038	46.32	5.07	<4.000
6/20/2018	Wednesday	14.39	0.03518	0.6475		4.344	0.4789		7.431	0.04594	41.45	6.01	<4.000
6/26/2018	Tuesday	14.27	0.02101	0.6937		3.334	0.4879		6.577	0.04346	41.50	6.33	<4.000
6/27/2018	Wednesday	14.74	0.02918	1.032		3.876	0.5322		7.286	0.04705	47.47	6.46	<4.000
7/3/2018	Tuesday	14.61	0.04138	0.5124		3.645	0.7520		5.363	0.04522	50.95	6.61	<4.000
7/4/2018	Wednesday	12.90	0.03871	0.5326		4.157	0.7695		5.354	0.03964	50.09	5.69	<4.000
7/10/2018	Tuesday	13.97	0.03990	0.5650	<10	4.485	0.9878	0.00214	8.404	0.03760	47.66	4.07	<4.000
7/11/2018	Wednesday	13.97	0.04541	0.6516		4.919	0.9633		10.38	0.04202	51.07	8	<4.000
7/17/2018	Tuesday	21.73	0.03906	0.8122		6.152	0.9772		7.052	0.07365	44.54	6.12	<4.000
7/18/2018	Wednesday	14.41	0.03359	0.7546		5.040	0.7149		6.572	0.05193	39.20	7.08	<4.000
7/24/2018	Tuesday	14.19	0.04782	0.8447	<10	5.373	0.7086		4.766	0.04485	48.74	6.54	<4.000
7/25/2018	Wednesday	14.62	0.04478	0.6003		5.821	0.7329		4.784	0.04522	49.53	6.89	<4.000
7/31/2018	Tuesday	13.34	0.06040	0.5466		5.493	0.6158		4.128	0.02800	49.22	4.96	<4.000
8/1/2018	Wednesday	14.24	0.05574	0.7013		5.526	0.6208		4.981	0.02433	48.50	5.29	<4.000
8/7/2018	Tuesday	13.56	0.05362	0.4768	<10	4.767	0.5140	0.00259	5.167	<0.020	46.64	6.93	<4.000
8/8/2018	Wednesday	13.45	0.05197	1.118		5.381	0.7969		5.945	0.04556	45.16	7.42	<4.000
8/14/2018	Tuesday	16.38	0.03640	0.5116		4.594	0.4675		4.029	0.02255	41.12	6.06	<4.000
8/15/2018	Wednesday	14.73	0.04112	0.6221		6.472	0.4739		7.551	0.02363	39.28	11.1	<4.000
8/21/2018	Tuesday	14.43	0.05545	0.7353		6.482	0.4824		7.131	0.03192	42.76	6.49	<4.000
8/22/2018	Wednesday	22.11	0.03513	0.9023		5.246	0.4330		6.309	0.04243	38.98	6.41	<4.000
8/28/2018	Tuesday	13.62	0.05183	2.618		6.102	0.4143		12.42	0.03403	42.45	7.50	<4.000
8/29/2018	Wednesday	13.36	0.03467	3.211		6.208	0.3944		37.16	0.03724	36.68	7.73	<4.000
9/4/2018	Tuesday	13.09	0.04826	0.5586		5.674	0.4994		8.909	0.03603	40.15	6.56	<4.000
9/5/2018	Wednesday	13.22	0.04443	0.6433		6.127	0.5000		9.424	0.03888	39.21	7.22	<4.000
9/11/2018	Tuesday	24.14	<0.020	1.563	<10	4.645	<0.300	0.00219	3.968	0.04765	27.55	5.90	<4.000
9/12/2018	Wednesday	25.32	0.02137	1.165		5.866	0.3903		5.124	0.08048	29.43	7.41	<4.000
9/18/2018	Tuesday	24.33	0.02930	0.6766		6.614	0.4580		4.946	0.06871	33.14	6.31	<4.000
9/19/2018	Wednesday	17.33	0.02282	0.6079		5.775	0.3269		4.946	0.04089	34.52	6.85	<4.000
9/25/2018	Tuesday	28.84	0.02340	0.8227		6.145	0.3890		3.525	0.08968	29.13	6.61	<4.000
9/26/2018	Wednesday	29.45	<0.020	0.8210		6.584	0.5154		2.707	0.1108	27.24	7.78	<4.000
10/2/2018	Tuesday	29.04	0.02680	0.5706		5.974	0.3681		3.501	0.06662	32.22	5.79	<4.000
10/3/2018	Wednesday	28.90	0.02362	0.5716		5.718	0.5254		3.063	0.08391	30.69	7.79	<4.000
10/9/2018	Tuesday	20.60	0.04137	0.4070		3.875	0.5522		4.025	0.04137	39.02	6.28	6.28
10/10/2018	Wednesday	19.55	0.04046	0.4847		3.930	0.4294		4.600	0.04113	34.46	4.96	<4.000
10/16/2018	Tuesday	26.96	0.03437	0.5841	<10	3.864	0.4151	0.00268	4.322	0.05505	29.81	5.67	<4.000
10/17/2018	Wednesday	21.35	0.03595	0.7865		3.933	0.4186		4.345	0.04269	32.12	10.2	<4.000
10/23/2018	Tuesday	21.14	0.03553	0.8117		4.724	0.4346		5.454	0.05452	39.73	7.36	<4.000
10/24/2018	Wednesday	19.60	0.02895	1.750		5.212	0.4309		5.939	0.04151	36.04	6.72	<4.000
10/30/2018	Tuesday	21.66	0.02325	0.5443		3.845	0.3890		3.015	0.05527	33.21	<4	<4.000
10/31/2018	Wednesday	20.42	0.02371	0.7024		3.917	0.3937		3.215	0.05368	33.43	7.04	<4.000
11/6/2018	Tuesday	34.59	0.02498	0.7752	<10	5.310	0.4968	0.00239	3.075	0.06933	29.36	8.59	<4.000

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

Bucklin Point Effluent Metals (Cd-Zn) and Cyanide, 2018

all analyses in ppb

Date	Day of the Week	Effluent Flow	Cd	Cr	Hex Cr	Cu	Pb	Hg	Ni	Ag	Zn	CN	Available CN
11/7/2018	Wednesday	27.48	0.02726	1.533		5.427	0.5914		4.765	0.06995	33.38	9.70	<4.000
11/13/2018	Tuesday	41.64	0.02693	1.215		5.124	0.6599		2.609	0.07846	26.18	4.53	<4.000
11/14/2018	Wednesday	35.75	0.02942	1.148		6.440	0.8511		2.951	0.1059	27.49	12.8	<4.000
11/20/2018	Tuesday	36.01	0.03648	0.8038		5.071	0.6001		3.014	0.06019	30.56	10.6	<4.000
11/21/2018	Wednesday	30.96	0.03507	0.5872		5.589	0.4345		3.347	0.03967	31.32	8.40	<4.000
11/27/2018	Tuesday	38.58	0.04503	0.5723		5.717	0.5773		2.325	0.05484	30.86	5.31	<4.000
11/28/2018	Wednesday	34.43	0.04709	0.6109		6.742	0.6080		3.299	0.05773	32.43	5.54	<4.000
12/4/2018	Tuesday	28.56	0.05432	0.6388	<10	7.113	0.6874	0.00239	2.906	0.04615	33.63	7.27	<4.000
12/5/2018	Wednesday	27.83	0.04930	0.6226		7.587	0.6769		3.245	0.04583	34.10	7.24	<4.000
12/11/2018	Tuesday	24.41	0.07475	0.5407		8.194	0.6118		3.925	0.03738	38.80	5.29	<4.000
12/12/2018	Wednesday	23.59	0.07095	0.6132		8.862	0.6408		4.846	0.03795	39.68	6.78	<4.000
12/18/2018	Tuesday	22.36	0.05888	0.4826		10.34	0.6703		5.866	0.04630	39.88	5.87	<4.000
12/19/2018	Wednesday	22.07	0.06303	0.5615		9.484	0.5931	0.00428	5.088	0.06832	41.09	7.98	<4.000
12/25/2018	Tuesday	23.63	0.04023	0.3267		4.842	0.4833		2.708	0.03309	30.62		
12/26/2018	Wednesday	23.79	0.05251	0.4003		4.921	0.4781		2.850	0.04075	29.99		
12/27/2018	Thursday	23.27										8.39	<4.000
12/28/2018	Friday	34.05										11.9	<4.000

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

Bucklin Point Effluent Metals, Al-Sn, 2018

all analyses in ppb

Date	Day of the Week	Effluent Flow	Al	Fe	Se	As	Mo	Sn
1/2/2018	Tuesday	14.24	14.146		<1.000	0.556	1.869	
1/3/2018	Wednesday	13.77	16.947		<1.000	0.644	3.391	
1/9/2018	Tuesday	14.40	13.583	74.031	<1.000	0.645	2.594	<5.00
1/10/2018	Wednesday	15.09	14.735		<1.000	0.621	3.309	
1/16/2018	Tuesday	20.93	17.991		<1.000	0.786	2.593	
1/17/2018	Wednesday	21.74	18.675		<1.000	0.799	2.740	
1/23/2018	Tuesday	30.28	26.250		<1.000	0.694	2.779	
1/24/2018	Wednesday	22.31	27.647		<1.000	0.764	3.204	
1/30/2018	Tuesday	19.60	15.490		<1.000	0.666	6.690	
1/31/2018	Wednesday	18.19	17.710		<1.000	0.670	5.013	
2/6/2018	Tuesday	18.92	15.993	74.924	<1.000	0.684	2.344	<5.00
2/7/2018	Wednesday	28.83	28.112		<1.000	0.675	3.156	
2/13/2018	Tuesday	22.58	17.152		<1.000	0.604	4.727	
2/14/2018	Wednesday	23.38	18.571		<1.000	0.611	2.259	
2/20/2018	Tuesday	22.45	14.630		<1.000	0.609	1.584	
2/21/2018	Wednesday	21.69	13.996		<1.000	0.666	3.414	
2/27/2018	Tuesday	22.02	14.565		<1.000	0.595	3.053	
2/28/2018	Wednesday	22.21	15.081		<1.000	0.727	2.375	
3/6/2018	Tuesday	29.13	28.490	160.209	<1.000	0.891	1.468	<5.00
3/7/2018	Wednesday	34.92	47.093		<1.000	0.885	2.435	
3/13/2018	Tuesday	31.19	31.523		<1.000	0.727	1.371	
3/14/2018	Wednesday	32.29	32.532		<1.000	0.703	1.560	
3/20/2018	Tuesday	24.94	25.845		<1.000	0.714	2.938	
3/21/2018	Wednesday	25.67	28.775		<1.000	0.792	3.244	
3/27/2018	Tuesday	21.72	17.569		<1.000	0.707	1.398	
3/28/2018	Wednesday	22.09	19.480		<1.000	0.715	1.265	
4/3/2018	Tuesday	28.92	22.028	141.987	<1.000	0.725	3.568	<5.00
4/4/2018	Wednesday	26.11	25.646		<1.000	0.721	2.110	
4/10/2018	Tuesday	20.86	18.220		<1.000	0.712	1.735	
4/11/2018	Wednesday	19.61	20.362		<1.000	0.728	1.858	
4/17/2018	Tuesday	25.01	17.411		<1.000	0.663	1.959	
4/18/2018	Wednesday	23.35	14.201		<1.000	0.649	1.969	
4/24/2018	Tuesday	22.30	17.853		<1.000	0.699	2.778	
4/25/2018	Wednesday	35.27	41.259		<1.000	0.635	1.731	
5/1/2018	Tuesday	24.70	45.780		<1.000	0.704	2.122	
5/2/2018	Wednesday	23.89	51.698		<1.000	0.681	3.670	
5/8/2018	Tuesday	20.86	32.490	260.829	<1.000	0.727	2.971	<5.00
5/9/2018	Wednesday	20.60	27.519		<1.000	0.724	3.761	
5/15/2018	Tuesday	25.66	27.545		<1.000	0.753	3.623	
5/16/2018	Wednesday	20.43	25.358		<1.000	0.764	2.546	
5/22/2018	Tuesday	19.94	24.935		<1.000	0.779	3.066	
5/23/2018	Wednesday	18.36	18.151		<1.000	0.775	2.399	
5/29/2018	Tuesday	16.83	14.152		<1.000	0.778	2.040	
5/30/2018	Wednesday	16.62	18.511		<1.000	0.785	3.998	
6/5/2018	Tuesday	20.63	21.259	109.952	<1.000	0.731	3.321	<5.00
6/6/2018	Wednesday	16.69	16.155		<1.000	0.693	2.740	
6/12/2018	Tuesday	15.80	19.99		<1	0.7182	2.299	
6/13/2018	Wednesday	16.32	17.30		<1	0.7285	2.767	
6/19/2018	Tuesday	15.01	16.59		<1	0.7714	2.603	
6/20/2018	Wednesday	14.39	17.02		<1	0.7408	2.034	
6/26/2018	Tuesday	14.27	13.30		<1	0.6330	3.218	
6/27/2018	Wednesday	14.74	16.61		<1	0.7259	2.324	
7/3/2018	Tuesday	14.61	15.63		<1	0.7494	3.540	
7/4/2018	Wednesday	12.90	16.70		<1	0.7703	3.452	
7/10/2018	Tuesday	13.97	17.36	62.30	<1	0.8080	3.486	<5
7/11/2018	Wednesday	13.97	18.93		<1	0.8075	3.589	
7/17/2018	Tuesday	21.73	30.93		<1	0.7894	3.078	
7/18/2018	Wednesday	14.41	20.33		<1	0.8600	2.399	
7/24/2018	Tuesday	14.19	31.34		<1	0.7762	2.087	
7/25/2018	Wednesday	14.62	21.35		<1	0.8020	1.933	
7/31/2018	Tuesday	13.34	16.56		<1	0.7454	3.169	
8/1/2018	Wednesday	14.24	16.46		<1	0.7866	3.049	
8/7/2018	Tuesday	13.56	18.79	37.92	<1	0.7118	1.598	<5
8/8/2018	Wednesday	13.45	24.10		<1	0.7689	2.192	
8/14/2018	Tuesday	16.38	10.77		<1	0.7252	1.356	

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

Bucklin Point Effluent Metals, Al-Sn, 2018

all analyses in ppb

Date	Day of the Week	Effluent Flow	Al	Fe	Se	As	Mo	Sn
8/15/2018	Wednesday	14.73	10.76		<1	0.7596	3.379	
8/21/2018	Tuesday	14.43	11.37		<1	0.6966	2.360	
8/22/2018	Wednesday	22.11	12.30		<1	0.7214	3.901	
8/28/2018	Tuesday	13.62	10.15		<1	0.5958	3.486	
8/29/2018	Wednesday	13.36	11.87		<1	0.6654	6.198	
9/4/2018	Tuesday	13.09	11.82		<1	0.5132	1.999	
9/5/2018	Wednesday	13.22	11.42		<1	0.6168	2.846	
9/11/2018	Tuesday	24.14	10.93	60.13	<1	<0.500	2.007	<5
9/12/2018	Wednesday	25.32	18.18		<1	0.5460	2.956	
9/18/2018	Tuesday	24.33	16.50		<1	0.6140	1.693	
9/19/2018	Wednesday	17.33	11.21		<1	0.7336	2.325	
9/25/2018	Tuesday	28.84	19.10		<1	0.6132	1.935	
9/26/2018	Wednesday	29.45	29.12		<1	0.7536	1.343	
10/2/2018	Tuesday	29.04	17.55		<1	0.6763	1.503	
10/3/2018	Wednesday	28.90	23.12		<1	0.6702	1.145	
10/9/2018	Tuesday	20.60	14.66		<1	0.6509	1.013	
10/10/2018	Wednesday	19.55	11.03		<1	0.6608	1.661	
10/16/2018	Tuesday	26.96	16.09	158.3	<1	0.7240	1.927	<5
10/17/2018	Wednesday	21.35	15.50		<1	0.6249	2.463	
10/23/2018	Tuesday	21.14	15.87		<1	0.5628	2.087	
10/24/2018	Wednesday	19.60	17.61		<1	0.6582	5.154	
10/30/2018	Tuesday	21.66	17.05		<1	0.6027	2.445	
10/31/2018	Wednesday	20.42	14.68		<1	0.6013	1.606	
11/6/2018	Tuesday	34.59	25.69	154.6	<1	0.5670	1.541	<5
11/7/2018	Wednesday	27.48	30.33		<1	0.5935	1.155	
11/13/2018	Tuesday	41.64	31.77		<1	<0.500	0.9819	
11/14/2018	Wednesday	35.75	44.59		<1	0.6631	2.538	
11/20/2018	Tuesday	36.01	28.41		<1	0.6740	1.982	
11/21/2018	Wednesday	30.96	19.48		<1	0.6170	2.015	
11/27/2018	Tuesday	38.58	27.75		<1	0.5987	1.219	
11/28/2018	Wednesday	34.43	26.90		<1	0.6160	1.562	
12/4/2018	Tuesday	28.56	22.50	96.29	<1	0.5763	1.669	<5
12/5/2018	Wednesday	27.83	22.65		<1	0.5865	1.473	
12/11/2018	Tuesday	24.41	17.33		<1	0.5695	2.441	
12/12/2018	Wednesday	23.59	19.51		<1	0.5704	1.535	
12/18/2018	Tuesday	22.36	22.47		<1	0.5855	1.243	
12/19/2018	Wednesday	22.07	22.89		<1	0.5682	1.955	
12/25/2018	Tuesday	23.63	16.62		<1	<0.500	0.5110	
12/26/2018	Wednesday	23.79	17.74		<1	0.5330	0.5486	

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

Field's Point Influent and Effluent Nutrients 2018

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
01/01/18	0.057	<0.100	0.129	18.80	31.400		31.529
01/02/18	0.067	0.116	0.183	19.20	33.700	4.320	33.883
01/03/18	0.067	0.083	0.150	18.80	32.000		32.150
01/08/18	0.101	0.185	0.286	19.40	32.900		33.186
01/09/18	0.086	0.172	0.258	20.20	33.000	4.300	33.258
01/10/18	0.062	0.171	0.233	20.00	34.900		35.133
01/15/18	0.089	1.161	1.250	8.950	18.600		19.850
01/16/18	0.087	1.003	1.090	10.70	22.200	2.080	23.290
01/17/18	0.096	1.114	1.210	13.00	21.300		22.510
01/22/18	0.106	0.723	0.829	17.10	29.100		29.929
01/23/18	0.064	0.956	1.020	8.530	16.500	1.750	17.520
01/24/18	0.084	1.146	1.230	9.720	14.700		15.930
01/29/18	0.130	0.836	0.966	16.60	27.600		28.566
01/30/18	0.114	0.707	0.821	16.80	27.500	3.430	28.321
01/31/18	0.118	0.648	0.766	17.10	25.400		26.166
02/05/18	0.080	1.030	1.110	9.760	18.800		19.910
02/06/18	0.096	0.984	1.080	11.10	18.700	2.210	19.780
02/07/18	0.089	1.101	1.190	10.70	19.300		20.490
02/12/18	0.126	1.324	1.450	9.800	17.300		18.750
02/13/18	0.121	1.259	1.380	10.60	18.500	1.940	19.880
02/14/18	0.127	1.233	1.360	12.40	20.800		22.160
02/19/18	0.130	1.010	1.140	12.00	20.200		21.340
02/20/18	0.160	1.120	1.280	13.40	22.600	2.370	23.880
02/21/18	0.166	1.024	1.190	14.20	24.500		25.690
02/26/18	0.244	1.496	1.740	11.10	16.600		18.340
02/27/18	0.253	1.637	1.890	12.00	19.700	2.560	21.590
02/28/18	0.265	1.825	2.090	12.00	20.500		22.590
03/05/18	0.246	2.924	3.170	6.690	13.700		16.870
03/06/18	0.233	2.357	2.590	7.180	13.600	1.460	16.190
03/07/18	0.204	2.156	2.360	6.620	14.300		16.660
03/12/18	0.324	1.326	1.650	8.120	16.600		18.250
03/13/18	0.321	1.469	1.790	7.700	16.000	1.810	17.790
03/14/18	0.344	1.446	1.790	7.300	16.100		17.890
03/19/18	0.169	1.241	1.410	10.50	21.600		23.010
03/20/18	0.224	1.386	1.610	10.40	20.300	2.300	21.910
03/21/18	0.135	1.235	1.370	10.60	19.100		20.470
03/26/18	0.202	0.958	1.160	12.60	20.100		21.260
03/27/18	0.269	0.931	1.200	12.50	20.800	3.760	22.000
03/28/18	0.175	0.766	0.941	12.40	21.600		22.541
04/02/18	0.171	0.592	0.763	12.40	23.400		24.163
04/03/18	0.134	0.623	0.757	11.0	19.7	2.90	20.457
04/04/18	0.118	0.912	1.030	10.70	19.700		20.730
04/09/18	0.106	0.503	0.609	14.30	22.500		23.109
04/10/18	0.102	0.547	0.649	14.30	24.000	3.520	24.649
04/11/18	0.113	0.462	0.575	14.30	16.300		16.875
04/16/18	0.052	0.813	0.865	4.790	9.120		9.985
04/17/18	0.074	1.026	1.100	8.040	12.800	2.430	13.900
04/18/18	0.092	0.822	0.914	8.260	13.200		14.114
04/23/18	0.123	0.674	0.797	12.80	21.600		22.397
04/24/18	0.116	0.645	0.761	12.90	21.700	2.870	22.461
04/25/18	0.057	0.802	0.859	6.010	12.100		12.959
04/30/18	0.145	0.750	0.895	8.370	15.800		16.695
05/01/18	0.191	0.687	0.878	10.00	20.400	2.370	21.278
05/02/18	0.218	0.513	0.731	10.70	21.700		22.431
05/07/18	0.156	0.555	0.711	11.30	21.700		22.411
05/08/18	0.136	0.375	0.511	12.60	24.700	3.100	25.211
05/09/18	0.109	0.203	0.312	13.50	26.000		26.312
05/14/18	0.040	0.195	0.235	14.70	26.900		27.135
05/15/18	0.068	0.236	0.304	11.60	24.700	3.240	25.004
05/16/18	0.107	0.376	0.483	11.90	21.900		22.383
05/21/18	0.070	0.158	0.228	14.00	25.500		25.728
05/22/18	0.091	0.132	0.223	13.70	26.300	3.180	26.523
05/23/18	0.087	0.130	0.217	14.00	24.500		24.717
05/28/18	<0.010	<0.100	<0.100	13.50	21.200		21.200
05/29/18	<0.010	<0.100	<0.100	14.30	26.300	3.740	26.300
05/30/18	0.240	0.081	0.321	14.90	27.400		27.721
06/04/18	0.092	0.303	0.395	9.920	18.500		18.895
06/05/18	0.076	0.387	0.463	10.80	20.500	2.510	20.963
06/06/18	0.062	0.229	0.291	11.60	20.700		20.991
06/11/18	0.0115	0.105	0.117	16.7	27.7		27.8
06/12/18	0.0121	0.114	0.126	15.9	26.5	4.17	26.6
06/13/18	<0.010	<0.100	<0.100	15.8	28.2		28.2
06/18/18	0.0514	0.101	0.152	15.7	29.7		29.9
06/19/18	0.0649	0.117	0.182	15.6	30.5	3.95	30.7
06/20/18	0.0734	0.120	0.193	16.6	28		28.2
06/25/18	0.224	<0.100	0.323	16.7	27.7		28
06/26/18	0.237	<0.100	0.279	17.1	29	3.75	29.3
06/27/18	0.118	0.110	0.228	16.4	30.2		30.4
07/02/18	0.547	<0.100	0.606	14.9	22.5		23.1
07/03/18	0.525	0.110	0.635	14.9	22.9	3.52	23.5
07/04/18	0.394	<0.100	0.421	13.3	24.5		24.9
07/09/18	0.0168	0.135	0.152	17.1	29.7		29.9
07/10/18	<0.010	0.126	0.126	16.2	28	3.67	28.1
07/11/18	<0.010	<0.100	<0.100	17.3	29		29

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
01/01/18	0.098	0.138	0.236	6.600	8.090	1.670	8.326
01/02/18	0.091	0.142	0.233	6.910	8.380		8.613
01/03/18	0.102	0.153	0.255	6.980	8.410		8.665
01/08/18	0.106	0.129	0.235	7.400	8.290	2.340	8.525
01/09/18	0.097	0.183	0.280	8.160	9.390		9.670
01/10/18	0.042	<0.100	<0.100	9.580	11.000		11.000
01/15/18	0.294	0.419	0.713	6.070	7.370	0.9460	8.083
01/16/18	0.103	0.131	0.234	6.750	7.730		7.964
01/17/18	0.056	0.057	0.113	8.710	9.960		10.073
01/22/18	0.066	0.145	0.211	11.10	12.200	1.270	12.411
01/23/18	0.283	1.217	1.500	5.020	6.180		7.680
01/24/18	0.310	0.880	1.190	7.060	7.870		9.060
01/29/18	0.061	0.068	0.129	10.40	11.500	1.240	11.629
01/30/18	0.086	0.143	0.229	10.10	10.400		10.629
01/31/18	0.062	0.082	0.144	10.10	10.400		10.544
02/05/18	0.275	1.355	1.630	5.640	6.810	0.7990	8.440
02/06/18	0.178	0.548	0.726	6.570	7.300		8.026
02/07/18	0.176	1.054	1.230	6.500	7.280		8.510
02/12/18	0.206	0.794	1.000	5.830	7.140	0.5540	8.140
02/13/18	0.128	0.298	0.426	6.050	7.180		7.606
02/14/18	0.097	0.251	0.348	6.630	7.770		8.118
02/19/18	0.130	0.379	0.509	4.650	5.780	0.8710	6.289
02/20/18	0.111	0.317	0.428	5.350	6.590		7.018
02/21/18	0.137	0.437	0.574	5.530	6.490		7.064
02/26/18	0.187	0.823	1.010	5.000	5.670	0.9940	6.680
02/27/18	0.103	0.358	0.461	4.390	5.230		5.691
02/28/18	0.131	0.618	0.749	4.070	4.950		5.699
03/05/18	0.207	2.853	3.060	2.720	4.280	0.7730	7.340
03/06/18	0.204	2.256	2.460	2.350	4.150		6.610
03/07/18	0.135	2.575	2.710	2.240	3.200		5.910
03/12/18	0.187	0.853	1.040	3.560	4.810	0.5670	5.850
03/13/18	0.256	0.964	1.220	3.000	4.380		5.600
03/14/18	0.193	0.732	0.925	3.060	4.400		5.325
03/19/18	0.052	0.222	0.274	4.200	5.630	0.7620	5.904
03/20/18	0.062	0.348	0.410	3.700	4.880		5.290
03/21/18	0.083	0.492	0.575	3.660	5.110		5.685
03/26/18	0.067	0.447	0.514	2.440	3.590	1.380	4.104
03/27/18	0.042	0.205	0.247	3.140	4.190		4.437
03/28/18	0.035	0.156	0.191	3.250	4.130		4.321
04/02/18	0.092	0.287	0.379	3.290	4.470	1.630	4.849
04/03/18	0.157	1.413	1.570	2.660	3.830		5.400
04/04/18	0.082	0.270	0.352	1.900	3.080		3.432
04/09/18	0.052	0.241	0.293	2.130	3.260	1.500	3.553
04/10/18	0.065	0.214	0.279	2.130	3.210		3.489
04/11/18	0.078	0.403	0.481	2.000	3.050		3.531
04/16/18	0.026	3.684	3.710	0.1410	1.110	0.8550	4.820
04/17/18	0.129	3.341	3.470	1.070	2.120		5.590
04/18/18	0.094	2.506	2.600	0.7840	1.960		4.560
04/23/18	0.079	0.875	0.954	0.9480	2.190	0.8630	3.144
04/24/18	0.103	1.347	1.450	1.130	2.450		3.900
04/25/18	0.020	2.870	2.890	<0.1	1.250		4.140
04/30/18	0.061	2.179	2.240	0.390	1.540	0.7620	3.780
05/01/18	0.030	1.250	1.280	0.3110	1.510		2.790
05/02/18	0.043	1.137	1.180	0.5290	1.720		2.900
05/07/18	0.035	0.448	0.483	0.6090	2.120	1.340	2.603
05/08/18	0.021	0.327	0.348	0.4370	1.670		2.018
05/09/18	0.030	0.387	0.417	0.7270	1.660		2.077
05/14/18	0.031	0.248	0.279	1.490	2.600	2.150	2.879
05/15/18	0.055	0.510	0.565	1.630	2.890		3.455
05/16/18	0.053	0.332	0.385	1.800	2.950		3.335
05/21/18	0.032	0.138	0.170	1.610	2.720	1.930	2.890
05/22/18	0.028	0.197	0.225	2.160	3.050		3.275
05/23/18	0.035	0.177	0.212	1.750	2.880		3.092
05/28/18	0.025	0.123	0.148	1.520	2.620	2.360	2.768
05/29/18	0.012	0.140	0.152	0.5580	1.680		1.832
05/30/18	0.025	0.268	0.293	0.7470	1.880		2.173
06/04/18	0.038	1.472	1.510	0.4650	1.760	1.450	3.270
06/05/18	0.091	1.049	1.140	1.140	2.390		3.530
06/06/18	0.077	0.345	0.422	0.6870	1.730		2.152
06/11/18	0.0110	0.288	0.299	0.350	1.64	2.31	1.94
06/12/18	0.0191	0.485	0.504	0.695	1.85		2.35
06/13/18	0.0276	0.279	0.307	0.481	1.60		1.91
06/18/18	0.0256	0.200	0.226	0.483	1.61	2.13	1.84
06/19/18	0.0121	0.204	0.216	0.256	1.32		1.54
06/20/18	<0.010	0.306	0.306	0.456	1.24		1.55
06/25/18	<0.010	<0.100	<0.100	0.670	1.98	2.35	1.98
06/26/18	<0.010	0.107	0.107	0.575	1.82		1.93
06/27/18	0.0398	0.313	0.353	1.27	2.79		3.14
07/02/18	<0.010	<0.100	<0.100	0.510	1.60	1.49	1.60
07/03/18	<0.010	<0.100	<0.100	0.437	1.69		1.69
07/04/18	<0.010	0.125	0.125	<0.100	1.19		1.31
07/09/18	<0.010	<0.100	<0.100	0.732	1.94	1.10	1.94
07/10/18	<0.010	0.114	0.114	0.689	1.65		1.76
07/11/18	<0.010	0.140	0.140	0.390	1.41		1.55

Table 13: Field's Point Influent and Effluent Nutrients

Field's Point Influent and Effluent Nutrients 2018

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
07/16/18	<0.010	0.121	0.121	15.9	23.6		23.7
07/17/18	0.0240	<0.100	0.111	12.5	30.2	3.67	30.3
07/18/18	0.0103	0.115	0.125	14	23.6		23.7
07/23/18	0.0151	0.105	0.120	16.6	25.7		25.8
07/24/18	0.0217	<0.100	<0.100	15.8	25.5	4.05	25.5
07/25/18	0.0139	0.122	0.136	15.3	28.5		28.6
07/30/18	0.0193	0.215	0.234	17.9	29.2		29.4
07/31/18	0.194	<0.100	0.262	16.4	28.7	4	29
08/01/18	0.171	<0.100	0.249	17.1	27.2		27.4
08/06/18	0.0627	<0.100	<0.100	11.3	18.3		18.3
08/07/18	0.0151	<0.100	<0.100	16	25.5	3.47	25.5
08/08/18	<0.010	0.102	0.102	15.3	26		26.1
08/13/18	0.0287	0.125	0.154	7.73	12		12.2
08/14/18	0.0279	0.127	0.155	9.19	13.9	1.85	14.1
08/15/18	0.0519	0.122	0.174	12.2	21.3		21.5
08/20/18	0.100	<0.100	0.187	9.79	17.7		17.9
08/21/18	0.0994	0.177	0.276	14.9	26	3.55	26.3
08/22/18	0.119	0.146	0.265	10.8	18.6		18.9
08/27/18	0.0413	0.250	0.291	16.8	30.2		30.5
08/28/18	0.208	0.140	0.348	15.9	30.2	4.32	30.5
08/29/18	0.265	0.150	0.415	16.4	28.7		29.1
09/03/18	0.312	0.151	0.463	16.6	30		30.5
09/04/18	0.0845	0.419	0.504	17.9	28.5	4.35	29
09/05/18	0.243	<0.100	0.269	18.1	31.7		32
09/10/18	0.0297	0.165	0.195	13.1	22.2		22.4
09/11/18	0.0132	0.135	0.148	9.38	16.4	2.29	16.5
09/12/18	0.0369	0.215	0.252	8.98	16.7		17
09/17/18	<0.010	0.139	0.139	15.8	26.2		26.3
09/18/18	0.0507	0.256	0.307	9.73	17	2.05	17.3
09/19/18	0.0533	0.168	0.221	9.06	16.1		16.3
09/24/18	<0.010	0.110	0.110	17	26.2		26.3
09/25/18	0.0618	0.371	0.433	7.39	15.3	1.94	15.7
09/26/18	0.188	1.41	1.60	6.04	10.9		12.5
10/01/18	0.270	0.147	0.417	9.96	17		17.4
10/02/18	0.321	0.217	0.538	7.40	13.1	2.62	13.6
10/03/18	0.239	0.422	0.661	9.02	14.8		15.5
10/08/18	0.515	<0.100	0.577	11.4	19.6		20.2
10/09/18	0.392	<0.100	0.467	12.1	20.7	3.45	21.2
10/10/18	0.556	<0.100	0.582	12.4	20.7		21.3
10/15/18	0.233	0.196	0.429	8.75	16.2		16.6
10/16/18	0.119	0.235	0.354	11.9	20.7	1.73	21.1
10/17/18	0.0639	0.177	0.241	12.5	22.8		23
10/22/18	0.0214	<0.100	0.113	14.3	28		28.1
10/23/18	0.0198	<0.100	0.115	14.8	27.7	2.06	27.8
10/24/18	0.0223	<0.100	0.114	14.9	24.1		24.2
10/29/18	0.102	0.368	0.470	8.44	14.7		15.2
10/30/18	0.0899	0.172	0.262	10.6	16.7	0.990	17
10/31/18	0.119	0.149	0.268	13.1	23.8		24.1
11/05/18	0.213	1.46	1.67	7.39	15		16.7
11/06/18	0.151	1.66	1.81	5.74	12.2	0.620	14
11/07/18	0.225	1.86	2.09	7.24	13.7		15.8
11/12/18	0.318	1.20	1.52	8	14.5		16
11/13/18	0.117	2.11	2.23	4.07	8.50	0.975	10.7
11/14/18	0.205	2.65	2.86	7.11	12.6		15.5
11/19/18	0.341	1.20	1.54	9.02	14.1		15.6
11/20/18	0.285	1.10	1.39	8.63	13.9	1.70	15.3
11/21/18	0.324	0.659	0.983	9.14	15.1		16.1
11/26/18	0.233	1.33	1.56	7.08	14.5		16.1
11/27/18	0.265	1.96	2.23	7.15	15.4	1.36	17.6
11/28/18	0.329	1.79	2.12	8.60	11		13.1
12/03/18	0.265	1.18	1.45	10.3	19		20.4
12/04/18	0.225	1.01	1.24	11.3	17.7	1.77	18.9
12/05/18	0.183	0.967	1.15	13.4	22		23.1
12/10/18	0.193	0.566	0.759	15.6	24.5		25.3
12/11/18	0.150	0.540	0.690	15.5	24	2.86	24.7
12/12/18	0.148	0.616	0.764	16.5	29.7		30.5
12/17/18	0.240	0.980	1.22	12.8	23.9		25.1
12/18/18	0.235	1.05	1.29	15.5	27.6	2.76	28.9
12/19/18	0.312	0.968	1.28	15.9	27		28.3
12/24/18	0.278	1.47	1.75	9.34	18		19.7
12/25/18	0.457	2.06	2.52	11.9	21.2	1.89	23.7
12/26/18	0.410	2.20	2.61	12.2	22.9		25.5
12/31/18	0.407	1.86	2.27	8.67	21		23.3

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
07/16/18	0.0112	<0.100	0.101	0.626	1.75	1.88	1.85
07/17/18	0.0346	0.184	0.219	1.12	3.58		3.80
07/18/18	0.0267	0.118	0.145	0.660	1.58		1.72
07/23/18	0.0257	0.139	0.165	0.923	1.88	2.97	2.04
07/24/18	0.0265	0.210	0.237	0.865	1.82		2.06
07/25/18	0.0180	0.264	0.282	0.536	1.52		1.80
07/30/18	<0.010	0.197	0.197	<0.100	1.03	2.26	1.23
07/31/18	<0.010	0.298	0.298	<0.100	0.938		1.24
08/01/18	<0.010	0.271	0.271	0.134	1.08		1.35
08/06/18	<0.010	<0.100	<0.100	0.565	1.65	2.32	1.65
08/07/18	<0.010	<0.100	<0.100	1.02	1.86		1.86
08/08/18	<0.010	<0.100	<0.100	1.41	2.23		2.23
08/13/18	0.0430	0.630	0.673	0.600	1.19	1.20	1.86
08/14/18	0.0514	0.513	0.564	0.532	1.44		2
08/15/18	0.0424	0.191	0.233	0.607	1.53		1.76
08/20/18	0.0198	0.218	0.238	0.372	1.20	1.59	1.44
08/21/18	0.0105	0.515	0.526	0.201	1.50		2.03
08/22/18	0.0406	0.326	0.367	0.418	1.43		1.80
08/27/18	0.0463	0.361	0.407	1.95	3.25	2.72	3.66
08/28/18	0.0393	0.354	0.393	1.05	2.24		2.63
08/29/18	0.0382	0.326	0.364	0.940	2.05		2.41
09/03/18	0.0175	0.227	0.245	0.313	1.56	2.59	1.80
09/04/18	<0.010	0.187	0.187	0.280	1.47		1.66
09/05/18	0.0357	0.118	0.154	1.68	3.13		3.28
09/10/18	0.0640	0.825	0.889	1.37	2.65	2.06	3.54
09/11/18	0.110	0.375	0.485	1.44	2.83		3.31
09/12/18	0.0492	0.853	0.902	0.656	1.76		2.66
09/17/18	0.0504	0.272	0.322	1.55	2.73	1.87	3.05
09/18/18	0.0466	1.44	1.49	0.612	1.83		3.32
09/19/18	0.0587	1.11	1.17	0.597	1.70		2.87
09/24/18	0.0529	0.425	0.478	1.11	2.28	2.23	2.76
09/25/18	0.0472	2.36	2.41	0.525	1.68		4.09
09/26/18	0.0900	2.88	2.97	0.340	1.15		4.12
10/01/18	0.0844	0.819	0.903	0.558	1.56	1.59	2.46
10/02/18	0.0730	1.49	1.56	0.586	1.78		3.34
10/03/18	0.100	1.53	1.63	0.884	1.94		3.57
10/08/18	<0.010	0.992	0.992	<0.100	1.33	1.42	2.32
10/09/18	<0.010	1	1	0.112	1.01		2.01
10/10/18	0.0229	0.880	0.903	0.535	1.41		2.31
10/15/18	0.0182	1.41	1.43	0.125	1.32	1.07	2.75
10/16/18	0.0174	0.849	0.866	0.179	1.28		2.15
10/17/18	0.0318	0.889	0.921	0.279	1.38		2.30
10/22/18	0.0151	1.30	1.32	<0.100	1.11	1.70	2.43
10/23/18	<0.010	1.05	1.05	<0.100	1.05		2.10
10/24/18	<0.010	1.38	1.38	<0.100	1.02		2.40
10/29/18	0.186	1.96	2.15	0.903	2.10	1.25	4.25
10/30/18	0.174	0.659	0.833	0.526	1.79		2.62
10/31/18	0.0485	0.214	0.263	0.298	1.40		1.66
11/05/18	0.0948	2.57	2.66	0.746	1.63	0.697	4.29
11/06/18	0.0883	3.02	3.11	0.630	1.68		4.79
11/07/18	0.178	2.62	2.80	1.24	2.56		5.36
11/12/18	0.142	2.05	2.19	1.06	2.37	0.587	4.56
11/13/18	0.0645	4.26	4.32	0.606	1.58		5.90
11/14/18	0.201	3.87	4.07	1.74	2.61		6.68
11/19/18	0.245	2.72	2.97	2.01	3.08	0.732	6.05
11/20/18	0.230	2.30	2.53	1.84	3.06		5.59
11/21/18	0.238	2.09	2.33	1.89	3.08		5.41
11/26/18	0.163	3.22	3.38	1.66	2.73	0.638	6.11
11/27/18	0.220	3.98	4.20	1.86	3.51		7.71
11/28/18	0.261	3.53	3.79	2.22	3.74		7.53
12/03/18	0.282	2.60	2.88	3.40	4.90	0.765	7.78
12/04/18	0.259	2.66	2.92	3.45	4.54		7.46
12/05/18	0.209	2.04	2.25	3.45	4.42		6.67
12/10/18	0.180	2.38	2.56	3.34	4.88	1.46	7.44
12/11/18	0.204	2.22	2.42	4.58	5.93		8.35
12/12/18	0.197	2.02	2.22	4.27	5.84		8.06
12/17/18	0.311	2.65	2.96	3.31	4.91	1.38	7.87
12/18/18	0.269	1.34	1.61	3.17	4.51		6.12
12/19/18	0.241	1.71	1.95	1.50	3.86		5.81
12/24/18	0.0762	3.24	3.32	0.474	1.79	0.530	5.11
12/25/18	0.0673	4.48	4.55	0.639	1.92		6.47
12/26/18	0.120	3.74	3.86	1.03	2.48		6.34
12/31/18	0.118	3.12	3.24	0.912	2.24	0.836	5.48

Table 13: Field's Point Influent and Effluent Nutrients

Bucklin Point Influent and Effluent Nutrients 2018

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
01/01/18	0.041	0.130	0.171	24.40	38.100		38.271
01/02/18	0.053	<0.100	0.147	23.50	40.000	5.000	40.147
01/03/18	0.013	<0.100	<0.100	26.90	44.800		44.800
01/08/18	0.027	<0.100	<0.100	23.40	36.900		36.900
01/09/18	0.038	<0.100	<0.100	27.20	42.500	5.340	42.500
01/10/18	0.128	<0.100	0.104	25.60	41.700		41.804
01/15/18	0.436	1.674	2.110	13.90	24.700		26.810
01/16/18	0.462	1.228	1.690	14.70	25.800	2.960	27.490
01/17/18	0.401	0.969	1.370	14.00	21.600		22.970
01/22/18	0.315	0.658	0.973	17.70	30.400		31.373
01/23/18	0.139	0.881	1.020	14.60	26.400	3.550	27.420
01/24/18	0.114	1.226	1.340	12.30	19.000		20.340
01/29/18	0.235	0.384	0.619	17.30	26.800		27.419
01/30/18	0.160	0.512	0.672	17.30	28.800	3.150	29.472
01/31/18	0.157	0.502	0.659	16.90	26.100		26.759
02/05/18	0.241	0.630	0.871	11.50	20.900		21.771
02/06/18	0.340	1.020	1.360	15.50	25.200	3.320	26.560
02/07/18	0.362	0.848	1.210	15.20	24.300		25.510
02/12/18	0.298	1.302	1.600	9.170	16.900		18.500
02/13/18	0.379	1.541	1.920	11.80	20.500	2.880	22.420
02/14/18	0.349	1.251	1.600	12.80	20.600		22.200
02/19/18	0.223	1.247	1.470	13.80	21.200		22.670
02/20/18	0.146	0.782	0.928	13.60	22.500	2.700	23.428
02/21/18	0.143	0.718	0.861	14.30	24.200		25.061
02/26/18	0.133	0.977	1.110	11.90	17.400		18.510
02/27/18	0.156	1.274	1.430	25.30	32.100	1.830	33.530
02/28/18	0.160	0.900	1.060	14.80	22.600		23.660
03/05/18	0.244	2.076	2.320	9.400	16.300		18.620
03/06/18	0.273	1.977	2.250	9.890	16.600	1.880	18.850
03/07/18	0.342	2.928	3.270	9.400	18.900		22.170
03/12/18	0.372	1.318	1.690	11.70	21.000		22.690
03/13/18	0.379	1.271	1.650	11.10	19.000	2.170	20.650
03/14/18	0.301	1.399	1.700	10.00	17.000		18.700
03/19/18	0.275	1.135	1.410	12.90	23.500		24.910
03/20/18	0.259	1.011	1.270	12.10	20.700	2.500	21.970
03/21/18	0.169	0.991	1.160	13.10	22.200		23.360
03/26/18	0.233	0.693	0.926	14.20	21.700		22.626
03/27/18	0.294	0.826	1.120	14.40	24.100	4.22	25.220
03/28/18	0.337	0.650	0.987	14.90	22.800		23.787
04/02/18	0.357	0.424	0.781	15.00	24.300		25.081
04/03/18	0.373	0.777	1.150	16.40	24.700	3.370	25.850
04/04/18	0.303	0.947	1.250	11.10	19.500		20.750
04/09/18	0.310	0.730	1.040	16.10	26.700		27.740
04/10/18	0.264	0.906	1.170	15.50	24.600	3.160	25.770
04/11/18	0.241	0.849	1.090	14.50	16.900		17.990
04/16/18	0.129	0.659	0.788	10.20	17.200		17.988
04/17/18	0.179	1.701	1.880	9.100	13.500	2.940	15.380
04/18/18	0.175	1.865	2.040	13.10	19.600		21.640
04/23/18	0.237	0.584	0.821	14.20	23.000		23.821
04/24/18	0.296	0.630	0.926	13.40	22.200	3.310	23.126
04/25/18	0.323	0.483	0.806	11.80	21.800		22.606
04/30/18	0.466	0.824	1.290	12.20	22.000		23.290
05/01/18	0.458	0.772	1.230	11.60	22.700	2.620	23.930
05/02/18	0.425	0.675	1.100	11.80	22.900		24.000
05/07/18	0.324	0.627	0.951	13.20	24.400		25.351
05/08/18	0.387	0.693	1.080	13.40	26.100	2.900	27.180
05/09/18	0.414	0.406	0.820	14.70	27.200		28.020
05/14/18	0.464	0.201	0.665	17.40	29.500		30.165
05/15/18	0.467	0.139	0.606	15.90	29.000	4.140	29.606
05/16/18	0.360	0.576	0.936	13.30	25.000		25.936
05/21/18	0.287	0.608	0.895	14.20	25.500		26.395
05/22/18	0.069	0.371	0.440	16.00	29.300	3.580	29.740
05/23/18	0.087	0.206	0.293	16.80	29.400		29.693
05/28/18	0.110	0.070	0.180	19.20	32.000		32.180
05/29/18	0.029	0.085	0.114	18.70	30.500	3.740	30.614
05/30/18	0.047	0.088	0.135	20.70	35.300		35.435
06/04/18	0.199	0.065	0.264	14.70	25.000		25.264
06/05/18	0.279	0.646	0.925	17.00	25.400	2.990	26.325
06/06/18	0.316	0.187	0.503	17.10	26.700		27.203
06/11/18	0.561	<0.100	0.532	20.1	34.5		35
06/12/18	0.556	<0.100	0.612	19.4	30.7	6.10	31.3
06/13/18	0.662	<0.100	0.493	19.3	34.7		35.2
06/18/18	0.492	<0.100	0.468	20.3	37		37.5
06/19/18	0.310	0.448	0.758	19.5	36.2	4.75	37
06/20/18	0.0559	1.55	1.61	21.4	35.2		36.8
06/25/18	0.0145	<0.100	<0.100	22	36.2		36.2
06/26/18	<0.010	0.110	0.110	23.9	39.2	4.55	39.3
06/27/18	0.0129	<0.100	<0.100	23.3	37		37
07/02/18	0.0626	<0.100	<0.100	20.4	29.2		29.2
07/03/18	0.0328	<0.100	0.112	21	32.5	4.22	32.6
07/04/18	0.0360	<0.100	0.115	19.4	34.5		34.6
07/09/18	0.478	<0.100	0.504	19.9	32		32.5
07/10/18	0.379	<0.100	0.395	21.2	34.7	3.97	35.1
07/11/18	0.0108	<0.100	<0.100	26.3	42.2		42.2
07/16/18	<0.010	<0.100	<0.100	22.7	37.2		37.2
07/17/18	<0.010	<0.100	<0.100	22.7	39.7	5.05	39.7
07/18/18	0.119	<0.100	0.102	16.7	28		28.1
07/23/18	<0.010	0.154	0.154	22.2	31		31.2
07/24/18	<0.010	0.101	0.101	23.7	36	5.07	36.1
07/25/18	<0.010	<0.100	<0.100	23.9	38.7		38.7
07/30/18	<0.010	<0.100	<0.100	22.6	34.5		34.5
07/31/18	<0.010	<0.100	<0.100	22.9	36.7	5.20	36.7
08/01/18	<0.010	<0.100	<0.100	22.4	35.2		35.2
08/06/18	0.0904	<0.100	0.108	21	31.2		31.3
08/07/18	0.0356	<0.100	<0.100	21.2	35	4.95	35
08/08/18	0.0102	<0.100	<0.100	23.1	35		35
08/13/18	0.118	0.121	0.239	14	20.1		20.3

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
01/01/18	0.020	3.640	3.660	<0.1	1.220		4.880
01/02/18	0.020	2.770	2.790	<0.1	1.060	2.560	3.850
01/03/18	0.017	2.113	2.130	<0.1	1.160		3.290
01/08/18	0.033	1.587	1.620	<0.1	1.270		2.890
01/09/18	0.028	1.392	1.420	<0.1	1.180	3.340	2.600
01/10/18	0.035	1.705	1.740	<0.1	1.310		3.050
01/15/18	0.060	2.950	3.010	1.010	2.220		5.230
01/16/18	0.026	2.344	2.370	<0.1	1.110	1.370	3.480
01/17/18	0.048	2.372	2.420	0.8550	2.250		4.670
01/22/18	0.036	2.914	2.950	<0.1	1.240		4.190
01/23/18	0.029	2.501	2.530	0.2780	1.680	2.360	4.210
01/24/18	0.046	3.054	3.100	1.380	2.730		5.830
01/29/18	0.013	0.931	0.944	<0.1	0.906		1.850
01/30/18	0.032	1.598	1.630	0.1610	1.220	1.850	2.850
01/31/18	0.020	2.400	2.420	<0.1	1.130		3.550
02/05/18	0.045	1.985	2.030	1.820	3.190		5.220
02/06/18	0.048	1.782	1.830	0.7020	1.750	1.770	3.580
02/07/18	0.039	2.051	2.090	0.3130	1.610		3.700
02/12/18	0.027	0.397	0.424	2.170	3.430		3.854
02/13/18	0.037	0.391	0.428	0.7040	1.780	1.030	2.208
02/14/18	0.039	0.298	0.337	2.230	3.310		3.647
02/19/18	0.032	0.433	0.465	2.230	3.500		3.965
02/20/18	0.031	0.379	0.410	1.330	4.580	1.510	4.990
02/21/18	0.031	0.468	0.499	0.7170	1.940		2.439
02/26/18	0.023	1.157	1.180	0.130	2.240		3.420
02/27/18	0.024	1.066	1.090	<0.1	1.030	1.580	2.120
02/28/18	0.018	1.562	1.580	<0.1	0.949		2.529
03/05/18	0.046	1.484	1.530	1.380	2.740		4.270
03/06/18	0.044	1.416	1.460	0.5870	2.030	1.690	3.490
03/07/18	0.030	0.933	0.963	<0.1	1.830		2.793
03/12/18	0.024	0.119	0.143	0.7650	3.180		3.323
03/13/18	0.042	0.853	0.895	1.350	2.720	1.110	3.615
03/14/18	0.046	1.174	1.220	1.060	2.680		3.900
03/19/18	0.030	1.050	1.080	0.3950	1.600		2.680
03/20/18	0.029	0.952	0.981	<0.1	1.380	1.360	2.361
03/21/18	0.035	1.205	1.240	1.070	2.590		3.830
03/26/18	0.034	1.246	1.280	0.4450	1.510		2.790
03/27/18	0.023	1.847	1.870	<0.1	1.030	1.620	2.900
03/28/18	0.022	1.338	1.360	<0.1	1.200		2.560
04/02/18	0.038	1.402	1.440	1.240	2.560		4.000
04/03/18	0.033	1.537	1.570	0.730	2.110	2.150	3.680
04/04/18	0.028	1.022	1.050	0.6390	2.100		3.150
04/09/18	0.015	1.045	1.060	<0.1	1.280		2.340
04/10/18	0.030	1.220	1.250	0.1230	1.640	2.190	2.890
04/11/18	0.026	2.544	2.570	<0.1	1.320		3.890
04/16/18	0.014	2.606	2.620	<0.1	2.920		5.540
04/17/18	0.045	3.095	3.140	0.370	1.760	1.630	4.900
04/18/18	0.023	1.897	1.920	<0.1	1.160		3.080
04/23/18	0.026	0.927	0.953	<0.1	1.480		2.433
04/24/18	0.023	1.197	1.220	<0.1	1.330	2.120	2.550
04/25/18	0.031	0.845	0.876	0.120	1.930		2.806
04/30/18	0.037	1.063	1.100	0.5750	2.590		3.690
05/01/18	0.031	0.682	0.713	0.6760	2.730	2.080	3.443
05/02/18	0.030	0.774	0.804	<0.1	2.030		2.834
05/07/18	0.034	0.695	0.729	0.7880	2.430		3.159
05/08/18	0.021	0.586	0.607	<0.1	1.570	2.200	2.177
05/09/18	0.022	0.531	0.553	<0.1	1.630		2.183
05/14/18	0.018	1.702	1.720	<0.1	1.900		3.620
05/15/18	0.020	1.740	1.760	<0.1	1.710	1.840	3.470
05/16/18	0.023	1.657	1.680	<0.1	1.530		3.210
05/21/18	0.020	2.980	3.000	<0.1	1.480		4.480
05/22/18	0.021	2.399	2.420	<0.1	1.430	2.320	3.850
05/23/18	0.022	3.058	3.080	<0.1	1.480		4.560
05/28/18	0.022	4.528	4.550	<0.1	1.330		5.880
05/29/18	0.021	3.069	3.090	<0.1	1.360	2.680	4.450
05/30/18	0.024	2.436	2.460	<0.1	1.500		3.960
06/04/18	0.030	1.950	1.980	0.2810	2.070		4.050
06/05/18	0.024	2.356	2.380	<0.1	1.560	1.990	3.940
06/06/18	0.020	1.610	1.630	<0.1	1.110		2.740
06/11/18	0.0180	1.23	1.25	<0.100	1.27		2.52
06/12/18	0.0207	1.72	1.74	<0.100	1.35	2.42	3.09
06/13/18	0.0277	3.43	3.46	<0.100	1.46		4.92
06/18/18	0.0224	1.32	1.34	0.637	2.28		3.62
06/19/18	0.0264	2.12	2.15	0.906	2.92	2.82	5.07
06/20/18	0.0208	1.35	1.37	0.162	1.64		3.01
06/25/18	0.0133	0.542	0.555	0.220	1.79		2.35
06/26/18	0.0229	1.07	1.09	0.208	1.76	1.65	2.85
06/27/18	0.0246	1.87	1.89	<0.100	1.91		3.80
07/02/18	0.0280	1.36	1.39	0.227	1.62		3.01
07/03/18	0.0290	1.99	2.02	<0.100	1.56	2.63	3.58
07/04/18	0.0314	2.68	2.71	<0.100	1.53		4.24
07/09/18	0.0337	1.45	1.48	0.212	1.74		3.22
07/10/18	0.0422	2.28	2.32	0.392	2.20	2.91	4.52
07/11/18	0.0426	3	3.04	0.540	2.08		5.12
07/16/18	0.0315	1.91	1.94	0.524	2.26		4.20
07/17/18	0.0279	0.886	0.914	1.68	3.66	2.92	4.57
07/18/18	0.0417	1.90	1.94	0.612	2.20		4.14
07/23/18	0.0575	1.38	1.44	<0.100	1.40		2.84
07/24/18	0.0538	1.93	1.98	<0.100	1.82	2.77	3.80
07/25/18	0.0602	1.90	1.96	0.246	1.83		3.79
07/30/18	0.0387	1.96	2	<0.100	2.15		4.15
07/31/18	0.0413	2.05	2.09	<0.100	1.23	2.89	3.32
08/01/18	0.0392	1.81	1.85	<0.100	1.19		3.04
08/06/18	0.0336	1.62	1.65	<0.100	1.01		2.66
08/07/18	0.0340	1.83	1.86	<0.100	1.17	1.85	3.03
08/08/18	0.0384	1.92	1.96	<0.100	1.01		2.97
08/13/18	0.0406	1.07	1.11	<0.100	0.799		1.91

Table 14: Bucklin Point Influent and Effluent Nutrients

Bucklin Point Influent and Effluent Nutrients 2018

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
08/14/18	0.0103	<0.100	<0.100	16.7	24.3	2.97	24.3
08/15/18	<0.010	0.117	0.117	21.1	36.7		36.8
08/20/18	0.0307	<0.100	<0.100	19.7	33.5		33.5
08/21/18	<0.010	0.145	0.145	20	37.5	4.82	37.6
08/22/18	<0.010	<0.100	<0.100	18.2	29.2		29.2
08/27/18	<0.010	<0.100	<0.100	24	39.5		39.5
08/28/18	<0.010	<0.100	<0.100	23.5	39.2	4.75	39.2
08/29/18	<0.010	0.104	0.104	24.7	38.5		38.6
09/03/18	0.0225	0.101	0.124	25.5	37		37.1
09/04/18	0.0361	0.116	0.152	24.9	40.5	4.60	40.7
09/05/18	0.0452	<0.100	<0.100	23.9	36.7		36.7
09/10/18	0.296	<0.100	0.232	24.6	36.2		36.4
09/11/18	0.427	0.202	0.629	12.2	20.8	2.70	21.4
09/12/18	0.660	<0.100	0.484	17.1	30.7		31.2
09/17/18	0.737	<0.100	0.693	19.1	30.5		31.2
09/18/18	0.468	<0.100	0.419	18.7	31.5	4.05	31.9
09/19/18	0.901	<0.100	0.920	13.3	23.2		24.1
09/24/18	<0.010	<0.100	<0.100	21.2	32.5		32.5
09/25/18	<0.010	<0.100	<0.100	19.9	34.2	4.35	34.2
09/26/18	0.0604	0.558	0.618	5.87	9.37		9.99
10/01/18	0.195	<0.100	0.235	16	24.7		24.9
10/02/18	0.278	0.129	0.407	14.7	22.2	3.42	22.6
10/03/18	0.526	0.574	1.10	7.68	13.6		14.7
10/08/18	0.586	<0.100	0.595	16.2	25		25.6
10/09/18	0.502	<0.100	0.515	14.9	26.2	4.52	26.7
10/10/18	0.492	<0.100	0.448	14.7	22.7		23.1
10/15/18	0.789	0.301	1.09	14.7	24		25.1
10/16/18	0.592	0.408	1	13.3	23.8	1.82	24.8
10/17/18	0.600	0.309	0.909	14.6	25.7		26.6
10/22/18	0.430	0.630	1.06	16.5	30		31.1
10/23/18	0.495	0.615	1.11	17.5	32.7	2.39	33.8
10/24/18	0.106	1.01	1.12	18.4	28.5		29.6
10/29/18	0.0785	0.499	0.578	13	20.5		21.1
10/30/18	0.0884	0.476	0.564	15.4	21.1	1.38	21.7
10/31/18	0.0816	0.347	0.429	18.9	28.5		28.9
11/05/18	0.152	0.698	0.850	13.2	21.9		22.7
11/06/18	0.104	0.784	0.888	11	20	0.807	20.9
11/07/18	0.109	0.951	1.06	8.05	14.6		15.7
11/12/18	0.300	1.26	1.56	10.5	17		18.6
11/13/18	0.242	0.569	0.811	6.60	11.4	<0.500	12.2
11/14/18	0.311	1.83	2.14	7.96	11.3		13.4
11/19/18	0.705	0.925	1.63	9.91	15.9		17.5
11/20/18	0.180	1.03	1.21	9.90	15.3	2.03	16.5
11/21/18	0.168	0.862	1.03	10.1	16		17
11/26/18	0.128	1.30	1.43	12.3	20.1		21.5
11/27/18	0.0861	1.11	1.20	7.45	14.3	1.41	15.5
11/28/18	0.138	1.70	1.84	9.62	16.9		18.7
12/03/18	0.148	1.29	1.44	9.87	18.8		20.2
12/04/18	0.177	1.17	1.35	11.9	20.1	1.80	21.4
12/05/18	0.180	0.970	1.15	12.6	18.8		19.9
12/10/18	0.164	0.570	0.734	13.9	22.4		23.1
12/11/18	0.174	0.665	0.839	14	21.9	3.15	22.7
12/12/18	0.175	0.647	0.822	15.3	25.7		26.5
12/17/18	0.174	0.826	1	11.7	23.3		24.3
12/18/18	0.210	0.900	1.11	16.8	28.4	2.86	29.5
12/19/18	0.136	0.806	0.942	16.8	28		28.9
12/24/18	0.168	0.862	1.03	13.8	24.2		25.2
12/25/18	0.149	0.691	0.840	15.2	25.5	2.36	26.3
12/26/18	0.143	0.674	0.817	17	28.2		29
12/31/18	0.146	0.719	0.865	14.5	25.7		26.6

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
08/14/18	0.0370	0.878	0.915	<0.100	0.725	1.37	1.64
08/15/18	0.0429	2.64	2.68	<0.100	1.01		3.69
08/20/18	0.0357	0.923	0.959	<0.100	1.08		2.04
08/21/18	0.0403	1.21	1.25	<0.100	1.05	1.63	2.30
08/22/18	0.0435	1.34	1.38	<0.100	1.14		2.52
08/27/18	0.0472	1.82	1.87	<0.100	1.25		3.12
08/28/18	0.0387	1.31	1.35	<0.100	1.25	2.46	2.60
08/29/18	0.0359	1.89	1.93	<0.100	1.12		3.05
09/03/18	0.0357	1.64	1.68	<0.100	1.14		2.82
09/04/18	0.0300	1.35	1.38	<0.100	1.16	1.87	2.54
09/05/18	0.0305	1.62	1.65	<0.100	1.32		2.97
09/10/18	0.0200	1.06	1.08	<0.100	1.56		2.64
09/11/18	0.0281	1.57	1.60	<0.100	0.949	1.01	2.55
09/12/18	0.0252	1.47	1.50	<0.100	1.46		2.96
09/17/18	0.0384	2.03	2.07	<0.100	1.08		3.15
09/18/18	0.0361	2.05	2.09	<0.100	1.16	2.04	3.25
09/19/18	0.0553	2.94	3	<0.100	1		4
09/24/18	0.0422	2.35	2.39	<0.100	1.06		3.45
09/25/18	0.0413	2.45	2.49	<0.100	1.38	1.70	3.87
09/26/18	0.0363	2.45	2.49	<0.100	1.21		3.70
10/01/18	0.0334	1.25	1.28	<0.100	1.08		2.36
10/02/18	0.0375	1.66	1.70	<0.100	1.12	2.02	2.82
10/03/18	0.0295	1.60	1.63	<0.100	1.07		2.70
10/08/18	0.0240	1.27	1.29	<0.100	1.20		2.49
10/09/18	0.0234	0.768	0.791	<0.100	1.11	1.93	1.90
10/10/18	0.0305	0.939	0.970	<0.100	0.897		1.87
10/15/18	0.0327	1.24	1.27	0.107	1.46		2.73
10/16/18	0.0406	0.915	0.956	0.108	1.25	1.58	2.21
10/17/18	0.0305	0.924	0.955	<0.100	0.931		1.89
10/22/18	0.0181	0.865	0.883	<0.100	0.875		1.76
10/23/18	0.0192	0.565	0.584	<0.100	0.937	0.985	1.52
10/24/18	0.0154	0.665	0.680	<0.100	0.826		1.51
10/29/18	0.0425	0.944	0.987	<0.100	1.07		2.06
10/30/18	0.0401	1.03	1.07	0.232	1.33	3.20	2.40
10/31/18	0.0313	0.871	0.902	<0.100	1.09		1.99
11/05/18	0.0463	0.984	1.03	0.139	1.09		2.12
11/06/18	0.0372	1.05	1.09	0.232	1.48	2.08	2.57
11/07/18	0.0669	1.03	1.10	0.455	2.15		3.25
11/12/18	0.0569	1.19	1.25	0.359	1.73		2.98
11/13/18	0.0537	1.79	1.84	<0.100	1.52	0.623	3.36
11/14/18	0.0507	3.03	3.08	0.491	2.15		5.23
11/19/18	0.0165	1.73	1.75	<0.100	1.35		3.10
11/20/18	0.0171	1.30	1.32	<0.100	1.19	1.01	2.51
11/21/18	0.0119	2.70	2.71	<0.100	0.990		3.70
11/26/18	<0.010	2.60	2.60	<0.100	1.10		3.70
11/27/18	0.0177	3.27	3.29	0.332	1.90	0.914	5.19
11/28/18	<0.010	5.13	5.13	<0.100	1.53		6.66
12/03/18	0.0108	4.78	4.79	<0.100	1.31		6.10
12/04/18	<0.010	5.24	5.24	<0.100	1.34	1.15	6.58
12/05/18	0.0117	6.05	6.06	<0.100	1.01		7.07
12/10/18	0.0113	5.98	5.99	<0.100	1.05		7.04
12/11/18	0.0106	5.98	5.99	<0.100	1.18	2.34	7.17
12/12/18	0.0136	6.32	6.33	<0.100	1.14		7.47
12/17/18	0.0107	6.72	6.73	<0.100	1.36		8.09
12/18/18	0.0101	7	7.01	<0.100	1.29	2.30	8.30
12/19/18	0.0128	4.86	4.87	<0.100	1.27		6.14
12/24/18	0.0148	2.81	2.82	<0.100	1.30		4.12
12/25/18	0.0139	3.26	3.27	<0.100	1.13	0.774	4.40
12/26/18	0.0155	3.22	3.24	<0.100	1.21		4.45
12/31/18	0.0253	4.53	4.56	<0.100	1.77		6.33

Table 14: Bucklin Point Influent and Effluent Nutrients

Oil and Grease Data 2018
Field's Point and Bucklin Point

Field's Point Oil & Grease 2018

Date	Influent Flow	Effluent Flow	Influent Average	Effluent Average
	MGD	MGD	ppm	ppm
1/9/2018	31.10	31.10	23.47	<4.0
2/6/2018	64.69	64.69	12.35	<4.0
3/6/2018	74.78	74.78	12.84	<4.0
4/3/2018	55.36	55.36	11.72	<4.0
5/8/2018	43.32	43.32	15.68	<4.0
6/5/2018	54.34	54.34	17.12	<4.0
7/10/2018	34.04	34.04	24.44	<4.0
8/7/2018	32.76	32.76	12.08	<4.0
9/11/2018	59.47	59.47	18.99	<4.0
10/16/2018	47.13	47.13	16.27	<4.0
11/6/2018	75.28	75.28	8.04	<4.0
12/4/2018	72.67	72.67	12.25	<4.0

Bucklin Point Oil & Grease 2018

Date	Influent Flow	Effluent Flow	Influent Average	Effluent Average
	MGD	MGD	ppm	ppm
1/9/2018	14.40	14.40	45.00	<4.0
2/6/2018	18.92	18.92	12.83	<4.0
3/6/2018	29.13	29.13	19.04	<4.0
4/3/2018	32.70	28.92	35.08	<4.0
5/8/2018	20.86	20.86	25.14	<4.0
6/5/2018	20.63	20.63	17.39	<4.0
7/10/2018	13.97	13.97	30.64	<4.0
8/7/2018	13.56	13.56	20.65	<4.0
9/11/2018	30.42	24.14	21.46	<4.0
10/16/2018	26.96	26.96	16.18	<4.0
11/6/2018	48.46	34.59	13.95	<4.0
12/4/2018	28.56	28.56	12.02	<4.0

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

Field's Point Dissolved Metals 2018

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
01/09/2018	<0.02	0.02	1.39	0.30	2.56	0.30	<0.30	0.30	22.89	0.30	<0.02	0.02	35.68	5.00	<5.00	5.00	47.82	5.00
02/06/2018	0.04	0.02	1.15	0.30	3.95	0.30	<0.30	0.30	11.52	0.30	<0.02	0.02	30.47	5.00	<5.00	5.00	35.52	5.00
03/06/2018	0.06	0.02	1.17	0.30	3.80	0.30	<0.30	0.30	11.19	0.30	<0.02	0.02	33.02	5.00	<5.00	5.00	31.22	5.00
04/03/2018	0.03	0.02	1.12	0.30	2.54	0.30	<0.30	0.30	16.55	0.30	<0.02	0.02	30.24	5.00	<5.00	5.00	40.41	5.00
05/08/2018	0.02	0.02	1.04	0.30	2.02	0.30	<0.30	0.30	12.03	0.30	<0.02	0.02	29.90	5.00	<5.00	5.00	44.28	5.00
06/05/2018	<0.02	0.02	2.65	0.30	2.28	0.30	<0.30	0.30	13.58	0.30	<0.02	0.02	29.27	5.00	6.83	5.00	60.03	5.00
07/10/2018	<0.02	0.02	1.03	0.30	1.30	0.30	<0.30	0.30	13.23	0.30	<0.02	0.02	25.50	5.00	8.15	5.00	43.81	5.00
08/07/2018	<0.02	0.02	1.36	0.30	1.60	0.30	<0.30	0.30	15.59	0.30	<0.02	0.02	29.01	5.00	8.05	5.00	41.04	5.00
09/11/2018	<0.02	0.02	1.79	0.30	1.92	0.30	<0.30	0.30	17.57	0.30	<0.02	0.02	25.58	5.00	<5.00	5.00	34.84	5.00
10/16/2018	0.03	0.02	1.10	0.30	1.96	0.30	<0.30	0.30	15.24	0.30	<0.02	0.02	16.66	5.00	<5.00	5.00	40.14	5.00
11/06/2018	<0.02	0.02	0.98	0.30	1.81	0.30	<0.30	0.30	9.20	0.30	<0.02	0.02	22.84	5.00	7.55	5.00	33.79	5.00
12/04/2018	0.03	0.02	1.63	0.30	2.59	0.30	<0.30	0.30	12.93	0.30	<0.02	0.02	23.67	5.00	<5.00	5.00	63.21	5.00

	Cd	**Cr**	**Cu**	**Pb**	**Ni**	**Ag**	**Zn**	**Al**	**Fe**
yearly average concentration	<0.03	1.37	2.36	<0.30	14.29	<0.02	27.65	<5.88	43.01
yearly median concentration	<0.02	1.16	2.15	<0.30	13.40	<0.02	29.14	<5.00	40.72
yearly minimum concentration	<0.02	0.98	1.30	<0.30	9.20	<0.02	16.66	<5.00	31.22
yearly maximum concentration	0.06	2.65	3.95	<0.30	22.89	<0.02	35.68	8.15	63.21

Table 16: Field's Point Effluent Dissolved Metals

Bucklin Point Dissolved Metals 2018

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
01/09/2018	0.03	0.02	0.852	0.30	3.03	0.30	0.40	0.30	4.28	0.30	0.06	0.02	39.91	5.00	8.14	5.00	49.48	5.00
02/06/2018	0.02	0.02	0.873	0.30	2.01	0.30	0.35	0.30	4.47	0.30	<0.02	0.02	34.16	5.00	6.17	5.00	41.46	5.00
03/06/2018	<0.02	0.02	0.638	0.30	1.50	0.30	<0.30	0.30	4.15	0.30	<0.02	0.02	35.66	5.00	8.32	5.00	66.92	5.00
04/03/2018	0.03	0.02	0.543	0.30	2.74	0.30	<0.30	0.30	3.65	0.30	<0.02	0.02	30.49	5.00	5.35	5.00	55.04	5.00
05/08/2018	<0.02	0.02	0.543	0.30	1.63	0.30	<0.30	0.30	4.89	0.30	<0.02	0.02	31.00	5.00	8.32	5.00	63.08	5.00
06/05/2018	<0.02	0.02	0.759	0.30	2.21	0.30	<0.30	0.30	7.77	0.30	<0.02	0.02	33.43	5.00	9.22	5.00	51.37	5.00
07/10/2018	0.04	0.02	0.775	0.30	4.57	0.30	0.94	0.30	8.73	0.30	<0.02	0.02	50.96	5.00	12.12	5.00	29.93	5.00
08/07/2018	0.06	0.02	0.715	0.30	4.62	0.30	0.45	0.30	5.49	0.30	<0.02	0.02	46.68	5.00	8.39	5.00	22.94	5.00
09/11/2018	0.02	0.02	1.758	0.30	3.90	0.30	<0.30	0.30	4.14	0.30	0.02	0.02	28.76	5.00	6.47	5.00	40.41	5.00
10/16/2018	0.03	0.02	0.708	0.30	2.34	0.30	<0.30	0.30	4.15	0.30	<0.02	0.02	28.42	5.00	5.20	5.00	74.47	5.00
11/06/2018	<0.02	0.02	0.654	0.30	2.51	0.30	<0.30	0.30	2.77	0.30	<0.02	0.02	24.87	5.00	<5.00	5.00	43.44	5.00
12/04/2018	0.05	0.02	0.564	0.30	5.43	0.30	<0.30	0.30	2.84	0.30	<0.02	0.02	32.60	5.00	6.36	5.00	29.74	5.00

	Cd	**Cr**	**Cu**	**Pb**	**Ni**	**Ag**	**Zn**	**Al**	**Fe**
yearly average concentration	<0.03	0.78	3.04	<0.38	4.78	<0.02	34.75	<7.42	47.36
yearly median concentration	0.03	0.71	2.62	<0.30	4.22	<0.02	33.02	7.31	46.46
yearly minimum concentration	<0.02	0.54	1.50	<0.30	2.77	<0.02	24.87	<5.00	22.94
yearly maximum concentration	0.06	1.76	5.43	0.94	8.73	0.06	50.96	12.12	74.47

Table 17: Bucklin Point Effluent Dissolved Metals

Field's Point Bioassay Data 2018

Field's Point WWTF Bioassay Results - 2018 *Americamysis bahia*						
Acute	**1st Quarter, 2018**			**2nd Quarter, 2018**		
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, 2018			**4th Quarter, 2018**		
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 - 2018 *Arbacia punctulata*						
Chronic	**1st Quarter, 2018**			**2nd Quarter, 2018**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	100	Required monitoring: No Limit	N/A	100	Required monitoring: No Limit	N/A
	3rd Quarter, 2018			**4th Quarter, 2018**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	100	Required monitoring: No Limit	N/A	50	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 - 2018 ***Americamysis bahia***						
Acute	**1st Quarter, 2018**			**2nd Quarter, 2018**		
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, 2018			**4th Quarter, 2018**		
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 - 2018 ***Arbacia punctulata***						
Chronic	**1st Quarter, 2018**			**2nd Quarter, 2018**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	100	50	Y	100	50	Y
	3rd Quarter, 2018			**4th Quarter, 2018**		
Test	**Result (%)**	**Permit Limit**	**Pass Y/N**	**Result (%)**	**Permit Limit**	**Pass Y/N**
C-NOEC	100	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**
1/2/2018	28.29	3.30		1.89		2.83		32.39		160.40		37.79		0.06		9.43		23.34		4.23		7.55		360.90		3.15	
1/16/2018	26.37	3.64		1.69		2.53		40.82		145.15		74.09		0.10		8.43		39.56		2.75		6.74		333.22		9.99	
Monthly Avg:		**3.47**		**1.79**		**2.68**		**36.61**		**152.78**		**55.94**		**0.08**		**8.93**		**31.45**		**3.49**		**7.15**		**347.06**		**6.57**	
Monthly Total in lbs.	**1,453,820**		**5.05**		**2.60**		**3.90**		**53.22**		**222.11**		**81.32**		**0.11**		**12.99**		**45.72**		**5.07**		**10.39**		**504.56**		**9.55**
2/6/2018	31.00	4.47		1.95		2.93		62.98		186.02		84.29		0.29		9.76		37.87		5.19		7.80		405.79		68.90	
2/20/2018	28.45	4.86		2.12		3.19		48.57		200.68		73.84		0.30		10.62		38.76		6.26		8.49		472.40		80.60	
Monthly Avg:		**4.67**		**2.04**		**3.06**		**55.77**		**193.35**		**79.06**		**0.29**		**10.19**		**38.31**		**5.73**		**8.15**		**439.10**		**74.75**	
Monthly Total in lbs.	**1,267,160**		**5.91**		**2.58**		**3.87**		**70.68**		**245.01**		**100.19**		**0.37**		**12.91**		**48.55**		**7.26**		**10.33**		**556.41**		**94.72**
3/6/2018	26.90	5.10		2.24		3.60		57.53		250.07		86.16		0.59		11.18		44.49		6.95		8.94		487.70		3.30	
3/20/2018	39.78	4.95		2.07		3.17		52.71		222.28		55.63		0.56		13.24		33.05		5.61		8.28		432.71		2.54	
Monthly Avg:		**5.02**		**2.15**		**3.38**		**55.12**		**236.17**		**70.90**		**0.58**		**12.21**		**38.77**		**6.28**		**8.61**		**460.20**		**2.92**	
Monthly Total in lbs.	**1,373,360**		**6.90**		**2.96**		**4.65**		**75.70**		**324.35**		**97.37**		**0.79**		**16.77**		**53.25**		**8.63**		**11.83**		**632.03**		**4.01**
4/3/2018	30.97	4.54		1.86		3.05		35.36		198.50		40.66		0.53		9.66		32.44		5.13		7.44		377.16		1.34	
4/17/2018	64.18	4.45		1.34		2.83		47.89		211.36		96.32		0.60		6.70		37.26		4.77		9.67		441.61		2.14	
Monthly Avg:		**4.49**		**1.60**		**2.94**		**41.62**		**204.93**		**68.49**		**0.57**		**8.18**		**34.85**		**4.95**		**8.55**		**409.39**		**1.74**	
Monthly Total in lbs.	**1,522,260**		**6.84**		**2.44**		**4.47**		**63.36**		**311.96**		**104.26**		**0.86**		**12.45**		**53.05**		**7.54**		**13.02**		**623.19**		**2.65**
5/1/2018	34.57	5.07		2.06		3.42		45.81		235.59		76.25		0.77		10.31		36.59		6.19		8.25		419.27		1.42	
5/15/2018	28.33	4.53		2.05		3.22		31.04		221.33		55.93		0.26		10.25		36.00		5.27		8.20		436.62		1.24	
Monthly Avg:		**4.80**		**2.06**		**3.32**		**38.42**		**228.46**		**66.09**		**0.51**		**10.28**		**36.29**		**5.73**		**8.23**		**427.94**		**1.33**	
Monthly Total in lbs.	**1,486,720**		**7.14**		**3.06**		**4.94**		**57.12**		**339.66**		**98.25**		**0.76**		**15.29**		**53.96**		**8.52**		**12.23**		**636.23**		**1.98**
6/5/2018	29.83	4.35		1.83		2.77		51.48		239.55		73.02		0.17		9.17		42.67		7.78		7.34		533.04		0.58	
6/19/2018	29.99	3.32		1.75		2.63		35.50		238.00		48.70		0.56		8.77		35.70		5.32		5.01		467.00		1.05	
6/28/2018	20.49	4.14		1.87		2.81		33.90		264.00		55.20				9.36		39.20		6.77		5.74		517.00			
Monthly Avg:		**3.94**		**1.82**		**2.74**		**40.29**		**247.18**		**58.97**		**0.36**		**9.10**		**39.19**		**6.62**		**6.03**		**505.68**		**0.81**	
Monthly Total in lbs.	**1,375,560**		**5.41**		**2.50**		**3.76**		**55.42**		**340.02**		**81.12**		**0.50**		**12.52**		**53.91**		**9.11**		**8.29**		**695.59**		**1.12**
7/3/2018	30.41	5.02		1.69		2.54		48.00		302.00		97.10		0.18		8.46		35.90		8.21		5.08		691.00		0.60	
7/17/2018	34.05	4.93		1.74		2.61		42.50		252.00		108.00		0.12		8.70		40.90		6.94		4.35		620.00		0.93	
Monthly Avg:		**4.98**		**1.72**		**2.57**		**45.25**		**277.00**		**102.55**		**0.15**		**8.58**		**38.40**		**7.58**		**4.71**		**655.50**		**0.77**	
Monthly Total in lbs.	**1,234,260**		**6.14**		**2.12**		**3.18**		**55.85**		**341.89**		**126.57**		**0.19**		**10.59**		**47.40**		**9.35**		**5.82**		**809.06**		**0.95**
8/14/2018	23.17	4.53		1.75		2.63		46.00		245.00		129.00		0.36		8.75		34.50		5.98		4.64		523.00		0.63	
8/22/2018	28.40	5.04		2.10		3.15		33.80		252.00		105.00		0.17		10.49		31.10		5.94		6.43		529.00		0.64	
Monthly Avg:		**4.79**		**1.92**		**2.89**		**39.90**		**248.50**		**117.00**		**0.26**		**9.62**		**32.80**		**5.96**		**5.54**		**526.00**		**0.64**	
Monthly Total in lbs.	**1,342,480**		**6.42**		**2.58**		**3.87**		**53.56**		**333.61**		**157.07**		**0.35**		**12.91**		**44.03**		**8.00**		**7.43**		**706.14**		**0.85**
9/4/2018	20.33	4.84		2.11		3.17		30.70		262.00		63.90		0.08		10.56		46.80		9.33		5.97		526.00		0.53	
9/18/2018	30.15	4.55		1.99		2.98		43.70		303.00		106.00		1.63		9.93		41.00		8.13		8.95		561.00		0.52	
Monthly Avg:		**4.70**		**2.05**		**3.07**		**37.20**		**282.50**		**84.95**		**0.85**		**10.25**		**43.90**		**8.73**		**7.46**		**543.50**		**0.53**	
Monthly Total in lbs.	**1,272,620**		**5.97**		**2.61**		**3.91**		**47.34**		**359.52**		**108.11**		**1.09**		**13.04**		**55.87**		**11.11**		**9.49**		**691.67**		**0.67**
10/2/2018	27.73	5.98		1.93		2.90		55.00		295.00		120.00		0.12		9.66		62.40		7.64		6.83		530.00		9.68	
10/16/2018	15.31	6.69		2.14		3.22		53.40		292.00		104.00		0.12		10.72		49.80		8.09		5.51		519.00		7.33	
Monthly Avg:		**6.34**		**2.04**		**3.06**		**54.20**		**293.50**		**112.00**		**0.12**		**10.19**		**56.10**		**7.87**		**6.17**		**524.50**		**8.51**	
Monthly Total in lbs.	**1,360,840**		**8.62**		**2.77**		**4.16**		**73.76**		**399.41**		**152.41**		**0.16**		**13.86**		**76.34**		**10.70**		**8.40**		**713.76**		**11.57**
11/6/2018	24.98	5.54		2.11		3.17		40.50		228.00		89.50		0.99		10.56		46.30		4.96		5.28		447.00		7.10	
11/20/2018	26.71	7.24		2.33		3.49		38.00		215.00		65.80		0.06		11.63		48.30		5.35		5.81		430.00		8.44	
Monthly Avg:		**6.39**		**2.22**		**3.33**		**39.25**		**221.50**		**77.65**		**0.53**		**11.09**		**47.30**		**5.16**		**5.55**		**438.50**		**7.77**	
Monthly Total in lbs.	**1,348,820**		**8.62**		**2.99**		**4.49**		**52.94**		**298.76**		**104.74**		**0.71**		**14.96**		**63.80**		**6.95**		**7.48**		**591.46**		**10.48**
12/4/2018	27.29	7.45		2.28		3.42		40.10		218.00		70.40		0.73		11.38		39.40		7.36		5.69		456.00		3.00	
12/18/2018	31.34	6.57		1.89		2.94		36.20		216.00		80.50		0.53		9.44		48.90		7.54		4.72		480.00		2.90	
Monthly Avg:		**7.01**		**2.08**		**3.18**		**38.15**		**217.00**		**75.45**		**0.63**		**10.41**		**44.15**		**7.45**		**5.21**		**468.00**		**2.95**	
Monthly Total in lbs.	**1,439,560**		**10.09**		**3.00**		**4.57**		**54.92**		**312.38**		**108.61**		**0.91**		**14.99**		**63.56**		**10.72**		**7.50**		**673.71**		**4.25**
YEARLY TOTAL LBS	**16,477,460**		**83.12**		**32.20**		**49.78**		**713.88**		**3828.68**		**1320.03**		**6.80**		**163.29**		**659.42**		**102.96**		**112.20**		**7833.82**		**142.80**

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

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
1/2/2018	7.5	4.4893		2.05		3.07		87.18		530.72		71.93		0.13		10.25		65.78		5.60		16.77		724.54		0.85	
1/16/2018	5.0	4.95523		2.23		3.35		84.93		565.36		67.99		0.15		11.16		62.39		6.27		17.86		733.51		0.76	
Monthly Avg:		**4.72**		**2.14**		**3.21**		**86.06**		**548.04**		**69.96**		**0.14**		**10.70**		**64.08**		**5.93**		**17.31**		**729.02**		**0.80**	
Monthly Total in lbs.	**355.840**		**1.68**		**0.76**		**1.14**		**30.62**		**195.02**		**24.89**		**0.05**		**3.81**		**22.80**		**2.11**		**6.16**		**259.42**		**0.29**
2/6/2018	7.3	4.35427		2.18		3.27		66.16		442.96		67.99		0.27		10.89		50.94		5.38		13.91		564.12		16.70	
2/20/2018	7.1	4.71452		2.30		3.45		69.87		480.60		70.51		0.26		11.50		55.84		5.24		14.90		586.35		21.70	
Monthly Avg:		**4.53**		**2.24**		**3.36**		**68.01**		**461.78**		**69.25**		**0.26**		**11.19**		**53.39**		**5.31**		**14.41**		**575.23**		**19.20**	
Monthly Total in lbs.	**359.700**		**1.63**		**0.81**		**1.21**		**24.46**		**166.10**		**24.91**		**0.09**		**4.03**		**19.20**		**1.91**		**5.18**		**206.91**		**6.91**
3/6/2018	6.6	5.69		2.05		4.60		89.94		534.75		79.51		0.52		10.76		60.93		5.07		14.27		677.82		1.42	
3/20/2018	4.3	6.02		2.21		4.87		87.58		556.58		89.86		0.57		11.13		61.56		6.13		14.93		731.08		1.50	
Monthly Avg:		**5.85**		**2.13**		**4.73**		**88.76**		**545.67**		**84.68**		**0.54**		**10.94**		**61.25**		**5.60**		**14.60**		**704.45**		**1.46**	
Monthly Total in lbs.	**344.940**		**2.02**		**0.74**		**1.63**		**30.62**		**188.22**		**29.21**		**0.19**		**3.77**		**21.13**		**1.93**		**5.04**		**242.99**		**0.50**
4/3/2018	6.8	5.00		2.27		4.12		62.52		440.82		71.41		0.27		11.37		44.23		3.98		11.42		582.12		0.97	
4/17/2018	7.1	5.65		2.16		4.47		71.28		514.31		81.70		0.59		10.79		48.56		4.49		13.10		695.34		1.01	
Monthly Avg:		**5.33**		**2.22**		**4.29**		**66.90**		**477.57**		**76.56**		**0.43**		**11.08**		**46.40**		**4.23**		**12.26**		**638.73**		**0.99**	
Monthly Total in lbs.	**323.080**		**1.72**		**0.72**		**1.39**		**21.61**		**154.29**		**24.73**		**0.14**		**3.58**		**14.99**		**1.37**		**3.96**		**206.36**		**0.32**
5/1/2018	6.4	5.54		2.12		4.17		70.20		485.99		88.16		0.28		10.58		46.96		4.46		14.59		658.65		0.48	
5/15/2018	7.2	5.27		2.08		4.02		67.37		487.32		88.46		0.26		10.41		45.67		4.54		14.31		706.13		1.00	
Monthly Avg:		**5.41**		**2.10**		**4.09**		**68.79**		**486.65**		**88.31**		**0.27**		**10.49**		**46.31**		**4.50**		**14.45**		**682.39**		**0.74**	
Monthly Total in lbs.	**362.240**		**1.96**		**0.76**		**1.48**		**24.92**		**176.29**		**31.99**		**0.10**		**3.80**		**16.78**		**1.63**		**5.23**		**247.19**		**0.27**
6/5/2018	7.1	5.29942		2.13		3.77		87.11		558.84		90.88		0.28		11.28		62.21		7.39		16.35		787.76		0.61	
6/19/2018	7.1	4.47		2.04		3.56		104.00		552.00		89.40		1.06		10.80		83.30		4.65		15.10		803.00		0.71	
6/28/2018	6.2	4.94		2.20		3.51		107.00		570.00		85.50				11.10		84.90		4.93		16.20		795.00			
Monthly Avg:		**4.90**		**2.12**		**3.61**		**99.37**		**560.28**		**88.59**		**0.67**		**11.06**		**76.80**		**5.66**		**15.88**		**795.25**		**0.66**	
Monthly Total in lbs.	**354.960**		**1.74**		**0.75**		**1.28**		**35.27**		**198.88**		**31.45**		**0.24**		**3.93**		**27.26**		**2.01**		**5.64**		**282.28**		**0.23**
7/3/2018	7.5	5.68		2.115		3.172		126		645		96.1		0.334		11.7		105		7.7		16.7		918		0.67	
7/18/2018	7.8	5.34		2.041		3.061		109		643		92.2		0.269		11.6		85.1		7.51		14.4		859		0.67	
Monthly Avg:		**5.51**		**2.08**		**3.12**		**117.50**		**644.00**		**94.15**		**0.30**		**11.65**		**95.05**		**7.61**		**15.55**		**888.50**		**0.67**	
Monthly Total in lbs.	**315.020**		**1.74**		**0.65**		**0.98**		**37.01**		**202.87**		**29.66**		**0.09**		**3.67**		**29.94**		**2.40**		**4.90**		**279.90**		**0.21**
8/14/2018	6.6	4.78		2.29		3.44		91.90		519.00		81.40		0.17		11.46		67.20		5.76		12.70		743.00		0.51	
8/22/2018	7.5	4.77		2.04		3.06		94.00		538.00		88.60		0.29		11.50		67.20		5.92		14.10		780.00		0.59	
Monthly Avg:		**4.78**		**2.17**		**3.25**		**92.95**		**528.50**		**85.00**		**0.23**		**11.48**		**67.20**		**5.84**		**13.40**		**761.50**		**0.55**	
Monthly Total in lbs.	**364.900**		**1.74**		**0.79**		**1.19**		**33.92**		**192.85**		**31.02**		**0.08**		**4.19**		**24.52**		**2.13**		**4.89**		**277.87**		**0.20**
9/4/2018	7.7	5.58		2.03		3.05		112.00		680.00		99.30		0.23		12.40		93.70		7.61		18.00		933.00		0.71	
9/18/2018	7.2	5.81		2.10		3.15		107.00		674.00		100.00		0.18		13.10		89.00		7.54		19.10		937.00		0.56	
Monthly Avg:		**5.70**		**2.07**		**3.10**		**109.50**		**677.00**		**99.65**		**0.21**		**12.75**		**91.35**		**7.58**		**18.55**		**935.00**		**0.64**	
Monthly Total in lbs.	**316.640**		**1.80**		**0.65**		**0.98**		**34.67**		**214.37**		**31.55**		**0.07**		**4.04**		**28.93**		**2.40**		**5.87**		**296.06**		**0.20**
10/2/2018	6.6	5.93		1.98		2.96		109.00		712.00		106.00		0.15		13.70		82.80		7.63		20.20		963.00		4.94	
10/16/2018	7.4	5.05		2.09		3.13		93.70		649.00		90.30		0.18		12.50		69.20		6.73		17.10		834.00		4.31	
Monthly Ave:		**5.49**		**2.03**		**3.05**		**101.35**		**680.50**		**98.15**		**0.17**		**13.10**		**76.00**		**7.18**		**18.65**		**898.50**		**4.63**	
Monthly Total in lbs.	**330.360**		**1.81**		**0.67**		**1.01**		**33.48**		**224.81**		**32.42**		**0.05**		**4.33**		**25.11**		**2.37**		**6.16**		**296.83**		**1.53**
11/6/2018	6.6	5.14		2.10		3.16		91.30		646.00		89.90		0.22		12.80		62.70		5.56		15.70		839.00		4.25	
11/20/2018	7.3	5.68		2.11		3.16		101.00		651.00		104.00		0.22		13.50		64.70		5.96		15.20		833.00		5.11	
Monthly Avg:		**5.41**		**2.10**		**3.16**		**96.15**		**648.50**		**96.95**		**0.22**		**13.15**		**63.70**		**5.76**		**15.45**		**836.00**		**4.68**	
Monthly Total in lbs.	**371.080**		**2.01**		**0.78**		**1.17**		**35.68**		**240.65**		**35.98**		**0.08**		**4.88**		**23.64**		**2.14**		**5.73**		**310.22**		**1.74**
12/4/2018	6.2	5.60		2.27		3.41		92.60		598.00		104.00		0.58		12.50		61.40		7.62		13.10		820.00		3.60	
12/18/2018	6.5	5.10		2.36		3.53		79.90		531.00		103.00		0.72		12.10		54.40		7.34		12.00		715.00		8.80	
Monthly Avg:		**5.35**		**2.31**		**3.47**		**86.25**		**564.50**		**103.50**		**0.65**		**12.30**		**57.90**		**7.48**		**12.55**		**767.50**		**6.20**	
Monthly Total in lbs.	**317.460**		**1.70**		**0.73**		**1.10**		**27.38**		**179.21**		**32.86**		**0.21**		**3.90**		**18.38**		**2.37**		**3.98**		**243.65**		**1.97**
YEARLY TOTAL LBS	**4,116.220**		**21.55**		**8.82**		**14.56**		**369.65**		**2333.55**		**360.67**		**1.39**		**47.92**		**272.68**		**24.77**		**62.75**		**3149.68**		**14.36**

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

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 2018
Quarterly Filter Cake Data

Plant:	Bucklin Point				Field's Point			
Quarter:	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sample Date:	3/22/2018	6/28/2018	9/5/2018	11/7/2018	3/22/2018	6/28/2018	9/5/2018	11/7/2018
(TCLP) Arsenic (mg/L)	<0.05	0.08	<0.05	<0.05	<0.05	0.11	<0.05	<0.05
(TCLP) Barium (mg/L)	<0.025	0.117	0.138	0.163	<0.025	0.166	0.180	0.167
(TCLP) Cadmium (mg/L)	<0.02	<0.025	<0.025	<0.025	<0.02	<0.025	<0.025	<0.025
(TCLP) Chromium (mg/L)	<0.025	0.033	<0.025	<0.025	<0.025	0.216	<0.025	<0.025
(TCLP) Lead (mg/L)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
(TCLP) Mercury (mg/L)	<0.005	<0.001	<0.001	<0.001	<0.005	<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)	<0.005	<0.025	<0.025	<0.060	<0.005	<0.025	<0.025	<0.060
Aluminum (mg/kg)	5570	5480	5880	5000	2320	2240	2400	2750
Arsenic (mg/kg)	12.2	10.1	5.71	4.75	8.45	8.35	<4.07	4.64
Beryllium (mg/kg)	<1.33	<1.30	<1.97	<1.29	<1.41	<1.16	<2.03	<1.61
Cadmium (mg/kg)	4.65	4.18	4.32	3.53	2.99	3.27	3.08	3.45
Chromium (mg/kg)	58.1	101	101	73.4	43.7	31.1	27.9	32.5
Copper (mg/kg)	443	569	698	619	240	286	279	243
Lead (mg/kg)	71.3	90.5	108	90.5	44.7	58.7	65	97.6
Mercury (mg/kg)	0.755	1.19	0.752	0.53	<0.304	0.349	0.287	0.516
Nickel (mg/kg)	48.1	91.4	97.7	55.5	29.8	41.6	45.4	50.6
Phosphorous (mg/kg)	15500	20200	19600	16700	13700	13700	14200	12700
Selenium (mg/kg)	<2.66	<2.60	<3.94	<2.58	<2.81	3.15	<4.07	<3.23
Zinc (mg/kg)	637	884	1030	808	446	594	636	575
Arachlor 1221 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1232 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1016 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1242 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1248 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1254 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1260 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1262 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Arachlor 1268 (ug/kg)	<399	<415	<402	<395	<387	<362	<421	<386
Percent Total Solids (%)	23.4	23.6	24.9	23.8	23.1	27	23.6	24.2
Percent Fixed Solids (%)	23	26	26	24	14	13	12	21
Percent Volatile Solids (%)	77	74	74	76	86	87	88	79
Paint Filter/Free Liquids (Present/Absent)	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Corrosivity/pH (SU)	7.8	8.2	7.6	7.8	5.4	5.4	5.2	7.6
(TCLP) Benzene (mg/L) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) Carbon tetrachloride (mg/L) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) Chlordane (mg/L) *	<0.005	NA	NA	NA	<0.005	NA	NA	NA
(TCLP) Chlorobenzene (mg/L) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) Chloroform (mg/L) *	<0.01	NA	NA	NA	<0.01	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	<0.10	NA	NA	NA
(TCLP) p-Cresol (mg/L) *	<0.10	NA	NA	NA	<0.10	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) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) 1,2-Dichloroethane (mg/L) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) 1,1-Dichloroethylene (mg/L) *	<0.01	NA	NA	NA	<0.01	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

* 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 2018
Quarterly Filter Cake Data

Plant:	Bucklin Point				Field's Point			
Quarter:	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sample Date:	3/22/2018	6/28/2018	9/5/2018	11/7/2018	3/22/2018	6/28/2018	9/5/2018	11/7/2018
(TCLP) Methyl ethyl ketone (mg/L) *	<0.5	NA	NA	NA	<25.0	NA	NA	NA
(TCLP) Nitrobenzene (mg/L) *	<0.05	NA	NA	NA	<0.05	NA	NA	NA
(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) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
(TCLP) Toxaphene (mg/L) *	<0.100	NA	NA	NA	<0.100	NA	NA	NA
(TCLP) Trichloroethylene (mg/L) *	<0.01	NA	NA	NA	<0.01	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) *	<0.01	NA	NA	NA	<0.01	NA	NA	NA
Flash Point/Ignitability (Deg. F) *	>200	NA	NA	NA	>200	NA	NA	NA
Reactive Cyanide (mg/kg) *	<0.8	NA	NA	NA	<0.8	NA	NA	NA
Reactive Sulfide (mg/kg) *	<0.4	NA	NA	NA	<0.4	NA	NA	NA
Percent Total Sulfur (%) *	1.02	NA	NA	NA	0.487	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 2018

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/9/2018	1,1-Dichloroethane	<1	ppb
1/9/2018	1,1-Dichloroethene	<1	ppb
1/9/2018	1,1,1-Trichloroethane	<1	ppb
1/9/2018	1,1,2-Trichloroethane	<1	ppb
1/9/2018	1,1,2,2-Tetrachlorethane	<1	ppb
1/9/2018	1,2-dichlorobenzene	<1	ppb
1/9/2018	1,2-Dichloroethane	<1	ppb
1/9/2018	1,2-Dichloropropane	<1	ppb
1/9/2018	1,3-dichlorobenzene	<1	ppb
1/9/2018	1,4-dichlorobenzene	<1	ppb
1/9/2018	2-Chloroethylvinylether	<2	ppb
1/9/2018	Benzene	<1	ppb
1/9/2018	Bromodichloromethane	<1	ppb
1/9/2018	Bromoform	<1	ppb
1/9/2018	Bromomethane	<10	ppb
1/9/2018	Carbon Tetrachloride	<1	ppb
1/9/2018	Chlorobenzene	<1	ppb
1/9/2018	Chloroethane	<10	ppb
1/9/2018	Chloroform	4.5	ppb
1/9/2018	Chloromethane	<10	ppb
1/9/2018	cis-1,3-Dichloropropene	<1	ppb
1/9/2018	Dibromochloromethane	<1	ppb
1/9/2018	Ethylbenzene	<1	ppb
1/9/2018	Methylene Chloride	<5	ppb
1/9/2018	o- xylene	<1	ppb
1/9/2018	p&m xylene	<1	ppb
1/9/2018	Tetrachlorethene	<1	ppb
1/9/2018	Toluene	<1	ppb
1/9/2018	Trans-1,2-Dichloroethene	<1	ppb
1/9/2018	Trans-1,3-Dichloropropene	<1	ppb
1/9/2018	Trichlorethene	<1	ppb
1/9/2018	Trichlorofluoromethane	<1	ppb
1/9/2018	Vinyl Chloride	<1	ppb
2/6/2018	1,1-Dichloroethane	<1	ppb
2/6/2018	1,1-Dichloroethene	<1	ppb
2/6/2018	1,1,1-Trichloroethane	<1	ppb
2/6/2018	1,1,2-Trichloroethane	<1	ppb
2/6/2018	1,1,2,2-Tetrachlorethane	<1	ppb
2/6/2018	1,2-dichlorobenzene	<1	ppb
2/6/2018	1,2-Dichloroethane	<1	ppb
2/6/2018	1,2-Dichloropropane	<1	ppb
2/6/2018	1,3-dichlorobenzene	<1	ppb
2/6/2018	1,4-dichlorobenzene	<1	ppb
2/6/2018	2-Chloroethylvinylether	<2	ppb
2/6/2018	Benzene	<1	ppb
2/6/2018	Bromodichloromethane	<1	ppb
2/6/2018	Bromoform	<1	ppb
2/6/2018	Bromomethane	<10	ppb
2/6/2018	Carbon Tetrachloride	<1	ppb
2/6/2018	Chlorobenzene	<1	ppb
2/6/2018	Chloroethane	<10	ppb
2/6/2018	Chloroform	3	ppb
2/6/2018	Chloromethane	<10	ppb
2/6/2018	cis-1,3-Dichloropropene	<1	ppb
2/6/2018	Dibromochloromethane	<1	ppb
2/6/2018	Ethylbenzene	<1	ppb
2/6/2018	Methylene Chloride	<5	ppb
2/6/2018	o- xylene	<1	ppb
2/6/2018	p&m xylene	<1	ppb
2/6/2018	Tetrachlorethene	1.1	ppb
2/6/2018	Toluene	<1	ppb
2/6/2018	Trans-1,2-Dichloroethene	<1	ppb
2/6/2018	Trans-1,3-Dichloropropene	<1	ppb
2/6/2018	Trichlorethene	<1	ppb
2/6/2018	Trichlorofluoromethane	<1	ppb
2/6/2018	Vinyl Chloride	<1	ppb
3/6/2018	1,1-Dichloroethane	<1	ppb
3/6/2018	1,1-Dichloroethene	<1	ppb
3/6/2018	1,1,1-Trichloroethane	<1	ppb

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/10/2018	1,1-Dichloroethane	<1	ppb
1/10/2018	1,1-Dichloroethene	<1	ppb
1/10/2018	1,1,1-Trichloroethane	<1	ppb
1/10/2018	1,1,2-Trichloroethane	<1	ppb
1/10/2018	1,1,2,2-Tetrachlorethane	<1	ppb
1/10/2018	1,2-dichlorobenzene	<1	ppb
1/10/2018	1,2-Dichloroethane	<1	ppb
1/10/2018	1,2-Dichloropropane	<1	ppb
1/10/2018	1,3-dichlorobenzene	<1	ppb
1/10/2018	1,4-dichlorobenzene	<1	ppb
1/10/2018	2-Chloroethylvinylether	<2	ppb
1/10/2018	Benzene	<1	ppb
1/10/2018	Bromodichloromethane	<1	ppb
1/10/2018	Bromoform	<1	ppb
1/10/2018	Bromomethane	<10	ppb
1/10/2018	Carbon Tetrachloride	<1	ppb
1/10/2018	Chlorobenzene	<1	ppb
1/10/2018	Chloroethane	<10	ppb
1/10/2018	Chloroform	<1	ppb
1/10/2018	Chloromethane	<10	ppb
1/10/2018	cis-1,3-Dichloropropene	<1	ppb
1/10/2018	Dibromochloromethane	<1	ppb
1/10/2018	Ethylbenzene	<1	ppb
1/10/2018	Methylene Chloride	<5	ppb
1/10/2018	o- xylene	<1	ppb
1/10/2018	p&m xylene	<1	ppb
1/10/2018	Tetrachlorethene	<1	ppb
1/10/2018	Toluene	<1	ppb
1/10/2018	Trans-1,2-Dichloroethene	<1	ppb
1/10/2018	Trans-1,3-Dichloropropene	<1	ppb
1/10/2018	Trichlorethene	<1	ppb
1/10/2018	Trichlorofluoromethane	<1	ppb
1/10/2018	Vinyl Chloride	<1	ppb
2/7/2018	1,1-Dichloroethane	<1	ppb
2/7/2018	1,1-Dichloroethene	<1	ppb
2/7/2018	1,1,1-Trichloroethane	<1	ppb
2/7/2018	1,1,2-Trichloroethane	<1	ppb
2/7/2018	1,1,2,2-Tetrachlorethane	<1	ppb
2/7/2018	1,2-dichlorobenzene	<1	ppb
2/7/2018	1,2-Dichloroethane	<1	ppb
2/7/2018	1,2-Dichloropropane	<1	ppb
2/7/2018	1,3-dichlorobenzene	<1	ppb
2/7/2018	1,4-dichlorobenzene	<1	ppb
2/7/2018	2-Chloroethylvinylether	<2	ppb
2/7/2018	Benzene	<1	ppb
2/7/2018	Bromodichloromethane	<1	ppb
2/7/2018	Bromoform	<1	ppb
2/7/2018	Bromomethane	<10	ppb
2/7/2018	Carbon Tetrachloride	<1	ppb
2/7/2018	Chlorobenzene	<1	ppb
2/7/2018	Chloroethane	<10	ppb
2/7/2018	Chloroform	1.5	ppb
2/7/2018	Chloromethane	<10	ppb
2/7/2018	cis-1,3-Dichloropropene	<1	ppb
2/7/2018	Dibromochloromethane	<1	ppb
2/7/2018	Ethylbenzene	<1	ppb
2/7/2018	Methylene Chloride	<5	ppb
2/7/2018	o- xylene	<1	ppb
2/7/2018	p&m xylene	<1	ppb
2/7/2018	Tetrachlorethene	<1	ppb
2/7/2018	Toluene	<1	ppb
2/7/2018	Trans-1,2-Dichloroethene	<1	ppb
2/7/2018	Trans-1,3-Dichloropropene	<1	ppb
2/7/2018	Trichlorethene	<1	ppb
2/7/2018	Trichlorofluoromethane	<1	ppb
2/7/2018	Vinyl Chloride	<1	ppb
3/7/2018	1,1-Dichloroethane	<1	ppb
3/7/2018	1,1-Dichloroethene	<1	ppb
3/7/2018	1,1,1-Trichloroethane	<1	ppb

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2018

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
3/6/2018	1,1,2-Trichloroethane	<1	ppb
3/6/2018	1,1,2,2-Tetrachlorethane	<1	ppb
3/6/2018	1,2-dichlorobenzene	<1	ppb
3/6/2018	1,2-Dichloroethane	<1	ppb
3/6/2018	1,2-Dichloropropane	<1	ppb
3/6/2018	1,3-dichlorobenzene	<1	ppb
3/6/2018	1,4-dichlorobenzene	<1	ppb
3/6/2018	2-Chloroethylvinylether	<2	ppb
3/6/2018	Benzene	<1	ppb
3/6/2018	Bromodichloromethane	<1	ppb
3/6/2018	Bromoform	<1	ppb
3/6/2018	Bromomethane	<10	ppb
3/6/2018	Carbon Tetrachloride	<1	ppb
3/6/2018	Chlorobenzene	<1	ppb
3/6/2018	Chloroethane	<10	ppb
3/6/2018	Chloroform	3.7	ppb
3/6/2018	Chloromethane	<10	ppb
3/6/2018	cis-1,3-Dichloropropene	<1	ppb
3/6/2018	Dibromochloromethane	<1	ppb
3/6/2018	Ethylbenzene	<1	ppb
3/6/2018	Methylene Chloride	<5	ppb
3/6/2018	o- xylene	<1	ppb
3/6/2018	p&m xylene	<1	ppb
3/6/2018	Tetrachlorethene	2.3	ppb
3/6/2018	Toluene	<1	ppb
3/6/2018	Trans-1,2-Dichloroethene	<1	ppb
3/6/2018	Trans-1,3-Dichloropropene	<1	ppb
3/6/2018	Trichlorethene	1.3	ppb
3/6/2018	Trichlorofluoromethane	<1	ppb
3/6/2018	Vinyl Chloride	<1	ppb
4/3/2018	1,1-Dichloroethane	<1	ppb
4/3/2018	1,1-Dichloroethene	<1	ppb
4/3/2018	1,1,1-Trichloroethane	<1	ppb
4/3/2018	1,1,2-Trichloroethane	<1	ppb
4/3/2018	1,1,2,2-Tetrachlorethane	<1	ppb
4/3/2018	1,2-dichlorobenzene	<1	ppb
4/3/2018	1,2-Dichloroethane	<1	ppb
4/3/2018	1,2-Dichloropropane	<1	ppb
4/3/2018	1,3-dichlorobenzene	<1	ppb
4/3/2018	1,4-dichlorobenzene	<1	ppb
4/3/2018	2-Chloroethylvinylether	<2	ppb
4/3/2018	Benzene	<1	ppb
4/3/2018	Bromodichloromethane	<1	ppb
4/3/2018	Bromoform	<1	ppb
4/3/2018	Bromomethane	<10	ppb
4/3/2018	Carbon Tetrachloride	<1	ppb
4/3/2018	Chlorobenzene	<1	ppb
4/3/2018	Chloroethane	<10	ppb
4/3/2018	Chloroform	7.1	ppb
4/3/2018	Chloromethane	<10	ppb
4/3/2018	cis-1,3-Dichloropropene	<1	ppb
4/3/2018	Dibromochloromethane	<1	ppb
4/3/2018	Ethylbenzene	<1	ppb
4/3/2018	Methylene Chloride	<5	ppb
4/3/2018	o- xylene	<1	ppb
4/3/2018	p&m xylene	<1	ppb
4/3/2018	Tetrachlorethene	16	ppb
4/3/2018	Toluene	1.3	ppb
4/3/2018	Trans-1,2-Dichloroethene	<1	ppb
4/3/2018	Trans-1,3-Dichloropropene	<1	ppb
4/3/2018	Trichlorethene	1.1	ppb
4/3/2018	Trichlorofluoromethane	<1	ppb
4/3/2018	Vinyl Chloride	<1	ppb
5/8/2018	1,1-Dichloroethane	<1	ppb
5/8/2018	1,1-Dichloroethene	<1	ppb
5/8/2018	1,1,1-Trichloroethane	<1	ppb
5/8/2018	1,1,2-Trichloroethane	<1	ppb
5/8/2018	1,1,2,2-Tetrachlorethane	<1	ppb

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
3/7/2018	1,1,2-Trichloroethane	<1	ppb
3/7/2018	1,1,2,2-Tetrachlorethane	<1	ppb
3/7/2018	1,2-dichlorobenzene	<1	ppb
3/7/2018	1,2-Dichloroethane	<1	ppb
3/7/2018	1,2-Dichloropropane	<1	ppb
3/7/2018	1,3-dichlorobenzene	<1	ppb
3/7/2018	1,4-dichlorobenzene	<1	ppb
3/7/2018	2-Chloroethylvinylether	<2	ppb
3/7/2018	Benzene	<1	ppb
3/7/2018	Bromodichloromethane	<1	ppb
3/7/2018	Bromoform	<1	ppb
3/7/2018	Bromomethane	<10	ppb
3/7/2018	Carbon Tetrachloride	<1	ppb
3/7/2018	Chlorobenzene	<1	ppb
3/7/2018	Chloroethane	<10	ppb
3/7/2018	Chloroform	1.9	ppb
3/7/2018	Chloromethane	<10	ppb
3/7/2018	cis-1,3-Dichloropropene	<1	ppb
3/7/2018	Dibromochloromethane	<1	ppb
3/7/2018	Ethylbenzene	<1	ppb
3/7/2018	Methylene Chloride	<5	ppb
3/7/2018	o- xylene	<1	ppb
3/7/2018	p&m xylene	<1	ppb
3/7/2018	Tetrachlorethene	<1	ppb
3/7/2018	Toluene	<1	ppb
3/7/2018	Trans-1,2-Dichloroethene	<1	ppb
3/7/2018	Trans-1,3-Dichloropropene	<1	ppb
3/7/2018	Trichlorethene	<1	ppb
3/7/2018	Trichlorofluoromethane	<1	ppb
3/7/2018	Vinyl Chloride	<1	ppb
4/4/2018	1,1-Dichloroethane	<1	ppb
4/4/2018	1,1-Dichloroethene	<1	ppb
4/4/2018	1,1,1-Trichloroethane	<1	ppb
4/4/2018	1,1,2-Trichloroethane	<1	ppb
4/4/2018	1,1,2,2-Tetrachlorethane	<1	ppb
4/4/2018	1,2-dichlorobenzene	<1	ppb
4/4/2018	1,2-Dichloroethane	<1	ppb
4/4/2018	1,2-Dichloropropane	<1	ppb
4/4/2018	1,3-dichlorobenzene	<1	ppb
4/4/2018	1,4-dichlorobenzene	<1	ppb
4/4/2018	2-Chloroethylvinylether	<2	ppb
4/4/2018	Benzene	<1	ppb
4/4/2018	Bromodichloromethane	1.4	ppb
4/4/2018	Bromoform	<1	ppb
4/4/2018	Bromomethane	<10	ppb
4/4/2018	Carbon Tetrachloride	<1	ppb
4/4/2018	Chlorobenzene	<1	ppb
4/4/2018	Chloroethane	<10	ppb
4/4/2018	Chloroform	3.5	ppb
4/4/2018	Chloromethane	<10	ppb
4/4/2018	cis-1,3-Dichloropropene	<1	ppb
4/4/2018	Dibromochloromethane	<1	ppb
4/4/2018	Ethylbenzene	<1	ppb
4/4/2018	Methylene Chloride	<5	ppb
4/4/2018	o- xylene	<1	ppb
4/4/2018	p&m xylene	<1	ppb
4/4/2018	Tetrachlorethene	2	ppb
4/4/2018	Toluene	<1	ppb
4/4/2018	Trans-1,2-Dichloroethene	<1	ppb
4/4/2018	Trans-1,3-Dichloropropene	<1	ppb
4/4/2018	Trichlorethene	<1	ppb
4/4/2018	Trichlorofluoromethane	<1	ppb
4/4/2018	Vinyl Chloride	<1	ppb
5/9/2018	1,1-Dichloroethane	<1	ppb
5/9/2018	1,1-Dichloroethene	<1	ppb
5/9/2018	1,1,1-Trichloroethane	<1	ppb
5/9/2018	1,1,2-Trichloroethane	<1	ppb
5/9/2018	1,1,2,2-Tetrachlorethane	<1	ppb

EPA VOC Data
Field's Point 2018

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
5/8/2018	1,2-dichlorobenzene	<1	ppb
5/8/2018	1,2-Dichloroethane	<1	ppb
5/8/2018	1,2-Dichloropropane	<1	ppb
5/8/2018	1,3-dichlorobenzene	<1	ppb
5/8/2018	1,4-dichlorobenzene	<1	ppb
5/8/2018	2-Chloroethylvinylether	<2	ppb
5/8/2018	Benzene	<1	ppb
5/8/2018	Bromodichloromethane	<1	ppb
5/8/2018	Bromoform	<1	ppb
5/8/2018	Bromomethane	<10	ppb
5/8/2018	Carbon Tetrachloride	<1	ppb
5/8/2018	Chlorobenzene	<1	ppb
5/8/2018	Chloroethane	<10	ppb
5/8/2018	Chloroform	7.2	ppb
5/8/2018	Chloromethane	<10	ppb
5/8/2018	cis-1,3-Dichloropropene	<1	ppb
5/8/2018	Dibromochloromethane	<1	ppb
5/8/2018	Ethylbenzene	<1	ppb
5/8/2018	Methylene Chloride	<5	ppb
5/8/2018	o- xylene	<1	ppb
5/8/2018	p&m xylene	<1	ppb
5/8/2018	Tetrachlorethene	2.2	ppb
5/8/2018	Toluene	1.5	ppb
5/8/2018	Trans-1,2-Dichloroethene	<1	ppb
5/8/2018	Trans-1,3-Dichloropropene	<1	ppb
5/8/2018	Trichlorethene	1.2	ppb
5/8/2018	Trichlorofluoromethane	<1	ppb
5/8/2018	Vinyl Chloride	<1	ppb
6/5/2018	1,1-Dichloroethane	<1	ppb
6/5/2018	1,1-Dichloroethene	<1	ppb
6/5/2018	1,1,1-Trichloroethane	<1	ppb
6/5/2018	1,1,2-Trichloroethane	<1	ppb
6/5/2018	1,1,2,2-Tetrachlorethane	<1	ppb
6/5/2018	1,2-dichlorobenzene	<1	ppb
6/5/2018	1,2-Dichloroethane	<1	ppb
6/5/2018	1,2-Dichloropropane	<1	ppb
6/5/2018	1,3-dichlorobenzene	<1	ppb
6/5/2018	1,4-dichlorobenzene	<1	ppb
6/5/2018	2-Chloroethylvinylether	<2	ppb
6/5/2018	acetone	140	ppb
6/5/2018	Benzene	<1	ppb
6/5/2018	Bromodichloromethane	<1	ppb
6/5/2018	Bromoform	<1	ppb
6/5/2018	Bromomethane	<10	ppb
6/5/2018	Carbon Tetrachloride	<1	ppb
6/5/2018	Chlorobenzene	<1	ppb
6/5/2018	Chloroethane	<10	ppb
6/5/2018	Chloroform	7.6	ppb
6/5/2018	Chloromethane	<10	ppb
6/5/2018	cis-1,3-Dichloropropene	<1	ppb
6/5/2018	Dibromochloromethane	<1	ppb
6/5/2018	Ethylbenzene	<1	ppb
6/5/2018	Methylene Chloride	<5	ppb
6/5/2018	o- xylene	<1	ppb
6/5/2018	p&m xylene	<1	ppb
6/5/2018	Tetrachlorethene	2.9	ppb
6/5/2018	Toluene	2	ppb
6/5/2018	Trans-1,2-Dichloroethene	<1	ppb
6/5/2018	Trans-1,3-Dichloropropene	<1	ppb
6/5/2018	Trichlorethene	1.1	ppb
6/5/2018	Trichlorofluoromethane	<1	ppb
6/5/2018	Vinyl Chloride	<1	ppb
7/10/2018	(m & p) Xylene	<1	ppb
7/10/2018	(o) Xylene	<1	ppb
7/10/2018	1,1-Dichloroethane	<1	ppb
7/10/2018	1,1-Dichloroethene	<1	ppb
7/10/2018	1,1,1-Trichloroethane	<1	ppb
7/10/2018	1,1,2-Trichloroethane	<1	ppb

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
5/9/2018	1,2-dichlorobenzene	<1	ppb
5/9/2018	1,2-Dichloroethane	<1	ppb
5/9/2018	1,2-Dichloropropane	<1	ppb
5/9/2018	1,3-dichlorobenzene	<1	ppb
5/9/2018	1,4-dichlorobenzene	<1	ppb
5/9/2018	2-Chloroethylvinylether	<2	ppb
5/9/2018	Benzene	<1	ppb
5/9/2018	Bromodichloromethane	8.6	ppb
5/9/2018	Bromoform	<1	ppb
5/9/2018	Bromomethane	<10	ppb
5/9/2018	Carbon Tetrachloride	<1	ppb
5/9/2018	Chlorobenzene	<1	ppb
5/9/2018	Chloroethane	<10	ppb
5/9/2018	Chloroform	9.1	ppb
5/9/2018	Chloromethane	<10	ppb
5/9/2018	cis-1,3-Dichloropropene	<1	ppb
5/9/2018	Dibromochloromethane	5	ppb
5/9/2018	Ethylbenzene	<1	ppb
5/9/2018	Methylene Chloride	<5	ppb
5/9/2018	o- xylene	<1	ppb
5/9/2018	p&m xylene	<1	ppb
5/9/2018	Tetrachlorethene	<1	ppb
5/9/2018	Toluene	<1	ppb
5/9/2018	Trans-1,2-Dichloroethene	<1	ppb
5/9/2018	Trans-1,3-Dichloropropene	<1	ppb
5/9/2018	Trichlorethene	<1	ppb
5/9/2018	Trichlorofluoromethane	<1	ppb
5/9/2018	Vinyl Chloride	<1	ppb
6/6/2018	1,1-Dichloroethane	<1	ppb
6/6/2018	1,1-Dichloroethene	<1	ppb
6/6/2018	1,1,1-Trichloroethane	<1	ppb
6/6/2018	1,1,2-Trichloroethane	<1	ppb
6/6/2018	1,1,2,2-Tetrachlorethane	<1	ppb
6/6/2018	1,2-dichlorobenzene	<1	ppb
6/6/2018	1,2-Dichloroethane	<1	ppb
6/6/2018	1,2-Dichloropropane	<1	ppb
6/6/2018	1,3-dichlorobenzene	<1	ppb
6/6/2018	1,4-dichlorobenzene	<1	ppb
6/6/2018	2-Chloroethylvinylether	<2	ppb
6/6/2018	Acetone	<10	ppb
6/6/2018	Benzene	<1	ppb
6/6/2018	Bromodichloromethane	9.1	ppb
6/6/2018	Bromoform	1.5	ppb
6/6/2018	Bromomethane	<10	ppb
6/6/2018	Carbon Tetrachloride	<1	ppb
6/6/2018	Chlorobenzene	<1	ppb
6/6/2018	Chloroethane	<10	ppb
6/6/2018	Chloroform	7	ppb
6/6/2018	Chloromethane	<10	ppb
6/6/2018	cis-1,3-Dichloropropene	<1	ppb
6/6/2018	Dibromochloromethane	7.3	ppb
6/6/2018	Ethylbenzene	<1	ppb
6/6/2018	Methylene Chloride	<5	ppb
6/6/2018	o- xylene	<1	ppb
6/6/2018	p&m xylene	<1	ppb
6/6/2018	Tetrachlorethene	1.5	ppb
6/6/2018	Toluene	<1	ppb
6/6/2018	Trans-1,2-Dichloroethene	<1	ppb
6/6/2018	Trans-1,3-Dichloropropene	<1	ppb
6/6/2018	Trichlorethene	<1	ppb
6/6/2018	Trichlorofluoromethane	<1	ppb
6/6/2018	Vinyl Chloride	<1	ppb
7/11/2018	(m & p) Xylene	<1	ppb
7/11/2018	(o) Xylene	<1	ppb
7/11/2018	1,1-Dichloroethane	<1	ppb
7/11/2018	1,1-Dichloroethene	<1	ppb
7/11/2018	1,1,1-Trichloroethane	<1	ppb
7/11/2018	1,1,2-Trichloroethane	<1	ppb

EPA VOC Data
Field's Point 2018

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
7/10/2018	1,1,2,2-Tetrachloroethane	<1	ppb
7/10/2018	1,2-Dichlorobenzene	<1	ppb
7/10/2018	1,2-Dichloroethane	<1	ppb
7/10/2018	1,2-Dichloropropane	<1	ppb
7/10/2018	1,3-Dichlorobenzene	<1	ppb
7/10/2018	1,4-Dichlorobenzene	<1	ppb
7/10/2018	2-Chloroethylvinylether	<2	ppb
7/10/2018	Acetone	230	ppb
7/10/2018	Benzene	<1	ppb
7/10/2018	Bromodichloromethane	<1	ppb
7/10/2018	Bromoform	<1	ppb
7/10/2018	Bromomethane	<10	ppb
7/10/2018	Carbon Tetrachloride	<1	ppb
7/10/2018	Chlorobenzene	<1	ppb
7/10/2018	Chloroethane	<10	ppb
7/10/2018	Chloroform	6.7	ppb
7/10/2018	Chloromethane	<10	ppb
7/10/2018	cis-1,3-Dichloropropylene	<1	ppb
7/10/2018	Dibromochloromethane	<1	ppb
7/10/2018	Ethylbenzene	<1	ppb
7/10/2018	Methylene Chloride	<5	ppb
7/10/2018	Tetrachloroethylene	1.2	ppb
7/10/2018	Toluene	1.5	ppb
7/10/2018	trans-1,2-Dichloroethene	<1	ppb
7/10/2018	trans-1,3-Dichloropropene	<1	ppb
7/10/2018	Trichloroethene	<1	ppb
7/10/2018	Trichlorofluoromethane	<1	ppb
7/10/2018	Vinyl Chloride	<1	ppb
8/7/2018	(m & p) Xylene	<1	ppb
8/7/2018	(o) Xylene	<1	ppb
8/7/2018	1,1-Dichloroethane	<1	ppb
8/7/2018	1,1-Dichloroethylene	<1	ppb
8/7/2018	1,1,1-Trichloroethane	<1	ppb
8/7/2018	1,1,2-Trichloroethane	<1	ppb
8/7/2018	1,1,2,2-Tetrachloroethane	<1	ppb
8/7/2018	1,2-Dichlorobenzene	<1	ppb
8/7/2018	1,2-Dichloroethane	<1	ppb
8/7/2018	1,2-Dichloropropane	<1	ppb
8/7/2018	1,3-Dichlorobenzene	<1	ppb
8/7/2018	1,4-Dichlorobenzene	<1	ppb
8/7/2018	2-Chloroethylvinylether	<2	ppb
8/7/2018	Acetone	97	ppb
8/7/2018	Benzene	<1	ppb
8/7/2018	Bromodichloromethane	<1	ppb
8/7/2018	Bromoform	<1	ppb
8/7/2018	Bromomethane	<10	ppb
8/7/2018	Carbon Tetrachloride	<1	ppb
8/7/2018	Chlorobenzene	<1	ppb
8/7/2018	Chloroethane	<10	ppb
8/7/2018	Chloroform	7.8	ppb
8/7/2018	Chloromethane	<10	ppb
8/7/2018	cis-1,3-Dichloropropylene	<1	ppb
8/7/2018	Dibromochloromethane	<1	ppb
8/7/2018	Ethylbenzene	<1	ppb
8/7/2018	Methylene Chloride	<5	ppb
8/7/2018	Tetrachloroethylene	1.3	ppb
8/7/2018	Toluene	1.9	ppb
8/7/2018	trans-1,2-Dichloroethene	<1	ppb
8/7/2018	trans-1,3-Dichloropropene	<1	ppb
8/7/2018	Trichloroethene	<1	ppb
8/7/2018	Trichlorofluoromethane	<1	ppb
8/7/2018	Vinyl Chloride	<1	ppb
9/11/2018	(m & p) Xylene	<1	ppb
9/11/2018	(o) Xylene	<1	ppb
9/11/2018	1,1-Dichloroethane	<1	ppb
9/11/2018	1,1-Dichloroethylene	<1	ppb
9/11/2018	1,1,1-Trichloroethane	<1	ppb
9/11/2018	1,1,2-Trichloroethane	<1	ppb

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
7/11/2018	1,1,2,2-Tetrachloroethane	<1	ppb
7/11/2018	1,2-Dichlorobenzene	<1	ppb
7/11/2018	1,2-Dichloroethane	<1	ppb
7/11/2018	1,2-Dichloropropane	<1	ppb
7/11/2018	1,3-Dichlorobenzene	<1	ppb
7/11/2018	1,4-Dichlorobenzene	<1	ppb
7/11/2018	2-Chloroethylvinylether	<2	ppb
7/11/2018	Acetone	<10	ppb
7/11/2018	Benzene	<1	ppb
7/11/2018	Bromodichloromethane	5.1	ppb
7/11/2018	Bromoform	<1	ppb
7/11/2018	Bromomethane	<10	ppb
7/11/2018	Carbon Tetrachloride	<1	ppb
7/11/2018	Chlorobenzene	<1	ppb
7/11/2018	Chloroethane	<10	ppb
7/11/2018	Chloroform	4.6	ppb
7/11/2018	Chloromethane	<10	ppb
7/11/2018	cis-1,3-Dichloropropylene	<1	ppb
7/11/2018	Dibromochloromethane	3.2	ppb
7/11/2018	Ethylbenzene	<1	ppb
7/11/2018	Methylene Chloride	<5	ppb
7/11/2018	Tetrachloroethylene	<1	ppb
7/11/2018	Toluene	<1	ppb
7/11/2018	trans-1,2-Dichloroethene	<1	ppb
7/11/2018	trans-1,3-Dichloropropene	<1	ppb
7/11/2018	Trichloroethene	<1	ppb
7/11/2018	Trichlorofluoromethane	<1	ppb
7/11/2018	Vinyl Chloride	<1	ppb
8/7/2018	(m & p) Xylene	<1	ppb
8/7/2018	(o) Xylene	<1	ppb
8/7/2018	1,1-Dichloroethane	<1	ppb
8/7/2018	1,1-Dichloroethylene	<1	ppb
8/7/2018	1,1,1-Trichloroethane	<1	ppb
8/7/2018	1,1,2-Trichloroethane	<1	ppb
8/7/2018	1,1,2,2-Tetrachloroethane	<1	ppb
8/7/2018	1,2-Dichlorobenzene	<1	ppb
8/7/2018	1,2-Dichloroethane	<1	ppb
8/7/2018	1,2-Dichloropropane	<1	ppb
8/7/2018	1,3-Dichlorobenzene	<1	ppb
8/7/2018	1,4-Dichlorobenzene	<1	ppb
8/7/2018	2-Chloroethylvinylether	<2	ppb
8/7/2018	Acetone	<10	ppb
8/7/2018	Benzene	<1	ppb
8/7/2018	Bromodichloromethane	6.3	ppb
8/7/2018	Bromoform	<1	ppb
8/7/2018	Bromomethane	<1	ppb
8/7/2018	Carbon Tetrachloride	<1	ppb
8/7/2018	Chlorobenzene	<1	ppb
8/7/2018	Chloroethane	<1	ppb
8/7/2018	Chloroform	6	ppb
8/7/2018	Chloromethane	<10	ppb
8/7/2018	cis-1,3-Dichloropropylene	<1	ppb
8/7/2018	Dibromochloromethane	4	ppb
8/7/2018	Ethylbenzene	<1	ppb
8/7/2018	Methylene Chloride	<1	ppb
8/7/2018	Tetrachloroethylene	<1	ppb
8/7/2018	Toluene	<1	ppb
8/7/2018	trans-1,2-Dichloroethene	<1	ppb
8/7/2018	trans-1,3-Dichloropropene	<1	ppb
8/7/2018	Trichloroethene	<1	ppb
8/7/2018	Trichlorofluoromethane	<1	ppb
8/7/2018	Vinyl Chloride	<5	ppb
9/11/2018	(m & p) Xylene	<1	ppb
9/11/2018	(o) Xylene	<1	ppb
9/11/2018	1,1-Dichloroethane	<1	ppb
9/11/2018	1,1-Dichloroethylene	<1	ppb
9/11/2018	1,1,1-Trichloroethane	<1	ppb
9/11/2018	1,1,2-Trichloroethane	<1	ppb

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2018

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
9/11/2018	1,1,2,2-Tetrachloroethane	<1	ppb
9/11/2018	1,2-Dichlorobenzene	<1	ppb
9/11/2018	1,2-Dichloroethane	<1	ppb
9/11/2018	1,2-Dichloropropane	<1	ppb
9/11/2018	1,3-Dichlorobenzene	<1	ppb
9/11/2018	1,4-Dichlorobenzene	<1	ppb
9/11/2018	2-Chloroethylvinylether	<2	ppb
9/11/2018	Acetone	73	ppb
9/11/2018	Benzene	<1	ppb
9/11/2018	Bromodichloromethane	<1	ppb
9/11/2018	Bromoform	<1	ppb
9/11/2018	Bromomethane	<10	ppb
9/11/2018	Carbon Tetrachloride	<1	ppb
9/11/2018	Chlorobenzene	<1	ppb
9/11/2018	Chloroethane	<10	ppb
9/11/2018	Chloroform	3.2	ppb
9/11/2018	Chloromethane	<10	ppb
9/11/2018	cis-1,3-Dichloropropylene	<1	ppb
9/11/2018	Dibromochloromethane	<1	ppb
9/11/2018	Ethylbenzene	<1	ppb
9/11/2018	Methylene Chloride	<5	ppb
9/11/2018	Tetrachloroethylene	<1	ppb
9/11/2018	Toluene	1.9	ppb
9/11/2018	trans-1,2-Dichloroethene	<1	ppb
9/11/2018	trans-1,3-Dichloropropene	<1	ppb
9/11/2018	Trichloroethene	<1	ppb
9/11/2018	Trichlorofluoromethane	<1	ppb
9/11/2018	Vinyl Chloride	<1	ppb
10/16/2018	(m & p) Xylene	<1	ppb
10/16/2018	(o) Xylene	<1	ppb
10/16/2018	1,1-Dichloroethane	<1	ppb
10/16/2018	1,1-Dichloroethylene	<1	ppb
10/16/2018	1,1,1-Trichloroethane	<1	ppb
10/16/2018	1,1,2-Trichloroethane	<1	ppb
10/16/2018	1,1,2,2-Tetrachloroethane	<1	ppb
10/16/2018	1,2-Dichlorobenzene	<1	ppb
10/16/2018	1,2-Dichloroethane	<1	ppb
10/16/2018	1,2-Dichloropropane	<1	ppb
10/16/2018	1,3-Dichlorobenzene	<1	ppb
10/16/2018	1,4-Dichlorobenzene	<1	ppb
10/16/2018	2-Chloroethylvinylether	<2	ppb
10/16/2018	Acetone	130	ppb
10/16/2018	Benzene	<1	ppb
10/16/2018	Bromodichloromethane	<1	ppb
10/16/2018	Bromoform	<1	ppb
10/16/2018	Bromomethane	<10	ppb
10/16/2018	Carbon Tetrachloride	<1	ppb
10/16/2018	Chlorobenzene	<1	ppb
10/16/2018	Chloroethane	<10	ppb
10/16/2018	Chloroform	4.2	ppb
10/16/2018	Chloromethane	<10	ppb
10/16/2018	cis-1,3-Dichloropropylene	<1	ppb
10/16/2018	Dibromochloromethane	<1	ppb
10/16/2018	Ethylbenzene	<1	ppb
10/16/2018	Methylene Chloride	<5	ppb
10/16/2018	Tetrachloroethylene	5.2	ppb
10/16/2018	Toluene	<1	ppb
10/16/2018	trans-1,2-Dichloroethene	<1	ppb
10/16/2018	trans-1,3-Dichloropropene	<1	ppb
10/16/2018	Trichloroethene	1.6	ppb
10/16/2018	Trichlorofluoromethane	<1	ppb
10/16/2018	Vinyl Chloride	<1	ppb
11/13/2018	1,1-Dichloroethane	<0.001	ppm
11/13/2018	1,1-Dichloroethylene	<0.001	ppm
11/13/2018	1,1,1-Trichloroethane	<0.001	ppm
11/13/2018	1,1,2-Trichloroethane	<0.001	ppm
11/13/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
11/13/2018	1,2-Dichlorobenzene	<0.001	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
9/11/2018	1,1,2,2-Tetrachloroethane	<1	ppb
9/11/2018	1,2-Dichlorobenzene	<1	ppb
9/11/2018	1,2-Dichloroethane	<1	ppb
9/11/2018	1,2-Dichloropropane	<1	ppb
9/11/2018	1,3-Dichlorobenzene	<1	ppb
9/11/2018	1,4-Dichlorobenzene	<1	ppb
9/11/2018	2-Chloroethylvinylether	<2	ppb
9/11/2018	Acetone	<10	ppb
9/11/2018	Benzene	<1	ppb
9/11/2018	Bromodichloromethane	5.7	ppb
9/11/2018	Bromoform	<1	ppb
9/11/2018	Bromomethane	<10	ppb
9/11/2018	Carbon Tetrachloride	<1	ppb
9/11/2018	Chlorobenzene	<1	ppb
9/11/2018	Chloroethane	<5	ppb
9/11/2018	Chloroform	3.7	ppb
9/11/2018	Chloromethane	<10	ppb
9/11/2018	cis-1,3-Dichloropropylene	<1	ppb
9/11/2018	Dibromochloromethane	4.6	ppb
9/11/2018	Ethylbenzene	<1	ppb
9/11/2018	Methylene Chloride	<1	ppb
9/11/2018	Tetrachloroethylene	<1	ppb
9/11/2018	Toluene	<1	ppb
9/11/2018	trans-1,2-Dichloroethene	<1	ppb
9/11/2018	trans-1,3-Dichloropropene	<1	ppb
9/11/2018	Trichloroethene	<1	ppb
9/11/2018	Trichlorofluoromethane	<1	ppb
9/11/2018	Vinyl Chloride	<1	ppb
10/17/2018	(m & p) Xylene	<1	ppb
10/17/2018	(o) Xylene	<1	ppb
10/17/2018	1,1-Dichloroethane	<1	ppb
10/17/2018	1,1-Dichloroethylene	<1	ppb
10/17/2018	1,1,1-Trichloroethane	<1	ppb
10/17/2018	1,1,2-Trichloroethane	<1	ppb
10/17/2018	1,1,2,2-Tetrachloroethane	<1	ppb
10/17/2018	1,2-Dichlorobenzene	<1	ppb
10/17/2018	1,2-Dichloroethane	<1	ppb
10/17/2018	1,2-Dichloropropane	<1	ppb
10/17/2018	1,3-Dichlorobenzene	<1	ppb
10/17/2018	1,4-Dichlorobenzene	<1	ppb
10/17/2018	2-Chloroethylvinylether	<2	ppb
10/17/2018	Acetone	<10	ppb
10/17/2018	Benzene	<1	ppb
10/17/2018	Bromodichloromethane	7.5	ppb
10/17/2018	Bromoform	2	ppb
10/17/2018	Bromomethane	<10	ppb
10/17/2018	Carbon Tetrachloride	<1	ppb
10/17/2018	Chlorobenzene	<1	ppb
10/17/2018	Chloroethane	<10	ppb
10/17/2018	Chloroform	5.3	ppb
10/17/2018	Chloromethane	<10	ppb
10/17/2018	cis-1,3-Dichloropropylene	<1	ppb
10/17/2018	Dibromochloromethane	5.7	ppb
10/17/2018	Ethylbenzene	<1	ppb
10/17/2018	Methylene Chloride	<5	ppb
10/17/2018	Tetrachloroethylene	<1	ppb
10/17/2018	Toluene	<1	ppb
10/17/2018	trans-1,2-Dichloroethene	<1	ppb
10/17/2018	trans-1,3-Dichloropropene	<1	ppb
10/17/2018	Trichloroethene	<1	ppb
10/17/2018	Trichlorofluoromethane	<1	ppb
10/17/2018	Vinyl Chloride	<1	ppb
11/13/2018	1,1-Dichloroethane	<0.001	ppm
11/13/2018	1,1-Dichloroethylene	<0.001	ppm
11/13/2018	1,1,1-Trichloroethane	<0.001	ppm
11/13/2018	1,1,2-Trichloroethane	<0.001	ppm
11/13/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
11/13/2018	1,2-Dichlorobenzene	<0.001	ppm

Table 25: EPA VOC Data
Field's Point

EPA VOC Data
Field's Point 2018

Field's Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
11/13/2018	1,2-Dichloroethane	<0.001	ppm
11/13/2018	1,2-Dichloropropane	<0.001	ppm
11/13/2018	1,3-Dichlorobenzene	<0.001	ppm
11/13/2018	1,4-Dichlorobenzene	<0.001	ppm
11/13/2018	2-Chloroethyl vinyl ether	<0.002	ppm
11/13/2018	Acetone	0.049	ppm
11/13/2018	Benzene	<0.001	ppm
11/13/2018	Bromodichloromethane	<0.001	ppm
11/13/2018	Bromoform	<0.001	ppm
11/13/2018	Bromomethane	<0.010	ppm
11/13/2018	Carbon Tetrachloride	<0.001	ppm
11/13/2018	Chlorobenzene	<0.001	ppm
11/13/2018	Chloroethane	<0.010	ppm
11/13/2018	Chloroform	0.0022	ppm
11/13/2018	Chloromethane	<0.010	ppm
11/13/2018	cis-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	Dibromochloromethane	<0.001	ppm
11/13/2018	Ethylbenzene	<0.001	ppm
11/13/2018	m,p-Xylene	<0.001	ppm
11/13/2018	Methylene Chloride	<0.005	ppm
11/13/2018	o-Xylene	<0.001	ppm
11/13/2018	Tetrachloroethylene	<0.001	ppm
11/13/2018	Toluene	<0.001	ppm
11/13/2018	trans-1,2-Dichloroethylene	<0.001	ppm
11/13/2018	trans-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	Trichloroethylene	<0.001	ppm
11/13/2018	Trichlorofluoromethane	<0.001	ppm
11/13/2018	Vinyl Chloride	<0.001	ppm
12/4/2018	1,1-Dichloroethane	<0.001	ppm
12/4/2018	1,1-Dichloroethylene	<0.001	ppm
12/4/2018	1,1,1-Trichloroethane	<0.001	ppm
12/4/2018	1,1,2-Trichloroethane	<0.001	ppm
12/4/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/4/2018	1,2-Dichlorobenzene	<0.001	ppm
12/4/2018	1,2-Dichloroethane	<0.001	ppm
12/4/2018	1,2-Dichloropropane	<0.001	ppm
12/4/2018	1,3-Dichlorobenzene	<0.001	ppm
12/4/2018	1,4-Dichlorobenzene	<0.001	ppm
12/4/2018	2-Chloroethyl vinyl ether	<0.010	ppm
12/4/2018	Acetone	<0.010	ppm
12/4/2018	Benzene	<0.001	ppm
12/4/2018	Bromodichloromethane	<0.001	ppm
12/4/2018	Bromoform	<0.001	ppm
12/4/2018	Bromomethane	<0.002	ppm
12/4/2018	Carbon Tetrachloride	<0.001	ppm
12/4/2018	Chlorobenzene	<0.001	ppm
12/4/2018	Chloroethane	<0.002	ppm
12/4/2018	Chloroform	0.002	ppm
12/4/2018	Chloromethane	<0.002	ppm
12/4/2018	cis-1,3-Dichloropropylene	<0.001	ppm
12/4/2018	Dibromochloromethane	<0.001	ppm
12/4/2018	Ethylbenzene	<0.001	ppm
12/4/2018	m,p-Xylene	<0.002	ppm
12/4/2018	Methylene Chloride	<0.010	ppm
12/4/2018	o-Xylene	<0.001	ppm
12/4/2018	Tetrachloroethylene	0.0017	ppm
12/4/2018	Toluene	0.0023	ppm
12/4/2018	trans-1,2-Dichloroethylene	<0.001	ppm
12/4/2018	trans-1,3-Dichloropropylene	<0.001	ppm
12/4/2018	Trichloroethylene	<0.001	ppm
12/4/2018	Trichlorofluoromethane	<0.001	ppm
12/4/2018	Vinyl Chloride	<0.001	ppm

Field's Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
11/13/2018	1,2-Dichloroethane	<0.001	ppm
11/13/2018	1,2-Dichloropropane	<0.001	ppm
11/13/2018	1,3-Dichlorobenzene	<0.001	ppm
11/13/2018	1,4-Dichlorobenzene	<0.001	ppm
11/13/2018	2-Chloroethyl vinyl ether	<0.002	ppm
11/13/2018	Acetone	<0.010	ppm
11/13/2018	Benzene	<0.001	ppm
11/13/2018	Bromodichloromethane	0.0026	ppm
11/13/2018	Bromoform	<0.001	ppm
11/13/2018	Bromomethane	<0.010	ppm
11/13/2018	Carbon Tetrachloride	<0.001	ppm
11/13/2018	Chlorobenzene	<0.001	ppm
11/13/2018	Chloroethane	<0.010	ppm
11/13/2018	Chloroform	0.0042	ppm
11/13/2018	Chloromethane	<0.010	ppm
11/13/2018	cis-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	Dibromochloromethane	<0.001	ppm
11/13/2018	Ethylbenzene	<0.001	ppm
11/13/2018	m,p-Xylene	<0.001	ppm
11/13/2018	Methylene Chloride	<0.005	ppm
11/13/2018	o-Xylene	<0.001	ppm
11/13/2018	Tetrachloroethylene	<0.001	ppm
11/13/2018	Toluene	<0.001	ppm
11/13/2018	trans-1,2-Dichloroethylene	<0.001	ppm
11/13/2018	trans-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	Trichloroethylene	<0.001	ppm
11/13/2018	Trichlorofluoromethane	<0.001	ppm
11/13/2018	Vinyl Chloride	<0.001	ppm
12/4/2018	1,1-Dichloroethane	<0.001	ppm
12/4/2018	1,1-Dichloroethylene	<0.001	ppm
12/4/2018	1,1,1-Trichloroethane	<0.001	ppm
12/4/2018	1,1,2-Trichloroethane	<0.001	ppm
12/4/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/4/2018	1,2-Dichlorobenzene	<0.001	ppm
12/4/2018	1,2-Dichloroethane	<0.001	ppm
12/4/2018	1,2-Dichloropropane	<0.001	ppm
12/4/2018	1,3-Dichlorobenzene	<0.001	ppm
12/4/2018	1,4-Dichlorobenzene	<0.001	ppm
12/4/2018	2-Chloroethyl vinyl ether	<0.010	ppm
12/4/2018	Acetone	<0.010	ppm
12/4/2018	Benzene	<0.001	ppm
12/4/2018	Bromodichloromethane	<0.001	ppm
12/4/2018	Bromoform	<0.001	ppm
12/4/2018	Bromomethane	<0.002	ppm
12/4/2018	Carbon Tetrachloride	<0.001	ppm
12/4/2018	Chlorobenzene	<0.001	ppm
12/4/2018	Chloroethane	<0.002	ppm
12/4/2018	Chloroform	0.0014	ppm
12/4/2018	Chloromethane	<0.002	ppm
12/4/2018	cis-1,3-Dichloropropylene	<0.001	ppm
12/4/2018	Dibromochloromethane	<0.001	ppm
12/4/2018	Ethylbenzene	<0.001	ppm
12/4/2018	m,p-Xylene	<0.002	ppm
12/4/2018	Methylene Chloride	<0.010	ppm
12/4/2018	o-Xylene	<0.001	ppm
12/4/2018	Tetrachloroethylene	<0.001	ppm
12/4/2018	Toluene	<0.001	ppm
12/4/2018	trans-1,2-Dichloroethylene	<0.001	ppm
12/4/2018	trans-1,3-Dichloropropylene	<0.001	ppm
12/4/2018	Trichloroethylene	<0.001	ppm
12/4/2018	Trichlorofluoromethane	<0.001	ppm
12/4/2018	Vinyl Chloride	<0.001	ppm

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/8/2018	1,1-Dichloroethane	<1	ppb
1/8/2018	1,1-Dichloroethene	<1	ppb
1/8/2018	1,1,1-Trichloroethane	<1	ppb
1/8/2018	1,1,2-Trichloroethane	<1	ppb
1/8/2018	1,1,2,2-Tetrachlorethane	<1	ppb
1/8/2018	1,2-dichlorobenzene	<1	ppb
1/8/2018	1,2-Dichloroethane	<1	ppb
1/8/2018	1,2-Dichloropropane	<1	ppb
1/8/2018	1,3-dichlorobenzene	<1	ppb
1/8/2018	1,4-dichlorobenzene	<1	ppb
1/8/2018	2-Chloroethylvinylether	<2	ppb
1/8/2018	Benzene	<1	ppb
1/8/2018	Bromodichloromethane	<1	ppb
1/8/2018	Bromoform	<1	ppb
1/8/2018	Bromomethane	<10	ppb
1/8/2018	Carbon Tetrachloride	<1	ppb
1/8/2018	Chlorobenzene	<1	ppb
1/8/2018	Chloroethane	<10	ppb
1/8/2018	Chloroform	6.3	ppb
1/8/2018	Chloromethane	<10	ppb
1/8/2018	cis-1,3-Dichloropropene	<1	ppb
1/8/2018	Dibromochloromethane	<1	ppb
1/8/2018	Ethylbenzene	<1	ppb
1/8/2018	Methylene Chloride	<5	ppb
1/8/2018	o- xylene	<1	ppb
1/8/2018	p&m xylene	<1	ppb
1/8/2018	Tetrachlorethene	3.3	ppb
1/8/2018	Toluene	2.7	ppb
1/8/2018	Trans-1,2-Dichloroethene	<1	ppb
1/8/2018	Trans-1,3-Dichloropropene	<1	ppb
1/8/2018	Trichlorethene	<1	ppb
1/8/2018	Trichlorofluoromethane	<1	ppb
1/8/2018	Vinyl Chloride	<1	ppb
2/5/2018	1,1-Dichloroethane	<1	ppb
2/5/2018	1,1-Dichloroethene	<1	ppb
2/5/2018	1,1,1-Trichloroethane	<1	ppb
2/5/2018	1,1,2-Trichloroethane	<1	ppb
2/5/2018	1,1,2,2-Tetrachlorethane	<1	ppb
2/5/2018	1,2-dichlorobenzene	<1	ppb
2/5/2018	1,2-Dichloroethane	<1	ppb
2/5/2018	1,2-Dichloropropane	<1	ppb
2/5/2018	1,3-dichlorobenzene	<1	ppb
2/5/2018	1,4-dichlorobenzene	<1	ppb
2/5/2018	2-Chloroethylvinylether	<2	ppb
2/5/2018	Benzene	<1	ppb
2/5/2018	Bromodichloromethane	<1	ppb
2/5/2018	Bromoform	<1	ppb
2/5/2018	Bromomethane	<10	ppb
2/5/2018	Carbon Tetrachloride	<1	ppb
2/5/2018	Chlorobenzene	<1	ppb
2/5/2018	Chloroethane	<10	ppb
2/5/2018	Chloroform	2.2	ppb
2/5/2018	Chloromethane	<10	ppb
2/5/2018	cis-1,3-Dichloropropene	<1	ppb
2/5/2018	Dibromochloromethane	<1	ppb
2/5/2018	Ethylbenzene	<1	ppb
2/5/2018	Methylene Chloride	<5	ppb
2/5/2018	o- xylene	<1	ppb

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
1/9/2018	1,1-Dichloroethane	<1	ppb
1/9/2018	1,1-Dichloroethene	<1	ppb
1/9/2018	1,1,1-Trichloroethane	<1	ppb
1/9/2018	1,1,2-Trichloroethane	<1	ppb
1/9/2018	1,1,2,2-Tetrachlorethane	<1	ppb
1/9/2018	1,2-dichlorobenzene	<1	ppb
1/9/2018	1,2-Dichloroethane	<1	ppb
1/9/2018	1,2-Dichloropropane	<1	ppb
1/9/2018	1,3-dichlorobenzene	<1	ppb
1/9/2018	1,4-dichlorobenzene	<1	ppb
1/9/2018	2-Chloroethylvinylether	<2	ppb
1/9/2018	Benzene	<1	ppb
1/9/2018	Bromodichloromethane	<1	ppb
1/9/2018	Bromoform	<1	ppb
1/9/2018	Bromomethane	<10	ppb
1/9/2018	Carbon Tetrachloride	<1	ppb
1/9/2018	Chlorobenzene	<1	ppb
1/9/2018	Chloroethane	<10	ppb
1/9/2018	Chloroform	<1	ppb
1/9/2018	Chloromethane	<10	ppb
1/9/2018	cis-1,3-Dichloropropene	<1	ppb
1/9/2018	Dibromochloromethane	<1	ppb
1/9/2018	Ethylbenzene	<1	ppb
1/9/2018	Methylene Chloride	<5	ppb
1/9/2018	o- xylene	<1	ppb
1/9/2018	p&m xylene	<1	ppb
1/9/2018	Tetrachlorethene	<1	ppb
1/9/2018	Toluene	<1	ppb
1/9/2018	Trans-1,2-Dichloroethene	<1	ppb
1/9/2018	Trans-1,3-Dichloropropene	<1	ppb
1/9/2018	Trichlorethene	<1	ppb
1/9/2018	Trichlorofluoromethane	<1	ppb
1/9/2018	Vinyl Chloride	<1	ppb
2/6/2018	1,1-Dichloroethane	<1	ppb
2/6/2018	1,1-Dichloroethene	<1	ppb
2/6/2018	1,1,1-Trichloroethane	<1	ppb
2/6/2018	1,1,2-Trichloroethane	<1	ppb
2/6/2018	1,1,2,2-Tetrachlorethane	<1	ppb
2/6/2018	1,2-dichlorobenzene	<1	ppb
2/6/2018	1,2-Dichloroethane	<1	ppb
2/6/2018	1,2-Dichloropropane	<1	ppb
2/6/2018	1,3-dichlorobenzene	<1	ppb
2/6/2018	1,4-dichlorobenzene	<1	ppb
2/6/2018	2-Chloroethylvinylether	<2	ppb
2/6/2018	Benzene	<1	ppb
2/6/2018	Bromodichloromethane	<1	ppb
2/6/2018	Bromoform	<1	ppb
2/6/2018	Bromomethane	<10	ppb
2/6/2018	Carbon Tetrachloride	<1	ppb
2/6/2018	Chlorobenzene	<1	ppb
2/6/2018	Chloroethane	<10	ppb
2/6/2018	Chloroform	<1	ppb
2/6/2018	Chloromethane	<10	ppb
2/6/2018	cis-1,3-Dichloropropene	<1	ppb
2/6/2018	Dibromochloromethane	<1	ppb
2/6/2018	Ethylbenzene	<1	ppb
2/6/2018	Methylene Chloride	<5	ppb
2/6/2018	o- xylene	<1	ppb

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
2/5/2018	p&m xylene	1.7	ppb
2/5/2018	Tetrachlorethene	1.3	ppb
2/5/2018	Toluene	2.7	ppb
2/5/2018	Trans-1,2-Dichloroethene	<1	ppb
2/5/2018	Trans-1,3-Dichloropropene	<1	ppb
2/5/2018	Trichlorethene	<1	ppb
2/5/2018	Trichlorofluoromethane	<1	ppb
2/5/2018	Vinyl Chloride	<1	ppb
3/5/2018	1,1-Dichloroethane	<1	ppb
3/5/2018	1,1-Dichloroethene	<1	ppb
3/5/2018	1,1,1-Trichloroethane	<1	ppb
3/5/2018	1,1,2-Trichloroethane	<1	ppb
3/5/2018	1,1,2,2-Tetrachlorethane	<1	ppb
3/5/2018	1,2-dichlorobenzene	<1	ppb
3/5/2018	1,2-Dichloroethane	<1	ppb
3/5/2018	1,2-Dichloropropane	<1	ppb
3/5/2018	1,3-dichlorobenzene	<1	ppb
3/5/2018	1,4-dichlorobenzene	<1	ppb
3/5/2018	2-Chloroethylvinylether	<2	ppb
3/5/2018	Benzene	<1	ppb
3/5/2018	Bromodichloromethane	<1	ppb
3/5/2018	Bromoform	<1	ppb
3/5/2018	Bromomethane	<10	ppb
3/5/2018	Carbon Tetrachloride	<1	ppb
3/5/2018	Chlorobenzene	<1	ppb
3/5/2018	Chloroethane	<10	ppb
3/5/2018	Chloroform	1.9	ppb
3/5/2018	Chloromethane	<10	ppb
3/5/2018	cis-1,3-Dichloropropene	<1	ppb
3/5/2018	Dibromochloromethane	<1	ppb
3/5/2018	Ethylbenzene	<1	ppb
3/5/2018	Methylene Chloride	<5	ppb
3/5/2018	o- xylene	<1	ppb
3/5/2018	p&m xylene	<1	ppb
3/5/2018	Tetrachlorethene	1	ppb
3/5/2018	Toluene	<1	ppb
3/5/2018	Trans-1,2-Dichloroethene	<1	ppb
3/5/2018	Trans-1,3-Dichloropropene	<1	ppb
3/5/2018	Trichlorethene	<1	ppb
3/5/2018	Trichlorofluoromethane	<1	ppb
3/5/2018	Vinyl Chloride	<1	ppb
4/2/2018	1,1-Dichloroethane	<10	ppb
4/2/2018	1,1-Dichloroethene	<10	ppb
4/2/2018	1,1,1-Trichloroethane	<10	ppb
4/2/2018	1,1,2-Trichloroethane	<10	ppb
4/2/2018	1,1,2,2-Tetrachlorethane	<10	ppb
4/2/2018	1,2-dichlorobenzene	<10	ppb
4/2/2018	1,2-Dichloroethane	<10	ppb
4/2/2018	1,2-Dichloropropane	<10	ppb
4/2/2018	1,3-dichlorobenzene	<10	ppb
4/2/2018	1,4-dichlorobenzene	<10	ppb
4/2/2018	2-Chloroethylvinylether	<20	ppb
4/2/2018	Benzene	<10	ppb
4/2/2018	Bromodichloromethane	<10	ppb
4/2/2018	Bromoform	<10	ppb
4/2/2018	Bromomethane	<100	ppb
4/2/2018	Carbon Tetrachloride	<10	ppb
4/2/2018	Chlorobenzene	<10	ppb

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
2/6/2018	p&m xylene	<1	ppb
2/6/2018	Tetrachlorethene	<1	ppb
2/6/2018	Toluene	<1	ppb
2/6/2018	Trans-1,2-Dichloroethene	<1	ppb
2/6/2018	Trans-1,3-Dichloropropene	<1	ppb
2/6/2018	Trichlorethene	<1	ppb
2/6/2018	Trichlorofluoromethane	<1	ppb
2/6/2018	Vinyl Chloride	<1	ppb
3/6/2018	1,1-Dichloroethane	<1	ppb
3/6/2018	1,1-Dichloroethene	<1	ppb
3/6/2018	1,1,1-Trichloroethane	<1	ppb
3/6/2018	1,1,2-Trichloroethane	<1	ppb
3/6/2018	1,1,2,2-Tetrachlorethane	<1	ppb
3/6/2018	1,2-dichlorobenzene	<1	ppb
3/6/2018	1,2-Dichloroethane	<1	ppb
3/6/2018	1,2-Dichloropropane	<1	ppb
3/6/2018	1,3-dichlorobenzene	<1	ppb
3/6/2018	1,4-dichlorobenzene	<1	ppb
3/6/2018	2-Chloroethylvinylether	<2	ppb
3/6/2018	Benzene	<1	ppb
3/6/2018	Bromodichloromethane	<1	ppb
3/6/2018	Bromoform	<1	ppb
3/6/2018	Bromomethane	<10	ppb
3/6/2018	Carbon Tetrachloride	<1	ppb
3/6/2018	Chlorobenzene	<1	ppb
3/6/2018	Chloroethane	<10	ppb
3/6/2018	Chloroform	<1	ppb
3/6/2018	Chloromethane	<10	ppb
3/6/2018	cis-1,3-Dichloropropene	<1	ppb
3/6/2018	Dibromochloromethane	<1	ppb
3/6/2018	Ethylbenzene	<1	ppb
3/6/2018	Methylene Chloride	<5	ppb
3/6/2018	o- xylene	<1	ppb
3/6/2018	p&m xylene	<1	ppb
3/6/2018	Tetrachlorethene	<1	ppb
3/6/2018	Toluene	<1	ppb
3/6/2018	Trans-1,2-Dichloroethene	<1	ppb
3/6/2018	Trans-1,3-Dichloropropene	<1	ppb
3/6/2018	Trichlorethene	<1	ppb
3/6/2018	Trichlorofluoromethane	<1	ppb
3/6/2018	Vinyl Chloride	<1	ppb
4/3/2018	1,1-Dichloroethane	<1	ppb
4/3/2018	1,1-Dichloroethene	<1	ppb
4/3/2018	1,1,1-Trichloroethane	<1	ppb
4/3/2018	1,1,2-Trichloroethane	<1	ppb
4/3/2018	1,1,2,2-Tetrachlorethane	<1	ppb
4/3/2018	1,2-dichlorobenzene	<1	ppb
4/3/2018	1,2-Dichloroethane	<1	ppb
4/3/2018	1,2-Dichloropropane	<1	ppb
4/3/2018	1,3-dichlorobenzene	<1	ppb
4/3/2018	1,4-dichlorobenzene	<1	ppb
4/3/2018	2-Chloroethylvinylether	<2	ppb
4/3/2018	Benzene	<1	ppb
4/3/2018	Bromodichloromethane	<1	ppb
4/3/2018	Bromoform	<1	ppb
4/3/2018	Bromomethane	<10	ppb
4/3/2018	Carbon Tetrachloride	<1	ppb
4/3/2018	Chlorobenzene	<1	ppb

Table 26: EPA VOC Data
Bucklin Point

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
4/2/2018	Chloroethane	<100	ppb
4/2/2018	Chloroform	<10	ppb
4/2/2018	Chloromethane	<100	ppb
4/2/2018	cis-1,3-Dichloropropene	<10	ppb
4/2/2018	Dibromochloromethane	<10	ppb
4/2/2018	Ethylbenzene	<10	ppb
4/2/2018	Methylene Chloride	<50	ppb
4/2/2018	o- xylene	<10	ppb
4/2/2018	p&m xylene	<10	ppb
4/2/2018	Tetrachlorethene	<10	ppb
4/2/2018	Toluene	<10	ppb
4/2/2018	Trans-1,2-Dichloroethene	<10	ppb
4/2/2018	Trans-1,3-Dichloropropene	<10	ppb
4/2/2018	Trichlorethene	<10	ppb
4/2/2018	Trichlorofluoromethane	<10	ppb
4/2/2018	Vinyl Chloride	<10	ppb
5/7/2018	1,1-Dichloroethane	<1	ppb
5/7/2018	1,1-Dichloroethene	<1	ppb
5/7/2018	1,1,1-Trichloroethane	<1	ppb
5/7/2018	1,1,2-Trichloroethane	<1	ppb
5/7/2018	1,1,2,2-Tetrachlorethane	<1	ppb
5/7/2018	1,2-dichlorobenzene	<1	ppb
5/7/2018	1,2-Dichloroethane	<1	ppb
5/7/2018	1,2-Dichloropropane	<1	ppb
5/7/2018	1,3-dichlorobenzene	<1	ppb
5/7/2018	1,4-dichlorobenzene	<1	ppb
5/7/2018	2-Chloroethylvinylether	<2	ppb
5/7/2018	Benzene	<1	ppb
5/7/2018	Bromodichloromethane	<1	ppb
5/7/2018	Bromoform	<1	ppb
5/7/2018	Bromomethane	<10	ppb
5/7/2018	Carbon Tetrachloride	<1	ppb
5/7/2018	Chlorobenzene	<1	ppb
5/7/2018	Chloroethane	<10	ppb
5/7/2018	Chloroform	3.2	ppb
5/7/2018	Chloromethane	<10	ppb
5/7/2018	cis-1,3-Dichloropropene	<1	ppb
5/7/2018	Dibromochloromethane	<1	ppb
5/7/2018	Ethylbenzene	<1	ppb
5/7/2018	Methylene Chloride	<5	ppb
5/7/2018	o- xylene	<1	ppb
5/7/2018	p&m xylene	<1	ppb
5/7/2018	Tetrachlorethene	1.4	ppb
5/7/2018	Toluene	2.5	ppb
5/7/2018	Trans-1,2-Dichloroethene	<1	ppb
5/7/2018	Trans-1,3-Dichloropropene	<1	ppb
5/7/2018	Trichlorethene	<1	ppb
5/7/2018	Trichlorofluoromethane	<1	ppb
5/7/2018	Vinyl Chloride	<1	ppb
6/4/2018	1,1-Dichloroethane	<1	ppb
6/4/2018	1,1-Dichloroethene	<1	ppb
6/4/2018	1,1,1-Trichloroethane	<1	ppb
6/4/2018	1,1,2-Trichloroethane	<1	ppb
6/4/2018	1,1,2,2-Tetrachlorethane	<1	ppb
6/4/2018	1,2-dichlorobenzene	<1	ppb
6/4/2018	1,2-Dichloroethane	<1	ppb
6/4/2018	1,2-Dichloropropane	<1	ppb
6/4/2018	1,3-dichlorobenzene	<1	ppb

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
4/3/2018	Chloroethane	<10	ppb
4/3/2018	Chloroform	<1	ppb
4/3/2018	Chloromethane	<10	ppb
4/3/2018	cis-1,3-Dichloropropene	<1	ppb
4/3/2018	Dibromochloromethane	<1	ppb
4/3/2018	Ethylbenzene	<1	ppb
4/3/2018	Methylene Chloride	<5	ppb
4/3/2018	o- xylene	<1	ppb
4/3/2018	p&m xylene	<1	ppb
4/3/2018	Tetrachlorethene	<1	ppb
4/3/2018	Toluene	<1	ppb
4/3/2018	Trans-1,2-Dichloroethene	<1	ppb
4/3/2018	Trans-1,3-Dichloropropene	<1	ppb
4/3/2018	Trichlorethene	<1	ppb
4/3/2018	Trichlorofluoromethane	<1	ppb
4/3/2018	Vinyl Chloride	<1	ppb
5/8/2018	1,1-Dichloroethane	<1	ppb
5/8/2018	1,1-Dichloroethene	<1	ppb
5/8/2018	1,1,1-Trichloroethane	<1	ppb
5/8/2018	1,1,2-Trichloroethane	<1	ppb
5/8/2018	1,1,2,2-Tetrachlorethane	<1	ppb
5/8/2018	1,2-dichlorobenzene	<1	ppb
5/8/2018	1,2-Dichloroethane	<1	ppb
5/8/2018	1,2-Dichloropropane	<1	ppb
5/8/2018	1,3-dichlorobenzene	<1	ppb
5/8/2018	1,4-dichlorobenzene	<1	ppb
5/8/2018	2-Chloroethylvinylether	<2	ppb
5/8/2018	Benzene	<1	ppb
5/8/2018	Bromodichloromethane	<1	ppb
5/8/2018	Bromoform	<1	ppb
5/8/2018	Bromomethane	<10	ppb
5/8/2018	Carbon Tetrachloride	<1	ppb
5/8/2018	Chlorobenzene	<1	ppb
5/8/2018	Chloroethane	<10	ppb
5/8/2018	Chloroform	1.2	ppb
5/8/2018	Chloromethane	<10	ppb
5/8/2018	cis-1,3-Dichloropropene	<1	ppb
5/8/2018	Dibromochloromethane	<1	ppb
5/8/2018	Ethylbenzene	<1	ppb
5/8/2018	Methylene Chloride	<5	ppb
5/8/2018	o- xylene	<1	ppb
5/8/2018	p&m xylene	<1	ppb
5/8/2018	Tetrachlorethene	<1	ppb
5/8/2018	Toluene	<1	ppb
5/8/2018	Trans-1,2-Dichloroethene	<1	ppb
5/8/2018	Trans-1,3-Dichloropropene	<1	ppb
5/8/2018	Trichlorethene	<1	ppb
5/8/2018	Trichlorofluoromethane	<1	ppb
5/8/2018	Vinyl Chloride	<1	ppb
6/5/2018	1,1-Dichloroethane	<1	ppb
6/5/2018	1,1-Dichloroethene	<1	ppb
6/5/2018	1,1,1-Trichloroethane	<1	ppb
6/5/2018	1,1,2-Trichloroethane	<1	ppb
6/5/2018	1,1,2,2-Tetrachlorethane	<1	ppb
6/5/2018	1,2-dichlorobenzene	<1	ppb
6/5/2018	1,2-Dichloroethane	<1	ppb
6/5/2018	1,2-Dichloropropane	<1	ppb
6/5/2018	1,3-dichlorobenzene	<1	ppb

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
6/4/2018	1,4-dichlorobenzene	<1	ppb
6/4/2018	2-Chloroethylvinylether	<2	ppb
6/4/2018	acetone	37	ppb
6/4/2018	Benzene	<1	ppb
6/4/2018	Bromodichloromethane	<1	ppb
6/4/2018	Bromoform	<1	ppb
6/4/2018	Bromomethane	<10	ppb
6/4/2018	Carbon Tetrachloride	<1	ppb
6/4/2018	Chlorobenzene	<1	ppb
6/4/2018	Chloroethane	<10	ppb
6/4/2018	Chloroform	<1	ppb
6/4/2018	Chloromethane	<10	ppb
6/4/2018	cis-1,3-Dichloropropene	<1	ppb
6/4/2018	Dibromochloromethane	<1	ppb
6/4/2018	Ethylbenzene	<1	ppb
6/4/2018	Methylene Chloride	<5	ppb
6/4/2018	o- xylene	<1	ppb
6/4/2018	p&m xylene	<1	ppb
6/4/2018	Tetrachlorethene	1.9	ppb
6/4/2018	Toluene	<1	ppb
6/4/2018	Trans-1,2-Dichloroethene	<1	ppb
6/4/2018	Trans-1,3-Dichloropropene	3.8	ppb
6/4/2018	Trichlorethene	<1	ppb
6/4/2018	Trichlorofluoromethane	<1	ppb
6/4/2018	Vinyl Chloride	<1	ppb
7/9/2018	(m & p) Xylene	<1	ppb
7/9/2018	(o) Xylene	<1	ppb
7/9/2018	1,1-Dichloroethane	<1	ppb
7/9/2018	1,1-Dichloroethene	<1	ppb
7/9/2018	1,1,1-Trichloroethane	<1	ppb
7/9/2018	1,1,2-Trichloroethane	<1	ppb
7/9/2018	1,1,2,2-Tetrachloroethane	<1	ppb
7/9/2018	1,2-Dichlorobenzene	<1	ppb
7/9/2018	1,2-Dichloroethane	<1	ppb
7/9/2018	1,2-Dichloropropane	<1	ppb
7/9/2018	1,3-Dichlorobenzene	<1	ppb
7/9/2018	1,4-Dichlorobenzene	<1	ppb
7/9/2018	2-Chloroethylvinylether	<2	ppb
7/9/2018	Acetone	120	ppb
7/9/2018	Benzene	<1	ppb
7/9/2018	Bromodichloromethane	<1	ppb
7/9/2018	Bromoform	<1	ppb
7/9/2018	Bromomethane	<10	ppb
7/9/2018	Carbon Tetrachloride	<1	ppb
7/9/2018	Chlorobenzene	<1	ppb
7/9/2018	Chloroethane	<10	ppb
7/9/2018	Chloroform	3.1	ppb
7/9/2018	Chloromethane	<10	ppb
7/9/2018	cis-1,3-Dichloropropylene	<1	ppb
7/9/2018	Dibromochloromethane	<1	ppb
7/9/2018	Ethylbenzene	<1	ppb
7/9/2018	Methylene Chloride	<5	ppb
7/9/2018	Tetrachloroethylene	1.6	ppb
7/9/2018	Toluene	7	ppb
7/9/2018	trans-1,2-Dichloroethene	<1	ppb
7/9/2018	trans-1,3-Dichloropropene	<1	ppb
7/9/2018	Trichloroethene	1.6	ppb

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
6/5/2018	1,4-dichlorobenzene	<1	ppb
6/5/2018	2-Chloroethylvinylether	<2	ppb
6/5/2018	acetone	<10	ppb
6/5/2018	Benzene	<1	ppb
6/5/2018	Bromodichloromethane	<1	ppb
6/5/2018	Bromoform	<1	ppb
6/5/2018	Bromomethane	<10	ppb
6/5/2018	Carbon Tetrachloride	<1	ppb
6/5/2018	Chlorobenzene	<1	ppb
6/5/2018	Chloroethane	<10	ppb
6/5/2018	Chloroform	<1	ppb
6/5/2018	Chloromethane	<10	ppb
6/5/2018	cis-1,3-Dichloropropene	<1	ppb
6/5/2018	Dibromochloromethane	<1	ppb
6/5/2018	Ethylbenzene	<1	ppb
6/5/2018	Methylene Chloride	<5	ppb
6/5/2018	o- xylene	<1	ppb
6/5/2018	p&m xylene	<1	ppb
6/5/2018	Tetrachlorethene	1.4	ppb
6/5/2018	Toluene	<1	ppb
6/5/2018	Trans-1,2-Dichloroethene	<1	ppb
6/5/2018	Trans-1,3-Dichloropropene	<1	ppb
6/5/2018	Trichlorethene	<1	ppb
6/5/2018	Trichlorofluoromethane	<1	ppb
6/5/2018	Vinyl Chloride	<1	ppb
7/10/2018	(m & p) Xylene	<1	ppb
7/10/2018	(o) Xylene	<1	ppb
7/10/2018	1,1-Dichloroethane	<1	ppb
7/10/2018	1,1-Dichloroethene	<1	ppb
7/10/2018	1,1,1-Trichloroethane	<1	ppb
7/10/2018	1,1,2-Trichloroethane	<1	ppb
7/10/2018	1,1,2,2-Tetrachloroethane	<1	ppb
7/10/2018	1,2-Dichlorobenzene	<1	ppb
7/10/2018	1,2-Dichloroethane	<1	ppb
7/10/2018	1,2-Dichloropropane	<1	ppb
7/10/2018	1,3-Dichlorobenzene	<1	ppb
7/10/2018	1,4-Dichlorobenzene	<1	ppb
7/10/2018	2-Chloroethylvinylether	<2	ppb
7/10/2018	Acetone	<10	ppb
7/10/2018	Benzene	<1	ppb
7/10/2018	Bromodichloromethane	<1	ppb
7/10/2018	Bromoform	<1	ppb
7/10/2018	Bromomethane	<10	ppb
7/10/2018	Carbon Tetrachloride	<1	ppb
7/10/2018	Chlorobenzene	<1	ppb
7/10/2018	Chloroethane	<10	ppb
7/10/2018	Chloroform	<1	ppb
7/10/2018	Chloromethane	<10	ppb
7/10/2018	cis-1,3-Dichloropropylene	<1	ppm
7/10/2018	Dibromochloromethane	<1	ppb
7/10/2018	Ethylbenzene	<1	ppb
7/10/2018	Methylene Chloride	<5	ppb
7/10/2018	Tetrachloroethylene	<1	ppb
7/10/2018	Toluene	<1	ppb
7/10/2018	trans-1,2-Dichloroethene	<1	ppb
7/10/2018	trans-1,3-Dichloropropene	<1	ppb
7/10/2018	Trichloroethene	<1	ppb

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
7/9/2018	Trichlorofluoromethane	<1	ppb
7/9/2018	Vinyl Chloride	<1	ppb
8/7/2018	(m & p) Xylene	<1	ppb
8/7/2018	(o) Xylene	<1	ppb
8/7/2018	1,1-Dichloroethane	<1	ppb
8/7/2018	1,1-Dichloroethylene	<1	ppb
8/7/2018	1,1,1-Trichloroethane	<1	ppb
8/7/2018	1,1,2-Trichloroethane	<1	ppb
8/7/2018	1,1,2,2-Tetrachloroethane	<1	ppb
8/7/2018	1,2-Dichlorobenzene	<1	ppb
8/7/2018	1,2-Dichloroethane	<1	ppb
8/7/2018	1,2-Dichloropropane	<1	ppb
8/7/2018	1,3-Dichlorobenzene	<1	ppb
8/7/2018	1,4-Dichlorobenzene	<1	ppb
8/7/2018	2-Chloroethylvinylether	<2	ppb
8/7/2018	Acetone	85	ppb
8/7/2018	Benzene	<1	ppb
8/7/2018	Bromodichloromethane	<1	ppb
8/7/2018	Bromoform	<1	ppb
8/7/2018	Bromomethane	<10	ppb
8/7/2018	Carbon Tetrachloride	<1	ppb
8/7/2018	Chlorobenzene	<1	ppb
8/7/2018	Chloroethane	<10	ppb
8/7/2018	Chloroform	3.4	ppb
8/7/2018	Chloromethane	<10	ppb
8/7/2018	cis-1,3-Dichloropropylene	<1	ppb
8/7/2018	Dibromochloromethane	<1	ppb
8/7/2018	Ethylbenzene	<1	ppb
8/7/2018	Methylene Chloride	<5	ppb
8/7/2018	Tetrachloroethylene	1.4	ppb
8/7/2018	Toluene	8	ppb
8/7/2018	trans-1,2-Dichloroethene	<1	ppb
8/7/2018	trans-1,3-Dichloropropene	<1	ppb
8/7/2018	Trichloroethene	<1	ppb
8/7/2018	Trichlorofluoromethane	<1	ppb
8/7/2018	Vinyl Chloride	<1	ppb
9/11/2018	(m & p) Xylene	<1	ppb
9/11/2018	(o) Xylene	<1	ppb
9/11/2018	1,1-Dichloroethane	<1	ppb
9/11/2018	1,1-Dichloroethylene	<1	ppb
9/11/2018	1,1,1-Trichloroethane	<1	ppb
9/11/2018	1,1,2-Trichloroethane	<1	ppb
9/11/2018	1,1,2,2-Tetrachloroethane	<1	ppb
9/11/2018	1,2-Dichlorobenzene		ppb
9/11/2018	1,2-Dichloroethane	<1	ppb
9/11/2018	1,2-Dichloropropane	<1	ppb
9/11/2018	1,3-Dichlorobenzene	<1	ppb
9/11/2018	1,4-Dichlorobenzene	<1	ppb
9/11/2018	2-Chloroethylvinylether	<2	ppb
9/11/2018	Acetone	2.9	ppb
9/11/2018	Benzene	<1	ppb
9/11/2018	Bromodichloromethane	<1	ppb
9/11/2018	Bromoform	<1	ppb
9/11/2018	Bromomethane	<10	ppb
9/11/2018	Carbon Tetrachloride	<1	ppb

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
7/10/2018	Trichlorofluoromethane	<1	ppb
7/10/2018	Vinyl Chloride	<1	ppb
8/7/2018	(m & p) Xylene	<1	ppb
8/7/2018	(o) Xylene	<1	ppb
8/7/2018	1,1-Dichloroethane	<1	ppb
8/7/2018	1,1-Dichloroethylene	<1	ppb
8/7/2018	1,1,1-Trichloroethane	<1	ppb
8/7/2018	1,1,2-Trichloroethane	<1	ppb
8/7/2018	1,1,2,2-Tetrachloroethane	<1	ppb
8/7/2018	1,2-Dichlorobenzene	<1	ppb
8/7/2018	1,2-Dichloroethane	<1	ppb
8/7/2018	1,2-Dichloropropane	<1	ppb
8/7/2018	1,3-Dichlorobenzene	<1	ppb
8/7/2018	1,4-Dichlorobenzene	<1	ppb
8/7/2018	2-Chloroethylvinylether	<2	ppb
8/7/2018	Acetone	<10	ppb
8/7/2018	Benzene	<1	ppb
8/7/2018	Bromodichloromethane	<1	ppb
8/7/2018	Bromoform	<1	ppb
8/7/2018	Bromomethane	<10	ppb
8/7/2018	Carbon Tetrachloride	<1	ppb
8/7/2018	Chlorobenzene	<1	ppb
8/7/2018	Chloroethane	<10	ppb
8/7/2018	Chloroform	<1	ppb
8/7/2018	Chloromethane	<10	ppb
8/7/2018	cis-1,3-Dichloropropylene	<1	ppb
8/7/2018	Dibromochloromethane	<1	ppb
8/7/2018	Ethylbenzene	<1	ppb
8/7/2018	Methylene Chloride	<5	ppb
8/7/2018	Tetrachloroethylene	<1	ppb
8/7/2018	Toluene	<1	ppb
8/7/2018	trans-1,2-Dichloroethene	<1	ppb
8/7/2018	trans-1,3-Dichloropropene	<1	ppb
8/7/2018	Trichloroethene	<1	ppb
8/7/2018	Trichlorofluoromethane	<1	ppb
8/7/2018	Vinyl Chloride	<1	ppb
9/11/2018	(m & p) Xylene	<1	ppb
9/11/2018	(o) Xylene	<1	ppb
9/11/2018	1,1-Dichloroethane	<1	ppb
9/11/2018	1,1-Dichloroethylene	<1	ppb
9/11/2018	1,1,1-Trichloroethane	<1	ppb
9/11/2018	1,1,2-Trichloroethane	<1	ppb
9/11/2018	1,1,2,2-Tetrachloroethane	<1	ppb
9/11/2018	1,2-Dichlorobenzene	<1	ppb
9/11/2018	1,2-Dichloroethane	<1	ppb
9/11/2018	1,2-Dichloropropane	<1	ppb
9/11/2018	1,3-Dichlorobenzene	<1	ppb
9/11/2018	1,4-Dichlorobenzene	<1	ppb
9/11/2018	2-Chloroethylvinylether	<2	ppb
9/11/2018	Acetone	<10	ppb
9/11/2018	Benzene	<1	ppb
9/11/2018	Bromodichloromethane	<1	ppb
9/11/2018	Bromoform	<1	ppb
9/11/2018	Bromomethane	<10	ppb
9/11/2018	Carbon Tetrachloride	<1	ppb

Table 26: EPA VOC Data
Bucklin Point

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
9/11/2018	Chlorobenzene	<1	ppb
9/11/2018	Chloroethane	<1	ppb
9/11/2018	Chloroform	3.1	ppb
9/11/2018	Chloromethane	<10	ppb
9/11/2018	cis-1,3-Dichloropropylene		ppb
9/11/2018	Dibromochloromethane	<1	ppb
9/11/2018	Ethylbenzene	<1	ppb
9/11/2018	Methylene Chloride	<5	ppb
9/11/2018	Tetrachloroethylene	<1	ppb
9/11/2018	Toluene	3.3	ppb
9/11/2018	trans-1,2-Dichloroethene	<1	ppb
9/11/2018	trans-1,3-Dichloropropene	<1	ppb
9/11/2018	Trichloroethene	<1	ppb
9/11/2018	Trichlorofluoromethane	<1	ppb
9/11/2018	Vinyl Chloride	<1	ppb
10/15/2018	(m & p) Xylene	<1	ppb
10/15/2018	(o) Xylene	<1	ppb
10/15/2018	1,1-Dichloroethane	<1	ppb
10/15/2018	1,1-Dichloroethylene	<1	ppb
10/15/2018	1,1,1-Trichloroethane	<1	ppb
10/15/2018	1,1,2-Trichloroethane	<1	ppb
10/15/2018	1,1,2,2-Tetrachloroethane	<1	ppb
10/15/2018	1,2-Dichlorobenzene	<1	ppb
10/15/2018	1,2-Dichloroethane	<1	ppb
10/15/2018	1,2-Dichloropropane	<1	ppb
10/15/2018	1,3-Dichlorobenzene	<1	ppb
10/15/2018	1,4-Dichlorobenzene	<1	ppb
10/15/2018	2-Chloroethylvinylether	<2	ppb
10/15/2018	Acetone	110	ppb
10/15/2018	Benzene	<1	ppb
10/15/2018	Bromodichloromethane	<1	ppb
10/15/2018	Bromoform	<1	ppb
10/15/2018	Bromomethane	<10	ppb
10/15/2018	Carbon Tetrachloride	<1	ppb
10/15/2018	Chlorobenzene	<1	ppb
10/15/2018	Chloroethane	<10	ppb
10/15/2018	Chloroform	3.3	ppb
10/15/2018	Chloromethane	<10	ppb
10/15/2018	cis-1,3-Dichloropropylene	<1	ppb
10/15/2018	Dibromochloromethane	<1	ppb
10/15/2018	Ethylbenzene	<1	ppb
10/15/2018	Methylene Chloride	<5	ppb
10/15/2018	Tetrachloroethylene	<1	ppb
10/15/2018	Toluene	1.5	ppb
10/15/2018	trans-1,2-Dichloroethene	<1	ppb
10/15/2018	trans-1,3-Dichloropropene	<1	ppb
10/15/2018	Trichloroethene	<1	ppb
10/15/2018	Trichlorofluoromethane	<1	ppb
10/15/2018	Vinyl Chloride	<1	ppb
11/13/2018	1,1-Dichloroethane	<0.001	ppm
11/13/2018	1,1-Dichloroethylene	<0.001	ppm
11/13/2018	1,1,1-Trichloroethane	<0.001	ppm
11/13/2018	1,1,2-Trichloroethane	<0.001	ppm
11/13/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
11/13/2018	1,2-Dichlorobenzene	<0.001	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
9/11/2018	Chlorobenzene	<1	ppb
9/11/2018	Chloroethane	<10	ppb
9/11/2018	Chloroform	<1	ppb
9/11/2018	Chloromethane	<10	ppb
9/11/2018	cis-1,3-Dichloropropylene	<1	ppb
9/11/2018	Dibromochloromethane	<1	ppb
9/11/2018	Ethylbenzene	<1	ppb
9/11/2018	Methylene Chloride	<5	ppb
9/11/2018	Tetrachloroethylene	<1	ppb
9/11/2018	Toluene	<1	ppb
9/11/2018	trans-1,2-Dichloroethene	<1	ppb
9/11/2018	trans-1,3-Dichloropropene	<1	ppb
9/11/2018	Trichloroethene	<1	ppb
9/11/2018	Trichlorofluoromethane	<1	ppb
9/11/2018	Vinyl Chloride	<1	ppb
10/16/2018	(m & p) Xylene	<1	ppb
10/16/2018	(o) Xylene	<1	ppb
10/16/2018	1,1-Dichloroethane	<1	ppb
10/16/2018	1,1-Dichloroethylene	<1	ppb
10/16/2018	1,1,1-Trichloroethane	<1	ppb
10/16/2018	1,1,2-Trichloroethane	<1	ppb
10/16/2018	1,1,2,2-Tetrachloroethane	<1	ppb
10/16/2018	1,2-Dichlorobenzene	<1	ppb
10/16/2018	1,2-Dichloroethane	<1	ppb
10/16/2018	1,2-Dichloropropane	<1	ppb
10/16/2018	1,3-Dichlorobenzene	<1	ppb
10/16/2018	1,4-Dichlorobenzene	<1	ppb
10/16/2018	2-Chloroethylvinylether	<2	ppb
10/16/2018	Acetone	<10	ppb
10/16/2018	Benzene	<1	ppb
10/16/2018	Bromodichloromethane	<1	ppb
10/16/2018	Bromoform	<1	ppb
10/16/2018	Bromomethane	<10	ppb
10/16/2018	Carbon Tetrachloride	<1	ppb
10/16/2018	Chlorobenzene	<1	ppb
10/16/2018	Chloroethane	<10	ppb
10/16/2018	Chloroform	<1	ppb
10/16/2018	Chloromethane	<10	ppb
10/16/2018	cis-1,3-Dichloropropylene	<1	ppb
10/16/2018	Dibromochloromethane	<1	ppb
10/16/2018	Ethylbenzene	<1	ppb
10/16/2018	Methylene Chloride	<5	ppb
10/16/2018	Tetrachloroethylene	<1	ppb
10/16/2018	Toluene	1	ppb
10/16/2018	trans-1,2-Dichloroethene	<1	ppb
10/16/2018	trans-1,3-Dichloropropene	<1	ppb
10/16/2018	Trichloroethene	<1	ppb
10/16/2018	Trichlorofluoromethane	<1	ppb
10/16/2018	Vinyl Chloride	<1	ppb
11/14/2018	1,1-Dichloroethane	<0.001	ppm
11/14/2018	1,1-Dichloroethylene	<0.001	ppm
11/14/2018	1,1,1-Trichloroethane	<0.001	ppm
11/14/2018	1,1,2-Trichloroethane	<0.001	ppm
11/14/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
11/14/2018	1,2-Dichlorobenzene	<0.001	ppm

EPA VOC Data
Bucklin Point 2018

Bucklin Point Influent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
11/13/2018	1,2-Dichloroethane	<0.001	ppm
11/13/2018	1,2-Dichloropropane	<0.001	ppm
11/13/2018	1,3-Dichlorobenzene	<0.001	ppm
11/13/2018	1,4-Dichlorobenzene	<0.001	ppm
11/13/2018	2-Chloroethyl vinyl ether	<0.002	ppm
11/13/2018	Acetone	0.072	ppm
11/13/2018	Benzene	<0.001	ppm
11/13/2018	Bromodichloromethane	<0.001	ppm
11/13/2018	Bromoform	<0.001	ppm
11/13/2018	Bromomethane	<0.010	ppm
11/13/2018	Carbon Tetrachloride	<0.001	ppm
11/13/2018	Chlorobenzene	<0.001	ppm
11/13/2018	Chloroethane	<0.010	ppm
11/13/2018	Chloroform	0.0015	ppm
11/13/2018	Chloromethane	<0.010	ppm
11/13/2018	cis-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	Dibromochloromethane	<0.001	ppm
11/13/2018	Ethylbenzene	<0.001	ppm
11/13/2018	m,p-Xylene	<0.001	ppm
11/13/2018	Methylene Chloride	<0.005	ppm
11/13/2018	o-Xylene	<0.001	ppm
11/13/2018	Tetrachloroethylene	<0.001	ppm
11/13/2018	Toluene	0.0013	ppm
11/13/2018	trans-1,2-Dichloroethylene	<0.001	ppm
11/13/2018	trans-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	Trichloroethylene	<0.001	ppm
11/13/2018	Trichlorofluoromethane	<0.001	ppm
11/13/2018	Vinyl Chloride	<0.001	ppm
12/4/2018	1,1-Dichloroethane	<0.002	ppm
12/4/2018	1,1-Dichloroethylene	<0.002	ppm
12/4/2018	1,1,1-Trichloroethane	<0.002	ppm
12/4/2018	1,1,2-Trichloroethane	<0.002	ppm
12/4/2018	1,1,2,2-Tetrachloroethane	<0.002	ppm
12/4/2018	1,2-Dichlorobenzene	<0.002	ppm
12/4/2018	1,2-Dichloroethane	<0.002	ppm
12/4/2018	1,2-Dichloropropane	<0.002	ppm
12/4/2018	1,3-Dichlorobenzene	<0.002	ppm
12/4/2018	1,4-Dichlorobenzene	<0.002	ppm
12/4/2018	2-Chloroethyl vinyl ether	<0.010	ppm
12/4/2018	Acetone	99.3	ppm
12/4/2018	Benzene	<0.002	ppm
12/4/2018	Bromodichloromethane	<0.002	ppm
12/4/2018	Bromoform	<0.002	ppm
12/4/2018	Bromomethane	<0.002	ppm
12/4/2018	Carbon Tetrachloride	<0.002	ppm
12/4/2018	Chlorobenzene	<0.002	ppm
12/4/2018	Chloroethane	<0.002	ppm
12/4/2018	Chloroform	0.002	ppm
12/4/2018	Chloromethane	<0.002	ppm
12/4/2018	cis-1,3-Dichloropropylene	<0.002	ppm
12/4/2018	Dibromochloromethane	<0.002	ppm
12/4/2018	Ethylbenzene	<0.002	ppm
12/4/2018	m,p-Xylene	<0.002	ppm
12/4/2018	Methylene Chloride	<0.010	ppm
12/4/2018	o-Xylene	<0.002	ppm

Bucklin Point Effluent Grab Samples			
Sample Date	**Parameter**	**Result**	**Units**
11/14/2018	1,2-Dichloroethane	<0.001	ppm
11/14/2018	1,2-Dichloropropane	<0.001	ppm
11/14/2018	1,3-Dichlorobenzene	<0.001	ppm
11/14/2018	1,4-Dichlorobenzene	<0.001	ppm
11/14/2018	2-Chloroethyl vinyl ether	<0.002	ppm
11/14/2018	Acetone	0.051	ppm
11/14/2018	Benzene	<0.001	ppm
11/14/2018	Bromodichloromethane	<0.001	ppm
11/14/2018	Bromoform	<0.001	ppm
11/14/2018	Bromomethane	<0.010	ppm
11/14/2018	Carbon Tetrachloride	<0.001	ppm
11/14/2018	Chlorobenzene	<0.001	ppm
11/14/2018	Chloroethane	<0.010	ppm
11/14/2018	Chloroform	0.0018	ppm
11/14/2018	Chloromethane	<0.010	ppm
11/14/2018	cis-1,3-Dichloropropylene	<0.001	ppm
11/14/2018	Dibromochloromethane	<0.001	ppm
11/14/2018	Ethylbenzene	<0.001	ppm
11/14/2018	m,p-Xylene	<0.001	ppm
11/14/2018	Methylene Chloride	<0.005	ppm
11/14/2018	o-Xylene	<0.001	ppm
11/14/2018	Tetrachloroethylene	0.0011	ppm
11/14/2018	Toluene	<0.001	ppm
11/14/2018	trans-1,2-Dichloroethylene	<0.001	ppm
11/14/2018	trans-1,3-Dichloropropylene	<0.001	ppm
11/14/2018	Trichloroethylene	<0.001	ppm
11/14/2018	Trichlorofluoromethane	<0.001	ppm
11/14/2018	Vinyl Chloride	<0.001	ppm
12/4/2018	1,1-Dichloroethane	<0.001	ppm
12/4/2018	1,1-Dichloroethylene	<0.001	ppm
12/4/2018	1,1,1-Trichloroethane	<0.001	ppm
12/4/2018	1,1,2-Trichloroethane	<0.001	ppm
12/4/2018	1,1,2,2-Tetrachloroethane	<0.001	ppm
12/4/2018	1,2-Dichlorobenzene	<0.001	ppm
12/4/2018	1,2-Dichloroethane	<0.001	ppm
12/4/2018	1,2-Dichloropropane	<0.001	ppm
12/4/2018	1,3-Dichlorobenzene	<0.001	ppm
12/4/2018	1,4-Dichlorobenzene	<0.001	ppm
12/4/2018	2-Chloroethyl vinyl ether	<0.010	ppm
12/4/2018	Acetone	<0.010	ppm
12/4/2018	Benzene	<0.001	ppm
12/4/2018	Bromodichloromethane	<0.001	ppm
12/4/2018	Bromoform	<0.001	ppm
12/4/2018	Bromomethane	<0.002	ppm
12/4/2018	Carbon Tetrachloride	<0.001	ppm
12/4/2018	Chlorobenzene	<0.001	ppm
12/4/2018	Chloroethane	<0.002	ppm
12/4/2018	Chloroform	<0.001	ppm
12/4/2018	Chloromethane	<0.002	ppm
12/4/2018	cis-1,3-Dichloropropylene	<0.001	ppm
12/4/2018	Dibromochloromethane	<0.001	ppm
12/4/2018	Ethylbenzene	<0.001	ppm
12/4/2018	m,p-Xylene	<0.002	ppm
12/4/2018	Methylene Chloride	<0.010	ppm
12/4/2018	o-Xylene	<0.001	ppm

Table 26: EPA VOC Data
Bucklin Point

Sanitary Manhole Sampling Data 2018

Date	Location	Al (ppb)	As (ppb)	BOD (ppm)	CBOD (ppm)	Cd (ppb)	Cr (ppb)	Cu (ppb)	CN (ppb)	Total Nitrogen (ppm)	Pb (ppb)	Hg (ppt)	Mo (ppb)	NH3-N (ppm)	Ni (ppb)	NO3NO2 (mg/L)	Se (ppb)	Ag (ppb)	Sn (ppb)	TKN (mgN/L)	TSS (ppm)	Zn (ppb)
1/2/2018	BS02		0.633		497.75	0.3	1.978	77.806	<4.00	78.218	30.84	99.2	1.971	34.2	4.475	0.318	<1.000	3.956	<5	77.9	828	254.68
1/10/2018	FS17		0.613		304.73	0.15	1.723	31.535	<4.00	96.707	30.68	21.5	1.193	63	3.426	0.307	<1.000	0.774		96.4	296	306.07
1/17/2018	BS03		<0.500		44.7	0.08	0.616	15.129	4.10	15.02	0.691	10.4	0.304	7.39	1.274	1.82	<1.000	0.1	<5	13.2	152	30.154
1/24/2018	FS30		0.6		206.47	0.12	2.197	23.012	4.32	54.5	28.06	6.43	0.901	35.7	2.355	<0.100	<1.000	0.108		54.5		104.54
1/31/2018	BS17		<0.500	230.88	205.14	0.69	0.623	22.188	5.72	28.814	2.366	21.6	0.433	17.4	1.539	0.214	<1.000	0.867	<5	28.6	102	59.638
2/8/2018	FS14		<0.500	60.7	47.79	0.08	0.398	10.643	<4.00	22.98	0.762	11.2	0.361	8.31	0.815	2.98	<1.000	0.06		20	71	30.456
2/15/2018	BS16		0.601	314.13	265.25	0.19	4.036	454.79	4.70	54.011	3.031	124	0.682	28.1	1.999	0.411	<1.000	0.198	<5	53.6	274	99.54
2/28/2018	BS05		0.761	270	226.08	0.19	4.712	26.931	<4.00	46.64	1.584	155	1.178	21.1	3.447	1.24	<1.000	0.137	<5	45.4	268	161.91
3/6/2018	FS43		0.552	407.01	376.16	0.37	1.542	54.443	4.01	88.2	49.16	9.31	1.642	43.3	3.685	<0.100	1.399	0.29		88.2	370	193.83
3/14/2018	BS04		<0.500			0.16	0.446	4.478	6.55		0.873	6.26	<0.300		2.195		<1.000	0.078	<5			14.459
3/21/2018	FS34		<0.500	533.39	314.11	0.23	1.807	66.047	10.80	49.8	8.637	31.4	1.214	17	2.233	<0.100	<1.000	0.108		49.8	904	164.61
3/27/2018	BS24		<0.500	136.33	124.54	0.26	0.771	20.437	4.61	22.7	3.121	25.9	0.449	13.3	2.508	<0.100	<1.000	0.163	<5	22.7	136	72.617
4/4/2018	FS24		<0.500	401.06	345.75	0.14	0.979	25.353	<4.00	58.4	8.564	12.4	0.786	28.8	2.684	<0.100	<1.000	0.266		58.4	428	110.77
4/11/2018	BS02		<0.500	216.02	163.24	0.12	1.631	38.74	5.75	73.42	16.27	25.9	0.809	17.2	1.94	1.52	<1.000	0.418	<5	71.9	400	60.965
4/18/2018	FS42		<0.500	336.86	333.76	0.15	1.245	16.374	<4.00	62.3	10.13	46.4	1.003	42.7	1.974	<0.100	1.384	0.1		62.3	326	165.38
4/25/2018	FS19		<0.500	320.47	300.72	0.18	0.803	18.498	<4.00	50.5	6.413	37.3	1.151	22.4	2.102	<0.100	<1.000	0.122		50.5	360	127.93
5/2/2018	BS07		<0.500	5.44	5.44	0.54	<0.300	1.644	<4.00	4.504	0.351	1.13	<0.300	0.312	1.134	3.61	<1.000	<0.020	<5	0.894	3.2	22.334
5/9/2018	FS24		0.747	797.25	1748.2	0.23	2.514	40.424	<4.00	120	29.73	35.5	1.618	72.7	4.941	<0.100	<1.000	0.519		120	870	195.47
5/16/2018	BS26		<0.500	853.43	795.59	0.08	2.326	45.71	<4.00	122	2.618	8.6	1.111	63.3	3.247	<0.100	<1.000	0.057	<5	122	506	178.32
5/22/2018	BS10		0.533		188.76	0.11	1.213	29.21	<4.00	66.5	4.152	8.94	0.717	44.9	2.13	<0.100	<1.000	0.125	<5	66.5	148	78.637
5/29/2018	FS17		0.712	948.94	972.88	0.35	1.622	47.766	8.34	118	18.79	22.7	1.537	61.4	3.276	<0.100	<1.000	0.354		118	872	252.87
6/6/2018	BS20		0.729	1007.9	555.76	0.66	3.939	77.849	6.14	85.2	13.99	8.22	2.23	70.5	5.497	<0.100	<1.000	0.227	<5	85.2	620	375.72
6/13/2018	FS31		<0.500	166.63	141.77	0.23	1.863	32.16	4.01	80	4.974	14.4	0.803	50.5	2.655	<0.100	<1.000	0.115		80	154	105.5
6/20/2018	FS41		<0.500	225.3	206.68	0.07	0.49	22.46	6.15	67	3.108	14.7	0.55	46.8	2.082	<0.100	<1.000	0.071		67	72	87.27
7/11/2018	BS08		1.269	232.38	367.28	0.23	2.877	90.81	<4.000	70	12.58	6.96	1.175	43.4	3.922	<0.100	<1.000	0.546	<5.000	70	199	232
7/18/2018	FS14	362.1	0.54	405.79	361.31	0.24	1.167	62.04	<4.000	62	3.014	4.97	0.686	32.8	2.456	<0.100	<1.000	0.151		62	664	122.7
7/25/2018	BS06	500.8	0.702	424.68	434.21	0.23	2.413	92.64	5.98	82	16.42	9.71	1.38	47	3.638	<0.100	<1.000	1.794		82	368	194.2
8/1/2018	FS13	223.2	<0.500	178.28	164.78	0.35	1.11	17.87	4.69	41.6	56.05	12.5	0.525	29.6	2.309	<0.100	<1.000	0.349		41.6	170	90.41
8/8/2018	BS19	304.3	0.738	395.39	338.8	0.34	3.002	48.85	9.73	81.5	19.94	11.5	2.268	57.8	6.654	<0.100	<1.000	0.134		81.5	402	134.5
8/22/2018	FS05	157.9	0.613	42.53	40.63	0.14	0.913	25.24	7.14	14.6	8.768	14.2	0.738	8.14	2.07	<0.100	<1.000	0.169		14.6	38.545	35.16
8/29/2018	BS23	277	<0.500	213.48	226.63	0.15	1.156	39.82	<4.000	17.2	15.74	26.7	0.847	33.4	1.823	<0.100	<1.000	0.197		43	233	123.6
9/4/2018	FS25	353.9	<0.500	436.81	470.43	0.15	1.139	18.29	4.47	61	17.78	31.2	0.967	42.4	1.969	<0.100	<1.000	0.174		61	234	151.2
9/12/2018	BS03	79.31	<0.500	63.82	73.99	0.05	0.372	14.37	5.25	19.8	2.036	7.78	0.354	13.9	1.099	<0.100	<1.000	0.068		19.8	66	43.56
9/19/2018	FS37	200.1	<0.500	279.54	288	0.05	0.57	11.81	6.70	87	4.203	12.8	0.848	62	1.946	<0.100	<1.000	0.039		87	208	59.97
9/26/2018	FS06	132.1	0.975	49.67	49.02	0.13	0.567	8.643	<4.000	10.1	3.745	10.5	0.709	6.11	2.267	<0.100	<1.000	0.143		10.1	30.4	35.32
10/3/2018	BS21	531.9	0.728	463.5	419.87	0.17	3.611	76.94	<4.000	69.5	8.103	29.8	1.218	43.4	2.796	<0.100	<1.000	0.496		69.5	496	167.8
10/14/2018	FS15	662.6	0.586	474.37	567.58	0.17	2.917	75.77	4.30	119	49.44	36.4	1.982	72	4.234	<0.100	2.156	0.162		119	768	457.6
10/17/2018	BS18	490.5	0.789	655.86	646.15	0.19	2.627	70.64	4.61	103	3.583	29.4	1.427	52	5.833	<0.100	<1.000	0.349		103	764	227
10/24/2018	BS09	419.4	0.528	197.32	277.38	0.14	1.67	59.38	<4.000	62.5	7.053	20.6	0.893	44.8	2.616	<0.100	<1.000	0.16		62.5	276	149.8
10/31/2018	BS13	218	<0.500	292.44	268.08	0.39	2.401	26.84	4.29	68	4.391	27.1	0.718	48.8	4.315	<0.100	<1.000	0.13		68	484	99.1

Table 27: Sanitary Manhole Sampling Data

NBC Significant Industrial 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	n-Amyl Acetate	Acetone*					Isopropyl Acetate	Ethyl Acetate
																									1	2	3	4	5		
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L	ppb	ppb	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ppb	ug/L	ug/L					ug/L	ug/L
9W Halo OpCo L.P.	1	5/7/2018	C	BP												400.39	30.67	28.98	1.1	11.9	1.55	13.45									
9W Halo OpCo L.P.	1	11/15/2018	C	BP												393.22	42	24.47	0.366	17.7	0.11	17.8									
A & F Plating Company	1	1/25/2018	C	FP	<0.015	<0.075	0.161	<0.075	0.159	<0.025	<0.060	<0.005		56.1					<0.1	0.573	<0.100	0.573									
A & F Plating Company	1	7/25/2018	C	FP	<0.015	<0.075	0.0286	<0.075	0.1526	<0.025	<0.060	<0.005		21.3					0.128	0.669	0.104	0.773									
A. Harrison & Company, Inc.	1	3/20/2018	G	BP														<4.0	<0.1	<0.500	0.125	<0.500									
A. Harrison & Company, Inc.	1	5/22/2018	G	BP											52.5			<4.0	<0.1	<0.500	0.13	<0.500			<100						
A. Harrison & Company, Inc.	1	10/19/2018	C	BP								<0.005			225.3			<4.000	<0.100	<0.500	0.171	<0.500			<200	200	<200	<200			
Accent Plating Company	1	5/7/2018	C	FP	<0.015	<0.075	0.134	<0.075	<0.050	<0.025	<0.060			<4.00					<0.1	6.17	1.12	7.29									
Accent Plating Company	1	10/2/2018	C	FP	<0.015	<0.075	0.614	<0.075	0.1218	<0.025	0.4876			40.9					0.837	6.03	2.43	8.46									
Al-Jac Produce	1	12/12/2018	C	FP								0.03554				5011.77	11280		20.5	540	4.1	544									
Alloy Holdings, LLC	1	3/8/2018	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	1.192	<0.005							<0.1	<0.500	0.104	<0.500									
Alloy Holdings, LLC	1	8/7/2018	C	FP	<0.015	<0.075	0.03183	<0.075	<0.050	<0.025	3.602	<0.005							<0.100	<0.500	0.163	<0.500									
Alloy Holdings, LLC	1	12/6/2018	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005							<0.100	<0.500	0.116	<0.500									
Armbrust International, Ltd.	1	1/29/2018	C	FP	<0.015	<0.075	0.5	<0.075	0.269	0.091	0.346	<0.005		25.9					1.28	23.6	0.122	23.722									
Armbrust International, Ltd.	1	7/25/2018	C	FP	<0.015	<0.075	0.4544	<0.075	2.896	0.134	0.202	<0.005		37.8					0.665	24.7	<0.100	24.7									
Armbrust International, Ltd.	1	10/2/2018	C	FP	<0.015	<0.075	2.13	<0.075	2.176	<0.025	2.197	<0.005		3530					7.57	10.2	0.285	10.5									
Armbrust International, Ltd.	1	12/12/2018	C	FP	<0.015	<0.075	0.1186	<0.075	0.2275	0.05108	0.1048	<0.005		7.59					2.1	44.7	0.142	44.8									
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP											18.0	17872.5	302		6030	6140	0.194	6140.194									
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP											<9.52	14735.51			2970	3020	0.107	3020									
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP											<10000										<2000	<5000	<5000	<10000			
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP											31.0	34427.57	26.26		5880	6870	0.102	6870.102									
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP											<10000	62656.11	6.6		6360	6450	<0.100	6450			<10000						
B. Deltoro & Sons, Inc.	1	12/12/2018	C	FP								0.008804				3294.18	7300		12.5	197	1.62	199									
Bliss Manufacturing Co., Inc.	1	2/27/2018	C	BP	<0.015	<0.075	0.189	<0.075	<0.050	<0.025	0.068			5.79					<0.1	1.56	3.9	5.46									
Bliss Manufacturing Co., Inc.	1	8/22/2018	C	BP	<0.015	<0.075	0.08379	<0.075	<0.050	0.02926	<0.060			<4					1.69	5.14	0.685	5.82									
Chemart Company	1	2/13/2018	C	BP	<0.015	<0.075	0.882	<0.075	1.324	<0.025	0.104			8.41					2.03	14.5	<0.100	14.5									
Chemart Company	1	8/29/2018	C	BP	<0.015	<0.075	0.7502	<0.075	3.329	<0.025	0.08862			119					2.04	14.3	0.203	14.5									
Chemart Company	1	12/12/2018	C	BP	<0.015	<0.075	0.06047	<0.075	0.0896	<0.025	<0.060			13.9					<0.100	2.9	<0.100	2.9									
Cintas Corporation	1	5/8/2018	C	BP	<0.015	<0.075	0.082	<0.075	<0.050	<0.025	0.258			<4.00	4.0	32.6	54	22.83	<0.1	4	0.144	4.144									
Cintas Corporation	1	11/19/2018	C	BP	<0.015	<0.075	0.1861	<0.075	0.07344	<0.025	0.6865			9.51	<20	135.16	64	10.74	<0.100	7.24	<0.100	7.24									
Cintas Corporation	1	11/19/2018	G	BP											250.6										280	280	230	200			
Conopco, Inc.	1	3/26/2018	C	BP											202.7				<0.1	<0.500	1.16	1.16									
Conopco, Inc.	1	11/28/2018	C	BP											<5				<0.100	<0.500	1.22	1.22									
Conopco, Inc.	1	11/28/2018	G	BP											78.5																
Contract Specialties, Inc.	1	3/22/2018	C	FP	<0.0150	<0.0750	0.0682	<0.0750	<0.0500	<0.0250	<0.0600	<0.005		<4.00					<0.1	1.44	0.121	1.561									
Contract Specialties, Inc.	1	9/6/2018	C	FP	<0.015	<0.075	0.09333	<0.075	<0.050	<0.025	<0.060	<0.005		4					<0.100	1.25	0.146	1.4									
Contract Specialties, Inc.	1	9/13/2018	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005					108	<4.000	<0.100	1.06	<0.100	1.06									
Contract Specialties, Inc.	1	9/18/2018	C	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005					21.762	<4.000	0.178	1.22	1.13	2.35									
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.07				48.1	220.6	2.47	<4.0	0.726	4.35	0.102	4.452									
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.2767				750.8	403.49	11.2	<4.000	<0.100	3.22	0.122	3.34			720						
DiFruscia Industries, Inc.	1	4/16/2018	C	FP	<0.0150	0.2145	3.4512	<0.0750	4.7325	<0.0250	8.349	<0.0050		762					<0.1	<0.500	20.5	20.5									
DiFruscia Industries, Inc.	1	5/31/2018	C	FP	<0.015	0.299	0.747	<0.075	21.223	<0.025	3.916	<0.0050		124					<0.1	<0.500	17.8	17.8									
DiFruscia Industries, Inc.	1	9/6/2018	C	FP	<0.015	0.2141	3.445	<0.075	2.46	<0.025	9.923	<0.005		1710					0.443	1.02	14.5	15.5									
DiFruscia Industries, Inc.	1	11/28/2018	C	FP	<0.015	0.359	0.1244	<0.075	0.09111	<0.025	4.141	<0.005		940					<0.100	0.782	1.44	2.22									
Dominion Energy Manchester St., Inc.	1	4/10/2018	C	FP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	<0.0600	<0.0050							<0.1	<0.500	0.138	<0.500									
Dominion Energy Manchester St., Inc.	1	9/19/2018	C	FP	<0.015	<0.075	<0.020	<0.075	0.05128	<0.025	<0.060	<0.005							0.315	1.62	1.32	2.94									
E&M Enterprises, LTD	1	1/10/2018	C	FP	<0.015	<0.075	0.228	<0.075	0.122	0.025	<0.060	<0.005		44.8					<0.1	0.524	<0.100	0.524									
E&M Enterprises, LTD	1	7/17/2018	C	FP	<0.015	<0.075	0.2404	<0.075	0.1114	0.02649	<0.060	<0.005		331					<0.100	<0.500	0.149	<0.500									
Eagle Laundry Inc.	1	5/2/2018	C	BP												272.8	18.6	51.84	1.03	7.44	0.354	7.794									
Eagle Laundry Inc.	1	11/8/2018	C	BP								<0.005				96.33	18	14.63	0.382	4.52	0.274	4.79									
Eaton Aerospace	1	4/5/2018	G	BP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	<0.0600			<4.00					<0.1	<0.500	0.501	0.501									
Eaton Aerospace	1	11/14/2018	G	BP	<0.015	<0.075	0.02135	<0.075	<0.050	<0.025	<0.060			9.01					<0.100	0.648	<0.100	0.648									
Ecological Fibers, Inc.	1	3/6/2018	C	FP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	0.6654				10.5	230.29	4.79		36.4	48.4	0.655	49.055									
Ecological Fibers, Inc.	1	11/15/2018	C	FP	<0.015	<0.075	0.03302	<0.075	0.1117	<0.025	9.744					266.66	12.5		142	266	0.579	267									
Ecological Fibers, Inc.	1	11/15/2018	G	FP											1738.0										2100	2300	2500	45			
Electrolizing, Inc.	1	1/10/2018	C	FP	<0.015	0.092	<0.020	<0.075	<0.050	<0.025	0.644	<0.005		4.84					0.221	<0.500	19	19									
Electrolizing, Inc.	1	7/31/2018	C	FP	<0.015	0.08551	<0.020	<0.075	<0.050	<0.025	0.5013	<0.005		6.93					<0.100	<0.500	9.26	9.26									
Finlay Extracts & Ingredients USA, Inc.	1	12/12/2018	C	BP												1291.1	233		0.464	45.4	0.287	45.7									
G. Tanury Plating Company	1	1/9/2018	C	FP	<0.015	<0.075	0.345	<0.075	0.464	<0.025	0.143	<0.005		20					<0.1	<0.500	0.444	<0.500									
G. Tanury Plating Company	1	7/23/2018	C	FP	<0.015	<0.075	0.3212	<0.075	1.091	<0.025	0.1829	<0.005		52.7					<0.100	<0.500	0.355	<0.500									
General Cable Industries, LLC	1	1/23/2018	C	BP	<0.015	<0.075	0.16	<0.075	<0.050	<0.025	0.833					649.6	74	9.306	<0.1	21.1	<0.100	21.1									
General Cable Industries, LLC	1	9/27/2018	C	BP	<0.015	<0.075	0.6684	<0.075	0.08906	<0.025	0.9638					416.98	<2.0000	15.66	<0.100	12.2	<0.100	12.2									
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060				51.5				<0.1	<0.500	<0.100	<0.500									
Godfrey and Wing Inc.	1	11/20/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	<0.500	0.112	<0.500									
Godfrey and Wing Inc.	1	11/20/2018	G	BP											57.9										15	12	<10	<10			
Hillview Auto Body	1	4/24/2018	G	FP	<0.015	<0.075	0.265	<0.075	<0.050	<0.025	0.829	<0.005			21.1			28	<0.1	1.85	0.265	2.115									
Hillview Auto Body	1	10/23/2018	G	FP	<0.015	<0.075	0.03971	<0.075	<0.050	<0.025	0.1556	<0.005			270.0			<4.000	<0.100	1.6	0.24	1.84			270						
Hord Crystal Corporation	1	4/12/2018	G	BP	<0.0150	<0.0750	0.0373	<0.0750	<0.0500	<0.0250	<0.0600			5.91					6.91	52.8	156	208.8									
Hord Crystal Corporation	1	10/2/2018	C	BP	<0.015	<0.075	0.1058	<0.075	<0.050	<0.025	<0.060			8.14					10.8	193	<0.100	193									
HP Services, Inc.	1	3/27/2018	G	BP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	<0.0600			<4.00				<4.0	<0.1	<0.500	<0.100	<0.500									
HP Services, Inc.	1	10/10/2018	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			4.09				<4.000	<0.100	<0.500	<0.100	<0.500									
Ideal Plating & Polishing Co., Inc.	1	1/29/2018	C	FP	<0.015	0.111	0.603	<0.075	0.501	0.028	0.174	<0.005		283					<0.1	<0.500	0.12	<0.500									
Ideal Plating & Polishing Co., Inc.	1	7/24/2018	C	FP	0.03156	0.1143	1.722	0.1917	0.9992	0.02668	0.4444	<0.005		173					<0.100	<0.500	0.162	<0.500									
Ideal Plating & Polishing Co., Inc.	1	9/19/2018	C	FP	<0.015	0.4535	0.4528	<0.075	0.5081	0.02632	0.09718	<0.005		94.8					<0.100	<0.500	0.202	<0.500									
Induplate LLC	1	1/22/2018	C	FP	<0.015	0.154	0.07	<0.075	0.102	<0.025	0.266	<0.005		<4.00					2.01	2.21	5.65	7.86									
Induplate LLC	1	7/17/2018	C	FP	<0.015	<0.075	0.05302	<0.075	<0.050	<0.025	<0.060	<0.005		<4.000					<0.100	<0.500	1.41	1.41									
International Chromium Plating	1	4/10/2018	C	BP	0.0287	0.2804	0.1349	<0.0750	1.0093	<0.0250	1.1568	<0.0050		18.6					<0.1	<0.500	0.337	<0.500									
International Chromium Plating	1	11/1/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.050		8.75					<0.100	<0.500	<0.100	<0.500									
International Etching, Inc.	1	3/20/2018	C	FP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	<0.0600	<0.005		5.38					<0.1	<0.500	0.102	<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.

NBC Significant Industrial 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	n-Amyl Acetate	Acetone*					Isopropyl Acetate	Ethyl Acetate
																									1	2	3	4	5		
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L	ppb	ppb	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ppb	ug/L	ug/L					ug/L	ug/L
International Etching, Inc.	1	11/6/2018	C	FP	<0.015	<0.075	0.08562	<0.075	<0.050	<0.025	<0.060	<0.005		15					0.899	9.2	0.109	9.31									
International Insignia Corporation	1	3/8/2018	C	FP	<0.015	<0.075	0.528	<0.075	0.687	<0.025	0.178	<0.005		5.82					1.01	10.5	0.202	10.702									
International Insignia Corporation	1	9/25/2018	C	FP	<0.015	<0.075	1.835	<0.075	0.8079	<0.025	0.3904	<0.005		13.3					0.346	9.82	0.54	10.4									
International Insignia Corporation	1	12/12/2018	C	FP	<0.015	<0.075	1.138	<0.075	0.2732	<0.025	0.2554	<0.005		8.36					0.351	5.42	0.829	6.25									
Interplex Engineered Products, Inc.	1	4/11/2018	C	FP	<0.0150	<0.0750	0.053	<0.0750	0.086	<0.0250	<0.0600			4					0.11	1.09	<0.100	1.09									
Interplex Engineered Products, Inc.	1	10/30/2018	C	FP	<0.015	<0.075	0.2569	<0.075	1.032	0.0445	<0.060			38.7					0.105	2.34	<0.100	2.34									
Ira Green, Inc.	1	2/20/2018	C	FP	<0.0150	<0.0750	0.3216	<0.0750	<0.0500	<0.0250	<0.0600	<0.005		<4.00					<0.1	<0.500	<0.100	<0.500									
Ira Green, Inc.	1	8/14/2018	C	FP	<0.015	<0.075	0.2519	<0.075	<0.050	<0.025	<0.060	<0.005		5.56					<0.100	<0.500	0.156	<0.500									
Isle Brewers Guild, LLC	1	6/5/2018	C	BP												15.16	2.4		<0.1	0.504	2.1	2.604									
Isle Brewers Guild, LLC	1	12/12/2018	C	BP												14.99	<2.0000		<0.100	<0.500	0.882	0.882									
John H. Collins & Sons Company	1	4/4/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	0.029	<0.060			8.85	3335.4			<4.0	<0.1	1.96	<0.100	1.96									
John H. Collins & Sons Company	1	11/26/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.5608							9.718	<0.100	8.08	5.91	14									
John H. Collins & Sons Company	1	11/26/2018	G	BP											<1000										<1000	<1000	<1000	<1000			
John Rocchio Corporation	1	12/18/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060						44.333	<4.000	<0.100	<0.500	<0.100	<0.500									
John Rocchio Corporation	1	12/19/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.06671						130	<4.000	<0.100	0.812	<0.100	0.812									
Lincoln Manufacturing, Inc.	1	3/21/2018	G	BP														12.39	<0.1	16.4	3.69	20.09									
Lincoln Manufacturing, Inc.	1	10/10/2018	G	BP														165.7	7.72	34.2	<0.100	34.2									
Liquid Blue	1	2/6/2018	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.06					172.86	20.5		<0.1	2.34	<0.100	2.34									
Liquid Blue	1	10/16/2018	G	BP	<0.015	<0.075	0.02678	<0.075	<0.050	<0.025	<0.060					92.24	17		1.14	38.4	0.103	38.5									
Liquid Blue	2	2/14/2018	G	BP	<0.015	<0.075	0.09	<0.075	<0.050	<0.025	0.121					1809.86	27		3.87	59.8	<0.100	59.8									
Mahr Federal Inc.	1	2/19/2018	C	BP	<0.0150	0.9773	0.0385	<0.0750	<0.0500	<0.0250	<0.0600	<0.005		4.46	2.8			<4.0	<0.1	<0.500	0.119	<0.500									
Mahr Federal Inc.	1	9/5/2018	C	BP	<0.015	5.45	0.07652	0.1776	<0.050	<0.025	<0.060	<0.005		5.23					<0.100	<0.500	0.13	<0.500									
Mahr Federal Inc.	1	12/11/2018	C	BP	<0.015	1.008	0.06799	<0.075	<0.050	<0.025	<0.060	<0.005		22.9					<0.100	<0.500	0.125	<0.500									
Materion Technical Materials, Inc.	1	1/23/2018	C	FP	<0.015	<0.075	0.034	<0.075	<0.050	<0.025	<0.060			9.18					0.221	2.01	0.135	2.145									
Materion Technical Materials, Inc.	1	11/14/2018	C	FP	<0.015	<0.075	0.1841	<0.075	0.08061	<0.025	<0.060			10					<0.100	3.96	0.236	4.2									
Metallurgical Solutions, Inc.	1	3/12/2018	G	BP	<0.015	2.535	0.711	<0.075	1.087	<0.025	0.181	0.0098		27					0.725	2.28	602	604.28									
Metallurgical Solutions, Inc.	1	9/6/2018	C	BP	<0.015	0.1973	0.1416	<0.075	0.3235	<0.025	0.07007	<0.005		90.8					0.828	<5.000	1200	1200									
Monarch Metal Finishing Co., Inc. - Aurora St.	1	3/29/2018	C	FP	<0.0150	<0.0750	0.4282	<0.0750	0.1	<0.0250	<0.0600	<0.005		23.7					2.25	3	0.305	3.305									
Monarch Metal Finishing Co., Inc. - Aurora St.	1	9/18/2018	C	FP	<0.015	0.09903	0.04717	<0.075	3.806	<0.025	<0.060	<0.005		19.9					0.282	0.825	0.222	1.05									
Monarch Metal Finishing Co., Inc. - Aurora St.	1	12/18/2018	C	FP	<0.015	<0.075	0.2188	<0.075	0.3009	<0.025	0.2564	<0.005		95.2					<0.100	1.39	0.111	1.5									
Monarch Metal Finishing Co., Inc. - Georgia Ave	1	1/30/2018	C	FP	<0.015	<0.075	0.931	<0.075	0.407	<0.025	1.203	<0.005		51.7					12.5	15.92	0.556	16.476									
Monarch Metal Finishing Co., Inc. - Georgia Ave	1	7/31/2018	C	FP	<0.015	<0.075	4.293	<0.075	0.9152	0.06653	6.413	<0.005		<4					12.8	18.1	0.721	18.8									
Monarch Metal Finishing Co., Inc. - Georgia Ave	1	10/2/2018	C	FP	<0.015	<0.075	0.1435	<0.075	0.2907	0.06933	0.1293	<0.005		26.7					2.82	22	<0.100	22									
Murdock Webbing Co., Inc.	1	1/8/2018	C	FP	<0.015	<0.075	0.27	<0.075	<0.050	<0.025	<0.060					621.94	16.21	39.05	8.06	40.4	0.863	41.263									
Murdock Webbing Co., Inc.	1	12/4/2018	C	FP	<0.015	<0.075	0.1421	<0.075	<0.050	<0.025	0.07146					1214.04	53.585	50.51	10.5	51	0.927	51.9									
Narragansett Jewelry	1	2/7/2018	C	BP	<0.015	<0.075	0.047	<0.075	<0.050	<0.025	<0.060	<0.005		6.4					<0.1	<0.500	0.157	<0.500									
Narragansett Jewelry	1	8/8/2018	C	BP	<0.015	<0.075	0.2288	<0.075	<0.050	<0.025	<0.060	<0.005		6.69					<0.100	<0.500	0.229	<0.500									
New England Linen Supply, Inc.	1	5/9/2018	C	FP												986.44	374	125.5	1.25	11.3	1.4	12.7									
New England Linen Supply, Inc.	1	11/15/2018	C	FP												855.77	225.71	322.1	1.15	7.77	1.06	8.83									
NGC Inc.	1	12/12/2018	C	BP								0.02173				1957.52	35	7.948	5.64	255	0.224	255									
Ocean State Peeled Potatoes	1	4/16/2018	C	FP												6889.25	4480		11.8	308	5.42	313.42									
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<0.015	<0.075	0.041	<0.075	<0.050	<0.025	9.719	<0.005			14.0	123.1	31	6.2	16.5	19	0.143	19.143									
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	0.462	<0.0050			10.1	471.58	45.33	53.45	0.592	4.02	0.169	4.189									
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	<0.0150	<0.0750	0.0396	<0.0750	<0.0500	<0.0250	0.1505	<0.0050			522.7	60.66	26	44.16	1.39	29.5	0.122	29.622			493.75						
Pawtucket Power Associates	1	6/18/2018	C	BP	<0.015	<0.075	0.0396	<0.075	<0.050	<0.025	<0.060							<4.000													
Pawtucket Power Associates	1	8/9/2018	C	BP	<0.015	<0.075	0.06057	<0.075	<0.050	<0.025	<0.060							<4.000	0.372	2.24	0.335	2.57									
Pawtucket Power Associates	2	7/12/2018	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	0.567	6.29	6.86									
Pawtucket Power Associates	3	7/12/2018	G	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060								<0.100	<0.500	0.795	0.795									
Pawtucket Power Associates	4	6/18/2018	C	BP	<0.015	<0.075	0.06179	<0.075	<0.050	<0.025	0.1165																				
Pawtucket Power Associates	4	8/9/2018	C	BP	<0.015	<0.075	0.06465	<0.075	<0.050	<0.025	0.1105								<0.100	2.02	0.561	2.58									
Pilgrim Screw Corporation	1	1/24/2018	G	FP	<0.015	1.428	0.062	<0.075	0.162	<0.025	3.891	<0.005		98.6				<4.0	5.94	6.36	9630	9636.36									
Pilgrim Screw Corporation	1	3/1/2018	G	FP	<0.0150	3.6453	<0.0200	<0.0750	0.2834	<0.0250	18.417	0.0374		192				4.035	1.93	62.5	1250	1312.5									
Prov. Journal Co. - Production Facility	1	2/21/2018	C	BP	<0.0150	<0.0750	0.0217	<0.0750	<0.0500	<0.0250	<0.0600	<0.005						7.526	1.89	37.1	0.19	37.29									
Prov. Journal Co. - Production Facility	1	8/28/2018	C	BP	<0.015	<0.075	0.02666	<0.075	<0.050	<0.025	<0.060	<0.005						5.431	1.73	42.3	0.135	42.4									
Providence Metallizing Company, Inc.	1	5/15/2018	C	FP	<0.015	0.33	0.115	<0.075	0.256	<0.025	<0.060			<4.00					<0.1	<0.500	1.2	1.2									
Providence Metallizing Company, Inc.	1	11/27/2018	C	FP	<0.015	0.2601	0.0888	<0.075	0.1969	<0.025	<0.060			6.84					<0.100	<0.500	0.835	0.835									
Providence Specialty Products	1	5/16/2018	G	FP												629.38	1310	275.5	<0.1	7.77	<0.200	7.77									
Providence Specialty Products	1	11/27/2018	G	FP												1161.61	96.8	71.41	<0.100	39.4	<0.100	39.4									
Providence Specialty Products	2	5/16/2018	G	FP												23104.71	301	230.7	6.48	354	0.108	354.108									
Providence Specialty Products	2	11/27/2018	C	FP												14634.86	1108	373.7	5.39	366	<0.100	366									
RI Resource Recovery	1	2/6/2018	C	FP	<0.015	0.081	<0.020	<0.075	<0.050	<0.025	<0.060	0.1228	3.73	40.4	<10	13.07	17.33	<4.0	351	373	11.3	384.3									
RI Resource Recovery	1	4/23/2018	C	FP	<0.015	<0.075	<0.020	<0.075	0.057	<0.025	<0.060	0.1508	4.58	23.2	<10	NR	30.5	<4.0	<0.1	17.7	0.246	17.946									
RI Resource Recovery	1	5/1/2018	C	FP	<0.0150	<0.0750	<0.0200	<0.0750	0.0598	<0.0250	<0.0600	0.1459	1.77	17.4	30.4	12.5	74	<4.0	<0.1	17.9	0.572	18.472			24.33						
RI Resource Recovery	1	10/23/2018	C	FP	<0.015	<0.075	<0.020	<0.075	0.05191	<0.025	<0.060	0.1629	2.32	28.1	<10	17.11	36	<4.000	<0.100	21.4	2.38	23.8									
RI Resource Recovery	1	10/23/2018	G	FP											270.0										270	<100	<100	<100	<100		
RI Resource Recovery	4	4/23/2018	G	FP															<0.1	17.7	1.89	19.59									
Stackbin Corporation	1	4/3/2018	G	FP	<0.015	<0.075	0.094	<0.075	<0.050	<0.025	0.327			20.3				145.6	<0.1	17.6	0.328	17.928									
Stackbin Corporation	1	11/29/2018	G	FP	<0.015	<0.075	0.06545	<0.075	<0.050	<0.025	0.1004			32.8				75.14	0.22	18.2	0.287	18.5									
Stackbin Corporation	2	4/3/2018	G	FP	<0.015	<0.075	0.029	<0.075	<0.050	<0.025	<0.060			28.9					0.246	4.99	12.4	17.39									
Stackbin Corporation	2	11/29/2018	G	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			10.4					2.81	7.09	17.3	24.4									
Summit Manufacturing Corporation	1	1/23/2018	C	BP	<0.015	0.466	0.425	<0.075	<0.050	<0.025	<0.060			11.7					<0.1	<0.500	6.53	6.53									
Summit Manufacturing Corporation	1	8/1/2018	C	BP	<0.015	0.7582	0.4276	<0.075	0.06913	<0.025	0.1707			6.29					<0.100	<0.500	8.85	8.85									
Surface Coatings Division, MFB LLC	1	1/9/2018	C	BP	<0.015	0.198	0.253	<0.075	2.595	<0.025	0.921	<0.005		12.1					5.32	6.14	0.323	6.463									
Surface Coatings Division, MFB LLC	1	2/22/2018	C	BP	<0.0150	<0.0750	0.1444	0.0772	0.1629	<0.0250	0.2578	<0.005		11.1					<0.1	<0.500	0.522	0.522									
Surface Coatings Division, MFB LLC	1	8/15/2018	C	BP	<0.015	<0.075	0.09569	<0.075	0.4421	<0.025	0.9321	<0.005		171					0.457	0.715	0.259	0.974									
Tanury Industries	1	3/1/2018	C	FP	<0.0150	0.3788	0.3409	<0.0750	0.6072	<0.0250	<0.0600			125					2.76	5.78	1.42	7.2									
Tanury Industries	1	10/3/2018	C	FP	<0.015	0.2697	0.1849	<0.075	0.8072	0.02968	<0.060			46.6					1.41	3.97	0.889	4.86									
Technodic, Inc.	1	1/30/2018	C	BP	<0.015	1.301	0.486	<0.075	0.251	<0.025	0.227	<0.005		14.5					0.728	1.51	16.5	18.01									
Technodic, Inc.	1	8/2/2018	C	BP	<0.015	0.2513	0.07277	<0.075	<0.050	<0.025	<0.060	<0.005		9.5					<0.100	<0.500	3.89	3.89									

*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.

NBC Significant Industrial 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	n-Amyl Acetate	Acetone*					Isopropyl Acetate	Ethyl Acetate
																									1	2	3	4	5		
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ng/L	ppb	ppb	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ppb	ug/L	ug/L					ug/L	ug/L
Tedor Pharma Inc.	1	2/8/2018	G	FP	<0.015	<0.075	0.066	<0.075	<0.050	<0.025	0.274				432.0	67.96	27	<4.0	4.99	20.2	0.143	20.343		<10	430					<10	<10
Tedor Pharma Inc.	1	10/9/2018	G	FP	<0.015	<0.075	0.09898	<0.075	<0.050	<0.025	0.2716				614.9	161.27	48.667	<4.000	5.9	28.4	<0.100	28.4			610						
Teknicote Tank T-7	1	2/26/2018	C	BP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	0.1264			4.54					<0.1	13.4	0.118	13.518									
Teknicote Tank T-7	1	8/21/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			11.1					<0.100	13.8	43.4	57.2									
Teknor Apex	1	2/26/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.344							<4.0	<0.1	<0.500	0.592	0.592									
Teknor Apex	1	11/15/2018	C	BP	<0.015	<0.075	0.03157	<0.075	<0.050	<0.025	0.6315							<4.000	<0.100	1.35	0.764	2.11									
The Okonite Company	1	5/2/2018	C	BP	<0.0150	<0.0750	0.2509	<0.0750	<0.0500	<0.0250	0.4846							5.308	<0.1	3.59	0.867	4.457									
The Okonite Company	1	10/30/2018	C	BP	<0.015	<0.075	0.124	<0.075	<0.050	<0.025	0.1513							<4.000	<0.100	2.18	0.607	2.79									
Tiffany and Company	1	5/3/2018	C	BP	<0.0150	<0.0750	<0.0200	<0.0750	<0.0500	<0.0250	<0.0600			<4.00					<0.1	2.1	<0.100	2.1									
Tiffany and Company	1	9/20/2018	C	BP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060			6.5					<0.100	2.27	<0.100	2.27									
Tri-Jay Company	1	1/10/2018	C	FP	<0.015	<0.075	1.81	<0.075	3.316	0.178	0.304	<0.005		581					1.5	9.12	0.9	10.02									
Tri-Jay Company	1	7/18/2018	C	FP	<0.015	<0.075	0.5764	<0.075	0.2693	0.03162	0.1064	<0.005		14.2					0.284	5.3	0.546	5.85									
Truex, Inc.	1	3/5/2018	C	BP	<0.0150	<0.0750	0.1947	<0.0750	<0.0500	<0.0250	0.3702			<4.00				<4.0	<0.1	1.05	0.112	1.162									
Truex, Inc.	1	10/2/2018	C	BP	<0.015	<0.075	0.07193	<0.075	<0.050	<0.025	0.2124			6.53				<4.000	<0.100	1.35	0.641	1.99									
Umicore USA, Incorporated	2	1/24/2018	G	FP	<0.015	<0.075	0.147	<0.075	0.124	<0.025	<0.060	<0.005							1180	3020	28.4	3048.4									
Umicore USA, Incorporated	100	1/24/2018	G	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005							<0.1	<0.500	0.648	0.648									
Umicore USA, Incorporated	100	1/30/2018	G	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	<0.060	<0.005							0.4	0.872	1.59	2.462									
Unique Plating Company	1	3/6/2018	C	FP	<0.0150	<0.0750	0.2145	<0.0750	0.1048	<0.0250	<0.0600	<0.005		42.6					<0.1	<0.500	2.63	2.63									
Unique Plating Company	1	8/7/2018	C	FP	<0.015	0.1197	1.293	<0.075	1.002	0.1228	<0.060	<0.005		132					<0.100	<0.500	2.55	2.55									
Unique Plating Company	1	10/17/2018	C	FP	<0.015	<0.075	1.143	<0.075	0.1362	<0.025	<0.060	<0.005		86.8					<0.100	<0.500	1.97	1.97									
Univar USA, Inc.	1	3/1/2018	G	FP	<0.015	<0.075	<0.020	<0.075	<0.050	<0.025	0.076	<0.005		8.98	49.8				<0.1	0.567	0.127	0.694	450									
Univar USA, Inc.	1	10/15/2018	C	FP	<0.015	<0.075	0.02809	<0.075	<0.050	<0.025	0.1038	<0.005	76.5	<4	28.7				<0.100	0.503	0.356	0.859			<10	<10	<10				
Univar USA, Inc.	1	10/15/2018	G	FP																			<10.000								
Universal Plating Company, Inc.	1	3/29/2018	C	FP	<0.0150	<0.0750	0.0485	<0.0750	<0.0500	<0.0250	<0.0600	<0.005		11.6					<0.1	<0.500	0.119	<0.500									
Universal Plating Company, Inc.	1	12/6/2018	C	FP	<0.015	<0.075	0.02538	<0.075	<0.050	<0.025	<0.060	<0.005		4.46					<0.100	<0.500	0.101	<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.

NBC Significant Industrial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	1,1,1-Trichloroethane					1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane					1,1-Dichloroethane					1,1-Dichloroethene					1,2-dichlorobenzene					
GRAB NO.					1	2	3	4	5		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	SEMI-VOC
					ppb					ppb	ppb					ppb					ppb					ppb					
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<10					<10	<10					<10					<10					<10					
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<20	<20	<20	<20			<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20		
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP	<10					<10	<10					<10					<10					<10					
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP																											<9.52
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<200	<500	<500	<1000			<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000		
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP	<10					<10	<10					<10					<10					<10					
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<1000						<1000					<1000					<1000					<1000					<5.1
Cintas Corporation	1	5/8/2018	C	BP	<1					<1	<1					<1					<1					<1					
Cintas Corporation	1	11/19/2018	C	BP																											<20
Cintas Corporation	1	11/19/2018	G	BP	<1	<1	<1	<1			<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		
Conopco, Inc.	1	3/26/2018	C	BP	22					<1	<1					2.2					<1					<1					
Conopco, Inc.	1	11/28/2018	C	BP																											<5
Conopco, Inc.	1	11/28/2018	G	BP	4	4	<1	4			<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	<1					<1	<1					<1					<1					<1					
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<1						<1					<1					<1					<1					<5
Ecological Fibers, Inc.	1	3/6/2018	C	FP	<1					<1	<1					<1					<1					<1					
Ecological Fibers, Inc.	1	11/15/2018	G	FP	<10	<10	<10	<1			<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1		
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<1					<1	<1					<1					<1					<1					
Godfrey and Wing Inc.	1	11/20/2018	G	BP	<1	<1	<1	<1			<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		
Hillview Auto Body	1	4/24/2018	G	FP	<1					<1	<1					<1					<1					<1					
Hillview Auto Body	1	10/23/2018	G	FP	<10						<10					<10					<10					<10					
John H. Collins & Sons Company	1	4/4/2018	C	BP	<1					<1	<1					<1					<1					<1					
John H. Collins & Sons Company	1	11/26/2018	G	BP	<100	<100	<100	<100			<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100		
Mahr Federal Inc.	1	2/19/2018	C	BP	<1					<1	<1					<1					<1					<1					
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<10					<10	<10					<10					<10					<10					
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	<1					<1	<1					<1					<1					<1					
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	<1					<1	<1					<1					<1					<1					
RI Resource Recovery	1	2/6/2018	C	FP	<1					<1	<1					<1					<1					<1					
RI Resource Recovery	1	4/23/2018	C	FP	<1					<1	<1					<1					<1					<1					
RI Resource Recovery	1	5/1/2018	C	FP	<1					<1	<1					<1					<1					<1					
RI Resource Recovery	1	10/23/2018	C	FP																											<10
RI Resource Recovery	1	10/23/2018	G	FP	<10	<10	<10	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Tedor Pharma Inc.	1	2/8/2018	G	FP	<1					<1	<1					<1					<1					<1					
Tedor Pharma Inc.	1	10/9/2018	G	FP	<1						<1					<1					<1					<1					<25
Univar USA, Inc.	1	3/1/2018	G	FP	<1					<1	<1					<1					<1					<1					
Univar USA, Inc.	1	10/15/2018	C	FP	<1	<1	<1				<1	<1	<1			<1	<1	<1			<1	<1	<1			<1	<1	<1			

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

NBC Significant Industrial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	1,2-Dichloroethane					1,2-Dichloropropane					1,3-dichlorobenzene						1,4-dichlorobenzene						2-Chloroethylvinylether				
GRAB NO.					1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	SEMI	1	2	3	4	5	SEMI	1	2	3	4	5
					ppb					ppb					ppb						ppb						ppb				
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<10					<10					<10						<10						<20				
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20			<20	<20	<20	<20			<20	<20	<20	<40	
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP	<10					<10					<10						<10						<20				
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP																<9.52						<9.52					
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000			<200	<500	<500	<1000			<200	<200	<200	<200	
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP	<10					<10					<10						<10						<20				
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<1000					<1000					<1000					<5.1	<1000					<5.1	<200				
Cintas Corporation	1	5/8/2018	C	BP	<1					<1					<1						<1						<2				
Cintas Corporation	1	11/19/2018	C	BP																<20						<20					
Cintas Corporation	1	11/19/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1			<1	<1	<1	<1			<2	<2	<2	<2	
Conopco, Inc.	1	3/26/2018	C	BP	<1					<1					<1						<1						<2				
Conopco, Inc.	1	11/28/2018	C	BP																<5						<5					
Conopco, Inc.	1	11/28/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1			<1	<1	<1	<1			<1	<1	<1	<1	
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	<1					<1					<1						<1						<2				
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<1					<1					<1					<5	<1						<2				
Ecological Fibers, Inc.	1	3/6/2018	C	FP	<1					<1					<1						<1						<2				
Ecological Fibers, Inc.	1	11/15/2018	G	FP	<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1			<10	<10	<10	<1			<20	<2	<2	<2	
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<1					<1					<1						<1						<2				
Godfrey and Wing Inc.	1	11/20/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1			<1	<1	<1	<1			<2	<2	<2	<2	
Hillview Auto Body	1	4/24/2018	G	FP	<1					<1					<1						<1						<2				
Hillview Auto Body	1	10/23/2018	G	FP	<10					<10					<10						<10						<20				
John H. Collins & Sons Company	1	4/4/2018	C	BP	<1					<1					<1						<1						<2				
John H. Collins & Sons Company	1	11/26/2018	G	BP	<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100			<100	<100	<100	<100			<200	<200	<200	<200	
Mahr Federal Inc.	1	2/19/2018	C	BP	<1					<1					<1						<1						<2				
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<10					<10					<10						<10						<20				
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	<1					<1					<1						<1						<2				
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	<1					<1					<1						<1						<2				
RI Resource Recovery	1	2/6/2018	C	FP	<1					<1					<1						<1						<2				
RI Resource Recovery	1	4/23/2018	C	FP	<1					<1					<1						<1						<2				
RI Resource Recovery	1	5/1/2018	C	FP	<1					<1					<1						<1						<1				
RI Resource Recovery	1	10/23/2018	C	FP																<10											
RI Resource Recovery	1	10/23/2018	G	FP	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10	<10	<10		<20	<20	<20	<20	<20
Tedor Pharma Inc.	1	2/8/2018	G	FP	<1					<1					<1						<1						<2				
Tedor Pharma Inc.	1	10/9/2018	G	FP	<1					<1					<1					<25	<1						<2				
Univar USA, Inc.	1	3/1/2018	G	FP	<1					<1					<1						<1						<2				
Univar USA, Inc.	1	10/15/2018	C	FP	<1	<1	<1			<1	<1	<1			<1	<1	<1				<1	<1	<1				<2	<2	<2		

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

NBC Significant Industrial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	Benzene					Bromodichloromethane					Bromoform					Bromomethane					Carbon Tetrachloride				
GRAB NO.					1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
					ppb					ppb					ppb					ppb					ppb				
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<10					<10					<10					<100					<10				
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20		<200	<200	<200	<200		<20	<20	<20	<20	
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP	<10					<10					<10					<100					<10				
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP																									
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000		<400	<1000	<1000	<2000		<200	<500	<500	<1000	
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP	<10					<10					<10					<100					<10				
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<1000					<1000					<1000					<2000					<1000				
Cintas Corporation	1	5/8/2018	C	BP	<1					<1					<1					<10					<1				
Cintas Corporation	1	11/19/2018	C	BP																									
Cintas Corporation	1	11/19/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<10	<10	<10	<10		<1	<1	<1	<1	
Conopco, Inc.	1	3/26/2018	C	BP	<1					<1					<1					<10					<1				
Conopco, Inc.	1	11/28/2018	C	BP																									
Conopco, Inc.	1	11/28/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1	
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	2.4					3.7					<1					<10					<1				
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<1					1.2					<1					<10					<1				
Ecological Fibers, Inc.	1	3/6/2018	C	FP	<1					1					<1					<10					<1				
Ecological Fibers, Inc.	1	11/15/2018	G	FP	<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1		<100	<100	<100	<10		<10	<10	<10	<1	
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<1					3.5					<1					<10					<1				
Godfrey and Wing Inc.	1	11/20/2018	G	BP	<1	<1	<1	<1		3.1	2.7	3.1	1.8		<1	<1	<1	<1		<10	<10	<10	<10		<1	<1	<1	<1	
Hillview Auto Body	1	4/24/2018	G	FP	<1					<1					<1					<10					<1				
Hillview Auto Body	1	10/23/2018	G	FP	<10					<10					<10					<100					<10				
John H. Collins & Sons Company	1	4/4/2018	C	BP	<1					8.7					<1					<10					<1				
John H. Collins & Sons Company	1	11/26/2018	G	BP	<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100		<1000	<1000	<1000	<1000		<100	<100	<100	<100	
Mahr Federal Inc.	1	2/19/2018	C	BP	<1					<1					<1					<10					<1				
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<10					1.6					<10					<100					<10				
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	<1					<1					<1					<10					<1				
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	<1					1.22					<1					<10					<1				
RI Resource Recovery	1	2/6/2018	C	FP	<1					<1					<1					<10					<1				
RI Resource Recovery	1	4/23/2018	C	FP	<1					<1					<1					<10					<1				
RI Resource Recovery	1	5/1/2018	C	FP	<1					<1					<1					<10					<1				
RI Resource Recovery	1	10/23/2018	C	FP																									
RI Resource Recovery	1	10/23/2018	G	FP	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<100	<100	<100	<100	<100	<10	<10	<10	<10	<10
Tedor Pharma Inc.	1	2/8/2018	G	FP	<1					<1					<1					<10					<1				
Tedor Pharma Inc.	1	10/9/2018	G	FP	<1					<1					<1					<10					<1				
Univar USA, Inc.	1	3/1/2018	G	FP	<1					2.8					<1					<10					<1				
Univar USA, Inc.	1	10/15/2018	C	FP	<1	<1	<1			2.1	2	1.9			<1	<1	<1			<10	<10	<10			<1	<1	<1		

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

NBC Significant Industrial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	Chlorobenzene					Chloroethane					Chloroform					Chloromethane					cis-1,3-Dichloropropene				Dibromochloromethane				
GRAB NO.					1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4	5
					ppb					ppb					ppb					ppb					ppb				ppb				
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<10					<100					52.5					<100					<10				<10				
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<20	<20	<20	<20		<200	<200	<200	<100		26	25	27	23		<200	<200	<200	<200						<20	<20	<20	<20	
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP	<10					<100					<10					<100					<10				<10				
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP																													
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<200	<500	<500	<1000		<400	<1000	<1000	<2000		<200	<500	<500	<1000		<400	<1000	<1000	<2000		<200	<500	<500	<1000	<200	<500	<500	<1000	
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP	<10					<100					11					<100					<10				<10				
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<1000					<2000					<1000					<10000					<1000				<1000				
Cintas Corporation	1	5/8/2018	C	BP	<1					<10					1.5					<10					<1				<1				
Cintas Corporation	1	11/19/2018	C	BP																													
Cintas Corporation	1	11/19/2018	G	BP	<1	<1	<1	<1		<10	<10	<10	<10		1.4	2.1	1.9	1.7		<10	<10	<10	<10		<1	<1	<1	<1	<1	<1	<1	<1	
Conopco, Inc.	1	3/26/2018	C	BP	<1					<10					<1					<10					<1				<1				
Conopco, Inc.	1	11/28/2018	C	BP																													
Conopco, Inc.	1	11/28/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	<1					<10					42					<10					<1				<1				
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<1					<5					27					<10									<1				
Ecological Fibers, Inc.	1	3/6/2018	C	FP	<1					<10					1.7					<10					<1				<1				
Ecological Fibers, Inc.	1	11/15/2018	G	FP	<10	<10	<10	<1		<100	<100	<100	<10		<10	<10	<10	1.7		<100	<100	<100	<10		<10	<10	<10	<1	<10	<10	<10	<1	
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<1					<10					47					<10					<1				<1				
Godfrey and Wing Inc.	1	11/20/2018	G	BP	<1	<1	<1	<1		<10	<10	<10	<10		47	40	46	26		<10	<10	<10	<10		<1	<1	<1	<1	<1	<1	<1	<1	
Hillview Auto Body	1	4/24/2018	G	FP	<1					<10					8.8					<10					<1				<1				
Hillview Auto Body	1	10/23/2018	G	FP	<10					<50					<10					<100					<10				<10				
John H. Collins & Sons Company	1	4/4/2018	C	BP	<1					<10					16					<10					<1				3.7				
John H. Collins & Sons Company	1	11/26/2018	G	BP	<100	<100	<100	<100		<1000	<1000	<500	<1000		<100	<100	<100	<100		<1000	<1000	<1000	<1000		<100	<100	<100	<100	<100	<100	<100	<100	
Mahr Federal Inc.	1	2/19/2018	C	BP	<1					<10					2.8					<10					<1				<1				
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<10					<100					12					<10					<10				<10				
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	<1					<10					6.6					<10					<1				<1				
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	<1					<10					19.25					<10					<1				<1				
RI Resource Recovery	1	2/6/2018	C	FP	<1					<10					<1					<10					<1				<1				
RI Resource Recovery	1	4/23/2018	C	FP	<1					<10					<1					<10					<1				<1				
RI Resource Recovery	1	5/1/2018	C	FP	<1					<10					3.87					<10					<1				<1				
RI Resource Recovery	1	10/23/2018	C	FP																													
RI Resource Recovery	1	10/23/2018	G	FP	<10	<10	<10	<10	<10	<100	<100	<100	<100	<50	<10	<10	<10	<10	<10	<100	<100	<100	<100	<100					<10	<10	<10	<10	<10
Tedor Pharma Inc.	1	2/8/2018	G	FP	<1					<10					2					<10					<1				<1				
Tedor Pharma Inc.	1	10/9/2018	G	FP	<1					<10					4.9					<10									<1				
Univar USA, Inc.	1	3/1/2018	G	FP	<1					<10					47					<10					<1				<1				
Univar USA, Inc.	1	10/15/2018	C	FP	<1	<1	<1			<10	<10	<10			27	27	26			<10	<10	<10							<1	<1	<1		

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

NBC Significant Industrial User Sample Results

Company	Sample Location	Sample Date	Sample Type	District	Ethylbenzene					Methylene Chloride					o- xylene					p&m xylene					Tetrachloroethene				
GRAB NO.					1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
					ppb					ppb					ppb					ppb					ppb				
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<10					<50					<10					<10					<10				
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<20	<20	<20	<20		<100	<100	<100	<20		<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20	
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP	<10					<50					<10					<10					<10				
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP																									
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<200	<500	<500	<1000		<2000	<5000	<5000	<10000		<200	<500	<500	<1000		<400	<1000	<1000	<1000		<200	<500	<500	<1000	
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP	<10					<50					<10					<10					<10				
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<1000					<10000					<1000					<2000					<1000				
Cintas Corporation	1	5/8/2018	C	BP	<1					<5					<1					0.6					1.1				
Cintas Corporation	1	11/19/2018	C	BP																									
Cintas Corporation	1	11/19/2018	G	BP	<1	<1	<1	<1		<5	<5	<5	<5		<1	<1	<1	<1		<1	<1	<1	<1		1.2	1.3	1.2	1.6	
Conopco, Inc.	1	3/26/2018	C	BP	<1					<5					<1					<1					130				
Conopco, Inc.	1	11/28/2018	C	BP																									
Conopco, Inc.	1	11/28/2018	G	BP	<1	<1	<1	<1		<5	<5	<5	<5		<1	<1	<1	<1		<1	<1	<1	<1		61	57	52	68	
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	<1					<5					<1					<1					<1				
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<1					<1					1.3					1.3					<1				
Ecological Fibers, Inc.	1	3/6/2018	C	FP	0.6					<5					2.3					4.9					<1				
Ecological Fibers, Inc.	1	11/15/2018	G	FP	<10	<10	<10	<1		<50	<50	<50	<5		<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1	
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<1					<5					<1					<1					<1				
Godfrey and Wing Inc.	1	11/20/2018	G	BP	<1	<1	<1	<1		<5	<5	<5	<5		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1	
Hillview Auto Body	1	4/24/2018	G	FP	<1					<5					<1					2.4					<1				
Hillview Auto Body	1	10/23/2018	G	FP	<10					<10					<10					<10					<10				
John H. Collins & Sons Company	1	4/4/2018	C	BP	280					74					355					1270					<1				
John H. Collins & Sons Company	1	11/26/2018	G	BP	<100	<100	<100	<100		650	536	<100	<500		<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100	
Mahr Federal Inc.	1	2/19/2018	C	BP	<1					<5					<1					<1					<1				
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<10					<50					<10					0.4					<10				
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	<1					<5					<1					2.1					<1				
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	1.22					<5					1.12					3.8					1.08				
RI Resource Recovery	1	2/6/2018	C	FP	<1					<5					<1					<1					<1				
RI Resource Recovery	1	4/23/2018	C	FP	<1					<5					<1					<1					<1				
RI Resource Recovery	1	5/1/2018	C	FP	<1					<5					<1					<1					<1				
RI Resource Recovery	1	10/23/2018	C	FP																									
RI Resource Recovery	1	10/23/2018	G	FP	<10	<10	<10	<10	<10	<50	<50	<50	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tedor Pharma Inc.	1	2/8/2018	G	FP	<1					<5					<1					<1					<1				
Tedor Pharma Inc.	1	10/9/2018	G	FP	<1					<5					<1					<1					<1				
Univar USA, Inc.	1	3/1/2018	G	FP	<1					<5					<1					<1					<1				
Univar USA, Inc.	1	10/15/2018	C	FP	<1	<1	<1			<5	<5	<5			<1	<1	<1			<1	<1	<1			<1	<1	<1		

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

NBC Significant Industrial 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	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
					ppb					ppb					ppb					ppb					ppb					ppb				
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<10					<10					<10					<10					<10					<10				
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20		<20	<20	<20	<20	
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP	18					<10					<10					<10					<10					<10				
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP																														
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000		<200	<500	<500	<1000	
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP	20					<10					<10					<10					<10					<10				
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<1000					<1000					<1000					<1000					<1000					<1000				
Cintas Corporation	1	5/8/2018	C	BP	0.8					<1					<1					<1					<1					<1				
Cintas Corporation	1	11/19/2018	C	BP																														
Cintas Corporation	1	11/19/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1	
Conopco, Inc.	1	3/26/2018	C	BP	<1					2.5					<1					46					<1					<1				
Conopco, Inc.	1	11/28/2018	C	BP																														
Conopco, Inc.	1	11/28/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		15	14	14	17		<1	<1	<1	<1		<1	<1	<1	<1	
Denison Acquisition Company, LLC	1	2/6/2018	G	BP	<1					<1					<1					<1					<1					<1				
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	<1					<1					<1					<1					<1					<1				
Ecological Fibers, Inc.	1	3/6/2018	C	FP	<1					<1					<1					<1					<1					<1				
Ecological Fibers, Inc.	1	11/15/2018	G	FP	<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1		<10	<10	<10	<1	
Godfrey and Wing Inc.	1	4/4/2018	C	BP	<1					<1					<1					1					<1					<1				
Godfrey and Wing Inc.	1	11/20/2018	G	BP	<1	<1	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1		1.5	2.4	<1	<1		<1	<1	<1	<1		<1	<1	<1	<1	
Hillview Auto Body	1	4/24/2018	G	FP	9.9					<1					<1					<1					<1					<1				
Hillview Auto Body	1	10/23/2018	G	FP	<10					<10					<10					<10					<10					<10				
John H. Collins & Sons Company	1	4/4/2018	C	BP	1328					<1					<1					<1					<1					<1				
John H. Collins & Sons Company	1	11/26/2018	G	BP	<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100		<100	<100	<100	<100	
Mahr Federal Inc.	1	2/19/2018	C	BP	<1					<1					<1					<1					<1					<1				
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP	<10					<10					<10					<10					<10					<10				
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP	1.4					<1					<1					<1					<1					<1				
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	<1					<1					<1					1.3					<1					<1				
RI Resource Recovery	1	2/6/2018	C	FP	<1					<1					<1					<1					<1					<1				
RI Resource Recovery	1	4/23/2018	C	FP	<1					<1					<1					<1					<1					<1				
RI Resource Recovery	1	5/1/2018	C	FP	2.2					<1					<1					<1					<1					<1				
RI Resource Recovery	1	10/23/2018	C	FP																														
RI Resource Recovery	1	10/23/2018	G	FP	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Tedor Pharma Inc.	1	2/8/2018	G	FP	<1					<1					<1					<1					<1					<1				
Tedor Pharma Inc.	1	10/9/2018	G	FP	<1					<1					<1					<1					<1					<1				
Univar USA, Inc.	1	3/1/2018	G	FP	<1					<1					<1					<1					<1					<1				
Univar USA, Inc.	1	10/15/2018	C	FP	<1	<1	<1			<1	<1	<1			<1	<1	<1			<1	<1	<1			<1	<1	<1			<1	<1	<1		

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

NBC Significant Industrial User Sample Results

Company GRAB NO.	Sample Location	Sample Date	Sample Type	District	Acetone					TTO*
					1	2	3	4	5	
					ppb					ppb
A. Harrison & Company, Inc.	1	5/22/2018	G	BP	<100					52.5
A. Harrison & Company, Inc.	1	10/19/2018	C	BP	<200	200	<200	<200		225.3
Aspen Aerogels Rhode Island, LLC	1	4/9/2018	C	BP						18.0
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	C	BP						<9.52
Aspen Aerogels Rhode Island, LLC	1	12/4/2018	G	BP	<2000	<5000	<5000	<10000		<10000
Aspen Aerogels Rhode Island, LLC	2	4/9/2018	G	BP						31.0
Aspen Aerogels Rhode Island, LLC	2	12/5/2018	G	BP	<10000					<10000
Cintas Corporation	1	5/8/2018	C	BP						4.0
Cintas Corporation	1	11/19/2018	C	BP						<20
Cintas Corporation	1	11/19/2018	G	BP	280	280	230	200		250.6
Conopco, Inc.	1	3/26/2018	C	BP						202.7
Conopco, Inc.	1	11/28/2018	C	BP						<5
Conopco, Inc.	1	11/28/2018	G	BP						78.5
Denison Acquisition Company, LLC	1	2/6/2018	G	BP						48.1
Denison Acquisition Company, LLC	1	10/3/2018	G	BP	720					750.8
Ecological Fibers, Inc.	1	3/6/2018	C	FP						10.5
Ecological Fibers, Inc.	1	11/15/2018	G	FP	2100	2300	2500	45		1738.0
Godfrey and Wing Inc.	1	4/4/2018	C	BP						51.5
Godfrey and Wing Inc.	1	11/20/2018	G	BP	15	12	<10	<10		57.9
Hillview Auto Body	1	4/24/2018	G	FP						21.1
Hillview Auto Body	1	10/23/2018	G	FP	270					270.0
John H. Collins & Sons Company	1	4/4/2018	C	BP						3335.4
John H. Collins & Sons Company	1	11/26/2018	G	BP	<1000	<1000	<1000	<1000		<1000
Mahr Federal Inc.	1	2/19/2018	C	BP						2.8
Organic Dyes and Pigments, LLC	1	2/6/2018	C	FP						14.0
Organic Dyes and Pigments, LLC	1	3/21/2018	C	FP						10.1
Organic Dyes and Pigments, LLC	1	5/1/2018	C	FP	493.75					522.7
RI Resource Recovery	1	2/6/2018	C	FP						<10
RI Resource Recovery	1	4/23/2018	C	FP						<10
RI Resource Recovery	1	5/1/2018	C	FP	24.33					30.4
RI Resource Recovery	1	10/23/2018	C	FP						<10
RI Resource Recovery	1	10/23/2018	G	FP	270	<100	<100	<100	<100	270.0
Tedor Pharma Inc.	1	2/8/2018	G	FP	430					432.0
Tedor Pharma Inc.	1	10/9/2018	G	FP	610					614.9
Univar USA, Inc.	1	3/1/2018	G	FP						49.8
Univar USA, Inc.	1	10/15/2018	C	FP	<10	<10	<10			28.7

*TTO and additional NBC SIU data shown in Table 27A

Table 28B: NBC SIU TTO Result Detail

Septage Monitoring Data - 2018

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
BB93184	1/2/2018	<0.015	0.015	<0.075	0.075	1.964	0.02	0.083	0.075	0.061	0.05	<0.040	0.04	4.224	0.06
BB93185	1/3/2018	<0.015	0.015	<0.075	0.075	6.710	0.02	0.138	0.075	<0.050	0.05	<0.040	0.04	6.736	0.06
BB93962	1/10/2018	0.055	0.015	0.135	0.075	4.505	0.02	0.227	0.075	0.132	0.05	<0.040	0.04	12.701	0.06
BB93961	1/11/2018	0.015	0.015	0.076	0.075	11.343	0.02	0.253	0.075	0.150	0.05	<0.040	0.04	14.399	0.06
BB93960	1/12/2018	0.021	0.015	0.284	0.075	15.374	0.02	1.414	0.075	0.251	0.05	<0.040	0.04	15.565	0.06
BB94457	1/17/2018	<0.015	0.015	<0.075	0.075	2.980	0.02	0.222	0.075	0.052	0.05	<0.040	0.04	4.240	0.06
BB94458	1/18/2018	<0.015	0.015	<0.075	0.075	2.895	0.02	0.076	0.075	<0.050	0.05	<0.040	0.04	4.005	0.06
BB94459	1/19/2018	0.050	0.015	0.150	0.075	8.985	0.02	1.946	0.075	0.248	0.05	0.065	0.04	26.015	0.3
BB95141	1/23/2018	0.019	0.015	<0.075	0.075	8.220	0.02	0.168	0.075	0.166	0.05	<0.040	0.04	8.993	0.06
BB95140	1/24/2018	0.029	0.015	0.098	0.075	16.915	0.02	1.105	0.075	0.161	0.05	<0.040	0.04	16.347	0.06
BB95139	1/26/2018	<0.015	0.015	<0.075	0.075	3.331	0.02	0.167	0.075	0.066	0.05	<0.040	0.04	5.217	0.06
BB95980	1/29/2018	0.023	0.015	0.077	0.075	26.073	0.02	0.485	0.075	0.180	0.05	<0.040	0.04	16.873	0.06
BB95981	1/31/2018	<0.015	0.015	<0.075	0.075	5.907	0.02	0.215	0.075	0.094	0.05	<0.040	0.04	8.532	0.06
BB95982	2/2/2018	0.021	0.015	0.082	0.075	8.810	0.02	0.287	0.075	0.210	0.05	<0.040	0.04	10.839	0.06
BB96266	2/6/2018	<0.015	0.015	<0.075	0.075	7.537	0.02	0.164	0.075	0.081	0.05	<0.040	0.04	7.199	0.06
BB96265	2/7/2018	3.600	0.015	0.221	0.075	47.325	0.1	4.400	0.075	0.296	0.05	0.091	0.04	33.035	0.3
BB96264	2/8/2018	0.083	0.015	<0.075	0.075	3.995	0.02	0.217	0.075	0.070	0.05	<0.040	0.04	8.048	0.06
BB96881	2/14/2018	<0.015	0.015	<0.075	0.075	4.380	0.02	0.249	0.075	0.077	0.05	<0.040	0.04	8.983	0.06
BB96882	2/15/2018	0.030	0.015	0.096	0.075	10.941	0.02	0.386	0.075	0.182	0.05	<0.040	0.04	15.339	0.06
BB96883	2/16/2018	0.020	0.015	<0.075	0.075	6.980	0.02	0.185	0.075	0.088	0.05	<0.040	0.04	7.816	0.06
BB97530	2/21/2018	0.022	0.015	0.192	0.075	8.514	0.02	0.346	0.075	0.149	0.05	0.054	0.04	12.338	0.06
BB97531	2/22/2018	0.036	0.015	0.125	0.075	11.364	0.02	1.195	0.075	0.239	0.05	<0.040	0.04	17.861	0.06
BB97532	2/23/2018	<0.015	0.015	<0.075	0.075	5.880	0.02	0.148	0.075	0.052	0.05	<0.040	0.04	5.992	0.06
BB98062	2/28/2018	<0.015	0.015	<0.075	0.075	10.047	0.02	0.380	0.075	0.090	0.05	<0.040	0.04	8.921	0.06
BB98063	3/1/2018	<0.015	0.015	<0.075	0.075	0.918	0.02	<0.075	0.075	<0.050	0.05	<0.200	0.2	1.985	0.06
BB98064	3/2/2018	<0.015	0.015	<0.075	0.075	3.682	0.02	0.094	0.075	0.051	0.05	<0.040	0.04	4.802	0.06
BB98813	3/5/2018	<0.015	0.015	<0.075	0.075	4.666	0.02	0.247	0.075	0.079	0.05	<0.040	0.04	6.556	0.06
BB98814	3/6/2018	<0.015	0.015	<0.075	0.075	4.929	0.02	0.180	0.075	0.064	0.05	<0.040	0.04	7.231	0.06
BB98815	3/7/2018	<0.015	0.015	<0.075	0.075	8.218	0.02	0.311	0.075	0.104	0.05	<0.040	0.04	9.555	0.06
BB99312	3/12/2018	0.0396	0.015	0.0851	0.075	7.2337	0.02	0.2291	0.075	0.1117	0.05	<0.0400	0.04	12.8194	0.06
BB99313	3/15/2018	0.0161	0.015	<0.0750	0.075	10.1357	0.02	0.3006	0.075	0.1261	0.05	<0.0400	0.04	13.5273	0.06
BB99314	3/16/2018	0.0330	0.015	0.1492	0.075	15.9880	0.02	0.6224	0.075	0.2075	0.05	<0.0400	0.04	20.5532	0.06
BC00019	3/21/2018	<0.0150	0.015	<0.0750	0.075	3.6013	0.02	0.1571	0.075	0.0773	0.05	0.0435	0.04	8.2146	0.06
BC00018	3/23/2018	0.0260	0.015	0.0801	0.075	9.0148	0.02	0.6415	0.075	0.1329	0.05	<0.0400	0.04	12.6013	0.06
BC00017	3/24/2018	<0.0150	0.015	<0.0750	0.075	0.6325	0.02	<0.0750	0.075	0.0816	0.05	<0.0400	0.04	2.2850	0.06
BC00569	3/29/2018	<0.0150	0.015	<0.0750	0.075	4.8581	0.02	0.3123	0.075	0.0687	0.05	<0.0400	0.04	9.3395	0.06
BC00570	3/30/2018	<0.0150	0.015	<0.0750	0.075	2.8159	0.02	0.0917	0.075	<0.0500	0.05	<0.0400	0.04	6.2804	0.06
BC00571	3/31/2018	0.0150	0.015	<0.0750	0.075	7.3094	0.02	0.3381	0.075	0.0953	0.05	<0.0400	0.04	11.2716	0.06
BC01227	4/2/2018	<0.0150	0.015	<0.0750	0.075	6.3941	0.02	0.2632	0.075	0.1030	0.05	0.0438	0.04	13.5592	0.06
BC01228	4/3/2018	<0.0150	0.015	<0.0750	0.075	1.0114	0.02	0.0988	0.075	<0.0500	0.05	<0.0400	0.04	5.9846	0.06
BC01229	4/4/2018	0.0295	0.015	<0.0750	0.075	8.2578	0.02	1.3842	0.075	0.1207	0.05	<0.0400	0.04	15.2871	0.06
BC01677	4/12/2018	<0.015	0.015	<0.075	0.075	4.451	0.02	0.148	0.075	0.061	0.05	<0.040	0.04	7.042	0.06
BC01676	4/13/2018	<0.015	0.015	<0.075	0.075	4.466	0.02	0.224	0.075	0.091	0.05	<0.040	0.04	7.969	0.06
BC01675	4/14/2018	<0.015	0.015	<0.075	0.075	2.996	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	4.484	0.06
BC02283	4/17/2018	0.038	0.015	<0.075	0.075	5.704	0.02	1.293	0.075	0.087	0.05	<0.040	0.04	8.896	0.06
BC02282	4/18/2018	<0.015	0.015	<0.075	0.075	0.774	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	3.924	0.06
BC02396	4/19/2018	<0.015	0.015	<0.075	0.075	3.565	0.02	0.133	0.075	0.050	0.05	<0.040	0.04	5.679	0.06
BC02397	4/20/2018	0.015	0.015	0.097	0.075	10.278	0.02	0.271	0.075	0.125	0.05	<0.040	0.04	11.334	0.06
BC02398	4/21/2018	<0.015	0.015	<0.075	0.075	0.606	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	1.132	0.06

Table 29: Septage Sampling Data

Septage Monitoring Data - 2018

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
BC02935	4/26/2018	0.015	0.015	<0.075	0.075	6.161	0.02	0.265	0.075	0.105	0.05	<0.040	0.04	9.976	0.06
BC02936	4/27/2018	<0.015	0.015	<0.075	0.075	4.862	0.02	0.253	0.075	0.074	0.05	<0.040	0.04	6.930	0.06
BC02937	4/28/2018	<0.015	0.015	<0.075	0.075	0.485	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	0.893	0.06
BC03625	4/30/2018	<0.015	0.015	<0.075	0.075	3.165	0.02	0.077	0.075	<0.050	0.05	<0.040	0.04	4.475	0.06
BC03624	5/2/2018	0.135	0.015	0.155	0.075	24.417	0.02	0.680	0.075	0.239	0.05	0.436	0.04	17.812	0.06
BC03623	5/4/2018	<0.015	0.015	<0.075	0.075	4.606	0.02	0.133	0.075	0.065	0.05	<0.040	0.04	6.843	0.06
BC04244	5/9/2018	0.015	0.015	<0.075	0.075	5.598	0.02	0.454	0.075	0.090	0.05	<0.040	0.04	8.491	0.06
BC04245	5/10/2018	<0.015	0.015	<0.075	0.075	2.733	0.02	0.091	0.075	<0.050	0.05	<0.040	0.04	3.560	0.06
BC04246	5/11/2018	0.020	0.015	<0.075	0.075	9.395	0.02	0.379	0.075	0.140	0.05	<0.040	0.04	13.946	0.06
BC04903	5/17/2018	<0.015	0.015	<0.075	0.075	0.440	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	3.474	0.06
BC04904	5/18/2018	<0.015	0.015	<0.075	0.075	1.094	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	6.815	0.06
BC04905	5/19/2018	<0.015	0.015	<0.075	0.075	1.830	0.02	<0.075	0.075	<0.050	0.05	<0.040	0.04	3.379	0.06
BC04643	5/21/2018	<0.015	0.015	<0.075	0.075	7.383	0.02	0.184	0.075	0.083	0.05	<0.040	0.04	10.842	0.06
BC04642	5/22/2018	<0.015	0.015	<0.075	0.075	4.487	0.02	0.349	0.075	0.079	0.05	<0.040	0.04	7.554	0.06
BC04641	5/23/2018	<0.015	0.015	<0.075	0.075	2.898	0.02	0.256	0.075	0.085	0.05	<0.040	0.04	10.155	0.06
BC06066	5/29/2018	0.016	0.015	<0.075	0.075	11.339	0.02	0.418	0.075	0.128	0.05	<0.040	0.04	12.224	0.06
BC06067	5/30/2018	<0.015	0.015	<0.075	0.075	5.496	0.02	0.210	0.075	0.112	0.05	<0.040	0.04	12.881	0.06
BC06068	5/31/2018	<0.015	0.015	<0.075	0.075	3.442	0.02	0.177	0.075	0.070	0.05	<0.040	0.04	7.447	0.06
CA00545-BP-SEPTAGE	6/4/2018	0.02517	0.015	0.1007	0.075	13.31	0.02	0.5644	0.075	0.1362	0.05	<0.025	0.025	22.30	0.06
CA00546-BP-SEPTAGE	6/8/2018	<0.015	0.015	<0.075	0.075	3.986	0.02	0.4164	0.075	0.1632	0.05	<0.025	0.025	6.130	0.06
CA00547-BP-SEPTAGE	6/9/2018	<0.015	0.015	<0.075	0.075	1.784	0.02	0.1042	0.075	<0.050	0.05	<0.025	0.025	3.231	0.06
CA00544-BP-SEPTAGE	6/12/2018	<0.015	0.015	<0.075	0.075	4.166	0.02	0.2592	0.075	0.06266	0.05	<0.025	0.025	7.164	0.06
CA00542-BP-SEPTAGE	6/15/2018	<0.015	0.015	<0.075	0.075	4.209	0.02	0.4651	0.075	0.09569	0.05	<0.025	0.025	8.889	0.06
CA00543-BP-SEPTAGE	6/16/2018	<0.015	0.015	<0.075	0.075	2.132	0.02	0.1033	0.075	0.05820	0.05	0.03410	0.025	5.255	0.06
CA00977-BP-SEPTAGE	6/19/2018	0.01705	0.015	0.1021	0.075	12.01	0.02	0.4404	0.075	0.1295	0.05	<0.025	0.025	14.08	0.06
CA00978-BP-SEPTAGE	6/20/2018	0.01531	0.015	<0.075	0.075	7.458	0.02	0.3088	0.075	0.1026	0.05	<0.025	0.025	11.48	0.06
CA00979-BP-SEPTAGE	6/22/2018	<0.015	0.015	<0.075	0.075	0.7040	0.02	<0.075	0.075	0.06522	0.05	<0.025	0.025	1.567	0.06
CA01418-BP-SEPTAGE	6/25/2018	0.03326	0.015	0.09715	0.075	9.755	0.02	0.5726	0.075	0.1451	0.05	0.02789	0.025	15.18	0.06
CA01417-BP-SEPTAGE	6/28/2018	<0.015	0.015	<0.075	0.075	4.529	0.02	0.1224	0.075	0.05428	0.05	<0.025	0.025	4.050	0.06
CA01416-BP-SEPTAGE	6/30/2018	<0.015	0.015	<0.075	0.075	5.450	0.02	0.2797	0.075	0.1172	0.05	<0.025	0.025	7.262	0.06
CA01520-BP-SEPTAGE	7/2/2018	<0.015	0.015	<0.075	0.075	0.4682	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.830	0.06
CA01519-BP-SEPTAGE	7/5/2018	<0.015	0.015	<0.075	0.075	2.253	0.02	0.1748	0.075	<0.050	0.05	<0.025	0.025	5.166	0.06
CA01521-BP-SEPTAGE	7/6/2018	0.03725	0.015	0.1315	0.075	15.96	0.02	0.3942	0.075	0.2445	0.05	0.02794	0.025	16.62	0.06
CA02118-BP-SEPTAGE	7/9/2018	0.03328	0.015	0.1298	0.075	11.23	0.02	0.4485	0.075	0.2264	0.05	0.04012	0.025	11.51	0.06
CA02119-BP-SEPTAGE	7/10/2018	<0.015	0.015	<0.075	0.075	0.9188	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.600	0.06
CA02120-BP-SEPTAGE	7/11/2018	<0.015	0.015	<0.075	0.075	1.698	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.846	0.06
CA02555-BP-SEPTAGE	7/17/2018	0.01538	0.015	<0.075	0.075	5.175	0.02	0.2295	0.075	0.1085	0.05	0.02538	0.025	5.702	0.06
CA02556-BP-SEPTAGE	7/18/2018	<0.015	0.015	<0.075	0.075	1.223	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.969	0.06
CA02557-BP-SEPTAGE	7/19/2018	<0.015	0.015	<0.075	0.075	1.731	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.405	0.06
CA03052-BP-SEPTAGE	7/25/2018	0.03579	0.015	0.4104	0.075	8.362	0.02	1.030	0.075	0.2848	0.05	<0.025	0.025	19.30	0.06
CA03053-BP-SEPTAGE	7/26/2018	<0.015	0.015	<0.075	0.075	7.571	0.02	0.1187	0.075	<0.050	0.05	<0.025	0.025	2.857	0.06
CA03054-BP-SEPTAGE	7/27/2018	0.01692	0.015	<0.075	0.075	18.36	0.02	0.7423	0.075	0.1306	0.05	<0.025	0.025	22.91	0.06
CA03390-BP-SEPTAGE	7/30/2018	<0.015	0.015	<0.075	0.075	0.6343	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.8497	0.06
CA03391-BP-SEPTAGE	7/31/2018	0.04431	0.015	0.5261	0.075	14.48	0.02	1.096	0.075	0.3878	0.05	0.1340	0.025	21.62	0.06
CA03392-BP-SEPTAGE	8/1/2018	<0.015	0.015	<0.075	0.075	1.052	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.402	0.06
CA03942-BP-SEPTAGE	8/7/2018	<0.015	0.015	0.07920	0.075	13.44	0.02	0.5045	0.075	0.1320	0.05	<0.025	0.025	17.82	0.06
CA03943-BP-SEPTAGE	8/9/2018	<0.015	0.015	<0.075	0.075	0.3206	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.758	0.06
CA03944-BP-SEPTAGE	8/11/2018	<0.015	0.015	<0.075	0.075	0.3677	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.823	0.06
CA04279-BP-SEPTAGE	8/14/2018	0.01955	0.015	0.09082	0.075	15.76	0.02	0.2975	0.075	0.1494	0.05	0.04029	0.025	19.17	0.06

Table 29: Septage Sampling Data

Septage Monitoring Data - 2018

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
CA04280-BP-SEPTAGE	8/15/2018	<0.015	0.015	<0.075	0.075	2.123	0.02	0.1843	0.075	0.05463	0.05	<0.025	0.025	7.443	0.06
CA04281-BP-SEPTAGE	8/16/2018	0.01967	0.015	<0.075	0.075	5.954	0.02	0.8602	0.075	0.1704	0.05	<0.025	0.025	32.33	0.3
CA04771-BP-SEPTAGE	8/20/2018	0.02827	0.015	0.1481	0.075	15.93	0.02	1.011	0.075	0.2252	0.05	0.03099	0.025	21.57	0.06
CA04772-BP-SEPTAGE	8/22/2018	0.01541	0.015	<0.075	0.075	3.499	0.02	0.1639	0.075	0.09103	0.05	<0.025	0.025	6.200	0.06
CA04773-BP-SEPTAGE	8/25/2018	<0.015	0.015	<0.075	0.075	1.664	0.02	0.1119	0.075	0.08213	0.05	<0.025	0.025	4.551	0.06
CA05155-BP-SEPTAGE	8/28/2018	<0.015	0.015	<0.075	0.075	7.943	0.02	0.2796	0.075	0.1269	0.05	<0.025	0.025	12	0.06
CA05156-BP-SEPTAGE	8/29/2018	0.03765	0.015	0.1056	0.075	11.75	0.02	1.547	0.075	0.1602	0.05	0.2635	0.025	20.09	0.06
CA05157-BP-SEPTAGE	8/30/2018	0.02033	0.015	0.1083	0.075	15.06	0.02	0.3281	0.075	0.1564	0.05	0.03936	0.025	14.26	0.06
CA05645-BP-SEPTAGE	9/4/2018	<0.015	0.015	<0.075	0.075	0.2223	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.142	0.06
CA05644-BP-SEPTAGE	9/6/2018	0.03649	0.015	0.08869	0.075	7.168	0.02	0.2691	0.075	0.1417	0.05	<0.025	0.025	17.32	0.06
CA05643-BP-SEPTAGE	9/8/2018	<0.015	0.015	<0.075	0.075	0.3489	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.624	0.06
CA06065-BP-SEPTAGE	9/11/2018	<0.015	0.015	<0.075	0.075	0.7681	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.180	0.06
CA06064-BP-SEPTAGE	9/13/2018	0.01677	0.015	<0.075	0.075	8.535	0.02	0.2596	0.075	0.1496	0.05	<0.025	0.025	37.07	0.3
CA06063-BP-SEPTAGE	9/15/2018	<0.015	0.015	<0.075	0.075	1.069	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	3.217	0.06
CA06567-BP-SEPTAGE	9/17/2018	<0.015	0.015	<0.075	0.075	1.402	0.02	0.1089	0.075	<0.050	0.05	<0.025	0.025	3.389	0.06
CA06568-BP-SEPTAGE	9/19/2018	<0.015	0.015	<0.075	0.075	4.900	0.02	0.1688	0.075	0.09531	0.05	<0.025	0.025	20.91	0.06
CA06569-BP-SEPTAGE	9/21/2018	<0.015	0.015	<0.075	0.075	1.663	0.02	0.1475	0.075	0.05971	0.05	<0.025	0.025	4.926	0.06
CA06969-BP-SEPTAGE	9/25/2018	0.01600	0.015	<0.075	0.075	4.192	0.02	0.1594	0.075	0.1582	0.05	<0.025	0.025	15.71	0.06
CA06970-BP-SEPTAGE	9/28/2018	<0.015	0.015	<0.075	0.075	2.396	0.02	0.08207	0.075	0.1281	0.05	<0.025	0.025	16.59	0.06
CA06971-BP-SEPTAGE	9/29/2018	<0.015	0.015	<0.075	0.075	0.3228	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.715	0.06
CA07546-BP-SEPTAGE	10/1/2018	<0.015	0.015	<0.075	0.075	1.782	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.778	0.06
CA07545-BP-SEPTAGE	10/4/2018	<0.015	0.015	<0.075	0.075	0.5617	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.380	0.06
CA07544-BP-SEPTAGE	10/6/2018	<0.015	0.015	<0.075	0.075	0.5475	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.216	0.06
CA07868-BP-SEPTAGE	10/9/2018	<0.015	0.015	<0.075	0.075	0.7964	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.567	0.06
CA07869-BP-SEPTAGE	10/11/2018	0.04428	0.015	0.3756	0.075	39.37	0.02	0.6706	0.075	0.4102	0.05	0.06527	0.025	53.78	0.3
CA07870-BP-SEPTAGE	10/13/2018	0.06248	0.015	0.3316	0.075	55.73	0.1	1.351	0.075	0.4234	0.05	0.1374	0.025	35.69	0.3
CA08403-BP-SEPTAGE	10/18/2018	0.01887	0.015	0.1553	0.075	22.08	0.02	0.4422	0.075	0.1539	0.05	0.04316	0.025	20.35	0.06
CA08404-BP-SEPTAGE	10/19/2018	<0.015	0.015	<0.075	0.075	9.424	0.02	0.1635	0.075	0.08510	0.05	<0.025	0.025	20.59	0.06
CA08405-BP-SEPTAGE	10/20/2018	0.03307	0.015	0.1909	0.075	14.94	0.02	1.081	0.075	0.2097	0.05	0.03715	0.025	26.50	0.3
CA08787-BP-SEPTAGE	10/23/2018	0.01868	0.015	0.08973	0.075	15.43	0.02	0.5764	0.075	0.1425	0.05	0.03043	0.025	17.83	0.06
CA08788-BP-SEPTAGE	10/25/2018	<0.015	0.015	<0.075	0.075	2.735	0.02	0.2232	0.075	0.06025	0.05	<0.025	0.025	7.244	0.06
CA08789-BP-SEPTAGE	10/27/2018	0.02203	0.015	0.08825	0.075	8.674	0.02	0.5212	0.075	0.1537	0.05	0.04453	0.025	19.14	0.06
CA09284-BP-SEPTAGE	10/30/2018	<0.015	0.015	<0.075	0.075	6.571	0.02	0.3241	0.075	0.06949	0.05	<0.025	0.025	9.609	0.06
CA09285-BP-SEPTAGE	11/1/2018	<0.015	0.015	0.08113	0.075	3.998	0.02	0.2950	0.075	0.1263	0.05	<0.025	0.025	14.24	0.06
CA09286-BP-SEPTAGE	11/3/2018	<0.015	0.015	<0.075	0.075	4.742	0.02	0.08846	0.075	<0.050	0.05	<0.025	0.025	7.048	0.06
CA09504-BP-SEPTAGE	11/5/2018	<0.015	0.015	<0.075	0.075	1.129	0.02	0.2602	0.075	<0.050	0.05	<0.025	0.025	4.576	0.06
CA09505-BP-SEPTAGE	11/7/2018	<0.015	0.015	<0.075	0.075	1.890	0.02	0.1598	0.075	0.06234	0.05	<0.025	0.025	6.049	0.06
CA09506-BP-SEPTAGE	11/9/2018	<0.015	0.015	<0.075	0.075	5.490	0.02	0.08791	0.075	<0.050	0.05	<0.025	0.025	6.289	0.06
CA10283-BP-SEPTAGE	11/13/2018	<0.015	0.015	<0.075	0.075	0.2345	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.7698	0.06
CA10284-BP-SEPTAGE	11/14/2018	<0.015	0.015	<0.075	0.075	1.587	0.02	0.08035	0.075	<0.050	0.05	0.02724	0.025	4.365	0.06
CA10285-BP-SEPTAGE	11/15/2018	<0.015	0.015	<0.075	0.075	1.943	0.02	0.09983	0.075	0.05858	0.05	0.03485	0.025	5.408	0.06
CA10624-BP-SEPTAGE	11/20/2018	<0.015	0.015	<0.075	0.075	4.457	0.02	0.3657	0.075	0.06046	0.05	<0.025	0.025	5.467	0.06
CA10625-BP-SEPTAGE	11/21/2018	<0.015	0.015	<0.075	0.075	0.4762	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.418	0.06
CA10626-BP-SEPTAGE	11/23/2018	0.02115	0.015	0.07971	0.075	9.597	0.02	0.7516	0.075	0.1439	0.05	<0.025	0.025	13.10	0.06
CA11225-BP-SEPTAGE	11/26/2018	<0.015	0.015	<0.075	0.075	2.113	0.02	0.1153	0.075	<0.050	0.05	<0.025	0.025	5.776	0.06
CA11224-BP-SEPTAGE	11/28/2018	<0.015	0.015	<0.075	0.075	3.572	0.02	0.1516	0.075	0.07379	0.05	<0.025	0.025	6.836	0.06
CA11223-BP-SEPTAGE	12/1/2018	<0.015	0.015	<0.075	0.075	1.222	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.922	0.06
CA11667-BP-SEPTAGE	12/5/2018	<0.015	0.015	<0.075	0.075	0.4672	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.8974	0.06
CA11668-BP-SEPTAGE	12/6/2018	0.03958	0.015	0.1190	0.075	41.21	0.02	0.9378	0.075	0.1902	0.05	0.07445	0.025	16.67	0.06

Table 29: Septage Sampling Data

Septage Monitoring Data - 2018

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
CA11666-BP-SEPTAGE	12/8/2018	<0.015	0.015	<0.075	0.075	5.720	0.02	0.1146	0.075	0.07134	0.05	<0.025	0.025	6.497	0.06
CA12091-BP-SEPTAGE	12/10/2018	<0.015	0.015	<0.075	0.075	0.6617	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.054	0.06
CA12092-BP-SEPTAGE	12/11/2018	<0.015	0.015	<0.075	0.075	1.791	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	2.877	0.06
CA12093-BP-SEPTAGE	12/12/2018	<0.015	0.015	<0.075	0.075	3.005	0.02	0.1591	0.075	0.08870	0.05	0.3081	0.025	9.910	0.06
CA12553-BP-SEPTAGE	12/17/2018	<0.015	0.015	<0.075	0.075	0.9355	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.8410	0.06
CA12554-BP-SEPTAGE	12/18/2018	<0.015	0.015	<0.075	0.075	0.4212	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	0.9259	0.06
CA12555-BP-SEPTAGE	12/19/2018	<0.015	0.015	<0.075	0.075	6.525	0.02	<0.075	0.075	0.1063	0.05	<0.025	0.025	4.845	0.06
CA13047-BP-SEPTAGE	12/26/2018	<0.015	0.015	<0.075	0.075	0.8784	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.539	0.06
CA13048-BP-SEPTAGE	12/27/2018	<0.015	0.015	<0.075	0.075	1.190	0.02	0.08980	0.075	0.05004	0.05	<0.025	0.025	4.393	0.06
CA13049-BP-SEPTAGE	12/28/2018	<0.015	0.015	<0.075	0.075	0.5691	0.02	<0.075	0.075	<0.050	0.05	<0.025	0.025	1.596	0.06
CA13455-BP-SEPTAGE	12/31/2018	<0.015	0.015	<0.075	0.075	2.646	0.02	0.1692	0.075	0.06931	0.05	<0.025	0.025	9.482	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

Table 30: Septage Summary 1996-2018

Field's Point and Bucklin Point 2018 Stormwater Sampling Results
Fecal coliform, Total Nitrogen, Total Kjeldahl Nitrogen, Nitrate-Nitrite

Date	Location	Fecal Coliform Bacteria (MPN/100mL)	Total Nitrogen (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Nitrate-Nitrite (mg/L)
3/7/2018	Field's Point Stormwater Aeration Drain	70	2.021	1.68	0.341
3/7/2018	Field's Point Stormwater Wet Weather Drain	<30	<0.500	<0.500	0.211
3/7/2018	Bucklin Point Stormwater North Diversion Structure	<30	8.200	<0.500	8.200

Table 31: Field's Point and Bucklin Point Stormwater Sampling Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
BAY																			
1/31/2018	10:55:00 AM	Phillipsdale Landing Bottom	BAY	2.5	24.44	2.61	6.86		522	9.61		215	70	2390	1270	909	15.73		
1/31/2018	10:50:00 AM	Phillipsdale Landing Surface	BAY	0.849	8.81	1.55	6.85		102	2.62		28.8	7.97	457	833	259	19.79	2.98	0.9647
2/14/2018	9:45:00 AM	Bullock Reach Buoy Bottom	BAY						38.9	1.61		<7.0	<5	228	683	153	36.63		
2/14/2018	9:40:00 AM	Bullock Reach Buoy Surface	BAY	0.5	15.12	2.62	8.07		253	6.72		84.5	12.4	1220	922	508	29.13	1.948	1.316
2/14/2018	9:25:00 AM	Conimicut Point Bottom	BAY						9.46	<1.5		<7.0	<5	57.7	616	118	45.59		
2/14/2018	9:20:00 AM	Conimicut Point Surface	BAY	0.5	15.52	2.23	8.17		176	4.67		37.9	<5	877	815	387	27.87	3.565	1.614
2/14/2018	2:25:00 PM	Edgewood Yacht Club Bottom	BAY						53.1	2.71		32.8	<5	304	867	210	54.95		
2/14/2018	2:20:00 PM	Edgewood Yacht Club Surface	BAY	0.5	11.01	3.27	7.6		351	7.45		149	15.2	1690	1010	727	25	4.817	1.733
2/14/2018	2:20:00 PM	Edgewood Yacht Club Surface (Duplicate)	BAY	0.5	11.01	3.27	7.6		344	7.58		147	15	1690	1030	773	20.83	5.181	2.014
2/14/2018	1:20:00 PM	India Point Park Bottom	BAY						40.2	<1.5		28.6	<5	219	730	182	43.7		
2/14/2018	1:15:00 PM	India Point Park Surface	BAY	0.5	3.87	2.76	7.86		519	9.24		141	26	2360	1070	887	10.53	1.94	1.355
2/14/2018	1:55:00 PM	Pawtuxet Cove Bottom	BAY						217	7.79		128	12	1140	930	564	24.2		
2/14/2018	1:50:00 PM	Pawtuxet Cove Surface	BAY	0.5	0.19	3.12	7.8		497	7.62		70.9	11.3	2100	828	797	3.33	<0.3	0.2019
2/14/2018	9:20:00 AM	Phillipsdale Landing Bottom	BAY	2.56	17.55	2.83	6.29		535	10.5		164	33.7	2400	957	987	4.17		
2/14/2018	9:15:00 AM	Phillipsdale Landing Surface	BAY	0.54	0.5	2.38	6.94		544	11		167	24.1	2360	981	1040	3.37	1.601	0.95
2/14/2018	10:25:00 AM	Pomham Rocks Bottom	BAY						32.8	<1.5		12.5	5.72	90.7	645	191	46.74		
2/14/2018	10:20:00 AM	Pomham Rocks Surface	BAY	0.5	13.31	2.37	7.99		266	8.14		157	18.2	1290	971	634	24.17	6.346	1.786
2/28/2018	10:10:00 AM	Bullock Reach Buoy Surface	BAY	0.068	20.38	5.24	7.95		172	4.68		65.6	10.5	694	767	359	< 2	2.718	1.087
2/28/2018	10:10:00 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.068	20.38	5.24	7.95		170	4.16		65.5	8.82	698	767	356	2.22	2.615	1.189
2/28/2018	9:50:00 AM	Conimicut Point Surface	BAY	0.09	22.6	4.88	7.93		166	4.75		60.2	11.2	678	752	362	3.7	2.604	0.862
2/28/2018	8:55:00 AM	Edgewood Shoals Bottom	BAY						44.6	2.31		43.8	9.33	243	674	218	2.55		
2/28/2018	8:50:00 AM	Edgewood Shoals Surface	BAY	0.102	17.28	4.52	7.84		261	7.58		138	23.5	1090	908	562	2.61	1.275	1.321
2/28/2018	2:10:00 PM	Edgewood Yacht Club Surface	BAY	0.045	16.39	6.07	7.81		306	8.77		162	31.5	1330	997	680	3.78	1.575	0.9726
2/28/2018	1:45:00 PM	India Point Park Surface	BAY	0.05	7.87	6.39	7.53		401	9.3		128	20.1	1740	965	711	2.55	0.7919	1.176
2/28/2018	9:35:00 AM	Pawtuxet Cove Surface	BAY	0.091	2.07	5.55	7.97		596	4.56		50.1	6.93	2380	968	787	2.55	1.892	1.382
2/28/2018	1:20:00 PM	Phillipsdale Landing Surface	BAY	0.068	4.18	7.12	7.48		523	12.3		154	43	2150	1220	866	5	4.115	3.813
2/28/2018	9:15:00 AM	Pomham Rocks Surface	BAY	0.096	17.07	4.79	7.87		251	6.82		122	21.1	1030	822	535	3.18	0.7181	1.075
3/14/2018	1:10:00 PM	Phillipsdale Landing Bottom	BAY	1.29	4.09	3.77	7.35		726	15		114	55	2250	1270	1020	7.74		
3/14/2018	1:05:00 PM	Phillipsdale Landing Surface	BAY	0.5	3.09	4.36	7.39		857	16.9		160	117	2300	1430	1210	7.23	1.977	1.825
3/28/2018	9:55:00 AM	Bullock Reach Buoy Surface	BAY	0.071	24.96	5.42	7.95		157	2.87		19.1	8.82	562	668	297	29.07	3.017	0.8641
3/28/2018	9:55:00 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.071	24.96	5.42	7.95		155	2.9		15.8	8.83	563	678	297	31.13	2.807	0.8066
3/28/2018	9:40:00 AM	Conimicut Point Surface	BAY	0.075	23.53	5.11	7.94		198	3.09		14.6	5.37	692	704	318	2.83	2.625	0.6715
3/28/2018	8:50:00 AM	Edgewood Shoals Bottom	BAY						54.9	1.88		<7.0	<5	300	675	147	35.2		
3/28/2018	8:45:00 AM	Edgewood Shoals Surface	BAY	0.091	23.3	5.3	7.94		187	3.68		48.7	24	683	743	342	30.71	3.272	2.106
3/28/2018	2:30:00 PM	Edgewood Yacht Club Surface	BAY	0.053	20.96	6.46	7.89		269	4.08		49.5	24.5	862	865	424	2.42	2.477	0.9368
3/28/2018	2:20:00 PM	India Point Park Surface	BAY	0.048	12.58	7.19	7.75		458	4.77		28.6	21.7	1230	939	622	33.47	2.476	0.9487
3/28/2018	9:20:00 AM	Pawtuxet Cove Surface	BAY	0.075	4.82	5.85	8.03		739	4.24		69.8	<5	2020	1210	941	20.41	1.605	0.8303
3/28/2018	1:40:00 PM	Phillipsdale Landing Surface	BAY	0.055	5.84	7.83	7.67		755	5.86		27.2	51	1630	1270	936	11.43	3.222	1.666
3/28/2018	9:00:00 AM	Pomham Rocks Surface	BAY	0.084	21.99	5.32	7.97		196	3.5		24.1	15.2	664	721	337	2.27	3.26	1.069
4/18/2018	9:35:00 AM	Bullock Reach Buoy Bottom	BAY						57.8	1.81		<7.0	<5	105	709	174	3.33		
4/18/2018	9:30:00 AM	Bullock Reach Buoy Surface	BAY	0.03	21	6.57	8.05		135	2.66		7.23	<5	264	903	292	4.44	15.06	2.452
4/18/2018	9:30:00 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.03	21	6.57	8.05		151	2.72		<7.0	<5	263	847	251	33.8	15.21	2.207
4/18/2018	9:10:00 AM	Conimicut Point Bottom	BAY						16.3	<1.5		<7.0	<5	55.2	643	219	24.44		
4/18/2018	9:05:00 AM	Conimicut Point Surface	BAY	0.015	19.34	6.29	8.01		195	2.92		13	<5	379	898	371	26.53	12.45	2.221
4/18/2018	2:10:00 PM	Edgewood Yacht Club Bottom	BAY						26.3	1.54		<7.0	<5	76.4	751	153	21.26		
4/18/2018	2:05:00 PM	Edgewood Yacht Club Surface	BAY	0.03	23.34	7.42	7.89		85.3	3.26		10.2	5.29	178	745	282	20.4	14.8	2.436
4/18/2018	1:10:00 PM	India Point Park Bottom	BAY						484	8.55		74.3	12.3	940	1190	761	5.36		
4/18/2018	1:05:00 PM	India Point Park Surface	BAY	0.022	5.81	7.6	7.84		501	8.79		69.3	11.8	985	1250	791	3.4	9.902	4.556
4/18/2018	1:40:00 PM	Pawtuxet Cove Bottom	BAY						110	3.42		32	<5	245	801	258	2.24		
4/18/2018	1:35:00 PM	Pawtuxet Cove Surface	BAY	0.025	4.05	8.21	7.77		635	3.68		40.2	<5	1500	1220	817	2.02	5.74	1.666
4/18/2018	2:45:00 PM	Phillipsdale Landing Bottom	BAY	1.59	1.16	8.81	7.62		475	14.1		80.9	53.9	1200	1190	732	30.11		
4/18/2018	2:40:00 PM	Phillipsdale Landing Surface	BAY	0.57	0.94	8.99	7.58		450	15.2		76.1	48.8	1270	1150	720	26.95	9.517	6.265
4/18/2018	8:50:00 AM	Pomham Rocks Bottom	BAY						23.8	<1.5		15.5	<5	72.3	642	162	4.04		
4/18/2018	8:45:00 AM	Pomham Rocks Surface	BAY	0.019	9.29	6.68	7.88		380	6.97		67.1	19.3	958	1080	674	4	11.19	4.476
4/25/2018	9:15:00 AM	Bullock Reach Buoy Surface	BAY	0.128	18.64	10.99	8.15		95.3	3.61		<7.0	<5	492	835	241	8	10.16	1.967
4/25/2018	9:00:00 AM	Conimicut Point Surface	BAY	0.133	20.85	10.72	8.16		47.6	2.83		<7.0	<5	328	900	198	7.4	16.05	2.091
4/25/2018	10:10:00 AM	India Point Park Surface	BAY	0.12	6.73	11.71	7.66		393	5.43		35.6	33.9	1140	1120	583	4.22	2.577	1.569

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
4/25/2018	9:35:00 AM	Pawtuxet Cove Surface	BAY	0.124	2.32	11.48	7.97		620	9.43		154	<5	1860	1310	907	2.76	2.727	1.492
4/25/2018	9:35:00 AM	Pawtuxet Cove Surface (Duplicate)	BAY	0.124	2.32	11.48	7.97		619	9.43		154	<5	1880	1010	911	2.95	1.55	0.8806
4/25/2018	1:35:00 PM	Phillipsdale Landing Surface	BAY	0.55	2.59	12.65	7.33		496	7.19		35.9	108	1640	1110	735	3.37	4.926	2.588
4/25/2018	10:35:00 AM	Pomham Rocks Surface	BAY	0.113	14.2	11.19	7.42		264	4.31		17.5	20.8	938	970	436	5.62	9.425	1.732
5/24/2018	10:00:00 AM	Bullock Reach Buoy Surface	BAY	0.129	17.06	17.84	8.48		7.67	2.25		<7.0	<5	192	699	308	34.4	34.58	12.62
5/24/2018	9:50:00 AM	Conimicut Point Surface	BAY	0.126	17.31	17.17	8.28		7.09	3.15		<7.0	<5	379	709	257	31.68	28.91	11.23
5/24/2018	9:10:00 AM	Edgewood Shoals Bottom	BAY						21.3	3.5		125	40.7	712	623	314	38.22		
5/24/2018	9:00:00 AM	Edgewood Shoals Surface	BAY	0.127	17.9	17.9	8.44		<6.00	<1.5		<7.0	<5	25.3	695	203	34.6	27.36	13.76
5/24/2018	2:10:00 PM	Edgewood Yacht Club Surface	BAY	0.127	18.18	18.26	8.28		17.2	2.09		<7.0	10.1	354	770	238	35.64	31.63	11.56
5/24/2018	1:35:00 PM	India Point Park Surface	BAY	0.124	9.21	19.13	7.56		493	8.55		47.7	38.7	1120	907	662	18.61	6.968	4.842
5/24/2018	1:35:00 PM	India Point Park Surface (Duplicate)	BAY	0.124	9.21	19.13	7.56		498	8.4		81.8	35.2	692	929	663	18.61	7.261	3.623
5/24/2018	9:30:00 AM	Pawtuxet Cove Surface	BAY	0.125	4.68	18.05	7.81		661	10		70.9	<5	1670	932	902	8.08	8.073	3.92
5/24/2018	1:20:00 PM	Phillipsdale Landing Surface	BAY	0.137	6.4	19.93	7.69		689	7.54		42.7	95.3	1100	1150	893	12.28	35.19	15.83
5/24/2018	9:20:00 AM	Pomham Rocks Surface	BAY	0.126	16.74	16.3	7.92		249	7.18		<7.0	20.2	774	752	469	25.35	11.28	4.147
6/6/2018	9:30:00 AM	Bullock Reach Buoy Bottom	BAY						9.93	1.64		20.5	19.5	425	534	126	47.45		
6/6/2018	9:25:00 AM	Bullock Reach Buoy Surface	BAY	0.5	24.28	15.86	7.56		53.1	4.19		19.1	37.3	342	649	210	40.21	8.969	6.385
6/6/2018	9:25:00 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.5	24.28	15.86	7.56		53	4.17		18	37.9	339	632	205	45.6	9.799	6.569
6/6/2018	10:20:00 AM	Conimicut Point Bottom	BAY						9.72	<1.5		<7.0	11.4	316	512	125	51.2		
6/6/2018	10:15:00 AM	Conimicut Point Surface	BAY	0.5	24.67	16.1	7.61		44.6	2.19		9.78	15.6	360	653	197	47	7.304	4.716
6/6/2018	2:40:00 PM	Edgewood Yacht Club Bottom	BAY						22.1	2.84		32.3	29.6	436	558	188	38.57		
6/6/2018	2:35:00 PM	Edgewood Yacht Club Surface	BAY	0.5	21.07	16.8	7.59		121	5.31		<7.0	42.1	450	767	300	39.2	15.87	4.411
6/6/2018	1:00:00 PM	India Point Park Bottom	BAY						12.1	2.13		53.2	25.2	424	484	151	44.24		
6/6/2018	12:55:00 PM	India Point Park Surface	BAY	0.5	20.12	16.49	7.56		134	4.79		24.8	30.7	533	732	309	42.29	20.25	5.863
6/6/2018	2:00:00 PM	Pawtuxet Cove Bottom	BAY						184	5.93		53.5	29.4	838	739	381	37.17		
6/6/2018	1:55:00 PM	Pawtuxet Cove Surface	BAY	0.5	9.53	17.13	7.5		564	12.6		63.9	15.1	1680	1050	782	19.6	7.802	3.401
6/6/2018	8:45:00 AM	Phillipsdale Landing Bottom	BAY	2.31	20.93	16.3	7.11		143	9.01		59.7	76.2	480	926	505	35.1		
6/6/2018	8:40:00 AM	Phillipsdale Landing Surface	BAY	0.5	7.81	17.38	7.3		493	11		25.6	91.5	1100	1050	815	14.8	20.25	5.534
6/6/2018	1:30:00 PM	Pomham Rocks Bottom	BAY						9.78	2.15		38.9	27.5	496	536	164	32.73		
6/6/2018	1:25:00 PM	Pomham Rocks Surface	BAY	0.5	22.06	16.65	7.61		67.2	4.47		<7.0	29.8	368	732	261	34.14	16.27	8.287
6/20/2018	10:10 AM	Bullock Reach Buoy Surface	BAY	0.5	24.9	21	7.75		6.48	<1.5	6.48	<7.000	20.9	690	682	287	39.355	16.714	2.0137
6/20/2018	9:45 AM	Conimicut Point Surface	BAY	0.5	25.4	21.3	7.78		8.23	2.34	<6.0	<7.000	28.1	737	614	205	38.557	17.929	3.7797
6/20/2018	9:45 AM	Conimicut Point Surface (Duplicate)	BAY	0.5	25.4	21.3	7.78		7.55	1.62	<6.0	<7.000	20.1	732	700	210	43.789	16.993	3.6579
6/20/2018	12:55 PM	Edgewood Shoals Bottom	BAY						6.92	2.76	<6.0	72.3	50.8	719	650	306	45.217		
6/20/2018	12:50 PM	Edgewood Shoals Surface	BAY	0.5	24.9	21.5	7.81	19.4	<6.000	1.61	<6.0	<7.000	36.2	765	650	238	39.796	24.466	4.2549
6/20/2018	12:40 PM	Edgewood Yacht Club Surface	BAY	0.5	24.5	21.5	7.83	13.9	8.78	<1.5	8.78	<7.000	22	752	584	178	40.619	21.009	3.6774
6/20/2018	2:45 PM	India Point Park Surface	BAY	0.5	24.3	21.2	7.85	35.5	6.55	1.72	<6.0	<7.000	27.4	819	683	220	35.6	46.134	0.9501
6/20/2018	1:20 PM	Pawtuxet Cove Surface	BAY	0.5	13.4	23.4	7.84	12.7	541	16.7	524.3	<7.000	<5.0	1480	1250	828	21.633	22.121	3.7941
6/20/2018	2:15 PM	Phillipsdale Landing Surface	BAY	0.5	21.9	21.7	7.48	5.8	111	5.83	105.17	49.1	37.4	1100	727	371	32.083	8.4756	3.9012
6/20/2018	1:05 PM	Pomham Rocks Surface	BAY	0.5	25.7	21	7.81	13.7	17.1	<1.5	17.1	<7.000	18.9	659	621	217	41.702	18.365	3.4779
6/27/2018	9:55 AM	Bullock Reach Buoy Bottom	BAY	0	0	0	0		8.24	1.6	6.64	<7.000	24.9	567	500	<100.000	43.2		
6/27/2018	9:40 AM	Bullock Reach Buoy Surface	BAY	0.5	28.4	20.5	8.12	10.6	<6.000	<1.5	<6.0	<7.000	19.9	568	630	123	43.617	9.0804	2.7843
6/27/2018	9:40 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.5	28.4	20.5	8.12	10.6	7.6	<1.5	7.6	<7.000	19.5	591	684	122	40.606	5.0103	1.1863
6/27/2018	9:30 AM	Conimicut Point Bottom	BAY	0	0	0	0		8.1	2.52	<6.0	37.5	26.8	499	658	131	50.303		
6/27/2018	9:25 AM	Conimicut Point Surface	BAY	0.5	28.7	20.3	8.08	8.5	8.1	<1.5	8.1	<7.000	25.4	531	739	210	42.245	5.988	1.7223
6/27/2018	1:30 PM	Edgewood Yacht Club Bottom	BAY	0	0	0	0		<6.000	<1.5	<6.0	27.4	48.3	899	817	282	65.918		
6/27/2018	1:25 PM	Edgewood Yacht Club Surface	BAY	0.5	27	21.3	8.14	13.4	<6.000	<1.5	<6.0	<7.000	38.4	885	768	132	42.6	13.051	2.452
6/27/2018	2:25 PM	India Point Park Bottom	BAY	0	0	0	0		18.9	3.11	15.79	44.7	60.4	905	649	217	45.6		
6/27/2018	2:20 PM	India Point Park Surface	BAY	0.5	22	21.4	7.5	7.8	105	7.85	97.15	171	92.5	1190	983	462	36.735	3.7212	1.0845
6/27/2018	1:55 PM	Pawtuxet Cove Bottom	BAY	0	0	0	0		7.96	1.69	6.27	8.19	43.2	925	563	157	41.6		
6/27/2018	1:50 PM	Pawtuxet Cove Surface	BAY	0.5	13.6	22.2	7.87	4.9	216	9.12	206.88	<7.000	27.9	1080	848	352	29.8	6.1716	2.1342
6/27/2018	10:40 AM	Phillipsdale Landing Bottom	BAY	1.71	23.9	20.8	7.28		127	7.63	119.37	170	86.8	1210	1240	447	82		
6/27/2018	10:35 AM	Phillipsdale Landing Surface	BAY	0.54	12.1	21.6	7.4		352	10.2	341.8	162	119	1480	1210	716	23.2	14.172	5.6976
6/27/2018	10:20 AM	Pomham Rocks Bottom	BAY	0	0	0	0		7.56	2.34	<6.0	43.8	38.7	620	626	169	49.484		
6/27/2018	10:15 AM	Pomham Rocks Surface	BAY	0.5	26.8	20.8	8.14	16.3	<6.000	<1.5	<6.0	<7.000	41.8	851	877	485	44.6	26.946	5.346
7/18/2018	10:30 AM	Bullock Reach Buoy Surface	BAY	0.055	29.1	24.8	7.7		33.6	2.98	30.62	36.7	107	1290	638	271	11.042	4.7904	2.0683
7/18/2018	10:20 AM	Conimicut Point Surface	BAY	0.053	27.9	25	7.67		24.1	2.81	21.29	27.9	90.8	1320	544	234	14.831	4.2951	2.1799
7/18/2018	10:10 AM	Edgewood Shoals Bottom	BAY						12.9	3.32	9.58	112	106	1530	652	350	31.398		
7/18/2018	10:00 AM	Edgewood Shoals Surface	BAY	0.055	27.9	25	7.66		20.4	3.62	16.78	41.6	102	1430	720	454	13.333	12.425	4.4892

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
7/18/2018	2:20 PM	Edgewood Yacht Club Surface	BAY	0.047	27.1	25.5	7.75		39.8	5.21	34.59	25.2	125	1450	740	338	12.273	11.673	2.9953
7/18/2018	1:40 PM	India Point Park Surface	BAY	0.055	27.8	25.1	7.59		33.6	5.07	28.53	72.5	117	1340	641	299	11.546	8.3823	3.261
7/18/2018	2:10 PM	Pawtuxet Cove Surface	BAY	0.049	10.9	26.3	7.46		800	15.6	784.4	45	35.1	1870	1330	1100	6.6	2.9872	1.6572
7/18/2018	1:15 PM	Phillipsdale Landing Surface	BAY	0.063	16	26.7	8.48		111	12.3	98.7	<7.000	219	1700	1250	466	33.563	26.681	4.7937
7/18/2018	2:00 PM	Pomham Rocks Surface	BAY	0.049	25.6	25.6	7.74		48.3	5.62	42.68	25.7	114	1420	654	290	13	8.9127	2.9169
7/18/2018	2:00 PM	Pomham Rocks Surface (Duplicate)	BAY	0.049	25.6	25.6	7.74		41	5.48	35.52	27.5	120	1220	756	323	12.174	11.735	3.4836
8/1/2018	9:30 AM	Bullock Reach Buoy Bottom	BAY						9.63	3.05	6.58	53	66.3	1260	824	264	10.105		
8/1/2018	9:25 AM	Bullock Reach Buoy Surface	BAY	0.5	27	25.4	7.56	20.7	<6.000	<1.5	<6.0	<7.000	59.7	1060	789	182	14.583	26.787	5.2797
8/1/2018	9:25 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.5	27	25.4	7.56	20.7	<6.000	<1.5	<6.0	<7.000	59.8	1070	961	173	11.753	32.76	1.8192
8/1/2018	9:10 AM	Conimicut Point Bottom	BAY						11.4	4.05	7.35	82.4	51.5	1070	779	240	20.227		
8/1/2018	9:05 AM	Conimicut Point Surface	BAY	0.5	27.4	25.1	7.96	18.9	<6.000	1.54	<6.0	<7.000	60	994	665	316	15.158	16.456	3.8661
8/1/2018	10:10 AM	Edgewood Yacht Club Bottom	BAY						<6.000	<1.5	<6.0	<7.000	95.2	1330	691	189	15.51		
8/1/2018	10:05 AM	Edgewood Yacht Club Surface	BAY	0.5	23.9	25.2	8.08	25.8	7.59	<1.5	7.59	<7.000	88	1290	862	236	11.368	42	4.6368
8/1/2018	1:35 PM	India Point Park Bottom	BAY						17.7	6.1	11.6	267	167	1590	721	439	12.609		
8/1/2018	1:30 PM	India Point Park Surface	BAY	0.5	22.6	25.9	8.09	49.6	6.66	1.63	<6.0	<7.000	131	1640	869	223	11.915	92.331	6.8859
8/1/2018	12:50 PM	Pawtuxet Cove Bottom	BAY						8.02	2.66	<6.0	61.5	122	1370	679	283	15.652		
8/1/2018	12:45 PM	Pawtuxet Cove Surface	BAY	0.5	15.8	25.3	7.97	14.9	298	3.03	294.97	<7.000	58.7	1700	1000	527	9.2135	21.474	4.7958
8/1/2018	9:05 AM	Phillipsdale Landing Bottom	BAY	1.71	26.1	25.7	7.11		47.9	9.33	38.57	77.6	180	2250	918	321	36.04		
8/1/2018	9:00 AM	Phillipsdale Landing Surface	BAY	0.5	17.9	25.9	7.32		55.2	8.81	46.39	80.1	167	2230	770	348	12.041	3.2622	3.429
8/1/2018	1:10 PM	Pomham Rocks Bottom	BAY						23	3.88	19.12	134	98.3	1430	355	294	19.54		
8/1/2018	1:05 PM	Pomhan Rocks Surface	BAY	0.5	25.2	25.5	8.02	22.1	9.28	<1.5	9.28	<7.000	90.3	1220	800	283	13.814	27.588	4.7289
8/16/2018	8:40 AM	Bullock Reach Buoy Surface	BAY	0.109	24.9	25	7.55		75.8	5.85	69.95	91.2	111	1730	842	380	8.2105	10.639	3.9835
8/16/2018	8:25 AM	Conimicut Point Surface	BAY	0.107	23.1	25	7.53		111	7.19	103.81	108	122	1820	856	419	8.7755	11.011	2.2961
8/16/2018	8:05 AM	Edgewood Shoals Bottom	BAY						20.5	2.87	17.63	136	164	1830	667	351	10.208		
8/16/2018	8:00 AM	Edgewood Shoals Surface	BAY	0.101	23.5	24.8	7.51		98.7	6.69	92.01	70.6	132	1800	773	350	8.6	13.939	3.8645
8/16/2018	9:50 AM	Edgewood Yacht Club Surface	BAY	0.113	21.8	25.1	7.41		124	6.85	117.15	145	147	1880	775	461	9.0526	5.2787	2.2051
8/16/2018	12:50 PM	India Point Park Surface	BAY	0.125	18.6	26.6	7.43		169	7.94	161.06	146	122	1960	883	527	8.6598	8.5037	2.038
8/16/2018	9:05 AM	Pawtuxet Cove Surface	BAY	0.109	10.7	25.1	7.32		567	9.88	557.12	75.9	56.1	2630	1094	912	6.1538	3.0362	2.7075
8/16/2018	1:25 PM	Phillipsdale Landing Surface	BAY	0.117	4.73	25.5	7.6		384	10.4	373.6	96.5	118	2490	994	757	5.5102	5.5297	2.5622
8/16/2018	1:25 PM	Phillipsdale Landing Surface (Duplicate)	BAY	0.117	4.73	25.5	7.6		385	9.47	375.53	95.9	119	2640	999	764	7.8431	5.0095	2.6257
8/16/2018	9:30 AM	Pomham Rocks Surface	BAY	0.111	20.2	25	7.36		148	8.06	139.94	172	139	1930	844	529	10.588	4.2125	1.9195
8/29/2018	8:20 AM	Phillipsdale Landing Bottom	BAY	2.56	23.7	24.7	7.28		57.5	8.67	48.83	80.7	96.1	1333	1000	431	<2.0000		
8/29/2018	8:00 AM	Phillipsdale Landing Surface	BAY	0.67	19.4	25.4	7.33		94.3	8.47	85.83	156	82.5	1390	1140	471	7.2727	42.687	12.115
8/30/2018	8:55 AM	Bullock Reach Buoy Bottom	BAY						25.7	5.09	20.61	94.9	61.5	1328	588	259	12.121		
8/30/2018	8:50 AM	Bullock Reach Buoy Surface	BAY	0.5	27	26	7.93		15	1.77	13.23	<7.000	31	1011	693	179	12.245	14.688	5.3687
8/30/2018	8:30 AM	Conimicut Point Bottom	BAY						23.2	7.36	15.84	117	60.8	1153	1110	287	150.82		
8/30/2018	8:25 AM	Conimicut Point Surface	BAY	0.5	26.8	25.9	7.96		10.2	<1.5	10.2	<7.000	28.9	975	654	187	8.3673	12.699	5.0852
8/30/2018	10:10 AM	Edgewood Yacht Club Bottom	BAY						9.65	2.77	6.88	80.1	79.8	1417	619	253	9.901		
8/30/2018	10:05 AM	Edgewood Yacht Club Surface	BAY	0.5	25	26.3	7.98		10.5	<1.5	10.5	<7.000	47.2	951	710	185	12.708	16.163	8.848
8/30/2018	10:05 AM	Edgewood Yacht Club Surface (Duplicate)	BAY	0.5	25	26.3	7.98		<6.000	<1.5	<6.0	<7.000	47.5	954	738	155	5.4545	16.875	8.0562
8/30/2018	9:30 AM	India Point Park Bottom	BAY						17.9	4.99	12.91	150	87.9	1309	646	347	12.174		
8/30/2018	9:25 AM	India Point Park Surface	BAY	0.5	21.5	26.4	7.81		46.8	5.22	41.58	56.9	50	1230	854	377	9.4737	30.952	9.95
8/30/2018	9:10 AM	Pawtuxet Cove Bottom	BAY						146	3.64	142.36	34.2	40.9	1387	824	391	11.042		
8/30/2018	9:05 AM	Pawtuxet Cove Surface	BAY	0.5	10.1	25.5	7.4		765	9.45	755.55	96.6	24.4	2448	1620	1200	6.3265	1.131	3.3292
8/30/2018	9:50 AM	Pomham Rocks Bottom	BAY						17	5.49	11.51	204	104	1507	785	423	59.13		
8/30/2018	9:45 AM	Pomham Rocks Surface	BAY	0.5	25	26.3	7.99		<6.000	<1.5	<6.0	19.7	41.6	968	709	193	23.158	18.392	7.9707
9/12/2018	9:40 AM	Bullock Reach Buoy Surface	BAY	0.185	29.6	21.6	7.53		57.5	8.98	48.52	172	85.7	1440	734	397	7.2727	9.537	2.6365
9/12/2018	9:25 AM	Conimicut Point Surface	BAY	0.184	29.9	21.5	7.53		60.5	8.96	51.54	156	81.9	1400	749	400	9.8925	10.794	3.0744
9/12/2018	8:45 AM	Edgewood Shoals Bottom	BAY						65.5	9.81	55.69	230	109	1560	801	539	10.976		
9/12/2018	8:40 AM	Edgewood Shoals Surface	BAY	0.183	26.2	22.5	7.3		140	12.8	127.2	273	132	1580	979	598	8.3673	7.5807	3.0771
9/12/2018	9:10 AM	Pawtuxet Cove Surface	BAY	0.185	12.4	21	7.16		521	13.5	507.5	150	61.4	2220	1220	857	19.583	5.3013	2.375
9/12/2018	9:10 AM	Pawtuxet Cove Surface (Duplicate)	BAY	0.185	12.4	21	7.16		521	13.5	507.5	151	61.7	2160	1090	861	17.849	5.7561	2.9627
9/12/2018	1:45 PM	Phillipsdale Landing Surface	BAY	0.65	19.3	22.6	7.3		345	14	331	282	180	1690	1230	929	8.6316	22.932	3.6762
9/12/2018	8:55 AM	Pomham Rocks Surface	BAY	0.183	25.7	22.4	7.25		111	13.2	97.8	253	138	1590	950	564	8.7755	10.42	3.849
9/26/2018	10:35 AM	Bullock Reach Buoy Bottom	BAY						87	13.7	73.3	131	66	1370	574	376	39.368		
9/26/2018	10:30 AM	Bullock Reach Buoy Surface	BAY	0.5	28.2	19.8	6.86		98	13.7	84.3	155	68.3	1430	602	420	35.918	4.3682	3.9197
9/26/2018	10:15 AM	Conimicut Point Bottom	BAY						72.4	12.7	59.7	113	59.1	1150	617	337	39.175		
9/26/2018	10:10 AM	Conimicut Point Surface	BAY	0.5	28.3	19.8	6.88		97.6	13.8	83.8	138	66.1	1360	643	400	32.4	3.3662	2.8457

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
9/26/2018	9:30 AM	Edgewood Yacht Club Bottom	BAY						91.8	12.7	79.1	261	102	1720	812	528	40.222		
9/26/2018	9:25 AM	Edgewood Yacht Club Surface	BAY	0.5	18.1	20.2	6.68		193	12.2	181	201	89.1	1420	826	578	28.936	1.0296	1.2811
9/26/2018	1:55 PM	India Point Park Bottom	BAY						396	12.9	383	211	84.9	2120	1050	842	18.99		
9/26/2018	1:50 PM	India Point Park Surface	BAY	0.5	9.25	19.5	6.48		423	12.6	410	201	80.4	2160	1020	869	19.388	2.0448	2.7817
9/26/2018	1:50 PM	India Point Park Surface (Duplicate)	BAY	0.5	9.25	19.5	6.48		422	12.4	410	205	80.8	2180	1010	860	18.333	1.4516	2.4422
9/26/2018	1:20 PM	Pawtuxet Cove Bottom	BAY						253	15.5	237	223	66.4	1850	954	670	27.447		
9/26/2018	1:15 PM	Pawtuxet Cove Surface	BAY	0.5	0.39	18.7	6.3		419	9.86	409	81.9	18.4	1430	952	716	28.352	4.9265	6.3637
9/26/2018	9:55 AM	Phillipsdale Landing Bottom	BAY	1.86	16.6	19.5	6.67		263	18	245	307	126	2090	932	790	8.1319		
9/26/2018	9:50 AM	Phillipsdale Landing Surface	BAY	0.65	3.93	19.4	6.85		584	11.7	572	213	86.4	2240	1130	1060	5.3933	0.92582	1.5104
9/26/2018	9:45 AM	Pomham Rocks Bottom	BAY						103	14.8	88.2	189	86.1	1630	694	456	41.333		
9/26/2018	9:40 AM	Pomham Rocks Surface	BAY	0.5	20.4	20	6.74		194	16.6	177	200	91.2	1420	819	559	27.778	1.6835	1.4755
10/11/2018	9:30 AM	Edgewood Shoals Bottom	BAY						225	18.4	207	220	87.8	2040	943	582	6.9038		
10/11/2018	9:25 AM	Edgewood Shoals Surface	BAY	0.036	18.81	21.2	7.53		319	17.5	301	184	81.4	2090	1030	649	7.2	2.3133	1.1262
10/11/2018	10:55 AM	Phillipsdale Landing Surface	BAY	0.5	4.86	19.7	7.35		527	11.9	515	113	51.3	3540	930	870	3.2	5.6152	1.1238
10/11/2018	9:45 AM	Pomham Rocks Surface	BAY	0.036	19.49	20.23	7.51		306	17.6	288	182	78.7	2250	1020	651	5.6		
10/24/2018	9:10 AM	Bullock Reach Buoy Bottom	BAY						158	15.5	142	87.5	52.5	1230	761	394	8		
10/24/2018	9:05 AM	Bullock Reach Buoy Surface	BAY	0.5	22.4	13.29	7.56		237	16	221	114	63.7	1680	795	458	8	1.7375	0.73065
10/24/2018	9:05 AM	Bullock Reach Buoy Surface (Duplicate)	BAY	0.5	22.4	13.29	7.56		234	15.8	218	110	63	1650	847	461	7.6087	1.3903	0.5982
10/24/2018	8:50 AM	Conimicut Point Bottom	BAY						144	15.7	128	44.7	46.7	976	691	263	11.613		
10/24/2018	8:45 AM	Conimicut Point Surface	BAY	0.5	26.38	12.91	7.62		213	15.9	197	100	59.3	1520	803	441	6.8085	1.0319	0.64092
10/24/2018	10:10 AM	Edgewood Yacht Club Bottom	BAY						158	16.3	142	95.3	55.6	1310	738	407	8.75		
10/24/2018	10:05 AM	Edgewood Yacht Club Surface	BAY	0.5	23.36	13.84	7.58		261	16.3	245	117	71	1760	851	506	6.5263	3.2004	1.2253
10/24/2018	10:00 AM	Phillipsdale Landing Bottom	BAY	3.07	22.84	5.74	7.36		246	17.2	229	124	60.9	1720	833	478	8.75		
10/24/2018	9:55 AM	Phillipsdale Landing Surface	BAY	0.52	6.38	10.96	7.56		496	11	485	144	47.2	3010	927	761	3.5789	1.3522	0.79152
10/24/2018	9:55 AM	Pomham Rocks Bottom	BAY						135	17.2	118	62.7	48.5	983	739	323	11.702		
10/24/2018	9:50 AM	Pomham Rocks Surface	BAY	0.5	21.89	13.98	7.55		268	15.6	252	120	67.1	1850	850	563	5.8947	1.588	0.76377
11/7/2018	9:45 AM	Bullock Reach Buoy Surface	BAY	0.5	15.93	12.57	7.56		399	9.81	389	87.2	47.3	2000	680	565	18.667	0.59775	0.56136
11/7/2018	9:25 AM	Conimicut Point Surface	BAY	0.5	15.59	12.27	7.55		430	10.1	420	87.8	46.4	2000	736	569	23.896	<0.300	0.39897
11/7/2018	9:25 AM	Conimicut Point Surface (Duplicate)	BAY	0.5	15.59	12.27	7.55		448	10.2	438	88.2	46.2	1960	723	562	22.045	0.44874	0.40635
11/7/2018	9:00 AM	Edgewood Shoals Bottom	BAY						311	9.45	302	92.3	42.9	2290	817	664	16.774		
11/7/2018	8:55 AM	Edgewood Shoals Surface	BAY	0.5	12.27	11.74	7.5		259	10.3	249	103	56.6	1410	547	508	25.773	0.50784	0.51501
11/7/2018	2:05 PM	Edgwood Yacht Club Surface	BAY	0.5	13.3	12.78	7.32		382	9.78	372	92.1	46.5	2000	774	583	21.463	0.32532	0.46809
11/7/2018	1:25 PM	India Point Park Surface	BAY	0.5	3.92	11.26	7.12		362	9.34	353	74.4	21.7	2750	809	639	9.6842	0.88551	1.3588
11/7/2018	1:55 PM	Pawtuxet Cove Surface	BAY	0.5	0.46	12.28	7.55		598	4.86	593	25.6	15.3	2900	928	896	4.7917	0.67122	0.66717
11/7/2018	1:10 PM	Phillipsdale Landing Surface	BAY	0.5	1.51	10.98	7.24		332	8.14	324	60.3	10.4	2820	727	759	9.5745	1.2552	1.649
11/7/2018	9:15 AM	Pomham Rocks Surface	BAY	0.5	12.56	12.04	7.47		329	9.75	319	89.7	45.6	2280	780	607	17.471	0.49719	0.51204
11/21/2018	10:35 AM	Bullock Reach Buoy Bottom	BAY						92.1	7.94	84.2	54.8	32.5	731	525	242	28.298		
11/21/2018	10:30 AM	Bullock Reach Buoy Surface	BAY	0.5	22.55	9.17	7.81		245	7.97	237	88.5	33.2	2080	577	560	9.2	0.83892	0.61914
11/21/2018	10:25 AM	Conimicut Point Bottom	BAY						104	7.43	96.6	60.3	34.2	739	462	309	17.474		
11/21/2018	10:15 AM	Conimicut Point Surface	BAY	0.5	21.26	8.45	7.78		271	8.25	263	84.6	34.1	1570	500	536	20	1.0671	0.78627
11/21/2018	2:00 PM	Edgewood Yacht Club Bottom	BAY						269	8.19	261	97.3	33.9	1530	663	481	11.222		
11/21/2018	1:55 PM	Edgewood Yacht Club Surface	BAY	0.5	16.2	8.22	7.47		391	9.71	381	94.2	33.8	2010	709	611	11.875	0.39531	0.79494
11/21/2018	1:05 PM	India Point Park Bottom	BAY						103	7.25	95.7	79.9	33.1	738	697	289	78.667		
11/21/2018	1:00 PM	India Point Park Surface	BAY	0.5	2.95	5.87	7.85		568	6.69	561	69.9	17.5	3190	863	862	4.5361	1.2716	1.1484
11/21/2018	1:40 PM	Pawtuxet Cove Bottom	BAY						340	6.99	333	104	32.9	1750	680	571	18.571		
11/21/2018	1:35 PM	Pawtuxet Cove Surface	BAY	0.5	1.14	6.5	7.92		572	4.58	567	71.7	7.56	2790	865	869	2.0408	1.3645	1.2609
11/21/2018	1:30 PM	Phillipsdale Landing Bottom	BAY	1.95	1.78	5.33	7.25		581	4.82	576	<7.000	12.2	3270	888	812	7.1111		
11/21/2018	1:25 PM	Phillipsdale Landing Surface	BAY	0.49	1.48	5.28	7.27		587	5.64	581	45.5	12.4	3360	878	833	7.7273	1.964	1.7433
11/21/2018	1:20 PM	Pomham Rocks Bottom	BAY						292	8.6	283	89.3	49.2	1670	643	500	11.222		
11/21/2018	1:15 PM	Pomham Rocks Surface	BAY	0.5	5.71	6.13	7.53		392	7.51	384	121	28.2	2280	636	607	8.2474	0.60951	0.95877
11/21/2018	1:15 PM	Pomham Rocks Surface (Duplicate)	BAY	0.5	5.71	6.13	7.53		390	7.07	383	79.7	25.6	2270	704	601	8.2	0.53562	0.88011
12/5/2018	1:35 PM	Phillipsdale Landing Bottom	BAY						846	7.66	838	63.4	40.8	3220	1080	1130	2.449		
12/5/2018	1:30 PM	Phillipsdale Landing Surface	BAY						864	7.62	856	63.9	40.4	3200	1100	1280	<2.0000	0.72987	0.72303
12/19/2018	12:50 PM	Conimicut Point Bottom	BAY						153	4.69	148	26.8	44.9	683	405	267	9.4845		
12/19/2018	12:45 PM	Conimicut Point Surface	BAY	0.5	24.46	5.33	7.76		353	7.01	346	59.8	29.8	1150	593	502	10.833	0.94425	0.5796
12/19/2018	2:15 PM	Edgewood Yacht Club Bottom	BAY						173	6.48	167	50.2	31.9	757	413	304	9.5833		
12/19/2018	2:10 PM	Edgewood Yacht Club Surface	BAY	0.5	17.88	5.46	7.5		436	8.88	427	88.9	41.7	1650	792	625	8.2979	1.6121	0.82272
12/19/2018	1:15 PM	India Point Park Bottom	BAY						243	5.97	237	44.3	28.9	985	482	389	284.54		

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
12/19/2018	1:10 PM	India Point Park Surface	BAY	0.5	13.71	3.83	7.72		617	8.1	609	82.7	35.7	2410	899	859	5.6818	0.35943	0.62448
12/19/2018	1:50 PM	Pawtuxet Cove Bottom	BAY						339	8.45	331	86.5	41.1	1410	834	510	8.6316		
12/19/2018	1:45 PM	Pawtuxet Cove Surface	BAY	0.5	1.97	2.91	8.13		730	4.53	725	107	9.62	2880	1050	1000	2.3913	1.5064	0.65151
12/19/2018	10:10 AM	Phillipsdale Landing Bottom	BAY	1.796	5.35	3.21	7.03		749	8.1	741	96.4	37.9	3060	1090	953	4.898		
12/19/2018	10:00 AM	Phillipsdale Landing Surface	BAY	0.53	3.7	2.69	6.88		845	8.58	836	97.7	52.7	2950	1170	1040	5.1064	1.7582	1.9042
12/19/2018	1:35 PM	Pomham Rocks Bottom	BAY						245	7.42	238	64.3	42.1	989	522	461	7.9592		
12/19/2018	1:30 PM	Pomham Rocks Surface	BAY	0.5	17.85	5.36	7.66		367	7.64	359	72.8	36.9	1410	634	532	18.461	0.82047	0.6312
RIVER																			
1/3/2018	8:55:00 AM	Moshassuck River @ Higginson Ave.	RIVER	0.263	0.16	1.34	7.7		579	8.54		65	<5	4540	888	827	5.21		
1/3/2018	10:50:00 AM	Moshassuck River @ Mill St.	RIVER	0.415	0.34	0.09	7.62		705	9.19		170	<5	4090	1040	1050	2.71		
1/3/2018	2:45:00 PM	Pawtuxet River @ Broad St.	RIVER	0.482	0.17	0.72	7.6		1300	6.29		277	90	3910	1840	1810	2.71		
1/3/2018	2:45:00 PM	Pawtuxet River @ Broad St. (Duplicate)	RIVER	0.482	0.17	0.72	7.6		1310	6.18		196	88.5	3430	1840	1820	2.77		
1/3/2018	12:45:00 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.465	0.18	0.66	7.78		752	3.48		22.8	<5	2490	986	1010	< 2		
1/3/2018	1:03:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.564	0.2	0.03	7.67		842	4.19		24.1	<5	2630	1090	1080	2.53		
1/17/2018	9:36:00 AM	Blackstone River @ Bikepath Bridge	RIVER	2.85	0.15	0.7	7.85		498	12.3		153	7.89	1940	816	900	2.39		
1/17/2018	12:45:00 PM	Blackstone River @ Slater Mill	RIVER	1.25	0.15	1.16	7.66		731	5.94		50.9	9.88	2480	945	1020	2		
1/17/2018	9:00:00 AM	Blackstone River @ Stateline	RIVER	3.5	0.16	0.75	8		499	12.6		176	12	1660	828	902	3.08		
1/17/2018	10:30:00 AM	Coles River @ Milford Rd.	RIVER	0.478	0.06	0.44	7.67		359	3.56		14.1	17	255	943	885	< 2		
1/17/2018	10:30:00 AM	Moshassuck River @ Higginson Ave.	RIVER	0.917	0.24	1.25	7.8		723	5.8		73.4	9.7	2280	1040	1020	2.39		
1/17/2018	1:07:00 PM	Moshassuck River @ Mill St.	RIVER	0.66	0.95	2.4	7.23		712	9.82		144	10.6	2980	1100	1110	6.15		
1/17/2018	11:15:00 AM	Palmer River @ Rt. 6	RIVER	0.442	0.08	0	7.11		365	2.86		22.9	11.5	316	938	863	3.92		
1/17/2018	2:45:00 PM	Pawtuxet River @ Broad St.	RIVER	0.76	0.21	2.46	7.4		1320	6.93		207	14.1	2430	1710	1830	2.76		
1/17/2018	2:45:00 PM	Pawtuxet River @ Broad St. (Duplicate)	RIVER	0.76	0.21	2.46	7.4		1340	8.73		197	13.3	2300	1710	1830	3.49		
1/17/2018	1:00:00 PM	Runnins River @ River Rd.	RIVER	0.547	0.16	0.18	7.23		569	5.49		31.3	11.5	1560	1030	1010	2.04		
1/17/2018	9:00:00 AM	Taunton River @ Berkley Bridge	RIVER	0.447	0.15	0.35	7.2		446	7.98		129	25.9	818	1010	1010	6.45		
1/17/2018	9:00:00 AM	Taunton River @ Berkley Bridge (Duplicate)	RIVER	0.447	0.15	0.35	7.2		448	8.05		132	25.8	849	1020	973	6.29		
1/17/2018	1:30:00 PM	Ten Mile River @ Central Ave.	RIVER	0.489	0.24	2.1	6.87		1410	6.15		75.2	12.4	1980	1930	1920	4.21		
1/17/2018	10:55:00 AM	Warren Reservoir/Kickemuit River	RIVER	0.328	0.08	0.98	7.06		478	6.1		72.3	27.4	398	1030	1000	3.16		
1/17/2018	1:30:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.775	0.28	2.63	7.47		597	4.41		45.6	5.92	1640	844	863	< 2		
1/31/2018	10:15:00 AM	Blackstone River @ Bikepath Bridge	RIVER	0.599	0.2	1.22	7.17		606	13.4		226	23.2	3110	1220	1300	6.32		
1/31/2018	8:45:00 AM	Blackstone River @ Slater Mill	RIVER	0.557	0.21	1.23	7.47		652	14.3		304	20.5	2940	1090	1250	9.79		
1/31/2018	10:55:00 AM	Blackstone River @ Stateline	RIVER	0.575	0.19	1.02	7.48		643	13.4		48.1	9.52	3180	975	950	5.89		
1/31/2018	1:54:00 PM	Coles River @ Milford Rd.	RIVER	1.09	0.08	0.92	7.47		387	3.03		19.8	11.8	774	837	770	< 2		
1/31/2018	9:20:00 AM	Moshassuck River @ Higginson Ave.	RIVER	0.599	0.26	1.66	7.37		724	4.7		23.6	7.79	3320	826	936	5.81		
1/31/2018	2:00:00 PM	Moshassuck River @ Mill St.	RIVER	0.459	0.3	2.24	7.08		780	6.8		95.8	5.09	3860	926	1050	6.15		
1/31/2018	2:00:00 PM	Moshassuck River @ Mill St. (Duplicate)	RIVER	0.459	0.3	2.24	7.08		782	6.7		94.6	5.48	3870	962	1040	6.09		
1/31/2018	1:10:00 PM	Palmer River @ Rt. 6	RIVER	1.5	0.89	0.4	7.41		493	3.69		26.1	11.3	1470	957	946	6.95		
1/31/2018	12:55:00 PM	Pawtuxet River @ Broad St.	RIVER	0.498	0.13	1.66	7.44		753	6.72		66.5	8.69	2200	1000	1060	9.89		
1/31/2018	12:50:00 PM	Runnins River @ River Rd.	RIVER	1.16	0.43	0.5	8.2		886	8.26		19.1	6.74	3280	1230	1260	< 2		
1/31/2018	8:55:00 AM	Taunton River @ Berkley Bridge	RIVER	0.595	0.39	0.38	8		553	11.1		200	16.8	1750	1100	1110	3.4		
1/31/2018	9:55:00 AM	Ten Mile River @ Central Ave.	RIVER	0.888	0.32	0.94	7.57		2070	6.46		<7.0	60.2	3570	2430	2500	2.55		
1/31/2018	9:55:00 AM	Ten Mile River @ Central Ave. (Duplicate)	RIVER	0.888	0.32	0.94	7.57		2130	6.47		<7.0	62.1	3080	2410	2430	2.15		
1/31/2018	1:36:00 PM	Warren Reservoir/Kickemuit River	RIVER	0.94	0.18	2.22	7.64		796	7		<7.0	9.09	1770	1240	1200	< 2		
1/31/2018	1:30:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.622	0.2	2.32	7.32		693	4.56		28.9	<5	2790	881	893	6.74		
2/14/2018	9:35:00 AM	Blackstone River @ Slater Mill	RIVER	0.403	0.19	2.52	7.68		530	8.69		160	9.93	2410	970	899	3.23		
2/14/2018	9:35:00 AM	Blackstone River @ Slater Mill (Duplicate)	RIVER	0.403	0.19	2.52	7.68		524	9.18		152	9.95	2250	979	900	4.35		
2/14/2018	8:33:00 AM	Moshassuck River @ Higginson Ave.	RIVER	0.446	0.28	3.76	7.38		527	2.99		<7.0	<5	2740	815	737	2.11		
2/14/2018	1:54:00 PM	Moshassuck River @ Mill St.	RIVER	0.64	0.27	4.83	7.55		659	4.94		34	7.28	2800	947	969	2.55		
2/14/2018	3:00:00 PM	Pawtuxet River @ Broad St.	RIVER	0.151	0.1	3.39	7.56		530	7.41		60.7	9.59	2040	874	822	3.86		
2/14/2018	1:22:00 PM	Ten Mile River @ Central Ave.	RIVER	0.853	0.27	3.98	7.66		1620	4.43		<7.0	18.7	2690	2030	1990	2.5		
2/14/2018	10:23:00 AM	Woonasquatcuket River @ Manton Ave.	RIVER	0.29	0.18	4.47	7.58		632	2.75		10.9	<5	2680	875	822	2.27		
2/14/2018	10:49:00 AM	Woonasquatcuket River @ Valley St.	RIVER	0.44	0.19	3.6	7.57		659	2.96		8.01	<5	2540	881	848	2.61		
2/28/2018	9:45:00 AM	Blackstone River @ Bikepath Bridge	RIVER	1.06	0.2	6	7.38		561	15.3		141	8.86	2510	919	870	< 2		
2/28/2018	10:25:00 AM	Blackstone River @ Slater Mill	RIVER	0.968	0.2	6.08	7.19		605	12		126	6.77	2800	1010	893	5.62		
2/28/2018	9:00:00 AM	Blackstone River @ Stateline	RIVER	1.53	0.19	5.5	7.36		484	14.4		71.5	7.78	2560	797	728	< 2		
2/28/2018	10:05:00 AM	Coles River @ Milford Rd.	RIVER	0.421	0.08	6.35	6.73		248	2.97		<7.0	10.9	457	684	629	30.21		
2/28/2018	1:30:00 PM	Moshassuck River @ Mill St.	RIVER	0.525	0.29	7.74	7.23		544	4.05		20.6	<5	2550	726	543	24.74		

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
2/28/2018	12:35:00 PM	Palmer River @ Rt. 6	RIVER	0.52	0.1	6.19	6.74		280	3.71		<7.0	8.6	902	712	651	< 2		
2/28/2018	2:40:00 PM	Pawtuxet River @ Broad St.	RIVER	0.859	0.12	6.67	7.52		660	3.9		<7.0	5.63	2470	906	845	2.71		
2/28/2018	1:05:00 PM	Runnins River @ River Rd.	RIVER	0.3	0.2	5.7	6.89		657	4.65		<7.0	<5	2330	956	997	30.22		
2/28/2018	9:25:00 AM	Taunton River @ Berkley Bridge	RIVER	0.52	0.17	5.92	6.88		428	15.9		114	11.1	1340	855	851	35.32		
2/28/2018	1:40:00 PM	Ten Mile River @ Central Ave.	RIVER	0.42	0.08	7.81	7.03		1440	4.49		16.1	20.4	2560	1580	1710	16.67		
2/28/2018	1:40:00 PM	Ten Mile River @ Central Ave. (Duplicate)	RIVER	0.42	0.08	7.81	7.03		1500	3.94		25.4	23.2	2720	1640	1550	20.43		
2/28/2018	10:40:00 AM	Warren Reservoir/Kickemuit River	RIVER	0.38	0.11	6.32	6.72		387	5.41		12.3	10.5	1120	887	874	16.25		
2/28/2018	12:30:00 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.801	0.18	7.02	7.4		626	3.7		<7.0	<5	2500	822	785	21.09		
2/28/2018	1:00:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.81	0.19	7.37	7.3		651	2.56		<7.0	<5	2460	840	777	4.9		
2/28/2018	1:00:00 PM	Woonasquatucket River @ Valley St. (Duplicate)	RIVER	0.81	0.19	7.37	7.3		653	2.68		NR	<5	2440	820	791	30		
3/14/2018	1:10:00 PM	Moshassuck River @ Higginson Ave.	RIVER	1.01	0.33	3.74	7.8		640	2.31		10.9	<5	2430	867	821	< 2		
3/14/2018	1:55:00 PM	Moshassuck River @ Mill St.	RIVER	0.522	0.87	4.21	7.55		718	5.27		49.1	<5	2220	1060	1040	5.71		
3/14/2018	2:20:00 PM	Pawtuxet River @ Broad St.	RIVER	0.805	0.17	3.63	7.77		711	2.5		<7.0	10.3	1700	1030	928	2.63		
3/14/2018	9:20:00 AM	Ten Mile River @ Central Ave.	RIVER	0.798	0.29	1.45	7.88		1270	4.3		35.2	10.4	1430	1560	1510	2.5		
3/14/2018	9:20:00 AM	Ten Mile River @ Central Ave. (Duplicate)	RIVER	0.798	0.29	1.45	7.88		604	2.81		20.9	11.2	1600	1570	920	2.5		
3/14/2018	10:00:00 AM	Woonasquatucket River @ Manton Ave.	RIVER	0.525	0.26	2.78	7.96		572	<1.5		10.3	<5	1030	820	727	2.77		
3/14/2018	10:25:00 AM	Woonasquatucket River @ Valley St.	RIVER	0.681	0.29	2.88	7.76		608	1.5		<7.0	<5	1680	882	766	< 2		
3/28/2018	9:30:00 AM	Blackstone River @ Bikepath Bridge	RIVER	0.88	0.23	6.67	7.43		778	7.62		13.1	<5	1800	1100	979	3.75		
3/28/2018	8:45:00 AM	Blackstone River @ Slater Mill	RIVER	0.81	0.23	6.52	8.02		838	6.56		<7.0	<5	1860	1160	1030	31.84		
3/28/2018	8:45:00 AM	Blackstone River @ Slater Mill (Duplicate)	RIVER	0.81	0.23	6.52	8.02		841	6.51		<7.0	<5	1850	1180	1040	40.59		
3/28/2018	10:00:00 AM	Blackstone River @ Stateline	RIVER	1.95	0.2	6.59	7.4		820	11.7		52.4	5.72	1840	1210	1080	13.26		
3/28/2018	12:45:00 PM	Moshassuck River @ Higginson Ave.	RIVER	0.78	0.33	7.72	7.69		584	3.3		15.1	<5	2270	881	747	2.92		
3/28/2018	1:15:00 PM	Moshassuck River @ Mill St.	RIVER	0.38	0.33	8.18	7.53		760	5.31		28.2	<5	2330	999	957	2.22		
3/28/2018	3:00:00 PM	Pawtuxet River @ Broad St.	RIVER	1.01	0.15	7.95	7.48		910	5.17		68.2	<5	2280	1300	1190	3.51		
3/28/2018	1:45:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.65	0.2	8.39	7.66		790	2.07		<7.0	5	1990	1010	935	3.37		
4/18/2018	8:30:00 AM	Blackstone River @ Slater Mill	RIVER	0.41	0.18	7.27	7.45		403	15.7		<7.0	12.7	1080	841	637	16.7		
4/18/2018	9:10:00 AM	Moshassuck River @ Higginson Ave.	RIVER	0.25	0.23	7.63	7.48		402	3.8		<7.0	6.34	1550	766	610	30		
4/18/2018	2:00:00 PM	Moshassuck River @ Mill St.	RIVER	0.4	0.23	9.46	7.5		503	3.99		12	<5	1910	926	673	6		
4/18/2018	10:40:00 AM	Pawtuxet River @ Broad St.	RIVER	0.44	0.13	7.61	7.58		723	3.72		25.3	<5	1410	1030	907	41.28		
4/18/2018	9:50:00 AM	Ten Mile River @ Central Ave.	RIVER	0.29	0.21	7.78	7.69		768	4.35		<7.0	11.7	861	1250	1050	32.5		
4/18/2018	1:00:00 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.5	0.17	8.69	7.54		450	1.66		<7.0	<5	1290	748	598	31.02		
4/18/2018	1:25:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.45	0.18	9	7.5		491	1.98		<7.0	<5	1360	751	644	14		
4/18/2018	1:25:00 PM	Woonasquatucket River @ Valley St. (Duplicate)	RIVER	0.45	0.18	9	7.5		491	2.13		<7.0	<5	1370	724	638	19.58		
4/25/2018	9:25:00 AM	Blackstone River @ Bikepath Bridge	RIVER	0.26	0.21	12.73	7.59		466	6.29		<7.0	10.1	1730	857	671	3.41		
4/25/2018	8:30:00 AM	Blackstone River @ Slater Mill	RIVER	0.662	0.21	12.41	8.04		483	6.09		<7.0	7.07	1610	1140	681	92.5		
4/25/2018	8:30:00 AM	Blackstone River @ Slater Mill (Duplicate)	RIVER	0.662	0.21	12.41	8.04		479	5.98		<7.0	5.91	1580	999	688	29		
4/25/2018	10:15:00 AM	Blackstone River @ Stateline	RIVER	0.634	0.21	12.4	7.51		479	17.1		34.4	8.97	1670	929	714	4.68		
4/25/2018	10:40:00 AM	Coles River @ Milford Rd.	RIVER	0.495	0.07	13.53	6.93		120	2.69		<7.0	12.8	106	655	541	< 2		
4/25/2018	1:50:00 PM	Moshassuck River @ Mill St.	RIVER	0.483	0.16	13.06	7.4		356	9.54		153	7.05	1030	1050	825	29.09		
4/25/2018	1:05:00 PM	Palmer River @ Rt. 6	RIVER	0.549	0.12	13.19	7.05		230	3.68		14.4	12.3	370	771	637	3.26		
4/25/2018	2:22:00 PM	Pawtuxet River @ Broad St.	RIVER	0.578	0.12	11.97	7.24		636	7.13		62.6	<5	1750	1030	891	4.67		
4/25/2018	1:30:00 PM	Runnins River @ River Rd.	RIVER	0.549	0.25	11.94	6.94		558	3.73		<7.0	8.2	951	1030	934	< 2		
4/25/2018	9:35:00 AM	Taunton River @ Berkley Bridge	RIVER	0.464	0.16	12.83	6.96		362	10		299	16.5	531	1170	1030	4.13		
4/25/2018	9:35:00 AM	Taunton River @ Berkley Bridge (Duplicate)	RIVER	0.464	0.16	12.83	6.96		362	9.88		298	16.8	563	1120	1030	3.91		
4/25/2018	2:10:00 PM	Ten Mile River @ Central Ave.	RIVER	0.499	0.28	13.27	7.2		936	4.41		<7.0	7.85	1370	1370	1230	3.01		
4/25/2018	11:10:00 AM	Warren Reservoir/Kickemuit River	RIVER	0.505	0.13	14.26	7.06		240	5.91		11.9	9.61	303	916	699	4.22		
4/25/2018	12:40:00 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.502	0.18	12.51	7.67		533	2.43		11.6	<5	1300	818	715	< 2		
4/25/2018	1:20:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.114	0.18	13.02	7.56		531	3.84		<7.0	<5	1130	874	746	5.06		
5/24/2018	9:25:00 AM	Blackstone River @ Bikepath Bridge	RIVER	0.535	0.21	18.85	7.71		875	8.73		43.1	10.2	2030	976	884	7.01		
5/24/2018	8:30:00 AM	Blackstone River @ Slater Mill	RIVER	0.532	0.21	18.63	7.85		880	8.47		51.9	12.5	1970	984	1030	5.31		
5/24/2018	10:30:00 AM	Blackstone River @ Stateline	RIVER	0.526	0.2	19.12	7.67		789	9.43		42.9	13.1	1960	974	886	6.53		
5/24/2018	10:10:00 AM	Coles River @ Milford Rd.	RIVER	0.43	0.08	18.95	7.07		160	6.77		34.1	30.2	762	956	848	4.08		
5/24/2018	2:15:00 PM	Moshassuck River @ Mill St.	RIVER	0.45	0.29	18.59	7.53		737	18.5		122	6.94	3120	949	1030	4.38		
5/24/2018	2:15:00 PM	Moshassuck River @ Mill St. (Duplicate)	RIVER	0.45	0.29	18.59	7.53		803	18.8		122	7.03	3210	995	944	4.21		
5/24/2018	10:35:00 AM	Palmer River @ Rt. 6	RIVER	0.56	0.59	18.81	6.65		328	6.35		47.3	12.5	1290	882	827	6.33		
5/24/2018	12:55:00 PM	Pawtuxet River @ Broad St.	RIVER	0.443	0.14	19.38	7.42		951	8.72		61.2	<5	2010	1080	981	4		
5/24/2018	11:25:00 AM	Runnins River @ River Rd.	RIVER	0.43	0.25	17.36	6.95		684	5.06		13.9	5.21	1710	939	981	2.47		
5/24/2018	9:15:00 AM	Taunton River @ Berkley Bridge	RIVER	0.4	0.17	18.39	6.78		501	12.8		217	21.4	1620	1140	1100	8.48		

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
5/24/2018	9:15:00 AM	Taunton River @ Berkley Bridge (Duplicate)	RIVER	0.4	0.17	18.39	6.78		650	12.9		218	20.7	1540	1150	1140	8.04		
5/24/2018	1:50:00 PM	Ten Mile River @ Central Ave.	RIVER	0.5	0.32	19.42	7.14		1140	14.9		58.7	15.4	2520	1380	1410	3.76		
5/24/2018	12:40:00 PM	Warren Reservoir/Kickemuit River	RIVER	0.48	0.12	22.57	7.24		145	8.64		40.7	12	715	1330	815	32.65		
5/24/2018	1:40:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.466	0.19	20.67	7.6		718	4.4		37.6	<5	1500	938	961	3.87		
6/6/2018	10:00:00 AM	Blackstone River @ Slater Mill	RIVER	0.427	0.24	17.73	7.48		676	6.37		<7.0	16.3	2130	1130	965	7		
6/6/2018	10:25:00 AM	Moshassuck River @ Higginson Ave.	RIVER	0.364	0.26	14.08	7.06		539	23.3		106	11.5	5260	865	827	2.55		
6/6/2018	1:25:00 PM	Moshassuck River @ Mill St.	RIVER	0.354	0.28	15.85	7.23		570	17.2		127	<5	3680	955	1040	3.6		
6/6/2018	1:50:00 PM	Pawtuxet River @ Broad St.	RIVER	0.766	1.22	17.62	7.08		838	16.5		57.6	<5	2660	1130	1250	2.57		
6/6/2018	9:30:00 AM	Ten Mile River @ Central Ave.	RIVER	0.582	0.31	15.55	7.4		1240	14.9		42.4	25.7	2730	1580	1620	2.39		
6/6/2018	12:35:00 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.598	0.18	17.9	7.26		492	4.92		19.6	<5	1410	827	751	3.06		
6/6/2018	12:35:00 PM	Woonasquatucket River @ Manton Ave. (Duplicate)	RIVER	0.598	0.18	17.9	7.26		490	4.6		22.7	<5	1430	784	743	8.2		
6/6/2018	1:05:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.548	0.2	17.58	7.3		548	4.78		<7.0	5.65	1500	823	796	4.9		
6/20/2018	9:33 AM	Blackstone River @ Bikepath Bridge	RIVER	0.415	0.3	22.9	7.82		507	6.17	500.83	<7.000	<5.0	1660	1030	796	7.6289		
6/20/2018	9:33 AM	Blackstone River @ Bikepath Bridge (Duplicate)	RIVER	0.415	0.3	22.9	7.82		504	5.94	498.06	<7.000	<5.0	1790	971	801	7.6289		
6/20/2018	8:44 AM	Blackstone River @ Slater Mill	RIVER	0.495	0.3	23.1	7.8		425	5.22	419.78	<7.000	<5.0	1750	1060	723	9.6907		
6/20/2018	10:23 AM	Blackstone River @ Stateline	RIVER	0.486	0.31	23.2	7.87		647	6.47	640.53	<7.000	6.58	1800	1130	958	5.8333		
6/20/2018	10:30 AM	Coles River @ Milford Rd.	RIVER	0.512	0.09	22.9	7.29		313	10.5	302.5	85.8	47.1	2500	1150	1140	2.4242		
6/20/2018	11:08 AM	Moshassuck River @ Higginson Ave.	RIVER	0.506	0.29	20.8	7.46		280	10.7	269.3	28.8	8.26	2960	509	543	2.9474		
6/20/2018	1:20 PM	Moshassuck River @ Mill St.	RIVER	0.411	0.35	19.7	7.51		749	24.8	724.2	114	<5.0	4660	960	1060	5.0526		
6/20/2018	11:30 AM	Palmer River @ Rt. 6	RIVER	0.511	8.04	24.3	7.13		79.5	4.25	75.25	<7.000	<5.0	1380	689	428	18.384		
6/20/2018	11:30 AM	Palmer River @ Rt. 6 (Duplicate)	RIVER	0.511	8.04	24.3	7.13		80.7	4.09	76.61	<7.000	<5.0	1260	684	470	18.2		
6/20/2018	2:47 PM	Pawtuxet River @ Broad St.	RIVER	0.48	2.13	23.1	7.53		1290	37.8	1252.2	<7.000	9.1	2420	1610	1570	6.2626		
6/20/2018	1:30 PM	Runnins River @ River Rd.	RIVER	0.5	0.38	19.8	7.24		378	5.34	372.66	12.5	5.74	4370	705	722	4.4		
6/20/2018	9:15 AM	Taunton River @ Berkley Bridge	RIVER	0.499	0.26	22.5	7.64		922	9.7	912.3	<7.000	62.4	2970	1390	1390	7.4		
6/20/2018	2:15 PM	Ten Mile River @ Central Ave.	RIVER	0.501	0.42	22.5	7.44		1510	7.33	1502.67	<7.000	22.9	2810	1510	1490	2.8		
6/20/2018	11:00 AM	Warren Reservoir/Kickemuit River	RIVER	0.539	0.15	21.9	7.02		<6.000	2.3	<6.0	<7.000	19.4	121	686	623	2.4		
6/20/2018	11:00 AM	Warren Reservoir/Kickemuit River (Duplicate)	RIVER	0.539	0.15	21.9	7.02		<6.000	1.75	<6.0	<7.000	14.9	118	666	638	2.8		
6/20/2018	12:57 PM	Woonasquatucket River @ Valley St.	RIVER	0.421	0.27	22.4	7.68		893	5.43	887.57	<7.000	<5.0	1340	1080	1120	<2.0000		
6/27/2018	9:15 AM	Blackstone River @ Slater Mill	RIVER	0.611	0.31	22.2	7.91		497	6.24	490.76	24.4	<5.0	1680	920	723	10.408		
6/27/2018	8:40 AM	Moshassuck River @ Higginson Ave.	RIVER	1.3	0.34	18.3	7.77		326	8.75	317.25	40.6	6.12	3640	519	511	5		
6/27/2018	8:40 AM	Moshassuck River @ Higginson Ave. (Duplicate)	RIVER	1.3	0.34	18.3	7.77		335	9.14	325.86	50.6	<5.0	3910	525	526	6.2		
6/27/2018	2:45 PM	Moshassuck River @ Mill St.	RIVER	0.187	0.37	19	7.76		817	21.5	795.5	68.9	<5.0	4860	1000	962	4.4898		
6/27/2018	3:20 PM	Pawtuxet River @ Broad St.	RIVER	0.395	0.23	22.4	7.79		1520	57.6	1462.4	<7.000	<10.0	2370	1640	1610	2.6		
6/27/2018	9:45 AM	Ten Mile River @ Central Ave.	RIVER	0.626	0.39	19.4	7.65		1310	9.37	1300.63	71.5	18.5	3190	1480	1460	3.3333		
6/27/2018	2:00 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.2	0.24	23	7.92		845	6.85	838.15	<7.000	<5.0	937	1020	993	2.268		
6/27/2018	2:15 PM	Woonasquatucket River @ Valley St.	RIVER	0.391	0.28	21.5	7.83		980	4.71	975.29	<7.000	<5.0	1450	1100	1090	2.5		
7/18/2018	9:50 AM	Blackstone @ Bikepath Bridge	RIVER	0.487	0.29	25.8	7.63		858	7.56	850.44	45.3	11.1	1420	1500	1270	11.753		
7/18/2018	8:55 AM	Blackstone @ Slater Mill	RIVER	0.495	0.29	25.5	8.13		368	6.86	361.14	31.1	<5.0	1050	938	747	12.21		
7/18/2018	10:48 AM	Blackstone @ Stateline	RIVER	0.529	0.31	24.8	7.51		869	10.8	858.2	61.3	29.9	1500	1710	1340	34.947		
7/18/2018	11:20 AM	Coles River @ Milford Rd.	RIVER	0.49	0.11	24.5	6.99		218	6.98	211.02	53.7	29.1	1350	1010	973	6.3736		
7/18/2018	3:05 PM	Moshassuck @ Mill St.	RIVER	0.194	0.28	23	7.16		456	14.1	441.9	69.2	<5.0	3920	819	803	4.3011		
7/18/2018	12:10 PM	Palmer River @ Rt. 6	RIVER	0.56	22.4	27	6.88		6.96	<1.5	6.96	<7.000	20.4	516	901	406	11.368		
7/18/2018	1:00 PM	Pawtuxet @ Broad St.	RIVER	0.518	20.6	25.6	7.51		75.3	5.09	70.21	71.8	109	1500	787	381	14.792		
7/18/2018	1:35 PM	Runnins River @ River Rd.	RIVER	0.53	0.45	22.7	7.4		525	14.1	510.9	<7.000	<5.0	4380	1060	987	4.0425		
7/18/2018	1:35 PM	Runnins River @ River Rd. (Duplicate)	RIVER	0.53	0.45	22.7	7.4		526	13.3	512.7	<7.000	<5.0	4470	1010	971	3.5165		
7/18/2018	10:30 AM	Taunton River @ Berkley Bridge	RIVER	0.58	0.57	25.7	7.25		753	8.23	744.77	<7.000	46.2	2310	1510	1230	10.947		
7/18/2018	10:30 AM	Taunton River @ Berkley Bridge (Duplicate)	RIVER	0.58	0.57	25.7	7.25		754	9.44	744.56	<7.000	45.4	2350	1320	1230	10.722		
7/18/2018	2:30 PM	Ten Mile River @ Central Ave	RIVER	0.5	0.35	25.1	7.35		1300	8.33	1291.67	42.9	32	3100	1500	1640	5.2083		
7/18/2018	11:45 AM	Warren Reservoir/Kickemuit River	RIVER	0.58	0.21	25.3	6.7		<6.000	<1.5	<6.0	13.1	11.2	358	766	796	6.875		
7/18/2018	1:45 PM	Woonaquatucket @ Manton Ave.	RIVER	0.337	0.23	27.1	7.55		580	7.74	572.26	31.4	<5.0	1100	872	873	2.268		
7/18/2018	1:45 PM	Woonasquatucket @ Manton Ave. (Duplicate)	RIVER	0.337	0.23	27.1	7.55		575	7.74	567.26	31.6	<5.0	1100	861	874	<2.0000		
7/18/2018	2:40 PM	Woonasquatucket @ Valley St.	RIVER	0.225	0.26	25.9	7.58		555	5.26	549.74	7.9	<5.0	1310	827	799	2.4742		
8/1/2018	1:25 PM	Blackstone River @ Slater Mill	RIVER	0.5	0.24	25.5	7.62		518	4.57	513.43	25.6	18.1	2250	876	786	8.75		
8/1/2018	1:00 PM	Moshassuck River @ Higginson Ave.	RIVER	0.1	0.28	20.4	7.88		427	4.21	422.79	33.2	6.61	4080	584	594	3.2653		
8/1/2018	1:50 PM	Moshassuck River @ Mill St.	RIVER	0.3	0.37	21.2	7.38		734	8.37	725.63	20	<5.0	4770	889	894	16.2		
8/1/2018	10:45 AM	Pawtuxet River @ Broad St.	RIVER	0.8	21.4	25.7	7.28		1370	3.21	1366.79	13.3	<5.0	2840	1590	1500	<2.0000		
8/1/2018	10:00 AM	Ten Mile River @ Central Ave.	RIVER	0.4	0.38	22.3	7.84		1700	4.64	1695.36	17.9	28.5	2750	1977	1860	<2.0000		
8/1/2018	10:00 AM	Ten Mile River @ Central Ave. (Duplicate)	RIVER	0.4	0.38	22.3	7.84		1690	4.62	1685.38	21.4	28.6	2810	1770	1920	<2.0000		

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
8/1/2018	8:45 AM	Ten Mile River @ Roger Williams Ave.	RIVER	0.268	0.32	24.9	7.37		172	4.76	167.24	88.3	20.4	2050	400	565	4.6808		
8/1/2018	2:30 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.3	0.24	25.5	7.38		426	3.95	422.05	11.8	<5.0	1080	721	721	5.2525		
8/1/2018	2:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.5	0.34	25.2	7.76		656	3.21	652.79	<7.000	<5.0	1490	869	810	<2.0000		
8/16/2018	9:35 AM	Blackstone River @ Bikepath Bridge	RIVER	0.461	0.17	24.3	7.1		427	10.9	416.1	68	26.9	2550	806	824	8.0435		
8/16/2018	8:37 AM	Blackstone River @ Slater Mill	RIVER	0.535	0.17	24.1	7.11		415	6.99	408.01	44.4	26.9	2560	827	743	9.3617		
8/16/2018	10:24 AM	Blackstone River @ Stateline	RIVER	0.488	0.17	24.3	7.1		319	6.6	312.4	24.3	25.5	2630	706	645	10.538		
8/16/2018	9:50 AM	Coles River @ Milford Rd.	RIVER	0.5	0.07	25.2	6.54		58.3	5.21	53.09	145	30.6	1690	1091	934	6.5274		
8/16/2018	7:53 AM	Moshassuck River @ Higginson Ave.	RIVER	0.488	0.29	24.4	6.56		162	3.89	158.11	43.4	7.6	2830	509	451	<2.0000		
8/16/2018	1:50 PM	Moshassuck River @ Mill St.	RIVER	0.412	0.3	23.6	7.24		459	9.99	449.01	46	<5.0	3820	763	778	<2.0000		
8/16/2018	11:15 AM	Palmer River @ Rt. 6	RIVER	0.5	10.9	26.3	6.49		17.3	2.86	14.44	<7.000	21.6	2900	1136	474	11.633		
8/16/2018	12:43 PM	Pawtuxet River @ Broad St.	RIVER	0.527	2.21	25.2	6.87		831	7.68	823.32	12.8	9.56	3080	1164	1090	2.1277		
8/16/2018	11:30 AM	Runnins River @ River Road	RIVER	0.5	0.26	22.7	7.3		292	3.56	288.44	<7.000	12.6	5030	799	828	<2.0000		
8/16/2018	9:00 AM	Taunton River @ Berkley Bridge	RIVER	0.5	0.24	24.5	6.56		813	6.73	806.27	<7.000	51.6	3230	1285	1270	4.7917		
8/16/2018	9:00 AM	Taunton River @ Berkley Bridge (Duplicate)	RIVER	0.5	0.24	24.5	6.56		828	7	821	<7.000	51.5	3280	1381	1230	4.2553		
8/16/2018	1:45 PM	Ten Mile River @ Central Ave.	RIVER	0.5	0.31	24.9	6.92		1010	5.58	1004.42	10.1	37.9	3480	1488	1420	4.7917		
8/16/2018	1:15 PM	Ten Mile River @ Roger Williams Ave.	RIVER	0.5	0.34	26.6	6.93		88.7	2.37	86.33	32.6	17.5	2130	572	414	4.7059		
8/16/2018	10:45 AM	Warren Reservoir/Kickemuit River	RIVER	0.5	0.12	24.1	6.43		13.4	1.68	11.72	<7.000	16.4	3430	815	674	9.2466		
8/16/2018	1:16 PM	Woonasquatucket @ Valley St.	RIVER	0.472	0.23	25.7	7.46		389	2.54	386.46	<7.000	<5.0	1720	638	594	<2.0000		
8/16/2018	1:16 PM	Woonasquatucket @ Valley St. (Duplicate)	RIVER	0.472	0.23	25.7	7.46		390	2.63	387.37	15.8	<5.0	1720	672	604	<2.0000		
8/29/2018	10:10 AM	Blackstone River @ Slater Mill	RIVER	0.59	0.27	25.1	7.58		604	3.78	600.22	254	18.2	2518	866	888	<2.0000		
8/29/2018	1:25 PM	Moshassuck @ Mill St.	RIVER	0.27	0.34	23.3	7.43		714	19.5	694.5	128	<5.0	4935	888	943	2.7957		
8/29/2018	9:45 AM	Moshassuck River @ Higginson Ave.	RIVER	0.5	0.28	21.3	7.51		316	6.72	309.28	184	217	3620	533	529	7.7083		
8/29/2018	2:30 PM	Pawtuxet River @ Broad St.	RIVER	0.33	9.33	26.2	7.08		1150	4.46	1145.54	282	7.59	3014	1560	1410	3.2941		
8/29/2018	2:30 PM	Pawtuxet River @ Broad St. (Duplicate)	RIVER	0.33	9.33	26.2	7.08		1170	4.49	1165.51	316	8.95	3062	1570	1420	2.3404		
8/29/2018	9:05 AM	Ten Mile River @ Roger Williams Ave.	RIVER	1.52	0.3	24.9	7.92		175	4.61	170.39	195	26.2	2078	526	530	<2.0000		
8/29/2018	12:40 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.37	0.24	26.4	7.51		507	4.42	502.58	131	<5.0	878	695	709	<2.0000		
8/29/2018	1:05 PM	Woonasquatucket River @ Valley St.	RIVER	0.34	0.29	25.5	7.49		727	3.2	723.8	37.3	<5.0	1660	848	948	<2.0000		
9/12/2018	9:27 AM	Blackstone River @ Bikepath Bridge	RIVER	0.54	0.27	19.7	7.45		924	4.53	919.47	22.1	17.8	2040	1250	1200	4.0425		
9/12/2018	9:27 AM	Blackstone River @ Bikepath Bridge (Duplicate)	RIVER	0.54	0.27	19.7	7.45		922	4.27	917.73	23.8	17.6	2060	1250	1210	4.3011		
9/12/2018	8:40 AM	Blackstone River @ Slater Mill	RIVER	0.51	0.26	20.6	7.46		863	4.64	858.36	22.9	15.4	1830	1140	1130	3.913		
9/12/2018	10:18 AM	Blackstone River @ Stateline	RIVER	0.5	0.24	19.8	7.42		938	16.8	921.2	230	32.7	2190	1580	1420	8.8889		
9/12/2018	10:15 AM	Coles River @ Milford Rd.	RIVER	0.49	0.1	21	7.42		553	7.1	545.9	62.7	33.4	3240	1200	1100	2.3656		
9/12/2018	10:15 AM	Coles River @ Milford Rd. (Duplicate)	RIVER	0.49	0.1	21	7.42		552	6.82	545.18	53.1	30.9	3520	1190	1110	2.0833		
9/12/2018	2:45 PM	Moshassuck @ Mill St.	RIVER	0.51	0.14	20.7	7.25		346	13.8	332.2	114	21.5	1700	1070	676	22.826		
9/12/2018	11:10 AM	Palmer River @ Rt. 6	RIVER	0.579	26.3	22.2	6.79		36.8	6.94	29.86	166	39.5	1790	1030	468	17.143		
9/12/2018	1:10 PM	Pawtuxet River @ Broad St.	RIVER	0.49	0.43	20.4	7.51		971	4.97	966.03	<7.000	5.59	2760	1190	1190	2.1277		
9/12/2018	1:10 PM	Runnins River @ River Road	RIVER	0.43	0.29	19.9	7.75		213	2.11	210.89	<7.000	14.2	4240	538	529	<2.0000		
9/12/2018	9:00 AM	Taunton River @ Berkley Bridge	RIVER	0.466	4.59	21.9	6.97		1240	9.79	1230.21	77.4	124	3170	1920	1680	7.4157		
9/12/2018	1:45 PM	Ten Mile River @ Central Ave.	RIVER	0.51	0.31	20.2	7.56		1070	5.66	1064.34	29.4	17.4	2260	1670	1400	5.102		
9/12/2018	2:20 PM	Ten Mile River @ Roger Williams Ave.	RIVER	0.476	0.28	22.3	7.4		119	3.71	115.29	66.8	28.2	1250	501	450	4.2857		
9/12/2018	10:45 AM	Warren Reservoir/Kickemuit River	RIVER	0.446	0.16	19.6	7.15		74.3	28	46.3	12.6	7.54	1080	825	565	<2.0000		
9/12/2018	1:40 PM	Woonasquatucket @ Manton Ave.	RIVER	0.49	0.21	19.7	7.44		1220	8.14	1211.86	26.2	5.09	1520	1460	1420	<2.0000		
9/12/2018	2:20 PM	Woonasquatucket @ Valley St.	RIVER	0.44	0.23	19.9	7.35		1120	6.6	1113.4	11.4	<5.0	1760	1340	1360	<2.0000		
9/26/2018	9:25 AM	Blackstone River @ Slater Mill	RIVER	0.28	0.16	17.3	7.63		516	8.02	508	14.6	16.2	2550	924	817	32.34		
9/26/2018	2:10 PM	Moshassuck @ Higginson Ave.	RIVER	0.43	0.22	19.6	7.04		127	4.06	123	<7.000	<5.0	2630	539	408	5.8696		
9/26/2018	1:45 PM	Moshassuck @ Mill St.	RIVER	0.19	0.18	19.2	6.99		255	5.52	249	17.8	9.06	2450	730	601	7.8652		
9/26/2018	10:45 AM	Pawtuxet River @ Broad St.	RIVER	0.38	0.09	18.6	7.41		429	10.2	419	66.8	12.3	1810	916	715	28.809		
9/26/2018	10:15 AM	Ten Mile River @ Roger Williams Ave.	RIVER	0.28	0.23	18.3	7.86		500	12.2	488	86.7	37.3	3420	1100	975	6.5168		
9/26/2018	10:15 AM	Ten Mile River @ Roger Williams Ave. (Duplicate)	RIVER	0.28	0.23	18.3	7.86		498	12.2	486	89.5	37.9	3080	1030	978	5.9341		
9/26/2018	1:10 PM	Woonasquatucket @ Manton Ave.	RIVER	0.164	0.15	19.6	7.22		298	2.86	295	10.3	8.37	2040	612	623	<2.0000		
9/26/2018	1:30 PM	Woonasquatucket @ Valley St.	RIVER	0.18	0.15	19.5	7.09		353	2.93	350	<7.000	8.32	2270	688	693	2.7273		
10/11/2018	9:25 AM	Blackstone River @ Slater Mill	RIVER	0.477	0.18	18.91	7.55		584	6.75	577	24.8	17.8	3780	796	812	5.5556		
10/11/2018	9:25 AM	Blackstone River @ Slater Mill (Duplicate)	RIVER	0.477	0.18	18.91	7.55		586	6.73	579	10.3	17.2	3720	820	822	4.9438		
10/11/2018	8:55 AM	Moshassuck @ Higginson Ave.	RIVER	0.266	0.24	19.3	7.45		285	9.39	276	41.6	7.94	2920	558	499	<2.0000		
10/11/2018	1:45 PM	Moshassuck @ Mill St.	RIVER	0.363	0.28	19.15	7.27		596	16.3	580	127	5.79	3800	811	899	3.1579		
10/11/2018	10:50 AM	Pawtuxet River @ Broad St.	RIVER	1.264	1.99	19.48	7.01		933	5.66	927	27.5	5.01	3960	1150	1170	2.6374		
10/11/2018	10:10 AM	Ten Mile River @ Roger Williams Ave.	RIVER	1.088	0.21	19.13	7.34		837	15.7	821	95.7	33.2	3720	1280	1290	<2.0000		
10/11/2018	1:00 PM	Woonasquatucket @ Manton Ave.	RIVER	0.234	0.18	20.19	7.42		546	3.29	543	18.5	<5.0	2640	692	738	<2.0000		

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
10/11/2018	1:20 PM	Woonasquatucket River @ Valley St.	RIVER	0.245	0.2	20.17	7.4		631	3.02	628	14.4	<5.0	3000	766	788	<2.0000		
10/24/2018	9:30 AM	Blackstone River @ Bikepath Bridge	RIVER	0.5	0.18	9.78	7.29		533	6.15	527	8.04	10.4	3440	720	756	2.4742		
10/24/2018	8:35 AM	Blackstone River @ Slater Mill	RIVER	0.6	0.18	9.71	7.17		562	5.57	556	42	8.99	3450	778	804	2.3656		
10/24/2018	10:22 AM	Blackstone River @ Stateline	RIVER	0.5	0.16	9.62	7.24		509	5.39	504	7.95	11.9	3230	685	710	2.3913		
10/24/2018	1:25 PM	Moshassuck River @ Higginson Ave.	RIVER	0.5	0.25	10.15	7.15		306	3.73	302	20.5	<5.0	3340	496	510	<2.0000		
10/24/2018	2:40 PM	Moshassuck River @ Mill St.	RIVER	0.5	0.18		7.68		463	5.3	458	59.9	5.33	3870	663	699	3.4409		
10/24/2018	2:40 PM	Moshassuck River @ Mill St. (Duplicate)	RIVER	0.5	0.18		7.68		463	5.75	457	51.7	<5.0	3950	656	685	2.5581		
10/24/2018	2:20 PM	Palmer River @ Rt. 6	RIVER	1.02	0.26	9.19	7.89		277	5.27	272	39.8	12.9	3070	896	798	7.5269		
10/24/2018	12:40 PM	Pawtuxet River @ Broad St.	RIVER	0.6	0.14	10.54	6.95		827	13.5	813	70.9	<5.0	3890	1010	1090	2.1053		
10/24/2018	2:00 PM	Runnins River @ River Rd.	RIVER	1.05	0.25	9.27	7.7		538	2.23	536	<7.000	8.78	5650	849	944	<2.0000		
10/24/2018	1:13 PM	Taunton River @ Berkley Bridge	RIVER	0.5	0.49	10.25	7.92		526	8.57	517	51.8	38.2	3460	1280	997	92.667		
10/24/2018	9:25 AM	Ten Mile River @ Central Ave.	RIVER	0.7	0.26	9.46	8.45		1080	7.99	1070	28.4	15.9	3910	1380	1550	2.3404		
10/24/2018	10:20 AM	Ten Mile River @ Roger Williams Ave.	RIVER	0.5	0.22	10.25	8.31		966	14.6	951	82.3	30.9	4590	1340	1410	2.549		
10/24/2018	10:20 AM	Ten Mile River @ Roger Williams Ave. (Duplicate)	RIVER	0.5	0.22	10.25	8.31		907	14.5	892	82.2	29.5	4720	1360	1400	<2.0000		
10/24/2018	2:10 PM	Woonasquatucket River @ Valley St.	RIVER	0.5	0.17		7.93		521	2.65	518	<7.000	<5.0	2720	644	706	<2.0000		
11/7/2018	9:15 AM	Blackstone River @ Bikepath Bridge	RIVER	0.106	0.13	10.21	7.31		299	7.87	291	<7.000	8.38	2810	597	734	4.0425		
11/7/2018	8:35 AM	Blackstone River @ Slater Mill	RIVER	0.512	0.13	10.3	8.03		333	8.48	325	15.2	8.34	2620	659	699	7.1111		
11/7/2018	8:35 AM	Blackstone River @ Slater Mill (Duplicate)	RIVER	0.512	0.13	10.3	8.03		334	8.82	325	29.1	7.92	2800	677	710	5.9794		
11/7/2018	10:00 AM	Blackstone River @ Stateline	RIVER						277	12.1	265	39.3	8.3	2190	618	648	3.617		
11/7/2018	10:10 AM	Coles River @ Milford Rd.	RIVER	0.585	0.06	10.8	7.15		78.1	4.85	73.2	8.41	31	1470	745	697	3.3333		
11/7/2018	1:00 PM	Moshassuck River @ Higginson Ave.	RIVER	0.084	0.19	11.71	7.56		287	2.9	284	<7.000	6.34	3600	533	612	<2.0000		
11/7/2018	1:30 PM	Moshassuck River @ Mill St.	RIVER	0.047	0.18	11.56	7.38		308	3.05	305	<7.000	5.02	3340	600	661	2.1176		
11/7/2018	1:00 PM	Palmer River @ Rt. 6	RIVER	0.587	0.1	11.51	6.74		75	4.61	70.4	<7.000	24.6	1280	713	647	<2.0000		
11/7/2018	1:00 PM	Palmer River @ Rt. 6 (Duplicate)	RIVER	0.587	0.1	11.51	6.74		75.4	4.4	71	<7.000	24.8	1100	749	661	3.1915		
11/7/2018	2:30 PM	Pawtuxet River @ Broad St.	RIVER	0.3	0.1	12.5	7.23		611	4.08	607	<7.000	12.8	2570	883	954	3.5165		
11/7/2018	1:35 PM	Runnins River @ River Rd.	RIVER	0.574	0.13	11.49	6.25		122	2.7	119	<7.000	10.7	2770	609	644	10.204		
11/7/2018	9:10 AM	Taunton River @ Berkley Bridge	RIVER	0.572	0.12	10.85	8.21		189	5.54	183	<7.000	21.8	1800	752	670	5.0526		
11/7/2018	2:15 PM	Ten Mile River @ Central Ave.	RIVER	0.562	0.15	12.2	6.65		846	4.07	842	<7.000	17.3	2200	1250	1180	3.1915		
11/7/2018	3:15 PM	Ten Mile River @ Roger Williams Ave.	RIVER	0.587	0.16	11.42	6.87		702	5.53	696	8.38	16.6	2640	1140	1070	3.2653		
11/7/2018	10:45 AM	Warren Reservoir/Kickemuit River	RIVER	0.526	0.09	12.47	6.61		150	5.64	144	<7.000	24.3	1480	1050	867	4.8421		
11/7/2018	2:00 PM	Woonasquatucket River @ Valley St.	RIVER	0.11	0.13	11.73	7.36		271	1.95	269	<7.000	<5.0	2390	503	589	<2.0000		
11/21/2018	2:15 PM	Blackstone River @ Slater Mill	RIVER	0.54	0.15	4.69	7.57		539	4.66	534	12.7	8.38	3150	745	845	4.1304		
11/21/2018	2:40 PM	Moshassuck River @ Higginson Ave.	RIVER	0.54	0.22	5.69	7.46		465	2.74	462	59.9	<5.0	3360	660	691	<2.0000		
11/21/2018	10:35 AM	Moshassuck River @ Mill St.	RIVER	0.51	0.21	5.11	7.3		549	4.17	545	27.2	<5.0	3780	703	853	2.3656		
11/21/2018	3:35 PM	Pawtuxet River @ Broad St.	RIVER	0.53	0.1	6.57	7.26		584	3.75	580	32.1	7.48	2530	799	842	3.0769		
11/21/2018	1:10 PM	Ten Mile River @ Roger Williams Ave.	RIVER	0.47	0.17	5.36	7.32		972	5.76	966	61.2	22.7	3110	1210	1320	2.2222		
11/21/2018	9:35 AM	Woonasquatucket River @ Manton Ave.	RIVER	0.57	0.12	4.7	7.09		390	1.76	388	<7.000	<5.0	2560	609	620	<2.0000		
11/21/2018	9:35 AM	Woonasquatucket River @ Manton Ave. (Duplicate)	RIVER	0.57	0.12	4.7	7.09		391	2.09	389	12	<5.0	2210	551	619	<2.0000		
11/21/2018	10:05 AM	Woonasquatucket River @ Valley St.	RIVER	0.43	0.12	4.84	7.28		425	2.65	422	11.1	<5.0	2320	628	656	<2.0000		
12/5/2018	10:00 AM	Blackstone River @ Bikepath Bridge	RIVER	0.423	0.14	4.26	7.42		569	6.89	562	23.2	11	3040	697	802	<2.0000		
12/5/2018	10:30 AM	Blackstone River @ Slater Mill	RIVER	0.529	0.14	4.43	7.38		608	8.96	599	28.4	15	3050	778	849	2.1053		
12/5/2018	9:25 AM	Blackstone River @ Stateline	RIVER	0.471	0.14	3.85	7.64		474	6.22	468	8.23	15.6	2850	622	696	<2.0000		
12/5/2018	9:55 AM	Coles River @ Milford Rd.	RIVER						246	3.46	243	<7.000	15.1	1330	569	710	<2.0000		
12/5/2018	1:30 PM	Moshassuck @ Mill St.	RIVER	0.501	0.21	4.69	7.08		673	6.03	667	65.7	<5.0	3840	795	957	<2.0000		
12/5/2018	12:45 PM	Palmer River @ Rt. 6	RIVER	0.74	0.1	3.33	7.99		269	1.57	267	21.2	10.5	85.1	584	638	2.268		
12/5/2018	2:10 PM	Pawtuxet River @ Broad St.	RIVER	0.571	0.1	5.18	7.28		630	3.87	626	<7.000	19.1	2750	788	902	<2.0000		
12/5/2018	12:25 PM	Runnins River @ River Rd.	RIVER	0.27	0.15	2.94	7.11		630	5.98	624	14.1	<5.0	3520	874	1010	<2.0000		
12/5/2018	9:20 AM	Taunton River @ Berkley Bridge	RIVER						373	10.9	362	39.5	9.07	1060	684	787	3.1915		
12/5/2018	1:30 PM	Ten Mile River @ Central Ave.	RIVER	0.38	0.2	4.34	7.69		1350	<1.5	1350	51.1	19.6	128	1480	1660	<2.0000		
12/5/2018	2:15 PM	Ten Mile River @ Roger Williams Ave.	RIVER	0.78	0.16	5.79	7.52		1110	<1.5	1110	49.2	17.2	147	1290	1400	<2.0000		
12/5/2018	10:40 AM	Warren Reservoir/Kickemuit River	RIVER						476	9.51	466	<7.000	11.7	1760	973	1020	6.5979		
12/5/2018	10:40 AM	Warren Reservoir/Kickemuit River (Duplicate)	RIVER						467	<1.5	467	45.9	9.6	147	964	951	6.6667		
12/5/2018	12:50 PM	Woonasquatucket River @ Manton Ave.	RIVER	0.511	0.11	4.01	7.32		505	2.43	503	<7.000	5.11	2450	613	710	<2.0000		
12/5/2018	1:10 PM	Woonasquatucket River @ Valley St.	RIVER	0.56	0.12	4.02	7.19		561	2.46	559	<7.000	<5.0	2770	660	757	<2.0000		
12/5/2018	1:10 PM	Woonasquatucket River @ Valley St. (Duplicate)	RIVER	0.56	0.12	4.02	7.19		560	2.44	558	<7.000	<5.0	2680	656	758	<2.0000		
12/19/2018	9:15 AM	Blackstone River @ Slater Mill	RIVER	1.07	0.15	2	7.53		749	7.2	742	80.7	8.03	3160	962	963	8.9583		
12/19/2018	8:45 AM	Moshassuck River @ Higginson Ave.	RIVER	0.72	0.21	2.31	7.69		665	4.4	661	25.5	<5.0	3360	793	808	10		
12/19/2018	10:20 AM	Moshassuck River @ Mill St.	RIVER	0.56	0.23	2.29	7.18		785	7.16	778	106	<5.0	3880	929	1010	4.8936		

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
12/19/2018	2:30 PM	Pawtuxet River @ Broad St.	RIVER	1.02	0.11	2.88	7.28		819	4.66	814	121	8.69	3020	1030	1070	<2.0000		
12/19/2018	2:30 PM	Pawtuxet River @ Broad St. (Duplicate)	RIVER	1.02	0.11	2.88	7.28		831	4.06	827	120	6.07	2800	1040	1080	<2.0000		
12/19/2018	9:45 AM	Ten Mile River @ Roger Williams Ave.	RIVER	1.2	0.2	2.06	7.31		1880	8.98	1870	76	28.9	4100	1990	2100	2.6804		
12/19/2018	12:45 PM	Woonasquatucket River @ Manton Ave.	RIVER	5.57	0.13	2.14	7.69		633	2.53	630	30.1	<5.0	3010	762	778	<2.0000		
12/19/2018	1:15 PM	Woonasquatucket River @ Valley St.	RIVER	0.81	0.13	2.33	7.33		690	2.73	687	25.2	<5.0	2840	792	826	<2.0000		
SPECIAL STUDY SITES																			
NUTRIENT BLANKS																			
1/3/2018	9:10:00 AM	Nutrient Blank	RIVER						27	1.56		<7.0	<5	<20	<200.0	<100.0			
1/17/2018	1:45:00 PM	Nutrient Blank	RIVER						13.9	<1.5		<7.0	<5	<20	<200.0	<100.0			
1/17/2018	9:15:00 AM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
1/31/2018	2:00:00 PM	Nutrient Blank	RIVER						16.1	<1.5		<7.0	<5	<20	<200.0	<100.0			
1/31/2018	9:15:00 AM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
2/14/2018	10:00:00 AM	Nutrient Blank	BAY						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
2/14/2018	1:28:00 PM	Nutrient Blank	RIVER						27.8	<1.5		<7.0	<5	<20	<200.0	<100.0			
2/28/2018	8:30:00 AM	Nutrient Blank	BAY						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
2/28/2018	1:45:00 PM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
2/28/2018	9:40:00 AM	Nutrient Blank	RIVER						16.6	<1.5		<7.0	<5	<20	<200.0	<100.0			
3/14/2018	10:15:00 AM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
3/28/2018	8:30:00 AM	Nutrient Blank	BAY						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
3/28/2018	9:00:00 AM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
4/18/2018	1:50:00 PM	Nutrient Blank	BAY						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
4/18/2018	8:50:00 AM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
4/25/2018	10:40:00 AM	Nutrient Blank	BAY						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
4/25/2018	10:00:00 AM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
4/25/2018	12:55:00 PM	Nutrient Blank	RIVER						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
5/24/2018	1:00:00 PM	Nutrient Blank	BAY						<6.00	<1.5		<7.0	<5	<20	<200.0	<100.0			
5/24/2018	10:50:00 AM	Nutrient Blank	RIVER						<6.00	<1.5		<7.0	<5	<20	<200.0	<100.0			
5/24/2018	9:50:00 AM	Nutrient Blank	RIVER						<6.00	<1.5		<7.0	<5	<20	<200.0	<100.0			
6/6/2018	2:20:00 PM	Nutrient Blank	BAY						<6.0	<1.5		<7.0	<5	<20	<200.0	<100.0			
6/6/2018	8:35:00 AM	Nutrient Blank	RIVER						41.4	<1.5		<7.0	<5	<20	<200.0	<100.0			
6/20/2018	2:00 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/20/2018	1:27 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/20/2018	2:30 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/27/2018	2:35 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
6/27/2018	2:40 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
7/18/2018	1:00 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	9.07	<5.0	<20.000	<200.000	<100.000			
7/18/2018	2:40 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
7/18/2018	3:45 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/1/2018	9:00 AM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
8/1/2018	9:15 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200	<100.000			
8/16/2018	1:40 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200	<100.000			
8/16/2018	2:00 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200	<100.000			
8/16/2018	7:58 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200	<100.000			
8/29/2018	8:30 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20	<200.000	<100.000			
8/30/2018	10:20 AM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	24.9	<5.0	23	<200.000	<100.000			
9/12/2018	9:50 AM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/12/2018	2:30 PM	Nutrient Blank	RIVER						13.5	<1.5	13.5	<7.000	<5.0	<20.000	<200.000	<100.000			
9/12/2018	8:55 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/26/2018	1:35 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
9/26/2018	2:20 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/11/2018	12:30 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/11/2018	9:40 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	7.24	<5.0	<20.000	<200.000	<100.000			
10/24/2018	9:30 AM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/24/2018	10:35 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
10/24/2018	2:45 PM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/7/2018	1:40 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	9.04	<20.000	<200.000	<100.000			

Table 32: River and Bay Nutrients Data

River-Bay Nutrient Results
2018

NR = Not Reportable

									NUTRIENT PARAMETERS								TSS AND CHLOROPHYLL		
Collection Date	Collection Time	Station	Waterbody	Depth (meters)	Salinity (ppt)	Temp (°C)	pH	Chl a (ug/L)	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)
11/7/2018	10:30 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/7/2018	9:25 AM	Nutrient Blank	RIVER						176	<1.5	176	<7.000	<5.0	<20.000	<200.000	<100.000			
11/21/2018	9:50 AM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
11/21/2018	10:40 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/5/2018	10:45 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/5/2018	9:30 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/19/2018	2:30 PM	Nutrient Blank	BAY						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			
12/19/2018	8:50 AM	Nutrient Blank	RIVER						<6.000	<1.5	<6.0	<7.000	<5.0	<20.000	<200.000	<100.000			

Table 32: River and Bay Nutrients Data

River Fecal Coliform Results 2018

(MPN/100mL)

	Woonasquatucket River						West River			Providence River	Seekonk River
Date	S-9- Manton Ave.	S-8D -Parking Bridge Olneyville	S-8C- Delaine St.	S-7B- Pleasant Valley Pkwy.	S-7A- Kinsley St.	W7C-Eagle Street	S-10-Douglas Ave. Bridge	S-10-B Veazie St. Bridge	S-11-West River St. Bridge	S-12- Crawford St. Bridge	SR-5A Pitman Street
1/2/2018	30.0	40.0	70.0								150.0
1/3/2018						<30					
1/8/2018	40.0	<30		40.0							
1/9/2018					<30		<30	90.0			
1/16/2018	230.0	230.0	30.0	230.0	230.0	60.0				430.0	
1/17/2018					150.0	230.0	390.0	90.0	230.0	90.0	
1/22/2018	40.0	150.0	40.0	90.0	70.0	34.6				230.0	230.0
1/23/2018					430.0	930.0	70.0	40.0	230.0	750.0	
1/29/2018	<30	90.0	40.0	<30	90.0	34.6				930.0	
1/31/2018					40.0	<30	40.0	<30	40.0	40.0	
2/5/2018	230.0	430.0	750.0	430.0	210.0	150.0				430.0	1500.0
2/6/2018					90.0	40.0	<30	40.0	90.0	230.0	
2/12/2018	90.0	40.0	40.0	40.0	90.0	34.6				90.0	
2/13/2018					40.0	<30	<30	<30	40.0	230.0	
2/19/2018	40.0	<30	40.0	40.0	<30	45.8				40.0	
2/20/2018					90.0	40.0	<30	90.0	90.0	40.0	
2/26/2018	40.0	90.0	70.0	40.0	40.0	90.0				40.0	
2/27/2018					90.0	90.0	40.0	150.0	40.0	150.0	
3/5/2018	230.0	750.0	230.0	230.0	750.0	116.2				230.0	
3/6/2018					230.0	230.0	390.0	150.0	70.0	150.0	
3/12/2018	40.0	<30	40.0	40.0	40.0	<30				150.0	
3/14/2018					40.0	40.0	40.0	<30	40.0	90.0	
3/19/2018	<30	<30	<30	40.0	40.0	60.0				<30	
3/20/2018					40.0	40.0	40.0	<30	<30	90.0	
3/26/2018	<30	150.0	<30	<30	90.0	60.0				90.0	
3/27/2018					<30	40.0	<30	<30	70.0	40.0	
4/2/2018	40.0	40.0	90.0	230.0	230.0	<30				430.0	
4/3/2018					<30	40.0	<30	<30	430.0	30.0	
4/9/2018	<30	<30	70.0	230.0	<30	<30				230.0	
4/10/2018					40.0	<30	4300.0	430.0	930.0	40.0	
4/12/2018							90.0	140.0	230.0		
4/16/2018	<30	150.0	430.0	430.0	750.0	415.3				1500.0	
4/17/2018					430.0	430.0	90.0	230.0	150.0	1500.0	
4/23/2018	90.0	40.0	90.0	<30	90.0	34.6				230.0	
4/24/2018					40.0	<30	40.0	<30	90.0	90.0	
4/30/2018	40.0	70.0	<30	<30	<30	<30				40.0	
5/1/2018					40.0	90.0	40.0	70.0	430.0	90.0	
5/7/2018	230.0	110.0	230.0	70.0	430.0	143.9				390.0	
5/8/2018					90.0	230.0	230.0	150.0	230.0	430.0	
5/14/2018	90.0	430.0	230.0	150.0	210.0	185.7				150.0	40.0
5/15/2018					430.0	430.0	40.0	90.0	2300.0	430.0	
5/21/2018	430.0	430.0	310.0	390.0	430.0	254.0				2300.0	
5/22/2018					430.0	230.0	230.0	430.0	230.0	430.0	
5/29/2018	90.0	930.0	430.0	230.0	230.0	314.5				230.0	40.0
5/30/2018					230.0	930.0	90.0	430.0	230.0	390.0	
6/4/2018	90.0	930.0	930.0	24000.0	4300.0	46000.0				4300.0	

Table 33: Woonasquatucket, West, Providence, and Seekonk Rivers Fecal Coliform Data

River Fecal Coliform Results 2018

(MPN/100mL)

	Woonasquatucket River						West River			Providence River	Seekonk River
Date	S-9- Manton Ave.	S-8D -Parking Bridge Olneyville	S-8C- Delaine St.	S-7B- Pleasant Valley Pkwy.	S-7A- Kinsley St.	W7C-Eagle Street	S-10-Douglas Ave. Bridge	S-10-B Veazie St. Bridge	S-11-West River St. Bridge	S-12- Crawford St. Bridge	SR-5A Pitman Street
6/5/2018					2300.0	2300.0	4300.0	2300.0	9300.0	2300.0	
6/11/2018	230.0	230.0	430.0	930.0	930.0	293.3				930.0	
6/12/2018					2300.0	230.0	4300.0	750.0	1500.0	4300.0	
6/18/2018	90.0	430.0	430.0	930.0	430.0	430.0				430.0	90.0
6/19/2018					4300.0	2300.0	4300.0	2300.0	4300.0	7500.0	
6/25/2018	930.0	930.0	2300.0	4300.0	46000.0	3144.8				46000.0	40.0
6/26/2018					2100.0	930.0	750.0	930.0	9300.0	2300.0	
7/2/2018	430.0	4300.0	930.0	930.0	2300.0	1462.5				2300.0	40.0
7/3/2018					2300.0	1500.0	2300.0	930.0	2300.0	2300.0	
7/9/2018	90.0	430.0	430.0	4300.0	930.0	632.4				750.0	
7/10/2018					9300.0	2300.0	2300.0	430.0	4300.0	750.0	
7/12/2018				4300.0	230.0	430.0	430.0		15000.0		
7/16/2018	430.0	9300.0	110000.0	>240000	>240000	14939.9				>240000	1500.0
7/17/2018					1500.0	4300.0	430.0	230.0	930.0	2300.0	
7/23/2018	930.0	1500.0	230.0	2300.0	4300.0	1999.7				7500.0	750.0
7/24/2018					2300.0	1500.0	1500.0	930.0	930.0	2300.0	
7/30/2018	40.0	230.0	230.0	2300.0	2300.0	587.4				930.0	
7/31/2018					430.0	430.0	430.0	430.0	1500.0	750.0	
8/6/2018	90.0	230.0	4300.0	9300.0	2300.0	1462.5				3900.0	
8/7/2018					4300.0	930.0	930.0	930.0	930.0	4300.0	
8/14/2018	930.0	24000.0	6400.0	9300.0	21000.0	4095.1				230.0	2300.0
8/15/2018					9300.0	750.0	4300.0	930.0	2300.0	430.0	
8/20/2018	280.0	2300.0	4300.0	4300.0	4300.0	587.4				4300.0	
8/21/2018					3900.0	2300.0	2300.0	930.0	24000.0	2100.0	
8/27/2018	230.0	430.0	230.0	2300.0	4300.0	1462.5				930.0	
8/28/2018					9300.0	930.0	1500.0	2300.0	230.0	430.0	
8/30/2018					1500.0		430.0	930.0			
9/4/2018	90.0	150.0	230.0	430.0	4300.0	462.5				4300.0	
9/5/2018					2300.0	750.0	210.0	430.0	9300.0	930.0	
9/10/2018	40.0	2300.0	430.0	4300.0	930.0	1857.4				24000.0	
9/11/2018					4300.0	7500.0	9300.0	4300.0	4300.0	24000.0	
9/17/2018	230.0	930.0	2300.0	930.0	930.0	632.4				930.0	930.0
9/18/2018					2300.0	230.0	930.0	2300.0	4300.0	2300.0	
9/24/2018	90.0	430.0	230.0	430.0	1500.0	430.0				4300.0	
9/25/2018					750.0	930.0	2100.0	430.0	24000.0	430.0	
10/1/2018	230.0	70.0	90.0	430.0	200.0	632.4				4300.0	
10/2/2018					2100.0	930.0	1500.0	930.0	46000.0	9300.0	
10/9/2018	90.0	230.0	90.0	230.0	430.0	254.0				930.0	
10/10/2018					230.0	230.0	230.0	430.0	9300.0	930.0	
10/15/2018	430.0	40.0	230.0	230.0	230.0	254.0				2300.0	
10/16/2018					430.0	430.0	930.0	430.0	15000.0	2300.0	
10/22/2018	90.0	430.0	230.0	150.0	90.0	60.0				70.0	
10/23/2018					430.0	150.0	90.0	90.0	430.0	90.0	
10/29/2018	230.0	430.0	2300.0	9300.0	2100.0	994.5				2300.0	
10/30/2018					230.0	230.0	150.0	930.0	90.0	430.0	
11/5/2018	430.0	150.0	430.0	430.0	230.0	462.5				930.0	

Table 33: Woonasquatucket, West, Providence, and Seekonk Rivers Fecal Coliform Data

River Fecal Coliform Results 2018

(MPN/100mL)

	Woonasquatucket River						West River			Providence River	Seekonk River
Date	**S-9-Manton Ave.**	**S-8D -Parking Bridge Olneyville**	**S-8C-Delaine St.**	**S-7B- Pleasant Valley Pkwy.**	**S-7A-Kinsley St.**	**W7C-Eagle Street**	**S-10-Douglas Ave. Bridge**	**S-10-B Veazie St. Bridge**	**S-11-West River St. Bridge**	**S-12- Crawford St. Bridge**	**SR-5A Pitman Street**
11/6/2018					230.0	70.0	430.0	150.0	430.0	750.0	
11/13/2018	930.0	1500.0	750.0	110000.0	>240000.0	1462.5				24000.0	
11/14/2018					24000.0	430.0	230.0	150.0	210.0	24000.0	
11/19/2018	90.0	40.0	<30.0	<30.0	110.0	90.0				230.0	
11/20/2018					230.0	430.0	70.0	150.0	230.0	230.0	
11/26/2018	430.0	230.0	430.0	4300.0	9300.0	314.5				230.0	
11/27/2018					9300.0	430.0	90.0	430.0	230.0	9300.0	
12/3/2018	90.0	90.0	40.0	70.0	70.0	126.9				230.0	
12/4/2018					40.0	90.0	<30.0	90.0	140.0	750.0	
12/10/2018	90.0	40.0	40.0	90.0	70.0	60.0				150.0	
12/11/2018					90.0	70.0	<30.0	40.0	230.0	90.0	
12/17/2018	140.0	30.0	150.0	230.0	430.0	77.5				430.0	
12/18/2018					150.0	40.0	230.0	40.0	40.0	40.0	
12/24/2018	40.0	230.0	150.0	40.0	40.0	34.6				230.0	
12/26/2018					<30.0	<30.0	390.0	430.0	640.0	90.0	
12/31/2018	40.0	40.0	40.0	40.0	<30.0	34.6				90.0	

Table 33: Woonasquatucket, West, Providence, and Seekonk Rivers Fecal Coliform Data

River Fecal Coliform Results 2018

(MPN/100mL)

	Moshassuck River							Blackstone River		Pawtuxet River
Date	M-1-Higginson Ave. Bridge	M4A-Grenville St.	M4C-Grotto Ave. Bridge	M-5-Footbridge Mill St.	M-4-Cemetary St. Bridge	M-5A-Stevens St. Bridge	M-6-Park Row Bridge	B-2-Whipple Bridge	B-3-Slater Mill Dam	Pawtuxet River @ Broad Street
1/2/2018								<30	<30	34.6
1/3/2018	430.0	930.0	930.0	930.0	930.0	930.0				
1/8/2018								<30		90.0
1/9/2018	150.0	430.0	430.0		430.0	930.0				
1/16/2018				930.0				150.0	430.0	196.7
1/17/2018	230.0		430.0	254.0	90.0	90.0	230.0			
1/22/2018				90.0				40.0	90.0	143.9
1/23/2018	30.0	60.0	930.0	1857.4	90.0	2300.0	430.0			
1/29/2018				1999.7				<30	<30	52.0
1/31/2018	40.0	90.0	90.0	143.9	40.0	<30	<30			
2/5/2018				143.9				90.0	430.0	52.0
2/6/2018	230.0	143.9	430.0	143.9	230.0	430.0	230.0			
2/12/2018				289.3				230.0	230.0	90.0
2/13/2018	230.0	230.0	230.0	245.4	930.0	230.0	230.0			
2/19/2018				60.0				40.0	<30	34.6
2/20/2018	30.0	60.0	90.0	143.9	90.0	70.0	230.0			
2/26/2018				994.5				40.0	40.0	95.9
2/27/2018	40.0	187.3	230.0	567.9	90.0	40.0	430.0			
3/5/2018				314.5				430.0	<30	77.5
3/6/2018	90.0	90.0	150.0	196.7	230.0	70.0	90.0			
3/12/2018				102.5				40.0	40.0	<30
3/14/2018	40.0	52.9	230.0	60.0	40.0	40.0	<30			
3/19/2018				254.0				<30	<30	34.6
3/20/2018	<30	60.0	150.0	185.7	40.0	230.0	230.0			
3/26/2018				6323.8				<30	<30	52.0
3/27/2018	30.0	60.0	150.0	143.9	<30	70.0	<30			
4/2/2018				314.5				<30	<30	52.0
4/3/2018	<30	34.6	90.0	116.2	<30	230.0	40.0			
4/9/2018				143.9				<30	40.0	60.0
4/10/2018	40.0	90.0	390.0	95.9	90.0	30.0	90.0			
4/16/2018				14939.9				70.0	930.0	79.4
4/17/2018	430.0	143.9	210.0	314.5	230.0	430.0	430.0			
4/23/2018	230.0	430.0	230.0	60.0				40.0	430.0	60.0
4/24/2018	90.0	90.0	2300.0	116.2	90.0	90.0	154.8	<30	<30	
4/30/2018				143.9				<30	70.0	<30
5/1/2018	40.0	230.0	40.0	131.1	90.0	90.0	230.0			
5/7/2018				632.4				40.0	150.0	60.0
5/8/2018	150.0	254.0	210.0	230.0	430.0	430.0	90.0			
5/14/2018				300.5				90.0	<30	34.6
5/15/2018	230.0	60.0	230.0	230.0	430.0	430.0	430.0			
5/21/2018				567.9				<30	90.0	192.9
5/22/2018	230.0	299.5	930.0	314.5	90.0	430.0	230.0			
5/29/2018				3144.8				230.0	430.0	131.1
5/30/2018	430.0	409.5	230.0	254.0	230.0	430.0	930.0			
6/4/2018				71133.7				90.0	2300.0	4624.9
6/5/2018	230.0	3144.8	4300.0	2300.0	2300.0	4300.0	9300.0			
6/11/2018				994.5				90.0	430.0	254.0
6/12/2018	390.0	994.5	2300.0	930.0	2300.0	9300.0	4300.0			
6/18/2018				314.5				150.0	<30.0	314.5
6/19/2018	90.0	1999.7	430.0	3144.8	1500.0	930.0	930.0			
6/25/2018				6323.8				90.0	430.0	7500.0
6/26/2018	210.0	1181.1	430.0	2539.7	390.0	4300.0	930.0			
7/2/2018				3144.8				90.0	750.0	727.3
7/3/2018	430.0	11811.0	2300.0	1857.4	2300.0	930.0	930.0			
7/9/2018				727.3				430.0	930.0	314.5
7/10/2018	90.0	632.4	2300.0	587.4	930.0	930.0	230.0			
7/12/2018			930.0	2197.7						
7/16/2018				835.2				<30.0	280.0	2995.0
7/17/2018	230.0	2539.7	4300.0	7429.7	930.0	930.0	930.0			
7/23/2018				1999.7				1500.0	930.0	718.3
7/24/2018	930.0	994.5	9300.0	1313.4	4300.0	430.0	930.0			
7/30/2018				2197.7				430.0	930.0	116.2
7/31/2018	2300.0	390.0	930.0	462.5	230.0	930.0	930.0			
8/6/2018				2300.0				140.0	430.0	314.5
8/7/2018	430.0	2300.0	9300.0	1462.5	2300.0	930.0	7500.0			
8/14/2018				4300.0				4300.0	1500.0	4300.0

Table 34: Moshassuck, Blackstone, and Pawtuxet Rivers Fecal Coliform Data

River Fecal Coliform Results 2018

(MPN/100mL)

	Moshassuck River							Blackstone River		Pawtuxet River
Date	M-1- Higginson Ave. Bridge	M4A- Grenville St.	M4C- Grotto Ave. Bridge	M-5- Footbridge Mill St.	M-4- Cemetary St. Bridge	M-5A- Stevens St. Bridge	M-6- Park Row Bridge	B-2- Whipple Bridge	B-3- Slater Mill Dam	Pawtuxet River @ Broad Street
8/15/2018	930.0	11811.0	930.0	2300.0	9300.0	4300.0	4300.0			
8/20/2018				33226.5				930.0	930.0	2539.7
8/21/2018	230.0	1181.1	430.0	4300.0	4300.0	2300.0	9300.0			
8/27/2018				3735.0				90.0	230.0	299.5
8/28/2018	930.0	1181.1	930.0	1181.1	1500.0	2300.0	2100.0			
8/30/2018		1500.0		632.4	750.0	750.0	2300.0			
9/4/2018				1181.1				30.0	40.0	196.7
9/5/2018	930.0		430.0	632.4	230.0	230.0	750.0			
9/10/2018				14939.9				40.0	230.0	143.9
9/11/2018	9300.0	105071.4	110000.0	51380.9	110000.0	24000.0	110000.0			
9/17/2018				10158.7				90.0	40.0	187.3
9/18/2018	930.0	1359.8	930.0	15906.0	1500.0	4300.0	9300.0			
9/24/2018				4624.9				230.0	230.0	90.0
9/25/2018	750.0	632.4	230.0	4624.9	200.0	9300.0	24000.0			
10/1/2018				1999.7				230.0	<30.0	462.5
10/2/2018	930.0	1462.5	930.0	18973.7	4300.0	24000.0	4300.0			
10/9/2018				24000.0				90.0	40.0	150.0
10/10/2018	230.0	462.5	930.0	4624.9	430.0	2300.0	2300.0			
10/15/2018				3144.8				230.0	230.0	143.9
10/16/2018	230.0	2300.0	930.0	2300.0	2300.0	4300.0	15000.0			
10/22/2018				930.0				<30.0	430.0	52.0
10/23/2018	230.0	314.5	430.0	803.1	390.0	930.0	1500.0			
10/29/2018				13416.4				150.0	200.0	230.0
10/30/2018	230.0	314.5	430.0	632.4	150.0	430.0	430.0			
11/5/2018				632.4				430.0	930.0	90.0
11/6/2018	230.0	803.1	930.0	632.4	430.0	930.0	930.0			
11/13/2018				9300.0				90.0	4300.0	632.4
11/14/2018	930.0	1857.4	930.0	803.1	7500.0	390.0	930.0			
11/19/2018				95.9				90.0	90.0	34.6
11/20/2018	150.0	314.5	70.0	3322.6	1500.0	230.0	4600.0			
11/26/2018				314.5				40.0	230.0	462.5
11/27/2018	930.0	727.3	230.0	930.0	2300.0	230.0	430.0			
12/3/2018				124.9				<30.0	90.0	90.0
12/4/2018	150.0	83.1	90.0	4300.0	230.0	40.0	230.0			
12/10/2018				230.0				40.0	40.0	<30.0
12/11/2018	<30.0	95.9	230.0	143.9	90.0	90.0	230.0			
12/17/2018				930.0				230.0	430.0	52.0
12/18/2018	40.0	60.0	90.0	143.9	230.0	150.0	40.0			
12/24/2018				196.7				430.0	90.0	116.2
12/26/2018	<30.0	79.4	<30.0	90.0	90.0	90.0	430.0			
12/31/2018				230.0				90.0	90.0	34.6

Table 34: Moshassuck, Blackstone, and Pawtuxet Rivers Fecal Coliform Data

River Enterococci Results 2018

(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	B-2- Whipple Bridge	B-3- Slater Mill Dam	S-9- Manton Ave.	S-7A- Kinsley St.	W7C-Eagle Street	S-10- Douglas Ave. Bridge	S-11-West River St. Bridge
1/2/2018				7.4	2.0	3.0				
1/3/2018	38.3	1481.7								
1/8/2018				9.7		<1				
1/9/2018	10.8								12.1	
1/16/2018				143.9	156.5	167.0	146.7	99.7		
1/17/2018	162.4	315.4	328.2						154.1	151.5
1/22/2018				36.8	19.9	21.8	24.6	27.9		
1/23/2018	23.8	1268.8	2419.6						34.1	71.4
1/29/2018				19.5	17.3	18.9	28.2	24.2		
1/31/2018	20.1	79.1	30.5						25.6	18.5
2/5/2018				135.4	67.6	547.5	365.4	237.9		
2/6/2018	152.9	116.5	82.0						25.6	60.2
2/12/2018				248.9	387.3	110.6	118.7	90.7		
2/13/2018	34.1	94.6	98.4						18.7	18.7
2/19/2018				6.3	4.1	3.1	4.1	4.1		
2/20/2018	5.1	36.9	9.7						8.5	14.8
2/26/2018				28.8	18.7	38.4	40.4	51.2		
2/27/2018	28.2	286.6	185.0						8.4	9.6
3/5/2018				64.5	57.3	45.0	73.8	47.6		
3/6/2018	32.7	48.3	43.5						30.1	32.8
3/12/2018				5.2	30.9	5.2	6.3	9.0		
3/14/2018	12.0	19.4	18.3						9.8	32.7
3/19/2018				7.5	7.5	4.1	3.0	2.5		
3/20/2018	325.5	20.2	14.8						27.2	30.5
3/26/2018				3.0	7.5	4.1	2.0	6.7		
3/27/2018	14.4	62.2	42.8						10.9	12.1
4/2/2018				5.2	3.0	8.5	12.2	13.5		
4/3/2018	3.0	44.2	25.6						12.2	143.9
4/9/2018				4.1	3.0	4.1	4.1	2.5		
4/10/2018	7.4	14.5	9.7						67.0	17.3
4/16/2018				10.9	727.0	49.5	>2419.6	579.1		
4/17/2018	980.4	219.4	325.5						185.0	365.4
4/23/2018				7.4	151.5	12.2	8.6	9.7		
4/24/2018	14.4	47.1	33.1						66.3	50.4
4/30/2018				13.2	13.2	13.4	25.0	26.3		
5/1/2018	21.1	18.6	25.3						21.1	36.8
5/7/2018				25.0	14.6	54.6	45.0	60.1		
5/8/2018	21.1	35.0	21.3						143.9	66.3
5/14/2018				10.9	19.9	12.0	26.6	23.4		
5/15/2018	40.8	83.3	127.4						77.1	172.5
5/21/2018				31.1	26.6	172.6	58.1	49.6		
5/22/2018	116.0	108.5	85.7						135.4	178.9
5/29/2018				25.9	22.8	31.5	147.0	77.6		
5/30/2018	119.8	148.2	178.2						435.2	365.4
6/4/2018				23.8	68.7	91.1	2419.6	>2419.6		
6/5/2018	113.7	844.2	770.1						866.4	1046.2
6/11/2018				82.3	118.7	125.9	866.4	266.7		
6/12/2018	79.8	410.6	435.2						547.5	435.2
6/18/2018				31.8	146.7	131.4	214.2	288.8		
6/19/2018	183.5	648.8	1119.9						1732.9	770.1
6/25/2018				123.4	579.4	190.4	>2419.6	920.8		
6/26/2018	185.0	687.8	980.4						1119.9	1119.9
7/2/2018				275.0	547.0	91.0	687.0	748.7		
7/3/2018	261.3	423.6	613.1						1732.9	1299.7
7/9/2018				135.4	218.7	83.9	1119.9	435.1		
7/10/2018	344.8	630.8	488.4						1119.9	866.4
7/16/2018				68.3	328.2	1203.3	>2419.6	1206.5		
7/17/2018	298.7	547.5	980.4						1119.9	648.8
7/23/2018				178.9	579.4	360.9	613.1	613.1		
7/24/2018	307.6	563.1	517.2						980.4	920.8
7/30/2018				78.9	275.5	579.4	209.8	281.4		
7/31/2018	275.5	448.0	172.7						488.4	613.1
8/6/2018				75.9	135.4	58.8	613.1	488.3		
8/7/2018	387.3	686.8	1046.2						1413.6	648.8
8/14/2018				1203.3	866.4	727.0	>2419.6	447.0		

NR = Not Reportable

Table 35: Moshassuck, Blackstone, Woonasquatucket, and West Rivers Enterococci Data

River Enterococci Results 2018

(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	B-2- Whipple Bridge	B-3- Slater Mill Dam	S-9- Manton Ave.	S-7A- Kinsley St.	W7C-Eagle Street	S-10- Douglas Ave. Bridge	S-11-West River St. Bridge
8/15/2018	248.9	488.1	517.2						461.1	816.4
8/20/2018				129.1	161.6	158.5	816.4	387.6		
8/21/2018	214.3	460.5	686.7						1553.1	1119.9
8/27/2018				48.8	113.0	307.6	416.0	245.7		
8/28/2018	139.1	238.6	190.4						547.5	387.3
9/4/2018				124.6	152.9	198.9	261.3	417.7		
9/5/2018	517.2	100.2	59.8						344.8	488.4
9/10/2018				40.8	133.4	98.5	2419.6	161.2		
9/11/2018	2419.6	>2419.6	>2419.6						2419.6	>2419.6
9/17/2018				57.1	58.1	82.3	152.2	120.1		
9/18/2018	410.6	241.5	228.2						816.4	547.5
9/24/2018				38.8	60.2	50.4	488.4	102.6		
9/25/2018	95.9	839.0	1986.3						410.6	290.9
10/1/2018				44.3	37.9	42.5	81.6	75.3		
10/2/2018	98.7	1346.5	1119.9						517.2	1986.3
10/9/2018				37.9	33.1	49.6	77.1	47.7		
10/10/2018	90.8	162.5	275.5						325.5	613.1
10/15/2018				33.6	37.3	70.3	90.9	57.7		
10/16/2018	172.2	2419.6	>2419.6						387.3	1413.6
10/22/2018				24.1	26.9	26.6	145.0	43.9		
10/23/2018	43.5	143.1	81.6						86.5	120.1
10/29/2018				517.2	461.1	298.7	2419.6	2047.7		
10/30/2018	435.2	355.8	410.6						248.1	238.2
11/5/2018				517.2	920.8	387.3	435.2	190.4		
11/6/2018	198.9	547.4	770.1						178.2	325.5
11/13/2018				156.5	344.8	920.8	>2419.6	2192.3		
11/14/2018	816.4	816.8	547.5						387.3	435.2
11/19/2018				37.9	47.1	88.2	56.3	59.6		
11/20/2018	25.0	70.9	76.7						48.0	46.7
11/26/2018				167.9	124.6	148.3	>2419.6	152.1		
11/27/2018	579.4	515.7	435.2						365.4	648.8
12/3/2018				67.0	46.5	84.2	60.9	76.8		
12/4/2018	70.3	30.9	27.5						45.7	44.1
12/10/2018				201.4	35.9	34.5	19.7	26.0		
12/11/2018	27.2	28.1	28.1						39.3	42.2
12/17/2018				517.2	121.1	148.3	235.9	214.2		
12/18/2018	81.3	92.6	56.3						56.3	50.4
12/24/2018				137.4	166.4	46.4	45.7	59.5		
12/26/2018	25.0	23.5	26.9						56.3	29.2
12/31/2018				167.0	114.5	9.5	8.6	11.1		

NR = Not Reportable

Table 35: Moshassuck, Blackstone, Woonasquatucket, and West Rivers Enterococci Data

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

	Station Name	1/24/2018	2/21/2018	3/7/2018	4/5/2018	4/11/2018	4/24/2018	5/2/2018	5/9/2018	5/16/2018	5/31/2018
Seekonk River	**Division St Dock**	430	23	43	43	9	43	23	93	930	150
	Bishop Pt	230	23	93	43	9	43	93	230	930	430
	Off BP Outfall	230	15	43	430	43	43	93	93	930	230
	Phillipsdale Landing	430	15	43	230	43	43	43	230	9300	150
	Phillipsdale Landing Duplicate	930	4	430	2300	9	93	43	43	430	230
	Narr Boating Center	1500	23	230	930	4	43	93	230	230	93
	Crook Pt	2300	9	93	430	23	93	43	43	2300	43
Providence River	**Comm. Boating Center**	24000	9	93	930	23	9	43	430	2300	93
	Point St Bridge	930	150	43	93	93		<3	930	4300	390
	Collier Pt Park	1500	23	93	150	9		43	230	9300	43
	Off FP Outfall	2300	9	150	430	23		23	93	2300	9
	South FP East	930	43	230	93	23		4	93	230	43
	Save the Bay	1500	23	93	23	15		9	93	930	15
	Edgewood Yacht Club	430	7	93	230	4		9	230	230	4
	Pawt/Prov Junction	430	43	23	150	93		3	430	43	93
	Gaspee Pt	93	23	43	93	4		9	23	43	9
	Bullock Neck	230	9	23	23	4		<3	4	9	4
	Bullocks Reach Buoy	43	4	9	9	<3		<3	9	23	<3
	Shawomet	23	4	43	23	4		3	43	23	<3
	North of Nayatt Point	150	4	15	150	4		4	9	43	<3
	Conimicut Pt	230	4	43	43	9		<3	9	4	<3
	Conimicut Pt Duplicate	93	9	9	23	4		<3	4	<3	4
	Seekonk River Geometric Mean	610	14	95	289	14	54	55	110	1079	154
	Providence River Geometric Mean	406	13	45	79	10	9	6	54	129	13
	Daily Max	24000	150	430	2300	93	93	93	930	9300	430
	Overall Geometric Mean	**462**	**13**	**57**	**119**	**11**	**43**	**13**	**67**	**254**	**28**
	Percent Greater than 400 MPN/100 mL	59%	0%	5%	27%	0%	0%	0%	14%	50%	5%
	Number of Samples (including duplicates)	22	22	22	22	22	8	22	22	22	22
	Bay Fecal Coliform Blank	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Rain Data*	Rain total - day of sampling (in time prior to sampling)	0	0	0	0	0	0	0	0	0	0
	Rain total - 1 day prior to sampling	1.45	T	0	0.16	T	0	T	0	0.58	0
	Rain total - 2 days prior to sampling	0.06	0.09	0.01	0.22	0	0	0.02	0	0	0
	Rain total - 3 days prior to sampling	0	0.29	T	0.2	0	0	0.03	0.15	0	0.02
	Rain total - 4 days prior to sampling	0	0.34	0.01	T	T	0	0	T	0.13	0.43
	Rain total - 5 days prior to sampling	0	0.14	2.55	0	0.31	0.44	0.67	T	0	0
	Total Rainfall	**1.51**	**0.86**	**2.57**	**0.58**	**0.31**	**0.44**	**0.72**	**0.15**	**0.71**	**0.45**
Tides**	High Tide	13:15	12:02	12:08	12:36	5:13	3:45	10:36	3:25	9:32	10:09
	Low Tide	6:02	4:47	4:44	5:18	11:00	9:35	3:27	9:24	14:47	3:03

T = Trace rainfall

*Rain data are from TF Green

**Tide data are from USHarbors.com

Table 36: Bay Fecal Coliform Data

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

	Station Name	6/13/2018	7/11/2018	7/25/2018	8/8/2018	8/22/2018	9/6/2018	9/19/2018	10/3/2018	10/17/2018	10/31/2018
Seekonk River	**Division St Dock**	1100	430	640	430	24000	150	9300.0	2300.0	39.0	93.0
	Bishop Pt	240	230	750	230	110000	430	46000.0	2300.0	43.0	93.0
	Off BP Outfall	240	43.0	150	430	9300	430	9300.0	2300.0	230.0	93.0
	Phillipsdale Landing	93.0	93.0	430	93.0	46000	430	24000.0	4300.0	430.0	93.0
	Phillipsdale Landing Duplicate	240	23.0	93.0	230	46000	430	9300.0	2300.0	230.0	150.0
	Narr Boating Center	23.0	150	43.0	9300	4300	93.0	46000.0	9300.0	230.0	43.0
	Crook Pt	9.00	93.0	43.0	75.0	1200	43.0	9300.0	9300.0	430.0	230.0
Providence River	**Comm. Boating Center**	15.0	43.0	23.0	230	750	21.0	46000.0	4300.0	93.0	150.0
	Point St Bridge	1500	750	430	930	>240000	2300	46000.0	4300.0	750.0	93.0
	Collier Pt Park	43.0	43.0	23.0	93.0	430	43.0	15000.0	9300.0	210.0	230.0
	Off FP Outfall	15.0	9.00	23.0	23.0	930	39.0	110000.0	2300.0	150.0	230.0
	South FP East	21.0	9.00	4.00	4.00	14.0	23.0	110000.0	930.0	230.0	430.0
	Save the Bay	4.00	23.0	4.00	9.00	9.00	4.00	4300.0	430.0	150.0	430.0
	Edgewood Yacht Club	4.00	4.00	7.00	9.00	93.0	7.00	430.0	930.0	43.0	230.0
	Pawt/Prov Junction	93.0	4.00	23.0	4.00	43.0	9.00	4300.0	2300.0	43.0	43.0
	Gaspee Pt	43.0	23.0	<3.00	15.0	<3.00	150	4300.0	930.0	43.0	93.0
	Bullock Neck	<3.00	4.00	<3.00	7.00	4.00	23.0	93.0	430.0	93.0	150.0
	Bullocks Reach Buoy	4.00	9.00	<3.00	9.00	4.00	4.00	2300.0	930.0	9.0	43.0
	Shawomet	7.00	7.00	4.00	15.0	15.0	4.00	430.0	430.0	23.0	43.0
	North of Nayatt Point	<3.00	<3.00	<3.00	9.00	4.00	<3.00	93.0	430.0	23.0	43.0
	Conimicut Pt	3.00	<3.00	<3.00	23.0	4.00	3.00	430.0	2300.0	23.0	150.0
	Conimicut Pt Duplicate	15.0	4.00	<3.00	43.0	15.0	<3.00	2300.0	2300.0	9.0	230.0
	Seekonk River Geometric Mean	117	103	176	349	15997	214	16814	3749	168	101
	Providence River Geometric Mean	14	12	8	21	45	15	3439	1378	61	130
	Daily Max	1500	750	750	9300	240000	2300	110000	9300	750	430
	Overall Geometric Mean	**28**	**23**	**22**	**52**	**292**	**36**	**5698**	**1895**	**84**	**120**
	Percent Greater than 400 MPN/100 mL	9%	9%	18%	18%	50%	23%	91%	100%	14%	9%
	Number of Samples (including duplicates)	22	22	22	22	22	22	22	22	22	22
	Bay Fecal Coliform Blank	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.0	<3.0	<3.0	<3.0
Rain Data*	Rain total - day of sampling (in time prior to sampling)	T	0	0	0	0.25	0	0	0.45	0	0
	Rain total - 1 day prior to sampling	0	0	0	0	0.01	0	0.52	1.01	0.09	0
	Rain total - 2 days prior to sampling	0	0	0	0	0.02	0	0.01	0.15	0.04	0.14
	Rain total - 3 days prior to sampling	0	0	0.4	0	0	0	0	0	0	0.04
	Rain total - 4 days prior to sampling	0	0	0	1.62	0.99	0	0	0	0.07	1.81
	Rain total - 5 days prior to sampling	0	0.03	0	0	0	0	0	0.68	1.23	0
	Total Rainfall	**0**	**0.03**	**0.4**	**1.62**	**1.27**	**0**	**0.53**	**2.29**	**1.43**	**1.99**
Tides**	High Tide	8:21	7:06	7:15	5:45	5:54	5:26	4:17	15:29	15:12	14:14
	Low Tide	13:34	12:19	12:01	11:05	10:52	10:47	9:29	8:12	7:47	6:46

T = Trace rainfall

*Rain data are from TF Green

**Tide data are from USHarbors.com

Table 36: Bay Fecal Coliform Data

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

	Station Name	11/28/2018	Annual Geomean	Annual Min	Annual Max
Seekonk River	**Division St Dock**	230.0	221	9	24000
	Bishop Pt	230.0	283	9	110000
	Off BP Outfall	430.0	242	15	9300
	Phillipsdale Landing	930.0	277	4	46000
	Phillipsdale Landing Duplicate	93.0			
	Narr Boating Center	930.0	271	4	46000
	Crook Pt	150.0	169	9	9300
Providence River	**Comm. Boating Center**	750.0	198	9	46000
	Point St Bridge	930.0	699	<3	>240000
	Collier Pt Park	930.0	197	9	15000
	Off FP Outfall	1500.0	152	9	110000
	South FP East	750.0	86	4	110000
	Save the Bay	750.0	57	4	4300
	Edgewood Yacht Club	430.0	43	4	930
	Pawt/Prov Junction	430.0	67	<3	4300
	Gaspee Pt	2300.0	46	<3	4300
	Bullock Neck	230.0	17	<3	430
	Bullocks Reach Buoy	230.0	15	<3	2300
	Shawomet	230.0	19	<3	430
	North of Nayatt Point	430.0	16	<3	430
	Conimicut Pt	430.0	20	<3	2300
	Conimicut Pt Duplicate	750.0			

	Seekonk River Geometric Mean	310
	Providence River Geometric Mean	593
	Daily Max	2300
	Overall Geometric Mean	**482**
	Percent Greater than 400 MPN/100 mL	68%
	Number of Samples (including duplicates)	22
	Bay Fecal Coliform Blank	<3.0
Rain Data*	Rain total - day of sampling (in time prior to sampling)	0
	Rain total - 1 day prior to sampling	0.32
	Rain total - 2 days prior to sampling	1.02
	Rain total - 3 days prior to sampling	1.44
	Rain total - 4 days prior to sampling	0
	Rain total - 5 days prior to sampling	0
	Total Rainfall	**2.78**
Tides**	High Tide	12:00
	Low Tide	4:35

T = Trace rainfall

*Rain data are from TF Green

**Tide data are from USHarbors.com

Table 36: Bay Fecal Coliform Data

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

Station Name	1/24/2018	2/21/2018	3/7/2018	4/5/2018	4/11/2018	4/24/2018	5/2/2018	5/9/2018	5/16/2018	5/31/2018	6/13/2018	7/11/2018
Phillipsdale Landing	794.0	<10	10.0	404.0	<10	30.0	<10	<10	160.0	10.0	31.0	10.0
Phillipsdale Landing Duplicate	862.0	10.0	10.0	384.0	52.0	10.0	<10	<10	122.0	52.0	20.0	20.0
Point St Bridge	576.0	10.0	<10	63.0	10.0		31.0	10.0	663.0	30.0	74.0	30.0
South FP East	836.0	20.0	31.0	41.0	<10		<10	<10	<10	10.0	20.0	<10.0
Gaspee Pt	512.0	<10	10.0	20.0	<10		<10	<10	74.0	<10	<10.0	10.0
Conimicut Pt	228.0	<10	20.0	<10	<10		<10	10.0	<10	<10	<10.0	<10.0
Conimicut Pt Duplicate	199.0	<10	10.0	20.0	<10		<10	<10	10.0	<10	<10.0	<10.0
Seekonk River Geometric Mean	827	10	10	394	23	17	10	10	140	23	25	14
Providence River Geometric Mean	407	11	14	25	10		13	10	35	12	17	12
Daily Max	862	20	31	404	52	30	31	10	663	52	74	30
Final Sample Day Geomean	**499**	**11**	**13**	**55**	**13**	**17**	**12**	**10**	**51**	**15**	**19**	**13**

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

Station Name	7/25/2018	8/8/2018	8/22/2018	9/6/2018	9/19/2018	10/3/2018	10/17/2018	10/31/2018	11/28/2018	Annual Min	Annual Max	Annual Geomean
Phillipsdale Landing	10.000	<10.000	2187.0	10.000	3448.0	2909.0	41.0	98.0	318.0	<10	3448	61
Phillipsdale Landing Duplicate	10.000	<10.000	1017.0	10.000	3448.0	2755.0	74.0	97.0	199.0			
Point St Bridge	<10.000	63.000	11199	20.000	2481.0	14136.0	246.0	148.0	703.0	<10	14136	110
South FP East	<10.000	<10.000	<10.000	10.000	408.0	1050.0	63.0	156.0	512.0	<10	1050	35
Gaspee Pt	<10.000	<10.000	<10.000	<10.000	228.0	1178.0	10.0	98.0	295.0	<10	1178	27
Conimicut Pt	<10.000	<10.000	<10.000	75.000	63.0	933.0	10.0	122.0	282.0	<10	933	24
Conimicut Pt Duplicate	<10.000	<10.000	<10.000	10.000	145.0	909.0	<10.0	63.0	318.0			
Seekonk River Geometric Mean	10	10	1491	10	3448	2831	55	97	252			
Providence River Geometric Mean	10	14	41	17	292	1715	27	112	394			
Daily Max	10	63	11199	75	3448	14136	246	156	703			
Final Sample Day Geomean	**10**	**13**	**114**	**15**	**591**	**1979**	**33**	**107**	**347**			

Table 37: Bay Enterococci Data

All samples are from CSO wet weather overflow at Bucklin Brook (NBC CSO # 218A)

Sample Date	Sample Time	Parameter	Result	Units
9/18/2018	2:00:00 PM	1,1,1-Trichloroethane	<0.001	ppm
9/18/2018	2:00:00 PM	1,1,2,2-Tetrachloroethane	<0.001	ppm
9/18/2018	2:00:00 PM	1,1,2-Trichloroethane	<0.001	ppm
9/18/2018	2:00:00 PM	1,1-Dichloroethane	<0.001	ppm
9/18/2018	2:00:00 PM	1,1-Dichloroethylene	<0.001	ppm
9/18/2018	2:00:00 PM	1,2,4-Trichlorobenzene	<0.005	ppm
9/18/2018	2:00:00 PM	1,2-Dichlorobenzene	<0.005	ppm
9/18/2018	2:00:00 PM	1,2-Dichlorobenzene	<0.001	ppm
9/18/2018	2:00:00 PM	1,2-Dichloroethane	<0.001	ppm
9/18/2018	2:00:00 PM	1,2-Dichloropropane	<0.001	ppm
9/18/2018	2:00:00 PM	1,2-Diphenylhydrazine	<0.005	ppm
9/18/2018	2:00:00 PM	1,3-Dichlorobenzene	<0.005	ppm
9/18/2018	2:00:00 PM	1,3-Dichlorobenzene	<0.001	ppm
9/18/2018	2:00:00 PM	1,4-Dichlorobenzene	<0.005	ppm
9/18/2018	2:00:00 PM	1,4-Dichlorobenzene	<0.001	ppm
9/18/2018	2:00:00 PM	2,2'-Oxybis(1-chloropropane)	<0.005	ppm
9/18/2018	2:00:00 PM	2,4,6-Trichlorophenol	<0.005	ppm
9/18/2018	2:00:00 PM	2,4-Dichlorophenol	<0.005	ppm
9/18/2018	2:00:00 PM	2,4-Dimethylphenol	<0.005	ppm
9/18/2018	2:00:00 PM	2,4-Dinitrophenol	<0.005	ppm
9/18/2018	2:00:00 PM	2,4-Dinitrotoluene	<0.005	ppm
9/18/2018	2:00:00 PM	2,6-Dinitrotoluene	<0.005	ppm
9/18/2018	2:00:00 PM	2-Chloroethyl vinyl ether	<0.002	ppm
9/18/2018	2:00:00 PM	2-Chloronaphthalene	<0.005	ppm
9/18/2018	2:00:00 PM	2-Chlorophenol	<0.005	ppm
9/18/2018	2:00:00 PM	2-Methyl-4,6-dinitrophenol	<0.005	ppm
9/18/2018	2:00:00 PM	2-Nitrophenol	<0.005	ppm
9/18/2018	2:00:00 PM	3,3'-Dichlorobenzidine	<0.005	ppm
9/18/2018	2:00:00 PM	4-Bromophenyl phenyl ether	<0.005	ppm
9/18/2018	2:00:00 PM	4-Chloro-3-methylphenol	<0.005	ppm
9/18/2018	2:00:00 PM	4-Chlorophenyl phenyl ether	<0.005	ppm
9/18/2018	2:00:00 PM	4-Nitrophenol	<0.005	ppm
9/18/2018	2:00:00 PM	Acenaphthene	<0.005	ppm
9/18/2018	2:00:00 PM	Acenaphthylene	<0.005	ppm
9/18/2018	2:00:00 PM	Acetone	0.042	ppm
9/18/2018	2:00:00 PM	Aluminum	1708	ppb
9/18/2018	2:00:00 PM	Aluminum, Dissolved	21.48	ppb
9/18/2018	2:00:00 PM	Ammonia	<0.100	ppm_N
9/18/2018	2:00:00 PM	Anthracene	<0.005	ppm
9/18/2018	2:00:00 PM	Arsenic	1.158	ppb
9/18/2018	2:00:00 PM	Benzene	<0.001	ppm
9/18/2018	2:00:00 PM	Benzidine	<0.005	ppm
9/18/2018	2:00:00 PM	Benzo(a)anthracene	<0.005	ppm
9/18/2018	2:00:00 PM	Benzo(a)pyrene	<0.005	ppm
9/18/2018	2:00:00 PM	Benzo(b)fluoranthene	<0.005	ppm
9/18/2018	2:00:00 PM	Benzo(g,h,i)perylene	<0.005	ppm
9/18/2018	2:00:00 PM	Benzo(k)fluoranthene	<0.005	ppm
9/18/2018	2:00:00 PM	Bis(2-Chloroethoxy)methane	<0.005	ppm
9/18/2018	2:00:00 PM	bis(2-Chloroethyl)Ether	<0.005	ppm
9/18/2018	2:00:00 PM	Bis(2-ethylhexyl)phthalate	<0.005	ppm
9/18/2018	2:00:00 PM	BOD	9.45	mg/l
9/18/2018	2:00:00 PM	Bromodichloromethane	<0.001	ppm
9/18/2018	2:00:00 PM	Bromoform	<0.001	ppm
9/18/2018	2:00:00 PM	Bromomethane	<0.010	ppm
9/18/2018	2:00:00 PM	Butylbenzyl phthalate	<0.005	ppm
9/18/2018	2:00:00 PM	Cadmium	0.1364	ppb
9/18/2018	2:00:00 PM	Cadmium, Dissolved	<0.020	ppb
9/18/2018	2:00:00 PM	Carbon Tetrachloride	<0.001	ppm

All samples are from CSO wet weather overflow at Bucklin Brook (NBC CSO # 218A)

Sample Date	Sample Time	Parameter	Result	Units
9/18/2018	2:00:00 PM	Chlorobenzene	<0.001	ppm
9/18/2018	2:00:00 PM	Chloroethane	<0.010	ppm
9/18/2018	2:00:00 PM	Chloroform	.0047	ppm
9/18/2018	2:00:00 PM	Chloromethane	<0.010	ppm
9/18/2018	2:00:00 PM	Chromium	6.490	ppb
9/18/2018	2:00:00 PM	Chromium, Dissolved	1.961	ppb
9/18/2018	2:00:00 PM	Chrysene	<0.005	ppm
9/18/2018	2:00:00 PM	cis-1,3-Dichloropropylene	<0.001	ppm
9/18/2018	2:00:00 PM	Copper	20.31	ppb
9/18/2018	2:00:00 PM	Copper, Dissolved	1.711	ppb
9/18/2018	2:00:00 PM	Cyanide, Total	6.83	ppb
9/18/2018	2:00:00 PM	Dibenzo(a,h)anthracene	<0.005	ppm
9/18/2018	2:00:00 PM	Dibromochloromethane	<0.001	ppm
9/18/2018	2:00:00 PM	Diethyl phthalate	<0.005	ppm
9/18/2018	2:00:00 PM	Dimethyl phthalate	<0.005	ppm
9/18/2018	2:00:00 PM	Di-n-butyl phthalate	<0.005	ppm
9/18/2018	2:00:00 PM	Di-n-octyl phthalate	<0.005	ppm
9/18/2018	2:00:00 PM	Enterococci	>24196.0	MPN_100ml
9/18/2018	2:00:00 PM	Ethylbenzene	<0.001	ppm
9/18/2018	2:00:00 PM	Fecal Coliform	110000.0	MPN_100ml
9/18/2018	2:00:00 PM	Fluoranthene	<0.005	ppm
9/18/2018	2:00:00 PM	Fluorene	<0.005	ppm
9/18/2018	2:00:00 PM	Hexachlorobenzene	<0.005	ppm
9/18/2018	2:00:00 PM	Hexachlorobutadiene	<0.005	ppm
9/18/2018	2:00:00 PM	Hexachlorocyclopentadiene	<0.005	ppm
9/18/2018	2:00:00 PM	Hexachloroethane	<0.005	ppm
9/18/2018	2:00:00 PM	Indeno(1,2,3-cd)pyrene	<0.005	ppm
9/18/2018	2:00:00 PM	Iron	2656	ppb
9/18/2018	2:00:00 PM	Iron, Dissolved	31.68	ppb
9/18/2018	2:00:00 PM	Isophorone	<0.005	ppm
9/18/2018	2:00:00 PM	Lead	25.68	ppb
9/18/2018	2:00:00 PM	Lead, Dissolved	0.3334	ppb
9/18/2018	2:00:00 PM	m,p-Xylene	<0.001	ppm
9/18/2018	2:00:00 PM	Mercury	55.0	ppt
9/18/2018	2:00:00 PM	Methylene Chloride	<0.005	ppm
9/18/2018	2:00:00 PM	Molybdenum	1.020	ppb
9/18/2018	2:00:00 PM	Naphthalene	<0.005	ppm
9/18/2018	2:00:00 PM	Nickel	4.345	ppb
9/18/2018	2:00:00 PM	Nickel, Dissolved	<0.300	ppb
9/18/2018	2:00:00 PM	Nitrate	0.141	ppm_N
9/18/2018	2:00:00 PM	Nitrate+Nitrite	0.141	ppm_N
9/18/2018	2:00:00 PM	Nitrite	<0.010	ppm_N
9/18/2018	2:00:00 PM	Nitrobenzene	<0.005	ppm
9/18/2018	2:00:00 PM	Nitrogen, Total	1.40	ppm_N
9/18/2018	2:00:00 PM	Nitrogen, Total Kjeldahl	1.26	ppm_N
9/18/2018	2:00:00 PM	N-nitrosodimethylamine	<0.005	ppm
9/18/2018	2:00:00 PM	N-nitrosodi-n-propylamine	<0.005	ppm
9/18/2018	2:00:00 PM	N-nitrosodiphenylamine	<0.005	ppm
9/18/2018	2:00:00 PM	Oil and Grease	4.557	ppm
9/18/2018	2:00:00 PM	o-Xylene	<0.001	ppm
9/18/2018	2:00:00 PM	Pentachlorophenol	<0.005	ppm
9/18/2018	2:00:00 PM	Phenanthrene	<0.005	ppm
9/18/2018	2:00:00 PM	Phenol	<0.005	ppm
9/18/2018	2:00:00 PM	Phosphorous, Total	0.272	ppm
9/18/2018	2:00:00 PM	Pyrene	<0.005	ppm
9/18/2018	2:00:00 PM	Selenium	<1.000	ppb
9/18/2018	2:00:00 PM	Silver	1.665	ppb
9/18/2018	2:00:00 PM	Silver, Dissolved	<0.020	ppb

All samples are from CSO wet weather overflow at Bucklin Brook (NBC CSO # 218A)

Sample Date	Sample Time	Parameter	Result	Units
9/18/2018	2:00:00 PM	Tetrachloroethylene	<0.001	ppm
9/18/2018	2:00:00 PM	Toluene	<0.001	ppm
9/18/2018	2:00:00 PM	trans-1,2-Dichloroethylene	<0.001	ppm
9/18/2018	2:00:00 PM	trans-1,3-Dichloropropylene	<0.001	ppm
9/18/2018	2:00:00 PM	Trichloroethylene	<0.001	ppm
9/18/2018	2:00:00 PM	Trichlorofluoromethane	<0.001	ppm
9/18/2018	2:00:00 PM	TSS	85.750	mg/l
9/18/2018	2:00:00 PM	Vinyl Chloride	<0.001	ppm
9/18/2018	2:00:00 PM	Zinc	70.90	ppb
9/18/2018	2:00:00 PM	Zinc, Dissolved	14.53	ppb
9/18/2018	2:30:00 PM	1,1,1-Trichloroethane	<0.001	ppm
9/18/2018	2:30:00 PM	1,1,2,2-Tetrachloroethane	<0.001	ppm
9/18/2018	2:30:00 PM	1,1,2-Trichloroethane	<0.001	ppm
9/18/2018	2:30:00 PM	1,1-Dichloroethane	<0.001	ppm
9/18/2018	2:30:00 PM	1,1-Dichloroethylene	<0.001	ppm
9/18/2018	2:30:00 PM	1,2,4-Trichlorobenzene	<0.005	ppm
9/18/2018	2:30:00 PM	1,2-Dichlorobenzene	<0.005	ppm
9/18/2018	2:30:00 PM	1,2-Dichlorobenzene	<0.001	ppm
9/18/2018	2:30:00 PM	1,2-Dichloroethane	<0.001	ppm
9/18/2018	2:30:00 PM	1,2-Dichloropropane	<0.001	ppm
9/18/2018	2:30:00 PM	1,2-Diphenylhydrazine	<0.005	ppm
9/18/2018	2:30:00 PM	1,3-Dichlorobenzene	<0.005	ppm
9/18/2018	2:30:00 PM	1,3-Dichlorobenzene	<0.001	ppm
9/18/2018	2:30:00 PM	1,4-Dichlorobenzene	<0.005	ppm
9/18/2018	2:30:00 PM	1,4-Dichlorobenzene	<0.001	ppm
9/18/2018	2:30:00 PM	2,2'-Oxybis(1-chloropropane)	<0.005	ppm
9/18/2018	2:30:00 PM	2,4,6-Trichlorophenol	<0.005	ppm
9/18/2018	2:30:00 PM	2,4-Dichlorophenol	<0.005	ppm
9/18/2018	2:30:00 PM	2,4-Dimethylphenol	<0.005	ppm
9/18/2018	2:30:00 PM	2,4-Dinitrophenol	<0.005	ppm
9/18/2018	2:30:00 PM	2,4-Dinitrotoluene	<0.005	ppm
9/18/2018	2:30:00 PM	2,6-Dinitrotoluene	<0.005	ppm
9/18/2018	2:30:00 PM	2-Chloroethyl vinyl ether	<0.002	ppm
9/18/2018	2:30:00 PM	2-Chloronaphthalene	<0.005	ppm
9/18/2018	2:30:00 PM	2-Chlorophenol	<0.005	ppm
9/18/2018	2:30:00 PM	2-Methyl-4,6-dinitrophenol	<0.005	ppm
9/18/2018	2:30:00 PM	2-Nitrophenol	<0.005	ppm
9/18/2018	2:30:00 PM	3,3'-Dichlorobenzidine	<0.005	ppm
9/18/2018	2:30:00 PM	4-Bromophenyl phenyl ether	<0.005	ppm
9/18/2018	2:30:00 PM	4-Chloro-3-methylphenol	<0.005	ppm
9/18/2018	2:30:00 PM	4-Chlorophenyl phenyl ether	<0.005	ppm
9/18/2018	2:30:00 PM	4-Nitrophenol	<0.005	ppm
9/18/2018	2:30:00 PM	Acenaphthene	<0.005	ppm
9/18/2018	2:30:00 PM	Acenaphthylene	<0.005	ppm
9/18/2018	2:30:00 PM	Acetone	.011	ppm
9/18/2018	2:30:00 PM	Aluminum	1203	ppb
9/18/2018	2:30:00 PM	Aluminum, Dissolved	23.62	ppb
9/18/2018	2:30:00 PM	Ammonia	<0.100	ppm_N
9/18/2018	2:30:00 PM	Anthracene	<0.005	ppm
9/18/2018	2:30:00 PM	Arsenic	0.8733	ppb
9/18/2018	2:30:00 PM	Benzene	<0.001	ppm
9/18/2018	2:30:00 PM	Benzidine	<0.005	ppm
9/18/2018	2:30:00 PM	Benzo(a)anthracene	<0.005	ppm
9/18/2018	2:30:00 PM	Benzo(a)pyrene	<0.005	ppm
9/18/2018	2:30:00 PM	Benzo(b)fluoranthene	<0.005	ppm
9/18/2018	2:30:00 PM	Benzo(g,h,i)perylene	<0.005	ppm
9/18/2018	2:30:00 PM	Benzo(k)fluoranthene	<0.005	ppm
9/18/2018	2:30:00 PM	Bis(2-Chloroethoxy)methane	<0.005	ppm

All samples are from CSO wet weather overflow at Bucklin Brook (NBC CSO # 218A)

Sample Date	Sample Time	Parameter	Result	Units
9/18/2018	2:30:00 PM	bis(2-Chloroethyl)Ether	<0.005	ppm
9/18/2018	2:30:00 PM	Bis(2-ethylhexyl)phthalate	<0.005	ppm
9/18/2018	2:30:00 PM	BOD	10.56	mg/l
9/18/2018	2:30:00 PM	Bromodichloromethane	<0.001	ppm
9/18/2018	2:30:00 PM	Bromoform	<0.001	ppm
9/18/2018	2:30:00 PM	Bromomethane	<0.010	ppm
9/18/2018	2:30:00 PM	Butylbenzyl phthalate	<0.005	ppm
9/18/2018	2:30:00 PM	Cadmium	0.1084	ppb
9/18/2018	2:30:00 PM	Cadmium, Dissolved	0.02410	ppb
9/18/2018	2:30:00 PM	Carbon Tetrachloride	<0.001	ppm
9/18/2018	2:30:00 PM	Chlorobenzene	<0.001	ppm
9/18/2018	2:30:00 PM	Chloroethane	<0.010	ppm
9/18/2018	2:30:00 PM	Chloroform	<0.001	ppm
9/18/2018	2:30:00 PM	Chloromethane	<0.010	ppm
9/18/2018	2:30:00 PM	Chromium	5.678	ppb
9/18/2018	2:30:00 PM	Chromium, Dissolved	1.939	ppb
9/18/2018	2:30:00 PM	Chrysene	<0.005	ppm
9/18/2018	2:30:00 PM	cis-1,3-Dichloropropylene	<0.001	ppm
9/18/2018	2:30:00 PM	Copper	15.89	ppb
9/18/2018	2:30:00 PM	Copper, Dissolved	1.391	ppb
9/18/2018	2:30:00 PM	Cyanide, Total	6.33	ppb
9/18/2018	2:30:00 PM	Dibenzo(a,h)anthracene	<0.005	ppm
9/18/2018	2:30:00 PM	Dibromochloromethane	<0.001	ppm
9/18/2018	2:30:00 PM	Diethyl phthalate	<0.005	ppm
9/18/2018	2:30:00 PM	Dimethyl phthalate	<0.005	ppm
9/18/2018	2:30:00 PM	Di-n-butyl phthalate	<0.005	ppm
9/18/2018	2:30:00 PM	Di-n-octyl phthalate	<0.005	ppm
9/18/2018	2:30:00 PM	Enterococci	>24196.0	MPN_100ml
9/18/2018	2:30:00 PM	Ethylbenzene	<0.001	ppm
9/18/2018	2:30:00 PM	Fecal Coliform	>240000.0	MPN_100ml
9/18/2018	2:30:00 PM	Fluoranthene	<0.005	ppm
9/18/2018	2:30:00 PM	Fluorene	<0.005	ppm
9/18/2018	2:30:00 PM	Hexachlorobenzene	<0.005	ppm
9/18/2018	2:30:00 PM	Hexachlorobutadiene	<0.005	ppm
9/18/2018	2:30:00 PM	Hexachlorocyclopentadiene	<0.005	ppm
9/18/2018	2:30:00 PM	Hexachloroethane	<0.005	ppm
9/18/2018	2:30:00 PM	Indeno(1,2,3-cd)pyrene	<0.005	ppm
9/18/2018	2:30:00 PM	Iron	1795	ppb
9/18/2018	2:30:00 PM	Iron, Dissolved	36.23	ppb
9/18/2018	2:30:00 PM	Isophorone	<0.005	ppm
9/18/2018	2:30:00 PM	Lead	23.93	ppb
9/18/2018	2:30:00 PM	Lead, Dissolved	0.5789	ppb
9/18/2018	2:30:00 PM	m,p-Xylene	<0.001	ppm
9/18/2018	2:30:00 PM	Mercury	10.6	ppt
9/18/2018	2:30:00 PM	Methylene Chloride	<0.005	ppm
9/18/2018	2:30:00 PM	Molybdenum	0.6528	ppb
9/18/2018	2:30:00 PM	Naphthalene	<0.005	ppm
9/18/2018	2:30:00 PM	Nickel	2.585	ppb
9/18/2018	2:30:00 PM	Nickel, Dissolved	0.5969	ppb
9/18/2018	2:30:00 PM	Nitrate	0.131	ppm_N
9/18/2018	2:30:00 PM	Nitrate+Nitrite	0.131	ppm_N
9/18/2018	2:30:00 PM	Nitrite	<0.010	ppm_N
9/18/2018	2:30:00 PM	Nitrobenzene	<0.005	ppm
9/18/2018	2:30:00 PM	Nitrogen, Total	1.31	ppm_N
9/18/2018	2:30:00 PM	Nitrogen, Total Kjeldahl	1.18	ppm_N
9/18/2018	2:30:00 PM	N-nitrosodimethylamine	<0.005	ppm
9/18/2018	2:30:00 PM	N-nitrosodi-n-propylamine	<0.005	ppm
9/18/2018	2:30:00 PM	N-nitrosodiphenylamine	<0.005	ppm

All samples are from CSO wet weather overflow at Bucklin Brook (NBC CSO # 218A)

Sample Date	Sample Time	Parameter	Result	Units
9/18/2018	2:30:00 PM	Oil and Grease	4.146	ppm
9/18/2018	2:30:00 PM	o-Xylene	<0.001	ppm
9/18/2018	2:30:00 PM	Pentachlorophenol	<0.005	ppm
9/18/2018	2:30:00 PM	Phenanthrene	<0.005	ppm
9/18/2018	2:30:00 PM	Phenol	<0.005	ppm
9/18/2018	2:30:00 PM	Phosphorous, Total	0.254	ppm
9/18/2018	2:30:00 PM	Pyrene	<0.005	ppm
9/18/2018	2:30:00 PM	Selenium	<1.000	ppb
9/18/2018	2:30:00 PM	Silver	0.3738	ppb
9/18/2018	2:30:00 PM	Silver, Dissolved	0.03089	ppb
9/18/2018	2:30:00 PM	Tetrachloroethylene	<0.001	ppm
9/18/2018	2:30:00 PM	Toluene	<0.001	ppm
9/18/2018	2:30:00 PM	trans-1,2-Dichloroethylene	<0.001	ppm
9/18/2018	2:30:00 PM	trans-1,3-Dichloropropylene	<0.001	ppm
9/18/2018	2:30:00 PM	Trichloroethylene	<0.001	ppm
9/18/2018	2:30:00 PM	Trichlorofluoromethane	<0.001	ppm
9/18/2018	2:30:00 PM	TSS	84.500	mg/l
9/18/2018	2:30:00 PM	Vinyl Chloride	<0.001	ppm
9/18/2018	2:30:00 PM	Zinc	58.24	ppb
9/18/2018	2:30:00 PM	Zinc, Dissolved	11.79	ppb
9/18/2018	3:00:00 PM	1,1,1-Trichloroethane	<0.001	ppm
9/18/2018	3:00:00 PM	1,1,2,2-Tetrachloroethane	<0.001	ppm
9/18/2018	3:00:00 PM	1,1,2-Trichloroethane	<0.001	ppm
9/18/2018	3:00:00 PM	1,1-Dichloroethane	<0.001	ppm
9/18/2018	3:00:00 PM	1,1-Dichloroethylene	<0.001	ppm
9/18/2018	3:00:00 PM	1,2,4-Trichlorobenzene	<0.005	ppm
9/18/2018	3:00:00 PM	1,2-Dichlorobenzene	<0.005	ppm
9/18/2018	3:00:00 PM	1,2-Dichlorobenzene	<0.001	ppm
9/18/2018	3:00:00 PM	1,2-Dichloroethane	<0.001	ppm
9/18/2018	3:00:00 PM	1,2-Dichloropropane	<0.001	ppm
9/18/2018	3:00:00 PM	1,2-Diphenylhydrazine	<0.005	ppm
9/18/2018	3:00:00 PM	1,3-Dichlorobenzene	<0.005	ppm
9/18/2018	3:00:00 PM	1,3-Dichlorobenzene	<0.001	ppm
9/18/2018	3:00:00 PM	1,4-Dichlorobenzene	<0.005	ppm
9/18/2018	3:00:00 PM	1,4-Dichlorobenzene	<0.001	ppm
9/18/2018	3:00:00 PM	2,2'-Oxybis(1-chloropropane)	<0.005	ppm
9/18/2018	3:00:00 PM	2,4,6-Trichlorophenol	<0.005	ppm
9/18/2018	3:00:00 PM	2,4-Dichlorophenol	<0.005	ppm
9/18/2018	3:00:00 PM	2,4-Dimethylphenol	<0.005	ppm
9/18/2018	3:00:00 PM	2,4-Dinitrophenol	<0.005	ppm
9/18/2018	3:00:00 PM	2,4-Dinitrotoluene	<0.005	ppm
9/18/2018	3:00:00 PM	2,6-Dinitrotoluene	<0.005	ppm
9/18/2018	3:00:00 PM	2-Chloroethyl vinyl ether	<0.002	ppm
9/18/2018	3:00:00 PM	2-Chloronaphthalene	<0.005	ppm
9/18/2018	3:00:00 PM	2-Chlorophenol	<0.005	ppm
9/18/2018	3:00:00 PM	2-Methyl-4,6-dinitrophenol	<0.005	ppm
9/18/2018	3:00:00 PM	2-Nitrophenol	<0.005	ppm
9/18/2018	3:00:00 PM	3,3'-Dichlorobenzidine	<0.005	ppm
9/18/2018	3:00:00 PM	4-Bromophenyl phenyl ether	<0.005	ppm
9/18/2018	3:00:00 PM	4-Chloro-3-methylphenol	<0.005	ppm
9/18/2018	3:00:00 PM	4-Chlorophenyl phenyl ether	<0.005	ppm
9/18/2018	3:00:00 PM	4-Nitrophenol	<0.005	ppm
9/18/2018	3:00:00 PM	Acenaphthene	<0.005	ppm
9/18/2018	3:00:00 PM	Acenaphthylene	<0.005	ppm
9/18/2018	3:00:00 PM	Acetone	.017	ppm
9/18/2018	3:00:00 PM	Aluminum	1692	ppb
9/18/2018	3:00:00 PM	Aluminum, Dissolved	31.61	ppb
9/18/2018	3:00:00 PM	Ammonia	0.277	ppm_N

All samples are from CSO wet weather overflow at Bucklin Brook (NBC CSO # 218A)

Sample Date	Sample Time	Parameter	Result	Units
9/18/2018	3:00:00 PM	Anthracene	<0.005	ppm
9/18/2018	3:00:00 PM	Arsenic	0.9834	ppb
9/18/2018	3:00:00 PM	Benzene	<0.001	ppm
9/18/2018	3:00:00 PM	Benzidine	<0.005	ppm
9/18/2018	3:00:00 PM	Benzo(a)anthracene	<0.005	ppm
9/18/2018	3:00:00 PM	Benzo(a)pyrene	<0.005	ppm
9/18/2018	3:00:00 PM	Benzo(b)fluoranthene	<0.005	ppm
9/18/2018	3:00:00 PM	Benzo(g,h,i)perylene	<0.005	ppm
9/18/2018	3:00:00 PM	Benzo(k)fluoranthene	<0.005	ppm
9/18/2018	3:00:00 PM	Bis(2-Chloroethoxy)methane	<0.005	ppm
9/18/2018	3:00:00 PM	bis(2-Chloroethyl)Ether	<0.005	ppm
9/18/2018	3:00:00 PM	Bis(2-ethylhexyl)phthalate	<0.005	ppm
9/18/2018	3:00:00 PM	BOD	11.91	mg/l
9/18/2018	3:00:00 PM	Bromodichloromethane	<0.001	ppm
9/18/2018	3:00:00 PM	Bromoform	<0.001	ppm
9/18/2018	3:00:00 PM	Bromomethane	<0.010	ppm
9/18/2018	3:00:00 PM	Butylbenzyl phthalate	<0.005	ppm
9/18/2018	3:00:00 PM	Cadmium	0.1912	ppb
9/18/2018	3:00:00 PM	Cadmium, Dissolved	0.04341	ppb
9/18/2018	3:00:00 PM	Carbon Tetrachloride	<0.001	ppm
9/18/2018	3:00:00 PM	Chlorobenzene	<0.001	ppm
9/18/2018	3:00:00 PM	Chloroethane	<0.010	ppm
9/18/2018	3:00:00 PM	Chloroform	<0.001	ppm
9/18/2018	3:00:00 PM	Chloromethane	<0.010	ppm
9/18/2018	3:00:00 PM	Chromium	6.345	ppb
9/18/2018	3:00:00 PM	Chromium, Dissolved	2.522	ppb
9/18/2018	3:00:00 PM	Chrysene	<0.005	ppm
9/18/2018	3:00:00 PM	cis-1,3-Dichloropropylene	<0.001	ppm
9/18/2018	3:00:00 PM	Copper	15.34	ppb
9/18/2018	3:00:00 PM	Copper, Dissolved	3.190	ppb
9/18/2018	3:00:00 PM	Cyanide, Total	6.57	ppb
9/18/2018	3:00:00 PM	Dibenzo(a,h)anthracene	<0.005	ppm
9/18/2018	3:00:00 PM	Dibromochloromethane	<0.001	ppm
9/18/2018	3:00:00 PM	Diethyl phthalate	<0.005	ppm
9/18/2018	3:00:00 PM	Dimethyl phthalate	<0.005	ppm
9/18/2018	3:00:00 PM	Di-n-butyl phthalate	<0.005	ppm
9/18/2018	3:00:00 PM	Di-n-octyl phthalate	<0.005	ppm
9/18/2018	3:00:00 PM	Enterococci	>24196.0	MPN_100ml
9/18/2018	3:00:00 PM	Ethylbenzene	<0.001	ppm
9/18/2018	3:00:00 PM	Fecal Coliform	>240000.0	MPN_100ml
9/18/2018	3:00:00 PM	Fluoranthene	<0.005	ppm
9/18/2018	3:00:00 PM	Fluorene	<0.005	ppm
9/18/2018	3:00:00 PM	Hexachlorobenzene	<0.005	ppm

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

Sample Date	Sample Time	Parameter	Result	Units
3/2/2018	2:00:00 PM	1,1,1-Trichloroethane	<1	ppb
3/2/2018	2:00:00 PM	1,1,2,2-Tetrachlorethane	<1	ppb
3/2/2018	2:00:00 PM	1,1,2-Trichloroethane	<1	ppb
3/2/2018	2:00:00 PM	1,1-Dichloroethane	<1	ppb
3/2/2018	2:00:00 PM	1,1-Dichloroethene	<1	ppb
3/2/2018	2:00:00 PM	1,2-Dichlorobenzene	<5.0	ppb
3/2/2018	2:00:00 PM	1,2-dichlorobenzene	<1	ppb
3/2/2018	2:00:00 PM	1,2-Dichloroethane	<1	ppb
3/2/2018	2:00:00 PM	1,2-Dichloropropane	<1	ppb
3/2/2018	2:00:00 PM	1,3-Dichlorobenzene	<5.0	ppb
3/2/2018	2:00:00 PM	1,3-dichlorobenzene	<1	ppb
3/2/2018	2:00:00 PM	1,4-Dichlorobenzene	<5.0	ppb
3/2/2018	2:00:00 PM	1,4-dichlorobenzene	<1	ppb
3/2/2018	2:00:00 PM	124-Trichlorobenzene	<5.0	ppb
3/2/2018	2:00:00 PM	12-Diphenylhydrazine	<5.0	ppb
3/2/2018	2:00:00 PM	2,4-Dichlorophenol	<5.0	ppb
3/2/2018	2:00:00 PM	2,4-Dimethylphenol	<5.0	ppb
3/2/2018	2:00:00 PM	2,4-Dinitrophenol	<5.0	ppb
3/2/2018	2:00:00 PM	2,4-Dinitrotoluene	<5.0	ppb
3/2/2018	2:00:00 PM	2,6-Dinitrotoluene	<5.0	ppb
3/2/2018	2:00:00 PM	246-Trichlorophenol	<5.0	ppb
3/2/2018	2:00:00 PM	2-Chloroethylvinylether	<2	ppb
3/2/2018	2:00:00 PM	2-Chloronaphthalene	<5.0	ppb
3/2/2018	2:00:00 PM	2-Chlorophenol	<5.0	ppb
3/2/2018	2:00:00 PM	2Methyl46dinitrophen	<5.0	ppb
3/2/2018	2:00:00 PM	2-Nitrophenol	<5.0	ppb
3/2/2018	2:00:00 PM	33-Dichlorobenzidine	<5.0	ppb
3/2/2018	2:00:00 PM	4Bromophenphenether	<5.0	ppb
3/2/2018	2:00:00 PM	4Chloro3methylphenol	<5.0	ppb
3/2/2018	2:00:00 PM	4Chlorophenphenether	<5.0	ppb
3/2/2018	2:00:00 PM	4-Nitrophenol	<5.0	ppb
3/2/2018	2:00:00 PM	Acenaphthene	<5.0	ppb
3/2/2018	2:00:00 PM	Acenaphthylene	<5.0	ppb
3/2/2018	2:00:00 PM	Aluminum	840.6	ug/L
3/2/2018	2:00:00 PM	Anthracene	<5.0	ppb
3/2/2018	2:00:00 PM	Benzene	<1	ppb
3/2/2018	2:00:00 PM	Benzidine	<5.0	ppb
3/2/2018	2:00:00 PM	Benzo(a)anthracene	<5.0	ppb
3/2/2018	2:00:00 PM	Benzo(a)pyrene	<5.0	ppb
3/2/2018	2:00:00 PM	Benzo(b)fluoranthene	<5.0	ppb
3/2/2018	2:00:00 PM	Benzo(g,h,i)perylene	<5.0	ppb
3/2/2018	2:00:00 PM	Benzo(k)fluoranthene	<5.0	ppb
3/2/2018	2:00:00 PM	bis2chloroethoxymeth	<5.0	ppb
3/2/2018	2:00:00 PM	bis2chloroethylether	<5.0	ppb
3/2/2018	2:00:00 PM	bis2chloroisoproethe	<5.0	ppb
3/2/2018	2:00:00 PM	bis2ethylhexylphthal	<5.0	ppb
3/2/2018	2:00:00 PM	BOD SM 5210B	7.95	ppm
3/2/2018	2:00:00 PM	Bromodichloromethane	<1	ppb
3/2/2018	2:00:00 PM	Bromoform	<1	ppb
3/2/2018	2:00:00 PM	Bromomethane	<10	ppb
3/2/2018	2:00:00 PM	Butylbenzylphthalate	<5.0	ppb
3/2/2018	2:00:00 PM	Cadmium	<2.5	ug/L
3/2/2018	2:00:00 PM	Carbon Tetrachloride	<1	ppb
3/2/2018	2:00:00 PM	Chlorobenzene	<1	ppb
3/2/2018	2:00:00 PM	Chloroethane	<10	ppb
3/2/2018	2:00:00 PM	Chloroform	<1	ppb
3/2/2018	2:00:00 PM	Chloromethane	<10	ppb
3/2/2018	2:00:00 PM	Chromium	10.01	ug/L

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

Sample Date	Sample Time	Parameter	Result	Units
3/2/2018	2:00:00 PM	Chrysene	<5.0	ppb
3/2/2018	2:00:00 PM	cis-1,3-Dichloropropene	<1	ppb
3/2/2018	2:00:00 PM	Copper	22.82	ug/L
3/2/2018	2:00:00 PM	Cyanide	12.10	ppb
3/2/2018	2:00:00 PM	Dibenzoahanthracene	<5.0	ppb
3/2/2018	2:00:00 PM	Dibromochloromethane	<1	ppb
3/2/2018	2:00:00 PM	Diethylphthalate	<5.0	ppb
3/2/2018	2:00:00 PM	Dimethylphthalate	<5.0	ppb
3/2/2018	2:00:00 PM	di-n-butylphthalate	<5.0	ppb
3/2/2018	2:00:00 PM	Di-n-octylphthalate	<5.0	ppb
3/2/2018	2:00:00 PM	Enterococci - IDEXX Method 1600	7710.0	MPN/100 ml
3/2/2018	2:00:00 PM	Ethylbenzene	<1	ppb
3/2/2018	2:00:00 PM	Fecal Coliform (3 tube) SM 9221E - Fecal	110000	MPN/100 ml
3/2/2018	2:00:00 PM	Fluoranthene	<5.0	ppb
3/2/2018	2:00:00 PM	Fluorene	<5.0	ppb
3/2/2018	2:00:00 PM	Fresh Water Total Nitrogen	1.778	ppm
3/2/2018	2:00:00 PM	Hexachlorobenzene	<5.0	ppb
3/2/2018	2:00:00 PM	Hexachlorobutadiene	<5.0	ppb
3/2/2018	2:00:00 PM	Hexachloroethane	<5.0	ppb
3/2/2018	2:00:00 PM	Hexaclcyclopentadien	<5.0	ppb
3/2/2018	2:00:00 PM	Indeno(123-cd)pyrene	<5.0	ppb
3/2/2018	2:00:00 PM	Iron	1672	ug/L
3/2/2018	2:00:00 PM	Isophorone	<5.0	ppb
3/2/2018	2:00:00 PM	Lead	26.73	ug/L
3/2/2018	2:00:00 PM	Mercury EPA Method 245.7 - Mercury	11.60	ng/L
3/2/2018	2:00:00 PM	Methylene Chloride	<5	ppb
3/2/2018	2:00:00 PM	Naphthalene	<5.0	ppb
3/2/2018	2:00:00 PM	NH3-N EPA 350.1 - Ammonia	<0.1	ppm
3/2/2018	2:00:00 PM	Nickel	<10	ug/L
3/2/2018	2:00:00 PM	Nitrobenzene	<5.0	ppb
3/2/2018	2:00:00 PM	Nnitrosodimethylamin	<5.0	ppb
3/2/2018	2:00:00 PM	Nnitrosodinpropylami	<5.0	ppb
3/2/2018	2:00:00 PM	Nnitrosodiphenylamin	<5.0	ppb
3/2/2018	2:00:00 PM	NO3NO2 EPA Method 353.2	0.168	mg/L
3/2/2018	2:00:00 PM	o- xylene	<1	ppb
3/2/2018	2:00:00 PM	Oil and Grease EPA Method 1664 (SIU)	<4.0	ppm
3/2/2018	2:00:00 PM	p&m xylene	<1	ppb
3/2/2018	2:00:00 PM	Pentachlorophenol	<5.0	ppb
3/2/2018	2:00:00 PM	Phenanthrene	<5.0	ppb
3/2/2018	2:00:00 PM	Phenol	<5.0	ppb
3/2/2018	2:00:00 PM	Pyrene	<5.0	ppb
3/2/2018	2:00:00 PM	Tetrachlorethene	<1	ppb
3/2/2018	2:00:00 PM	TKN - Copper Sulfate Digestion - TKN	1.610	mg N/L
3/2/2018	2:00:00 PM	Toluene	<1	ppb
3/2/2018	2:00:00 PM	Total_Phosphorus-P	0.2110	mg/L
3/2/2018	2:00:00 PM	Trans-1,2-Dichloroethene	<1	ppb
3/2/2018	2:00:00 PM	Trans-1,3-Dichloropropene	<1	ppb
3/2/2018	2:00:00 PM	Trichlorethene	<1	ppb
3/2/2018	2:00:00 PM	Trichlorofluoromethane	<1	ppb
3/2/2018	2:00:00 PM	TSS SM 5240D - TSS	56.00	ppm
3/2/2018	2:00:00 PM	Vinyl Chloride	<1	ppb
3/2/2018	2:00:00 PM	Zinc	75.32	ug/L
3/2/2018	3:20:00 PM	Enterococci - IDEXX Method 1600	4770.0	MPN/100 ml
3/2/2018	3:20:00 PM	Fecal Coliform (3 tube) SM 9221E - Fecal	24000	MPN/100 ml
3/2/2018	7:00:00 PM	1,1,1-Trichloroethane	<1	ppb
3/2/2018	7:00:00 PM	1,1,2,2-Tetrachlorethane	<1	ppb
3/2/2018	7:00:00 PM	1,1,2-Trichloroethane	<1	ppb
3/2/2018	7:00:00 PM	1,1-Dichloroethane	<1	ppb

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

Sample Date	Sample Time	Parameter	Result	Units
3/2/2018	7:00:00 PM	1,1-Dichloroethene	<1	ppb
3/2/2018	7:00:00 PM	1,2-Dichlorobenzene	<5.0	ppb
3/2/2018	7:00:00 PM	1,2-dichlorobenzene	<1	ppb
3/2/2018	7:00:00 PM	1,2-Dichloroethane	<1	ppb
3/2/2018	7:00:00 PM	1,2-Dichloropropane	<1	ppb
3/2/2018	7:00:00 PM	1,3-Dichlorobenzene	<5.0	ppb
3/2/2018	7:00:00 PM	1,3-dichlorobenzene	<1	ppb
3/2/2018	7:00:00 PM	1,4-Dichlorobenzene	<5.0	ppb
3/2/2018	7:00:00 PM	1,4-dichlorobenzene	<1	ppb
3/2/2018	7:00:00 PM	124-Trichlorobenzene	<5.0	ppb
3/2/2018	7:00:00 PM	12-Diphenylhydrazine	<5.0	ppb
3/2/2018	7:00:00 PM	2,4-Dichlorophenol	<5.0	ppb
3/2/2018	7:00:00 PM	2,4-Dimethylphenol	<5.0	ppb
3/2/2018	7:00:00 PM	2,4-Dinitrophenol	<5.0	ppb
3/2/2018	7:00:00 PM	2,4-Dinitrotoluene	<5.0	ppb
3/2/2018	7:00:00 PM	2,6-Dinitrotoluene	<5.0	ppb
3/2/2018	7:00:00 PM	246-Trichlorophenol	<5.0	ppb
3/2/2018	7:00:00 PM	2-Chloroethylvinylether	<2	ppb
3/2/2018	7:00:00 PM	2-Chloronaphthalene	<5.0	ppb
3/2/2018	7:00:00 PM	2-Chlorophenol	<5.0	ppb
3/2/2018	7:00:00 PM	2Methyl46dinitrophen	<5.0	ppb
3/2/2018	7:00:00 PM	2-Nitrophenol	<5.0	ppb
3/2/2018	7:00:00 PM	33-Dichlorobenzidine	<5.0	ppb
3/2/2018	7:00:00 PM	4Bromophenphenether	<5.0	ppb
3/2/2018	7:00:00 PM	4Chloro3methylphenol	<5.0	ppb
3/2/2018	7:00:00 PM	4Chlorophenphenether	<5.0	ppb
3/2/2018	7:00:00 PM	4-Nitrophenol	<5.0	ppb
3/2/2018	7:00:00 PM	Acenaphthene	<5.0	ppb
3/2/2018	7:00:00 PM	Acenaphthylene	<5.0	ppb
3/2/2018	7:00:00 PM	Aluminum	3472	ug/L
3/2/2018	7:00:00 PM	Anthracene	<5.0	ppb
3/2/2018	7:00:00 PM	Benzene	<1	ppb
3/2/2018	7:00:00 PM	Benzidine	<5.0	ppb
3/2/2018	7:00:00 PM	Benzo(a)anthracene	<5.0	ppb
3/2/2018	7:00:00 PM	Benzo(a)pyrene	<5.0	ppb
3/2/2018	7:00:00 PM	Benzo(b)fluoranthene	<5.0	ppb
3/2/2018	7:00:00 PM	Benzo(g,h,i)perylene	<5.0	ppb
3/2/2018	7:00:00 PM	Benzo(k)fluoranthene	<5.0	ppb
3/2/2018	7:00:00 PM	bis2chloroethoxymeth	<5.0	ppb
3/2/2018	7:00:00 PM	bis2chloroethylether	<5.0	ppb
3/2/2018	7:00:00 PM	bis2chloroisoproethe	<5.0	ppb
3/2/2018	7:00:00 PM	bis2ethylhexylphthal	<5.0	ppb
3/2/2018	7:00:00 PM	BOD SM 5210B	6.09	ppm
3/2/2018	7:00:00 PM	Bromodichloromethane	<1	ppb
3/2/2018	7:00:00 PM	Bromoform	<1	ppb
3/2/2018	7:00:00 PM	Bromomethane	<10	ppb
3/2/2018	7:00:00 PM	Butylbenzylphthalate	<5.0	ppb
3/2/2018	7:00:00 PM	Cadmium	<2.5	ug/L
3/2/2018	7:00:00 PM	Carbon Tetrachloride	<1	ppb
3/2/2018	7:00:00 PM	Chlorobenzene	<1	ppb
3/2/2018	7:00:00 PM	Chloroethane	<10	ppb
3/2/2018	7:00:00 PM	Chloroform	<1	ppb
3/2/2018	7:00:00 PM	Chloromethane	<10	ppb
3/2/2018	7:00:00 PM	Chromium	39.67	ug/L
3/2/2018	7:00:00 PM	Chrysene	<5.0	ppb
3/2/2018	7:00:00 PM	cis-1,3-Dichloropropene	<1	ppb
3/2/2018	7:00:00 PM	Copper	371.5	ug/L
3/2/2018	7:00:00 PM	Cyanide	6.430	ppb

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

Sample Date	Sample Time	Parameter	Result	Units
3/2/2018	7:00:00 PM	Dibenzoahanthracene	<5.0	ppb
3/2/2018	7:00:00 PM	Dibromochloromethane	<1	ppb
3/2/2018	7:00:00 PM	Diethylphthalate	<5.0	ppb
3/2/2018	7:00:00 PM	Dimethylphthalate	<5.0	ppb
3/2/2018	7:00:00 PM	di-n-butylphthalate	<5.0	ppb
3/2/2018	7:00:00 PM	Di-n-octylphthalate	<5.0	ppb
3/2/2018	7:00:00 PM	Ethylbenzene	<1	ppb
3/2/2018	7:00:00 PM	Fluoranthene	<5.0	ppb
3/2/2018	7:00:00 PM	Fluorene	<5.0	ppb
3/2/2018	7:00:00 PM	Fresh Water Total Nitrogen	3.993	ppm
3/2/2018	7:00:00 PM	Hexachlorobenzene	<5.0	ppb
3/2/2018	7:00:00 PM	Hexachlorobutadiene	<5.0	ppb
3/2/2018	7:00:00 PM	Hexachloroethane	<5.0	ppb
3/2/2018	7:00:00 PM	Hexaclcyclopentadien	<5.0	ppb
3/2/2018	7:00:00 PM	Indeno(123-cd)pyrene	<5.0	ppb
3/2/2018	7:00:00 PM	Iron	10920	ug/L
3/2/2018	7:00:00 PM	Isophorone	<5.0	ppb
3/2/2018	7:00:00 PM	Lead	99.45	ug/L
3/2/2018	7:00:00 PM	Mercury EPA Method 245.7 - Mercury	276.4	ng/L
3/2/2018	7:00:00 PM	Methylene Chloride	<5	ppb
3/2/2018	7:00:00 PM	Naphthalene	<5.0	ppb
3/2/2018	7:00:00 PM	NH3-N EPA 350.1 - Ammonia	<0.1	ppm
3/2/2018	7:00:00 PM	Nickel	11.05	ug/L
3/2/2018	7:00:00 PM	Nitrobenzene	<5.0	ppb
3/2/2018	7:00:00 PM	Nnitrosodimethylamin	<5.0	ppb
3/2/2018	7:00:00 PM	Nnitrosodinpropylami	<5.0	ppb
3/2/2018	7:00:00 PM	Nnitrosodiphenylamin	<5.0	ppb
3/2/2018	7:00:00 PM	NO3NO2 EPA Method 353.2	0.283	mg/L
3/2/2018	7:00:00 PM	o- xylene	<1	ppb
3/2/2018	7:00:00 PM	Oil and Grease EPA Method 1664 (SIU)	<4.0	ppm
3/2/2018	7:00:00 PM	p&m xylene	<1	ppb
3/2/2018	7:00:00 PM	Pentachlorophenol	<5.0	ppb
3/2/2018	7:00:00 PM	Phenanthrene	<5.0	ppb
3/2/2018	7:00:00 PM	Phenol	<5.0	ppb
3/2/2018	7:00:00 PM	Pyrene	<5.0	ppb
3/2/2018	7:00:00 PM	Tetrachlorethene	<1	ppb
3/2/2018	7:00:00 PM	TKN - Copper Sulfate Digestion - TKN	3.710	mg N/L
3/2/2018	7:00:00 PM	Toluene	<1	ppb
3/2/2018	7:00:00 PM	Total_Phosphorus-P	0.795	mg/L
3/2/2018	7:00:00 PM	Trans-1,2-Dichloroethene	<1	ppb
3/2/2018	7:00:00 PM	Trans-1,3-Dichloropropene	<1	ppb
3/2/2018	7:00:00 PM	Trichlorethene	<1	ppb
3/2/2018	7:00:00 PM	Trichlorofluoromethane	<1	ppb
3/2/2018	7:00:00 PM	TSS SM 5240D - TSS	296.00	ppm
3/2/2018	7:00:00 PM	Vinyl Chloride	<1	ppb
3/2/2018	7:00:00 PM	Zinc	123.2	ug/L
3/2/2018	11:00:00 PM	1,1,1-Trichloroethane	<1	ppb
3/2/2018	11:00:00 PM	1,1,2,2-Tetrachlorethane	<1	ppb
3/2/2018	11:00:00 PM	1,1,2-Trichloroethane	<1	ppb
3/2/2018	11:00:00 PM	1,1-Dichloroethane	<1	ppb
3/2/2018	11:00:00 PM	1,1-Dichloroethene	<1	ppb
3/2/2018	11:00:00 PM	1,2-Dichlorobenzene	<5.0	ppb
3/2/2018	11:00:00 PM	1,2-dichlorobenzene	<1	ppb
3/2/2018	11:00:00 PM	1,2-Dichloroethane	<1	ppb
3/2/2018	11:00:00 PM	1,2-Dichloropropane	<1	ppb
3/2/2018	11:00:00 PM	1,3-Dichlorobenzene	<5.0	ppb
3/2/2018	11:00:00 PM	1,3-dichlorobenzene	<1	ppb
3/2/2018	11:00:00 PM	1,4-Dichlorobenzene	<5.0	ppb

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

Sample Date	Sample Time	Parameter	Result	Units
3/2/2018	11:00:00 PM	1,4-dichlorobenzene	<1	ppb
3/2/2018	11:00:00 PM	124-Trichlorobenzene	<5.0	ppb
3/2/2018	11:00:00 PM	12-Diphenylhydrazine	<5.0	ppb
3/2/2018	11:00:00 PM	2,4-Dichlorophenol	<5.0	ppb
3/2/2018	11:00:00 PM	2,4-Dimethylphenol	<5.0	ppb
3/2/2018	11:00:00 PM	2,4-Dinitrophenol	<5.0	ppb
3/2/2018	11:00:00 PM	2,4-Dinitrotoluene	<5.0	ppb
3/2/2018	11:00:00 PM	2,6-Dinitrotoluene	<5.0	ppb
3/2/2018	11:00:00 PM	246-Trichlorophenol	<5.0	ppb
3/2/2018	11:00:00 PM	2-Chloroethylvinylether	<2	ppb
3/2/2018	11:00:00 PM	2-Chloronaphthalene	<5.0	ppb
3/2/2018	11:00:00 PM	2-Chlorophenol	<5.0	ppb
3/2/2018	11:00:00 PM	2Methyl46dinitrophen	<5.0	ppb
3/2/2018	11:00:00 PM	2-Nitrophenol	<5.0	ppb
3/2/2018	11:00:00 PM	33-Dichlorobenzidine	<5.0	ppb
3/2/2018	11:00:00 PM	4Bromophenphenether	<5.0	ppb
3/2/2018	11:00:00 PM	4Chloro3methylphenol	<5.0	ppb
3/2/2018	11:00:00 PM	4Chlorophenphenether	<5.0	ppb
3/2/2018	11:00:00 PM	4-Nitrophenol	<5.0	ppb
3/2/2018	11:00:00 PM	Acenaphthene	<5.0	ppb
3/2/2018	11:00:00 PM	Acenaphthylene	<5.0	ppb
3/2/2018	11:00:00 PM	Aluminum	313.2	ug/L
3/2/2018	11:00:00 PM	Anthracene	<5.0	ppb
3/2/2018	11:00:00 PM	Benzene	<1	ppb
3/2/2018	11:00:00 PM	Benzidine	<5.0	ppb
3/2/2018	11:00:00 PM	Benzo(a)anthracene	<5.0	ppb
3/2/2018	11:00:00 PM	Benzo(a)pyrene	<5.0	ppb
3/2/2018	11:00:00 PM	Benzo(b)fluoranthene	<5.0	ppb
3/2/2018	11:00:00 PM	Benzo(g,h,i)perylene	<5.0	ppb
3/2/2018	11:00:00 PM	Benzo(k)fluoranthene	<5.0	ppb
3/2/2018	11:00:00 PM	bis2chloroethoxymeth	<5.0	ppb
3/2/2018	11:00:00 PM	bis2chloroethylether	<5.0	ppb
3/2/2018	11:00:00 PM	bis2chloroisoproethe	<5.0	ppb
3/2/2018	11:00:00 PM	bis2ethylhexylphthal	<5.0	ppb
3/2/2018	11:00:00 PM	BOD SM 5210B	6.99	ppm
3/2/2018	11:00:00 PM	Bromodichloromethane	<1	ppb
3/2/2018	11:00:00 PM	Bromoform	<1	ppb
3/2/2018	11:00:00 PM	Bromomethane	<10	ppb
3/2/2018	11:00:00 PM	Butylbenzylphthalate	<5.0	ppb
3/2/2018	11:00:00 PM	Cadmium	<2.5	ug/L
3/2/2018	11:00:00 PM	Carbon Tetrachloride	<1	ppb
3/2/2018	11:00:00 PM	Chlorobenzene	<1	ppb
3/2/2018	11:00:00 PM	Chloroethane	<10	ppb
3/2/2018	11:00:00 PM	Chloroform	<1	ppb
3/2/2018	11:00:00 PM	Chloromethane	<10	ppb
3/2/2018	11:00:00 PM	Chromium	<10	ug/L
3/2/2018	11:00:00 PM	Chrysene	<5.0	ppb
3/2/2018	11:00:00 PM	cis-1,3-Dichloropropene	<1	ppb
3/2/2018	11:00:00 PM	Copper	35.32	ug/L
3/2/2018	11:00:00 PM	Cyanide	4.730	ppb
3/2/2018	11:00:00 PM	Dibenzoahanthracene	<5.0	ppb
3/2/2018	11:00:00 PM	Dibromochloromethane	<1	ppb
3/2/2018	11:00:00 PM	Diethylphthalate	<5.0	ppb
3/2/2018	11:00:00 PM	Dimethylphthalate	<5.0	ppb
3/2/2018	11:00:00 PM	di-n-butylphthalate	<5.0	ppb
3/2/2018	11:00:00 PM	Di-n-octylphthalate	<5.0	ppb
3/2/2018	11:00:00 PM	Ethylbenzene	<1	ppb
3/2/2018	11:00:00 PM	Fluoranthene	<5.0	ppb

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

Sample Date	Sample Time	Parameter	Result	Units
3/2/2018	11:00:00 PM	Fluorene	<5.0	ppb
3/2/2018	11:00:00 PM	Fresh Water Total Nitrogen	0.782	ppm
3/2/2018	11:00:00 PM	Hexachlorobenzene	<5.0	ppb
3/2/2018	11:00:00 PM	Hexachlorobutadiene	<5.0	ppb
3/2/2018	11:00:00 PM	Hexachloroethane	<5.0	ppb
3/2/2018	11:00:00 PM	Hexaclcyclopentadien	<5.0	ppb
3/2/2018	11:00:00 PM	Indeno(123-cd)pyrene	<5.0	ppb
3/2/2018	11:00:00 PM	Iron	948.4	ug/L
3/2/2018	11:00:00 PM	Isophorone	<5.0	ppb
3/2/2018	11:00:00 PM	Lead	11.14	ug/L
3/2/2018	11:00:00 PM	Mercury EPA Method 245.7 - Mercury	57.20	ng/L
3/2/2018	11:00:00 PM	Methylene Chloride	<5	ppb
3/2/2018	11:00:00 PM	Naphthalene	<5.0	ppb
3/2/2018	11:00:00 PM	NH3-N EPA 350.1 - Ammonia	<0.1	ppm
3/2/2018	11:00:00 PM	Nickel	<10	ug/L
3/2/2018	11:00:00 PM	Nitrobenzene	<5.0	ppb
3/2/2018	11:00:00 PM	Nnitrosodimethylamin	<5.0	ppb
3/2/2018	11:00:00 PM	Nnitrosodinpropylami	<5.0	ppb
3/2/2018	11:00:00 PM	Nnitrosodiphenylamin	<5.0	ppb
3/2/2018	11:00:00 PM	NO3NO2 EPA Method 353.2	0.188	mg/L
3/2/2018	11:00:00 PM	o- xylene	<1	ppb
3/2/2018	11:00:00 PM	Oil and Grease EPA Method 1664 (SIU)	<4.0	ppm
3/2/2018	11:00:00 PM	p&m xylene	<1	ppb
3/2/2018	11:00:00 PM	Pentachlorophenol	<5.0	ppb
3/2/2018	11:00:00 PM	Phenanthrene	<5.0	ppb
3/2/2018	11:00:00 PM	Phenol	<5.0	ppb
3/2/2018	11:00:00 PM	Pyrene	<5.0	ppb
3/2/2018	11:00:00 PM	Tetrachlorethene	<1	ppb
3/2/2018	11:00:00 PM	TKN - Copper Sulfate Digestion - TKN	0.594	mg N/L
3/2/2018	11:00:00 PM	Toluene	<1	ppb
3/2/2018	11:00:00 PM	Total_Phosphorus-P	<0.20	mg/L
3/2/2018	11:00:00 PM	Trans-1,2-Dichloroethene	<1	ppb
3/2/2018	11:00:00 PM	Trans-1,3-Dichloropropene	<1	ppb
3/2/2018	11:00:00 PM	Trichlorethene	<1	ppb
3/2/2018	11:00:00 PM	Trichlorofluoromethane	<1	ppb
3/2/2018	11:00:00 PM	TSS SM 5240D - TSS	34.00	ppm
3/2/2018	11:00:00 PM	Vinyl Chloride	<1	ppb
3/2/2018	11:00:00 PM	Zinc	<10	ug/L

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

Sample Date	Sample Time	Parameter	Result	Units
11/13/2018	8:30:00 AM	1,2,4-Trichlorobenzene	<0.005	ppm
11/13/2018	8:30:00 AM	1,2-Dichlorobenzene	<0.005	ppm
11/13/2018	8:30:00 AM	1,2-Dichlorobenzene	<0.500	ppm_N
11/13/2018	8:30:00 AM	1,2-Diphenylhydrazine	<0.005	ppm
11/13/2018	8:30:00 AM	1,2-Diphenylhydrazine	<0.200	ppm
11/13/2018	8:30:00 AM	1,3-Dichlorobenzene	<0.005	ppm
11/13/2018	8:30:00 AM	1,3-Dichlorobenzene	<2.0000	mg/l
11/13/2018	8:30:00 AM	1,4-Dichlorobenzene	<0.005	ppm
11/13/2018	8:30:00 AM	1,4-Dichlorobenzene	<0.001	ppm
11/13/2018	8:30:00 AM	2,2'-Oxybis(1-chloropropane)	<0.005	ppm
11/13/2018	8:30:00 AM	2,2'-Oxybis(1-chloropropane)	<0.001	ppm
11/13/2018	8:30:00 AM	2,4,6-Trichlorophenol	<0.005	ppm
11/13/2018	8:30:00 AM	2,4,6-Trichlorophenol	<0.001	ppm
11/13/2018	8:30:00 AM	2,4-Dichlorophenol	<0.005	ppm
11/13/2018	8:30:00 AM	2,4-Dichlorophenol	<0.001	ppm
11/13/2018	8:30:00 AM	2,4-Dimethylphenol	<0.005	ppm
11/13/2018	8:30:00 AM	2,4-Dimethylphenol	<0.001	ppm
11/13/2018	8:30:00 AM	2,4-Dinitrophenol	<0.005	ppm
11/13/2018	8:30:00 AM	2,4-Dinitrophenol	<0.001	ppm
11/13/2018	8:30:00 AM	2,4-Dinitrotoluene	<0.005	ppm
11/13/2018	8:30:00 AM	2,4-Dinitrotoluene	<0.001	ppm
11/13/2018	8:30:00 AM	2,6-Dinitrotoluene	<0.005	ppm
11/13/2018	8:30:00 AM	2,6-Dinitrotoluene	<0.001	ppm
11/13/2018	8:30:00 AM	2-Chloronaphthalene	<0.005	ppm
11/13/2018	8:30:00 AM	2-Chloronaphthalene	<0.001	ppm
11/13/2018	8:30:00 AM	2-Chlorophenol	<0.005	ppm
11/13/2018	8:30:00 AM	2-Chlorophenol	<0.001	ppm
11/13/2018	8:30:00 AM	2-Methyl-4,6-dinitrophenol	<0.005	ppm
11/13/2018	8:30:00 AM	2-Methyl-4,6-dinitrophenol	<0.001	ppm
11/13/2018	8:30:00 AM	2-Nitrophenol	<0.005	ppm
11/13/2018	8:30:00 AM	2-Nitrophenol	<0.001	ppm
11/13/2018	8:30:00 AM	3,3'-Dichlorobenzidine	<0.005	ppm
11/13/2018	8:30:00 AM	3,3'-Dichlorobenzidine	<0.002	ppm
11/13/2018	8:30:00 AM	4-Bromophenyl phenyl ether	<0.005	ppm
11/13/2018	8:30:00 AM	4-Bromophenyl phenyl ether	<0.010	ppm
11/13/2018	8:30:00 AM	4-Chloro-3-methylphenol	<0.005	ppm
11/13/2018	8:30:00 AM	4-Chloro-3-methylphenol	<0.001	ppm
11/13/2018	8:30:00 AM	4-Chlorophenyl phenyl ether	<0.005	ppm
11/13/2018	8:30:00 AM	4-Chlorophenyl phenyl ether	<0.001	ppm
11/13/2018	8:30:00 AM	4-Nitrophenol	<0.005	ppm
11/13/2018	8:30:00 AM	4-Nitrophenol	<0.001	ppm
11/13/2018	8:30:00 AM	Acenaphthene	<0.005	ppm
11/13/2018	8:30:00 AM	Acenaphthene	<0.010	ppm
11/13/2018	8:30:00 AM	Acenaphthylene	<0.005	ppm
11/13/2018	8:30:00 AM	Acenaphthylene	<0.001	ppm
11/13/2018	8:30:00 AM	Aluminum	44.18	ppb
11/13/2018	8:30:00 AM	Aluminum, Dissolved	16.74	ppb
11/13/2018	8:30:00 AM	Ammonia	<0.100	ppm_N
11/13/2018	8:30:00 AM	Anthracene	<0.005	ppm
11/13/2018	8:30:00 AM	Anthracene	<0.001	ppm
11/13/2018	8:30:00 AM	Arsenic	<0.500	ppb
11/13/2018	8:30:00 AM	Benzidine	<0.005	ppm
11/13/2018	8:30:00 AM	Benzidine	<0.010	ppm
11/13/2018	8:30:00 AM	Benzo(a)anthracene	<0.005	ppm
11/13/2018	8:30:00 AM	Benzo(a)anthracene	<0.001	ppm
11/13/2018	8:30:00 AM	Benzo(a)pyrene	<0.005	ppm
11/13/2018	8:30:00 AM	Benzo(a)pyrene	<0.010	ppm
11/13/2018	8:30:00 AM	Benzo(b)fluoranthene	<0.005	ppm

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

Sample Date	Sample Time	Parameter	Result	Units
11/13/2018	8:30:00 AM	Benzo(b)fluoranthene	<0.001	ppm
11/13/2018	8:30:00 AM	Benzo(g,h,i)perylene	<0.005	ppm
11/13/2018	8:30:00 AM	Benzo(g,h,i)perylene	<0.001	ppm
11/13/2018	8:30:00 AM	Benzo(k)fluoranthene	<0.005	ppm
11/13/2018	8:30:00 AM	Benzo(k)fluoranthene	<0.001	ppm
11/13/2018	8:30:00 AM	Bis(2-Chloroethoxy)methane	<0.005	ppm
11/13/2018	8:30:00 AM	Bis(2-Chloroethoxy)methane	<0.005	ppm
11/13/2018	8:30:00 AM	bis(2-Chloroethyl)Ether	<0.005	ppm
11/13/2018	8:30:00 AM	bis(2-Chloroethyl)Ether	<0.001	ppm
11/13/2018	8:30:00 AM	Bis(2-ethylhexyl)phthalate	<0.005	ppm
11/13/2018	8:30:00 AM	Bis(2-ethylhexyl)phthalate	<0.001	ppm
11/13/2018	8:30:00 AM	Butylbenzyl phthalate	<0.005	ppm
11/13/2018	8:30:00 AM	Butylbenzyl phthalate	<0.001	ppm
11/13/2018	8:30:00 AM	Cadmium	0.04421	ppb
11/13/2018	8:30:00 AM	Cadmium, Dissolved	0.04391	ppb
11/13/2018	8:30:00 AM	CBOD	<2.00	mg/l
11/13/2018	8:30:00 AM	Chromium	<0.300	ppb
11/13/2018	8:30:00 AM	Chromium, Dissolved	0.3882	ppb
11/13/2018	8:30:00 AM	Chrysene	<0.005	ppm
11/13/2018	8:30:00 AM	Chrysene	<0.001	ppm
11/13/2018	8:30:00 AM	Copper	1.277	ppb
11/13/2018	8:30:00 AM	Copper, Dissolved	1.185	ppb
11/13/2018	8:30:00 AM	Cyanide, Total	7.86	ppb
11/13/2018	8:30:00 AM	Dibenzo(a,h)anthracene	<0.005	ppm
11/13/2018	8:30:00 AM	Dibenzo(a,h)anthracene	<0.001	ppm
11/13/2018	8:30:00 AM	Diethyl phthalate	<0.005	ppm
11/13/2018	8:30:00 AM	Diethyl phthalate	<0.001	ppm
11/13/2018	8:30:00 AM	Dimethyl phthalate	<0.005	ppm
11/13/2018	8:30:00 AM	Dimethyl phthalate	<0.001	ppm
11/13/2018	8:30:00 AM	Di-n-butyl phthalate	<0.005	ppm
11/13/2018	8:30:00 AM	Di-n-octyl phthalate	<0.005	ppm
11/13/2018	8:30:00 AM	Enterococci	410.0	MPN_100ml
11/13/2018	8:30:00 AM	Fecal Coliform	230.0	MPN_100ml
11/13/2018	8:30:00 AM	Fluoranthene	<0.005	ppm
11/13/2018	8:30:00 AM	Fluorene	<0.005	ppm
11/13/2018	8:30:00 AM	Hexachlorobenzene	<0.005	ppm
11/13/2018	8:30:00 AM	Hexachlorobutadiene	<0.005	ppm
11/13/2018	8:30:00 AM	Hexachlorocyclopentadiene	<0.005	ppm
11/13/2018	8:30:00 AM	Hexachloroethane	<0.005	ppm
11/13/2018	8:30:00 AM	Indeno(1,2,3-cd)pyrene	<0.005	ppm
11/13/2018	8:30:00 AM	Iron	90.28	ppb
11/13/2018	8:30:00 AM	Iron, Dissolved	22.87	ppb
11/13/2018	8:30:00 AM	Isophorone	<0.005	ppm
11/13/2018	8:30:00 AM	Lead	<0.300	ppb
11/13/2018	8:30:00 AM	Lead, Dissolved	<0.300	ppb
11/13/2018	8:30:00 AM	Mercury	3.33	ppt
11/13/2018	8:30:00 AM	Molybdenum	<0.300	ppb
11/13/2018	8:30:00 AM	Naphthalene	<0.005	ppm
11/13/2018	8:30:00 AM	Nickel	0.5607	ppb
11/13/2018	8:30:00 AM	Nickel, Dissolved	0.6128	ppb
11/13/2018	8:30:00 AM	Nitrate	1.85	ppm_N
11/13/2018	8:30:00 AM	Nitrate+Nitrite	1.85	ppm_N
11/13/2018	8:30:00 AM	Nitrite	<0.010	ppm_N
11/13/2018	8:30:00 AM	Nitrobenzene	<0.005	ppm
11/13/2018	8:30:00 AM	Nitrogen, Total	1.85	ppm_N
11/13/2018	8:30:00 AM	N-nitrosodimethylamine	<0.005	ppm
11/13/2018	8:30:00 AM	N-nitrosodi-n-propylamine	<0.005	ppm
11/13/2018	8:30:00 AM	N-nitrosodiphenylamine	<0.005	ppm

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

Sample Date	Sample Time	Parameter	Result	Units
11/13/2018	8:30:00 AM	Oil and Grease	<4.000	ppm
11/13/2018	8:30:00 AM	Pentachlorophenol	<0.005	ppm
11/13/2018	8:30:00 AM	Phenanthrene	<0.005	ppm
11/13/2018	8:30:00 AM	Phenol	<0.005	ppm
11/13/2018	8:30:00 AM	Phyenanthrene (Reading)	<0.005	ppm
11/13/2018	8:30:00 AM	Pyrene	<0.005	ppm
11/13/2018	8:30:00 AM	Selenium	<1.000	ppb
11/13/2018	8:30:00 AM	Silver	<0.020	ppb
11/13/2018	8:30:00 AM	Silver, Dissolved	<0.020	ppb
11/13/2018	8:30:00 AM	Zinc	18.63	ppb
11/13/2018	8:30:00 AM	Zinc, Dissolved	20.73	ppb
11/13/2018	10:15:00 AM	1,1,1-Trichloroethane	<0.001	ppm
11/13/2018	10:15:00 AM	1,1,2,2-Tetrachloroethane	<0.001	ppm
11/13/2018	10:15:00 AM	1,1,2-Trichloroethane	<0.001	ppm
11/13/2018	10:15:00 AM	1,1-Dichloroethane	<0.001	ppm
11/13/2018	10:15:00 AM	1,1-Dichloroethylene	<0.001	ppm
11/13/2018	10:15:00 AM	1,2,4-Trichlorobenzene	<0.005	ppm
11/13/2018	10:15:00 AM	1,2-Dichlorobenzene	<0.005	ppm
11/13/2018	10:15:00 AM	1,2-Dichlorobenzene	<0.001	ppm
11/13/2018	10:15:00 AM	1,2-Dichloroethane	<0.001	ppm
11/13/2018	10:15:00 AM	1,2-Dichloropropane	<0.001	ppm
11/13/2018	10:15:00 AM	1,2-Diphenylhydrazine	<0.005	ppm
11/13/2018	10:15:00 AM	1,3-Dichlorobenzene	<0.005	ppm
11/13/2018	10:15:00 AM	1,3-Dichlorobenzene	<0.001	ppm
11/13/2018	10:15:00 AM	1,4-Dichlorobenzene	<0.005	ppm
11/13/2018	10:15:00 AM	1,4-Dichlorobenzene	<0.001	ppm
11/13/2018	10:15:00 AM	2,2'-Oxybis(1-chloropropane)	<0.005	ppm
11/13/2018	10:15:00 AM	2,4,6-Trichlorophenol	<0.005	ppm
11/13/2018	10:15:00 AM	2,4-Dichlorophenol	<0.005	ppm
11/13/2018	10:15:00 AM	2,4-Dimethylphenol	<0.005	ppm
11/13/2018	10:15:00 AM	2,4-Dinitrophenol	<0.005	ppm
11/13/2018	10:15:00 AM	2,4-Dinitrotoluene	<0.005	ppm
11/13/2018	10:15:00 AM	2,6-Dinitrotoluene	<0.005	ppm
11/13/2018	10:15:00 AM	2-Chloroethyl vinyl ether	<0.002	ppm
11/13/2018	10:15:00 AM	2-Chloronaphthalene	<0.005	ppm
11/13/2018	10:15:00 AM	2-Chlorophenol	<0.005	ppm
11/13/2018	10:15:00 AM	2-Methyl-4,6-dinitrophenol	<0.005	ppm
11/13/2018	10:15:00 AM	2-Nitrophenol	<0.005	ppm
11/13/2018	10:15:00 AM	3,3'-Dichlorobenzidine	<0.005	ppm
11/13/2018	10:15:00 AM	4-Bromophenyl phenyl ether	<0.005	ppm
11/13/2018	10:15:00 AM	4-Chloro-3-methylphenol	<0.005	ppm
11/13/2018	10:15:00 AM	4-Chlorophenyl phenyl ether	<0.005	ppm
11/13/2018	10:15:00 AM	4-Nitrophenol	<0.005	ppm
11/13/2018	10:15:00 AM	Acenaphthene	<0.005	ppm
11/13/2018	10:15:00 AM	Acenaphthylene	<0.005	ppm
11/13/2018	10:15:00 AM	Acetone	0.011	ppm
11/13/2018	10:15:00 AM	Ammonia	<0.100	ppm_N
11/13/2018	10:15:00 AM	Anthracene	<0.005	ppm
11/13/2018	10:15:00 AM	Benzene	<0.001	ppm
11/13/2018	10:15:00 AM	Benzidine	<0.005	ppm
11/13/2018	10:15:00 AM	Benzo(a)anthracene	<0.005	ppm
11/13/2018	10:15:00 AM	Benzo(a)pyrene	<0.005	ppm
11/13/2018	10:15:00 AM	Benzo(b)fluoranthene	<0.005	ppm
11/13/2018	10:15:00 AM	Benzo(g,h,i)perylene	<0.005	ppm
11/13/2018	10:15:00 AM	Benzo(k)fluoranthene	<0.005	ppm
11/13/2018	10:15:00 AM	Bis(2-Chloroethoxy)methane	<0.005	ppm
11/13/2018	10:15:00 AM	bis(2-Chloroethyl)Ether	<0.005	ppm
11/13/2018	10:15:00 AM	Bis(2-ethylhexyl)phthalate	<0.005	ppm

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

Sample Date	Sample Time	Parameter	Result	Units
11/13/2018	10:15:00 AM	Bromodichloromethane	<0.001	ppm
11/13/2018	10:15:00 AM	Bromoform	<0.001	ppm
11/13/2018	10:15:00 AM	Bromomethane	<0.010	ppm
11/13/2018	10:15:00 AM	Butylbenzyl phthalate	<0.005	ppm
11/13/2018	10:15:00 AM	Carbon Tetrachloride	<0.001	ppm
11/13/2018	10:15:00 AM	Chlorobenzene	<0.001	ppm
11/13/2018	10:15:00 AM	Chloroethane	<0.010	ppm
11/13/2018	10:15:00 AM	Chloroform	<0.001	ppm
11/13/2018	10:15:00 AM	Chloromethane	<0.010	ppm
11/13/2018	10:15:00 AM	Chrysene	<0.005	ppm
11/13/2018	10:15:00 AM	cis-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	10:15:00 AM	Dibenzo(a,h)anthracene	<0.005	ppm
11/13/2018	10:15:00 AM	Dibromochloromethane	<0.001	ppm
11/13/2018	10:15:00 AM	Diethyl phthalate	<0.005	ppm
11/13/2018	10:15:00 AM	Dimethyl phthalate	<0.005	ppm
11/13/2018	10:15:00 AM	Di-n-butyl phthalate	<2.00	mg/l
11/13/2018	10:15:00 AM	Di-n-butyl phthalate	<0.005	ppm
11/13/2018	10:15:00 AM	Di-n-octyl phthalate	8.54	ppb
11/13/2018	10:15:00 AM	Di-n-octyl phthalate	<0.005	ppm
11/13/2018	10:15:00 AM	Ethylbenzene	<0.001	ppm
11/13/2018	10:15:00 AM	Fluoranthene	98040.0	MPN_100ml
11/13/2018	10:15:00 AM	Fluoranthene	<0.005	ppm
11/13/2018	10:15:00 AM	Fluorene	430.0	MPN_100ml
11/13/2018	10:15:00 AM	Fluorene	<0.005	ppm
11/13/2018	10:15:00 AM	Hexachlorobenzene	3.58	ppt
11/13/2018	10:15:00 AM	Hexachlorobenzene	<0.005	ppm
11/13/2018	10:15:00 AM	Hexachlorobutadiene	54.98	ppb
11/13/2018	10:15:00 AM	Hexachlorobutadiene	<0.005	ppm
11/13/2018	10:15:00 AM	Hexachlorocyclopentadiene	15.34	ppb
11/13/2018	10:15:00 AM	Hexachlorocyclopentadiene	<0.005	ppm
11/13/2018	10:15:00 AM	Hexachloroethane	<0.500	ppb
11/13/2018	10:15:00 AM	Hexachloroethane	<0.005	ppm
11/13/2018	10:15:00 AM	Indeno(1,2,3-cd)pyrene	0.08203	ppb
11/13/2018	10:15:00 AM	Indeno(1,2,3-cd)pyrene	<0.005	ppm
11/13/2018	10:15:00 AM	Isophorone	0.04419	ppb
11/13/2018	10:15:00 AM	Isophorone	<0.005	ppm
11/13/2018	10:15:00 AM	m,p-Xylene	<0.001	ppm
11/13/2018	10:15:00 AM	Methylene Chloride	<0.005	ppm
11/13/2018	10:15:00 AM	Naphthalene	<0.300	ppb
11/13/2018	10:15:00 AM	Naphthalene	<0.005	ppm
11/13/2018	10:15:00 AM	Nickel, Dissolved	0.5145	ppb
11/13/2018	10:15:00 AM	Nitrate	1.35	ppm_N
11/13/2018	10:15:00 AM	Nitrate+Nitrite	1.35	ppm_N
11/13/2018	10:15:00 AM	Nitrite	<0.010	ppm_N
11/13/2018	10:15:00 AM	Nitrobenzene	0.3335	ppb
11/13/2018	10:15:00 AM	Nitrobenzene	<0.005	ppm
11/13/2018	10:15:00 AM	Nitrogen, Total	5.02	ppm_N
11/13/2018	10:15:00 AM	Nitrogen, Total Kjeldahl	3.67	ppm_N
11/13/2018	10:15:00 AM	N-nitrosodimethylamine	1.338	ppb
11/13/2018	10:15:00 AM	N-nitrosodimethylamine	<0.005	ppm
11/13/2018	10:15:00 AM	N-nitrosodi-n-propylamine	1.545	ppb
11/13/2018	10:15:00 AM	N-nitrosodi-n-propylamine	<0.005	ppm
11/13/2018	10:15:00 AM	N-nitrosodiphenylamine	149.2	ppb
11/13/2018	10:15:00 AM	N-nitrosodiphenylamine	<0.005	ppm
11/13/2018	10:15:00 AM	Oil and Grease	<4.000	ppm
11/13/2018	10:15:00 AM	o-Xylene	<0.001	ppm
11/13/2018	10:15:00 AM	Pentachlorophenol	22.04	ppb
11/13/2018	10:15:00 AM	Pentachlorophenol	<0.005	ppm

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

Sample Date	Sample Time	Parameter	Result	Units
11/13/2018	10:15:00 AM	Phenanthrene	0.3995	ppb
11/13/2018	10:15:00 AM	Phenanthrene	<0.005	ppm
11/13/2018	10:15:00 AM	Phenol	<0.300	ppb
11/13/2018	10:15:00 AM	Phenol	<0.005	ppm
11/13/2018	10:15:00 AM	Phosphorous, Total	<0.200	ppm
11/13/2018	10:15:00 AM	Phyenanthrene (Reading)	<0.300	ppb
11/13/2018	10:15:00 AM	Phyenanthrene (Reading)	<0.005	ppm
11/13/2018	10:15:00 AM	Pyrene	0.5355	ppb
11/13/2018	10:15:00 AM	Pyrene	<0.005	ppm
11/13/2018	10:15:00 AM	Selenium	<1.000	ppb
11/13/2018	10:15:00 AM	Silver	<0.020	ppb
11/13/2018	10:15:00 AM	Silver, Dissolved	<0.020	ppb
11/13/2018	10:15:00 AM	Tetrachloroethylene	<0.001	ppm
11/13/2018	10:15:00 AM	Toluene	<0.001	ppm
11/13/2018	10:15:00 AM	trans-1,2-Dichloroethylene	<0.001	ppm
11/13/2018	10:15:00 AM	trans-1,3-Dichloropropylene	<0.001	ppm
11/13/2018	10:15:00 AM	Trichloroethylene	<0.001	ppm
11/13/2018	10:15:00 AM	Trichlorofluoromethane	<0.001	ppm
11/13/2018	10:15:00 AM	TSS	28.000	mg/l
11/13/2018	10:15:00 AM	Vinyl Chloride	<0.001	ppm
11/13/2018	10:15:00 AM	Zinc	16.64	ppb
11/13/2018	10:15:00 AM	Zinc, Dissolved	17.72	ppb

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

Sample Date	Sample Time	Parameter	Result	Units

Table 40: 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

Table 40: CSO Wet Weather Overflow North Diversion Structure NBC CSO 002A

Secchi Depth 2018

				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**
2/14/18	Conimicut Point	9:20 AM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.4	2.2	2.3	
2/14/18	Bullock Reach	9:40 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
2/14/18	Pomham Rocks	10:20 AM	M	2.6	2.4	2.5	2.8	2.6	2.7	2.8	2.6	2.7	
2/14/18	India Point Park	1:15 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
2/14/18	Pawtuxet Cove	1:50 PM	M	2.2	1.8	2	2.2	2	2.1	2.2	1.8	2	
2/14/18	Edgewood Yacht Club	2:20 PM	M	2	1.8	1.9	2.2	1.8	2	2.2	2	2.1	
2/21/18	Bullock Reach	8:20 AM	M	3.6	3.2	3.4	3.4	3.2	3.3	3.4	3.2	3.3	
2/21/18	Conimicut Point	8:45 AM	M	3.6	3.4	3.5	3.6	3.4	3.5	3.6	3.4	3.5	
2/21/18	Point St. Bridge	9:15 AM	M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.6	2.7	
2/21/18	India Point Park	9:25 AM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.6	2.4	2.5	
2/21/18	Phillipsdale Landing	9:40 AM	M	2	1.8	1.9	2.2	2	2.1	2	1.8	1.9	
2/28/18	Edgewood Shoals	8:50 AM	M	5.2	5	5.1	5.4	5.2	5.3	5.2	5	5.1	
2/28/18	Pomham Rocks	9:15 AM	M	4.2	4	4.1	4	3.8	3.9	4.2	4	4.1	
2/28/18	Pawtuxet Cove	9:30 AM	M	3.2	3	3.1	3.4	3.2	3.3	3.2	3	3.1	
2/28/18	Conimicut Point	9:50 AM	M	4.2	4	4.1	4	3.8	3.9	3.8	3.6	3.7	
2/28/18	Bullock Reach	10:10 AM	M	5	4.8	4.9	4.8	4.6	4.7	5	4.8	4.9	
2/28/18	Phillipsdale Landing	1:20 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
2/28/18	India Point Park	1:45 PM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
2/28/18	Edgewood Yacht Club	2:10 PM	M	2.8	2.6	2.7	2.6	2.4	2.5	3.2	3	3.1	
3/28/18	Edgewood Shoals	8:50 AM	M	3.2	3	3.1	3.4	3.2	3.3	3.2	3	3.1	
3/28/18	Pomham Rocks	9:00 AM	M	4.4	4.2	4.3	4.2	4	4.1	4.4	4.2	4.3	
3/28/18	Conimicut Point	9:40 AM	M	5.6	5.2	5.4	5.8	5.4	5.6	5.4	5	5.2	
3/28/18	Bullock Reach	10:00 AM	M	5.6	5.4	5.5	5.4	5.2	5.3	5.6	5.4	5.5	
3/28/18	Phillipsdale Landing	1:40 PM	M	3.2	3	3.1	3	2.8	2.9	3.2	3	3.1	
3/28/18	India Point Park	2:20 PM	M	3.2	3	3.1	3.4	3.2	3.3	3.2	3	3.1	
3/28/18	Edgewood Yacht Club	2:30 PM	M	4	3.8	3.9	4.2	4	4.1	4	3.8	3.9	
4/18/18	Pomham Rocks	8:55 AM	M	0.8	1.2	1	1	0.8	0.9	1.2	0.8	1	
4/18/18	Conimicut Point	9:10 AM	M	1.6	4.4	3	1.8	1.6	1.7	1.6	1.4	1.5	
4/18/18	Bullock Reach	9:30 AM	M	2.2	2	2.1	2	1.8	1.9	2.2	2	2.1	
4/18/18	India Point Park	1:10 PM	M	1	0.8	0.9	0.8	0.6	0.7	1	0.8	0.9	
4/18/18	Pawtuxet Cove	1:45 PM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.6	1.4	1.5	
4/18/18	Edgewood Yacht Club	2:10 PM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.4	1.2	1.3	
4/25/18	Pawtuxet Cove	9:35 AM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.6	2.4	2.5	
4/25/18	India Point Park	10:10 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
5/2/18	Bullock Reach	8:00 AM	M	3.2	3	3.1	3	2.8	2.9	3.2	3	3.1	
5/2/18	Conimicut Point	8:15 AM	M	4	3.8	3.9	4.2	4	4.1	4	3.8	3.9	
5/2/18	Point St. Bridge	9:10 AM	M	3	2.8	2.9	3.4	3.2	3.3	3	2.8	2.9	
5/2/18	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	
5/2/18	Phillipsdale Landing	9:30 AM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
5/2/18	Pomham Rocks	10:10 AM	M	3	2.8	2.9	2.8	2.6	2.7	3	2.8	2.9	
5/2/18	Pawtuxet Cove	1:15 PM	M	3	2.8	2.9	3.2	3	3.1	3	2.8	2.9	
5/2/18	Edgewood Yacht Club	1:40 PM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.6	2.4	2.5	
5/9/18	Bullock Reach	8:35 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
5/9/18	Conimicut Point	8:40 AM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.2	1.4	1.3	
5/9/18	Point St. Bridge	9:30 AM	M	3	2.8	2.9	2.8	2.6	2.7	3	2.8	2.9	
5/9/18	India Point Park	9:40 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
5/9/18	Phillipsdale Landing	10:00 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
5/9/18	Pomham Rocks	12:45 PM	M	1	0.8	0.9	1	0.8	0.9	0.8	0.6	0.7	
5/9/18	Pawtuxet Cove	1:00 PM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
5/9/18	Edgewood Yacht Club	1:30 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
5/16/18	Bullock Reach	7:55 AM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.4	2.2	2.3	
5/16/18	Conimicut Point	8:10 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
5/16/18	Point St. Bridge	8:45 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
5/16/18	India Point Park	9:00 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.4	1.2	1.3	
5/16/18	Phillipsdale Landing	9:25 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
5/16/18	Pomham Rocks	10:15 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.6	1.4	1.5	
5/16/18	Pawtuxet Cove	1:05 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
5/16/18	Edgewood Yacht Club	1:15 PM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.6	1.4	1.5	
5/24/18	Edgewood Shoals	9:00 AM	M	1.2	0.8	1	1	0.8	0.9	1.2	1	1.1	
5/24/18	Pomham Rocks	9:20 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
5/24/18	Pawtuxet Cove	9:30 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
5/24/18	Conimicut Point	9:50 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
5/24/18	Bullock Reach	10:00 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
5/24/18	Phillipsdale Landing	1:20 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
5/24/18	India Point Park	1:40 PM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
5/24/18	Edgewood Yacht Club	2:10 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
5/31/18	Bullock Reach	8:17 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
5/31/18	Conimicut Point	8:30 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
5/31/18	Point St. Bridge	9:11 AM	M	2	1.8	1.9	2	1.8	1.9	1.8	1.6	1.7	
5/31/18	India Point Park	9:20 AM	M	2	1.8	1.9	2	1.8	1.9	1.8	1.6	1.7	
5/31/18	Phillipsdale Landing	9:42 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
5/31/18	Pomham Rocks	10:25 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.8	1.6	1.7	
5/31/18	Edgewood Yacht Club	1:45 PM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
5/31/18	Pawtuxet Cove	2:00 PM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.4	1.2	1.3	
6/6/18	Bullock Reach	9:25 AM	M	2.4	2.2	2.3	2.4	2.2	2.3	2.2	2	2.1	
6/6/18	Conimicut Point	10:15 AM	M	2.6	2.4	2.5	2.6	2.4	2.5	2.4	2.2	2.3	
6/6/18	India Point Park	12:55 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.8	1.6	1.7	
6/6/18	Pomham Rocks	1:25 PM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.6	1.4	1.5	
6/6/18	Pawtuxet Cove	1:55 PM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
6/6/18	Edgewood Yacht Club	2:35 PM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
6/13/18	Edgewood Yacht Club	8:00 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
6/13/18	Bullock Reach	8:15 AM	M	2.2	2	2.1	2.4	2	2.2	2	1.8	1.9	
6/13/18	Conimicut Point	8:20 AM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.4	2.2	2.3	
6/13/18	Point St. Bridge	9:00 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
6/13/18	India Point Park	9:30 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
6/13/18	Phillipsdale Landing	9:53 AM	M	0.6	0.4	0.5	0.4	0.2	0.3	0.6	0.4	0.5	
6/13/18	Pomham Rocks	10:31 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
6/13/18	Pawtuxet Cove	1:35 PM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
6/20/18	Conimicut Point	9:45 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
6/20/18	Bullock Reach	10:10 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
6/20/18	Edgewood Yacht Club	12:40 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.2	1	1.1	choppy conditions
6/20/18	Edgewood Shoals	12:50 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.2	1	1.1	choppy conditions
6/20/18	Pomham Rocks	1:05 PM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	choppy conditions
6/20/18	Pawtuxet Cove	1:20 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
6/20/18	Phillipsdale Landing	2:15 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
6/20/18	India Point Park	2:45 PM	M	1	0.8	0.9	1.2	1	1.1	1	0.8	0.9	choppy conditions
6/27/18	Conimicut Point	9:25 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
6/27/18	Bullock Reach	9:40 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
6/27/18	Pomham Rocks	10:15 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	

Table 41: Bay Secchi Depth

Secchi Depth 2018

				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**
6/27/18	Edgewood Yacht Club	1:25 PM	M										Too Choppy
6/27/18	Pawtuxet Cove	1:50 PM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
6/27/18	India Point Park	2:20 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
7/11/18	Bullock Reach	8:25 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.4	1.2	1.3	
7/11/18	Conimicut Point	8:35 AM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.4	1.2	1.3	
7/11/18	Point St. Bridge	9:35 AM	M	1.2	1	1.1	1.4	1.2	1.3	1.6	1.4	1.5	
7/11/18	India Point Park	9:36 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
7/11/18	Phillipsdale Landing	9:55 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
7/11/18	Pomham Rocks	10:40 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
7/11/18	Edgewood Yacht Club	1:04 PM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
7/18/18	Edgewood Shoals	10:10 AM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
7/18/18	Conimicut Point	10:20 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
7/18/18	Bullock Reach	10:40 AM	M	2	1.8	1.9	1.8	1.6	1.7	1.8	1.6	1.7	
7/18/18	Phillipsdale Landing	1:10 PM	M	0.8	0.6	0.7	1	0.8	0.9	0.8	0.6	0.7	
7/18/18	India Point Park	1:40 PM	M	3.2	3	3.1	3.4	3.2	3.3	3	2.8	2.9	
7/18/18	Pomham Rocks	2:00 PM	M	2.2	2	2.1	2.4	2.2	2.3	2.2	2	2.1	
7/18/18	Pawtuxet Cove	2:10 PM	M	2	1.8	1.9	2	1.8	1.9	1.8	1.6	1.7	
7/18/18	Edgewood Yacht Club	2:20 PM	M	2	1.8	1.9	2.4	2.2	2.3	2.2	2	2.1	
7/25/18	Bullock Reach	8:30 AM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.2	1	1.1	
7/25/18	Conimicut Point	9:00 AM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.6	1.4	1.5	
7/25/18	Point St. Bridge	9:45 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
7/25/18	Phillipsdale Landing	10:25 AM	M	0.8	0.6	0.7	0.6	0.4	0.5	0.8	0.6	0.7	
8/1/18	Conimicut Point	9:05 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
8/1/18	Bullock Reach	9:25 AM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.2	1	1.1	
8/1/18	Edgewood Yacht Club	10:10 AM	M	1.2	1	1.1	1.2	1	1.1	1	0.8	0.9	
8/1/18	Pawtuxet Cove	12:45 PM	M	1.2	1	1.1	1.2	1	1.1	1	0.8	0.9	
8/1/18	Pomham Rocks	1:05 PM	M	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	
8/1/18	India Point Park	1:30 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.2	1	1.1	
8/8/18	Bullock Reach	8:14 AM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
8/8/18	Conimicut Point	8:30 AM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
8/8/18	Point St. Bridge	9:09 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
8/8/18	India Point Park	9:22 AM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.4	1.2	1.3	
8/8/18	Phillipsdale Landing	9:59 AM	M	1.2	1	1.1	1.2	1	1.1	1.2	1	1.1	
8/8/18	Edgewood Yacht Club	12:50 PM	M	0.8	0.6	0.7	1	0.8	0.9	1	0.8	0.9	
8/8/18	Pomham Rocks	1:00 PM	M	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	
8/8/18	Pawtuxet Cove	1:10 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
8/16/18	Edgewood Shoals	8:00 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.4	1.2	1.3	
8/16/18	Conimicut Point	8:25 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
8/16/18	Bullock Reach	8:45 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
8/16/18	Pawtuxet Cove	9:10 AM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.4	2.2	2.3	
8/16/18	Pomham Rocks	9:35 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.6	1.4	1.5	
8/16/18	Edgewood Yacht Club	9:50 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
8/16/18	India Point Park	12:50 PM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
8/16/18	Phillipsdale Landing	1:25 PM	M	1.8	1.2	1.5	1.2	1	1.1	1.4	1.2	1.3	
8/22/18	Bullock Reach	8:55 AM	M	1.8	1.6	1.7	2	1.8	1.9	2	1.8	1.9	
8/22/18	Conimicut Point	9:16 AM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
8/22/18	Point St. Bridge	9:50 AM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
8/22/18	India Point Park	10:00 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	2	1.8	1.9	
8/22/18	Phillipsdale Landing	10:30 AM	M	1.2	1	1.1	1.2	1	1.1	1.2	1.1	1.15	
8/22/18	Edgewood Yacht Club	1:00 PM	M	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	
8/22/18	Pawtuxet Cove	1:05 PM	M	1.2	1	1.1	1	0.8	0.9	1	0.8	0.9	
8/22/18	Pomham Rocks	1:15 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.4	1.2	1.3	
8/30/18	Conimicut Point	8:25 AM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
8/30/18	Bullock Reach	8:50 AM	M	2	1.8	1.9	2.2	2	2.1	2.2	2	2.1	
8/30/18	Pawtuxet Cove	9:05 AM	M	1.8	1.7	1.75	1.8	1.6	1.7	1.8	1.6	1.7	
8/30/18	India Point Park	9:25 AM	M	1	0.8	0.9	1	0.8	0.9	1	0.8	0.9	
8/30/18	Pomham Rocks	9:45 AM	M	1	0.8	0.9	1.2	1	1.1	1	0.8	0.9	
8/30/18	Edgewood Yacht Club	10:05 AM	M	1.2	1	1.1	1.2	1	1.1	1	0.8	0.9	
9/6/18	Bullock Reach	8:05 AM	M	1.8	1.6	1.7	1.4	2	1.7	2	1.8	1.9	
9/6/18	Conimicut Point	8:45 AM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.6	1.4	1.5	
9/6/18	Pomham Rocks	8:50 AM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
9/6/18	Point St. Bridge	9:00 AM	M	1.6	1.4	1.5	1.8	1.6	1.7	1.6	1.4	1.5	
9/6/18	India Point Park	9:10 AM	M	1	0.8	0.9	0.8	0.6	0.7	1	0.6	0.8	
9/6/18	Phillipsdale Landing	9:20 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
9/6/18	Edgewood Yacht Club	10:45 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
9/12/18	Edgewood Shoals	8:40 AM	M	2.4	2.2	2.3	2.2	1.8	2	2.4	2	2.2	
9/12/18	Pomham Rocks	9:00 AM	M	2.4	2.2	2.3	1.8	1.6	1.7	2.2	2	2.1	
9/12/18	Pawtuxet Cove	9:10 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
9/12/18	Conimicut Point	9:25 AM	M	3	2.8	2.9	3.2	3	3.1	3	2.8	2.9	
9/12/18	Bullock Reach	9:40 AM	M	3.4	3.2	3.3	3.2	3	3.1	3.4	3.2	3.3	
9/19/18	Edgewood Yacht Club	8:24 AM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
9/19/18	Bullock Reach	8:34 AM	M	1.8	1.6	1.7	2	1.8	1.9	1.8	1.6	1.7	
9/19/18	Conimicut Point	8:47 AM	M	2.2	2	2.1	2.2	2	2.1	2	1.9	1.95	
9/19/18	Point St. Bridge	9:20 AM	M	2	1.8	1.9	2	1.8	1.9	2	1.8	1.9	
9/19/18	India Point Park	9:26 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.2	1	1.1	
9/19/18	Phillipsdale Landing	9:56 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
9/19/18	Edgewood Shoals	10:30 AM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.6	1.4	1.5	
9/19/18	Pomham Rocks	12:55 PM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	
9/19/18	Pawtuxet Cove	1:04 PM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.8	1.6	1.7	
9/26/18	Edgewood Yacht Club	9:25 AM	M	1.4	1.2	1.3	1.6	1.4	1.5	1.4	1.2	1.3	
9/26/18	Pomham Rocks	9:40 AM	M	1.6	1.4	1.5	1.6	1.4	1.5	1.4	1.2	1.3	
9/26/18	Conimicut Point	10:10 AM	M	2.2	2	2.1	2.4	2.2	2.3	2.4	2.2	2.3	
9/26/18	Bullock Reach	10:30 AM	M	2.2	2	2.1	2.4	2.2	2.3	2.4	2.2	2.3	
9/26/18	Pawtuxet Cove	1:15 PM	M	0.6	0.4	0.5	0.6	0.4	0.5	1.6	0.4	1	
9/26/18	India Point Park	1:50 PM	M										Current Too Strong
9/26/18	Edgewood Shoals	2:20 PM	M	1.8	1.6	1.7	1.8	1.6	1.7	1.6	1.4	1.5	
10/3/18	Bullock Reach	8:15 AM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
10/3/18	Conimicut Point	8:30 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
10/3/18	Point St. Bridge	9:00 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.8	1.6	1.7	
10/3/18	India Point Park	9:10 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
10/3/18	Phillipsdale Landing	9:45 AM	M	1	0.8	0.9	0.8	0.6	0.7	1.2	1	1.1	
10/3/18	Edgewood Shoals	12:45 PM	M	2.2	2	2.1	2	1.8	1.9	2.2	2	2.1	
10/3/18	Pomham Rocks	1:00 PM	M	2.2	2	2.1	2	1.8	1.9	2.2	2	2.1	
10/3/18	Pawtuxet Cove	1:15 PM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
10/3/18	Edgewood Yacht Club	1:30 PM	M	2.2	2	2.1	2	1.8	1.9	2.4	2.2	2.3	
10/11/18	Edgewood Shoals	9:25 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
10/11/18	Pomham Rocks	10:10 AM	M	2.2	2	2.1	2	1.8	1.9	2.4	2.2	2.3	
10/17/18	Bullock Reach	8:40 AM	M	4	3.8	3.9	3.8	3.6	3.7	4	3.8	3.9	
10/17/18	Conimicut Point	8:50 AM	M	3.2	3	3.1	3.4	3.2	3.3	3.2	3	3.1	

Table 41: Bay Secchi Depth

Secchi Depth 2018

				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**
10/17/18	Point St. Bridge	9:40 AM	M	3.8	3.6	3.7	4	3.8	3.9	3.8	3.6	3.7	
10/17/18	India Point Park	9:50 AM	M	3.2	3	3.1	2.8	2.6	2.7	3.4	3.2	3.3	
10/17/18	Phillipsdale Landing	10:20 AM	M	1.2	1	1.1	1.4	1.2	1.3	1.2	1	1.1	
10/17/18	Edgewood Shoals	1:11 PM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
10/17/18	Edgewood Yacht Club	1:20 PM	M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.4	2.6	
10/17/18	Pawtuxet Cove	1:35 PM	M	2.8	2.6	2.7	2.6	2.4	2.5	2.8	2.6	2.7	
10/17/18	Pomham Rocks	1:48 PM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.6	2.4	2.5	
10/24/18	Conimicut Point	8:45 AM	M	3	2.8	2.9	3.2	3	3.1	3.2	3	3.1	
10/24/18	Bullock Reach	9:05 AM	M	2.8	2.6	2.7	3	2.8	2.9	2.8	2.6	2.7	
10/24/18	Pomham Rocks	9:50 AM	M	2.7	2.6	2.65	2.8	2.6	2.7	2.8	2.6	2.7	
10/24/18	Edgewood Yacht Club	10:05 AM	M	2.4	2.2	2.3	2.6	2.4	2.5	2.6	2.4	2.5	
10/31/18	Bullock Reach	8:40 AM	M	3.4	3.2	3.3	3.2	3	3.1	3.4	3.2	3.3	
10/31/18	Conimicut Point	9:00 AM	M	3.4	3.2	3.3	3.2	3	3.1	3.4	3.2	3.3	
10/31/18	Pomham Rocks	9:15 AM	M	2.4	2.2	2.3	2.2	2	2.1	2.4	2.2	2.3	
10/31/18	Point St. Bridge	9:30 AM	M	2	1.8	1.9	1.8	1.6	1.7	2.2	2	2.1	
10/31/18	India Point Park	9:42 AM	M	1.8	1.6	1.7	1.8	1.6	1.7	2	1.8	1.9	
10/31/18	Phillipsdale Landing	10:05 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
10/31/18	Pawtuxet Cove	1:35 PM	M	1.2	1	1.1	1.2	1	1.1	1	0.8	0.9	
10/31/18	Edgewood Yacht Club	1:45 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
10/31/18	Edgewood Shoals	2:00 PM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
11/7/18	Edgewood Shoals	9:00 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
11/7/18	Pomham Rocks	9:15 AM	M	1.4	1.2	1.3	1.2	1	1.1	1.4	1.2	1.3	
11/7/18	Conimicut Point	9:25 AM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
11/7/18	Bullock Reach	9:45 AM	M	1.8	1.6	1.7	1.6	1.4	1.5	1.4	1.2	1.3	
11/7/18	Phillipsdale Landing	1:10 PM	M	1	0.8	0.9	0.8	0.6	0.7	1	0.8	0.9	
11/7/18	India Point Park	1:25 PM	M	1	0.8	0.9	0.8	0.6	0.7	1.2	1	1.1	
11/7/18	Pawtuxet Cove	1:55 PM	M	0.8	0.6	0.7	0.6	0.4	0.5	0.8	0.6	0.7	
11/21/18	Conimicut Point	10:10 AM	M	2.8	2.4	2.6	2.4	2.2	2.3	2.8	2.4	2.6	
11/21/18	Bullock Reach	10:20 AM	M	2.6	2.4	2.5	2.4	2.2	2.3	2.8	2.6	2.7	
11/21/18	India Point Park	1:00 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
11/21/18	Pomham Rocks	1:15 PM	M	1.6	1.4	1.5	1.4	1.2	1.3	1.6	1.4	1.5	
11/21/18	Pawtuxet Cove	1:35 PM	M	1.2	1	1.1	1	0.8	0.9	1.2	1	1.1	
11/21/18	Edgewood Yacht Club	2:00 PM	M	1	0.8	0.9	1.2	1	1.1	0.8	0.6	0.7	
12/19/18	Conimicut Point	12:45 PM	M	3.4	3.2	3.3	3.6	3.4	3.5	3.4	3.2	3.3	
12/19/18	India Point Park	1:20 PM	M	3.8	3.6	3.7	3.6	3.4	3.5	3.8	3.6	3.7	
12/19/18	Pomham Rocks	1:40 PM	M	3	2.8	2.9	3.2	3	3.1	3	2.8	2.9	
12/19/18	Pawtuxet Cove	2:00 PM	M	2	1.8	1.9	1.8	1.6	1.7	2	1.8	1.9	
12/19/18	Edgewood Yacht Club	2:30 PM	M	2.2	2	2.1	2.4	2.2	2.3	2.2	2	2.1	

Table 41: Bay Secchi Depth