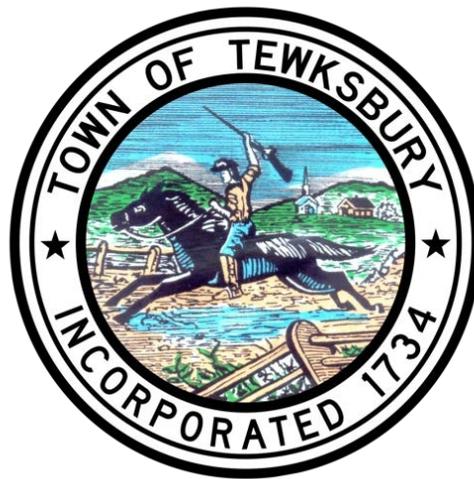


Wet Weather Outfall Sampling Report

MS4 Permit Compliance - Year 6



Town of Tewksbury, MA

Department of Public Works

999 Whipple Road

Tewksbury, MA 01876

June 30, 2024

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1.0 INTRODUCTION

Under the Environmental Protection Agency's (EPA's) 2016 National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System General Permit (2016 MS4 Permit), applicable Massachusetts communities are required to conduct wet weather investigations at regulated outfalls as part of Minimum Control Measure (MCM) 3: Illicit Discharge Detection and Elimination (IDDE). This report presents the results of the wet weather outfall sampling conducted for the Town of Tewksbury during Permit Year 6 (July 1, 2023 to June 30, 2024).

1.1 Regulatory Requirement

Under the 2016 MS4 Permit, permittees are required to reduce the discharge of pollutants from their MS4 through six minimum control measures (MCMs) :

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)
6. Good Housekeeping and Pollution Prevention for Permittee Owned Operations

As part of MCM #3, the Town is required to implement an IDDE program to systematically investigate, identify and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges. This includes, but is not limited to, the following elements:

1. Development of a comprehensive map of the Town's MS4 that builds upon the outfalls and receiving waters that were previously mapped under the 2003 MS4 Permit.
2. Ensuring that appropriate regulatory mechanisms and enforcement procedures, as required under the 2003 MS4 Permit, are in place to prohibit illicit discharges.
3. Development and implementation of a written plan to detect and eliminate illicit discharges, which references the Town's authority to implement all aspects of the IDDE program, clearly identifies responsibilities with regard to eliminating illicit discharges, and outlines written procedures for dry and wet weather outfall screening and sampling and catchment investigations.
4. Providing IDDE training annually to employees involved in the IDDE program, including how to recognize illicit discharges and sanitary sewer overflows (SSOs).

5. Identifying and eliminating non-stormwater discharges from the stormwater system through implementation of a comprehensive IDDE Program.

The 2016 MS4 Permit requires that an outfall/interconnection inventory and priority ranking be performed based on illicit discharge potential, and that each outfall and interconnection is categorized as a problem, high priority, low priority or excluded outfall as defined in Section 2.3.4.7 of the 2016 MS4 Permit based on characteristics of the catchment area described in the Permit. This ranking is to be utilized to establish the priority order for screening of outfalls and interconnections, conduct catchment investigations for evidence of illicit discharges, and provide the basis for determining permit milestones. This inventory and ranking should be updated annually throughout the permit term to reflect new findings from dry and wet-weather outfall and interconnection sampling and other IDDE program activities and should be submitted to EPA each year along with the Town's MS4 Annual Report.

1.1.1 Wet Weather Outfall Screening and Sampling Requirements

The 2016 MS4 Permit requires the Town to perform wet weather screening and sampling of all regulated outfalls and interconnections with a minimum of one (1) System Vulnerability Factor (SVF) as outlined in the 2016 MS4 Permit. SVFs include factors such as a history of Sanitary Sewer Overflows (SSOs), crossings of storm and sanitary sewer alignments, and/or areas where sanitary and storm drain infrastructure is greater than 40 years old. An evaluation of the SVFs for each catchment is included in Attachment A.

Wet weather screening and sampling of all regulated outfalls and interconnections with at least one SVF must be completed within ten (10) years of the permit effective date or by June 30, 2028.

Wet weather screening and sampling must occur during or after a storm event of sufficient depth or intensity to produce a stormwater discharge. EPA strongly recommends sampling during the spring (March through June) when groundwater levels are relatively high. The permit does not require a minimum rainfall event prior to wet weather screening. For this project, wet weather sampling was completed when more than 0.25 inches of rainfall had occurred in the previous 24-hour period. In accordance with the 2016 MS4 Permit, the following information must be recorded or collected for each outfall or interconnection during screening:

- Unique identifier;
- Receiving water;
- Date of most recent inspection;
- Dimensions;
- Shape;
- Material (concrete, PVC, etc.);
- Spatial location (latitude and longitude with a minimum accuracy of +/-30 feet);

- Physical condition; and
- Indicators of potential non-stormwater discharges (including presence or evidence of suspect flow and sensory observations such as odor, color, turbidity, floatables, or oil sheen).

The 2016 MS4 Permit requires samples collected during wet weather outfall screening to be analyzed for contaminants typically found in stormwater as well as common indicators of water quality, including temperature, salinity, conductivity, ammonia, chlorine, surfactants, and *Escherichia coli* (*E.coli*) in freshwater. Outfalls discharging to an impaired waterbody must also be sampled for their pollutants of concern identified as the cause of the impairment in Appendix G of the 2016 MS4 Permit. The pollutants of concern and associated impairments for receiving waters in Tewksbury are included in Table 1.

Table 1: Pollutants of Concern by Receiving Water in Tewksbury

Receiving Water	Segment ID	Water Quality Impairments ¹	Pollutant of Concern (Sampling Parameters)
Shawsheen River	MA83-18	(Curly-leaf Pondweed*), Dissolved Oxygen, <i>Escherichia Coli</i> (<i>E. Coli</i>), Fecal Coliform	Dissolved Oxygen BOD ₅ Total Phosphorous
Strong Water Brook	MA83-07	<i>Escherichia Coli</i> (<i>E. Coli</i>), Fecal Coliform**	<i>E. Coli</i>
Pinnacle Brook (Unnamed Tributary to Meadow Brook)	MA83-15	(Dewatering*), Chloride, <i>Escherichia Coli</i> (<i>E. Coli</i>), Fecal Coliform**	Chloride
Merrimack River	MA84A-03	(Fish Passage Barrier*), <i>Escherichia Coli</i> (<i>E. Coli</i>), Mercury in Fish Tissue, PCBs in Fish Tissue Total Phosphorus	Total Phosphorous
Wetland Draining to Concord River	MA82A-08	(Eurasian Water Milfoil, <i>Myriophyllum Spicatum</i> *), (European Water Clover*), (Fanwort*), (Fish Passage Barrier*), (Water Chestnut*), Chloride, <i>Escherichia Coli</i> (<i>E. Coli</i>), Mercury in Fish Tissue, Trash	Chloride
Long Pond	MA83010	(Water Chestnut*), Algae Chlorophyll-a, Dissolved Oxygen, Total Phosphorus, Transparency/Clarity	Dissolved Oxygen BOD ₅ Total Phosphorous
Ames Pond	MA83001	Mercury in Fish Tissue	-
Unnamed Tributary to Shawsheen River; Dascomb Road, Andover to confluence with Shawsheen River	MA83-20	Chloride	Chloride
Tull Brook	MA84A-14	<i>Escherichia Coli</i> (<i>E. Coli</i>)	<i>E. Coli</i>

*TMDL not required (non-pollutant)

**EPA has indicated that *E. Coli* is a better indicator of health risk from water contact for freshwater, and that sampling for fecal coliform is no longer required.

¹ Impairments from the Final 2022 List of Integrated Waters, or 303(d) List approved by EPA.

Benchmark criteria are used to assess whether a contaminant concentration is above federal or state water quality standards, or in the absence of a regulatory standard, industry accepted concentrations based on typical characteristics of surface water and wastewater. The most recent Massachusetts Surface Water Quality Standards as well as the 2016 MS4 Permit were used to determine benchmark criteria. Table 2 presents the benchmark criteria that were used to assess whether contaminant concentrations in outfalls meet water quality standards or industry accepted concentrations.

Parameter	Benchmark
Ammonia-Nitrogen	≥ 0.5 mg/L
Biological Oxygen Demand (BOD ₅)	≥ 5 mg/L ⁽¹⁾
Conductivity	2,000 μ S/cm
Chloride	Chronic Standard – 230 mg/L; Acute Standard – 860 mg/L
Dissolved Oxygen	≤ 5.0 mg/L ⁽²⁾
Escherichia Coli (E. Coli)	≥ 126 cfu/100mL ⁽²⁾
Salinity	None
Surfactants	≥ 0.25 mg/L
Temperature	$\geq 83^{\circ}$ F ($\geq 28.3^{\circ}$ C) ⁽²⁾
Total Chlorine	≥ 0.01 mg/L
Total Phosphorus	≥ 0.1 mg/L ⁽¹⁾
Total Suspended Solids	None ⁽³⁾
Turbidity	None ⁽³⁾

- (1) A placeholder has been included here based on available literature including EPA's 1986 "Gold Book" and the 1991 Streamkeeper's Field Guide. EPA has indicated that they will be providing additional guidance regarding benchmark criteria for parameters included in Appendix G of the 2016 MS4 Permit.
- (2) Massachusetts Surface Water Quality Standards for Class B Waters.
- (3) The Massachusetts Surface Water Quality Standards do not list numeric benchmark criteria for total suspended solids or turbidity for any waterbody class.

The following benchmark criteria were used to evaluate the results of the sampling to determine whether the results indicate likely sewer input in accordance with the Town's 2016 MS4 Permit:

- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water, or
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and detectable levels of chlorine (0.02 mg/L).

1.2 Project Background

In June 2023, the Town of Tewksbury retained the services of Weston & Sampson to conduct wet weather screening and sampling of up to thirty (30) regulated Town-owned stormwater outfalls and

interconnections in accordance with 2016 MS4 Permit requirements. As part of the screening, the physical location of each outfall and interconnection was verified and updated as needed; the receiving water was identified; and the observed flow rate and other visual characteristics of the flow were noted, where applicable. Characteristics of each outfall were also recorded including pipe material, dimension, shape, structural condition, presence of erosion downstream of the outfall and any evidence of an illicit discharge. For each outfall observed to have wet weather flow, samples were collected and analyzed for ammonia, Escherichia coliform (*E. coli*), surfactants, total chlorine, conductivity, salinity and temperature. In addition, for outfalls that discharge directly to impaired receiving waters, samples were also analyzed for pollutants of concern including total phosphorous, dissolved oxygen, and BOD5. Samples were collected and analyzed in accordance with EPA-approved methods (40 CFR 136). Each sampling parameter is further defined below.

- Ammonia: Ammonia is an organic compound found in decaying organic matter, fertilizers, and failing septic systems. It can be another indicator that sewage is entering the storm drain system.
- BOD₅: Biological Oxygen Demand is a measure of the amount of oxygen needed by microorganisms to decompose organic content in a waterbody. When a high concentration of organics is introduced, the BOD₅ concentration increases, which lowers the amount of dissolved oxygen in the water. BOD₅ is expressed as milligrams of oxygen needed to break down the organic matter contained in a liter of water over five days.
- Total Chlorine: Chlorine is added to drinking water as a biocide and is an indicator of potable water entering into the storm drain system.
- Conductivity: Conductivity is the measure of the ability of water to pass an electrical current. This level is impacted by the presence of inorganic dissolved solids. It can be an indicator of an industrial discharge or failing septic system.
- Dissolved Oxygen: Dissolved oxygen is the amount of oxygen that is present in water. Waterbodies receive oxygen from the atmosphere and from aquatic plants. Aquatic animals depend on oxygen to breathe. Waterbodies need to maintain a certain level of dissolved oxygen to support aquatic life. When dissolved oxygen levels get too low, aquatic resources lose their ability to support aquatic life.
- Escherichia coliform (*E. coli*): *E. coli* is a bacteria found in the intestines of humans and warm-blooded animals. Elevated concentration of *E. coli* may be an indicator of sewage discharging into the storm drain system, or other sources of fecal matter, such as failing septic systems, entering the storm drain system.
- Total Phosphorus: Phosphorus, commonly found in fertilizers, is a necessary component of plant growth. When phosphorus enters water bodies in excess it can cause eutrophication or decreased levels of dissolved oxygen within the waterbody, which impacts the ability of the waterbody to support aquatic life.

- Salinity: Salinity is a measure of the amount of salt dissolved in a volume of water. Road salt is commonly spread on roadways during winter storm events to lower the freezing point of water. It is extremely useful in keeping roadways safe during the winter months, but it is actively raising the salinity of freshwater which has negative environmental impacts.
- Surfactants: Surfactants, found in many types of detergents, are often an indicator of wash sinks or washing machine effluent discharging into the storm drain system.
- Temperature: A developed watershed can be a significant source of stormwater runoff for a surface waterbody. Many of the species within these water bodies are highly susceptible to changes in temperature, and as stormwater is conveyed across impervious surfaces, its temperature can increase rapidly.

2.0 OUTFALL SCREENING AND SAMPLING

2.1 Methodology

The 2016 MS4 Permit requires the Town to perform wet weather outfall and interconnection screening and sampling of all regulated outfalls and interconnections with a minimum of one (1) System Vulnerability Factor (SVF) as outlined in the 2016 MS4 Permit. In those instances where flow was present at an outfall or interconnection, one sample was collected and analyzed for the following parameters in accordance with the permit:

- Ammonia-Nitrogen;
- Chlorine;
- Conductivity;
- Salinity;
- *E. coli*;
- Surfactants;
- Temperature; and
- Pollutants of concern for impaired waters.

Samples collected were taken to Nelson Analytical Laboratory in Manchester, NH and analyzed for *E. coli*, ammonia-nitrogen, and surfactants. Samples for pollutants of concern were also sent to the laboratory during follow up sampling. All other parameters were analyzed on-site using test kits and sampling probes following procedures outlined in the Town's IDDE Plan.

2.1.1 Wet Weather Outfall Screening and Sampling Findings

Weston & Sampson conducted wet weather outfall screening and sampling on November 18, 2023, and March 7, 2024. While the 2016 MS4 Permit does not identify a minimum rainfall event prior to wet weather screening, 0.25" of rainfall in the 12 hours prior to sampling typically generates a stormwater discharge. Graphs of the 48-hour precipitation totals for each day of screening are included in Appendix E, confirming that sufficient rainfall had occurred in the 12 hours prior to sampling.

Wet weather outfall screening was conducted at 39 outfalls. Samples were collected at all 39 outfalls. Where no flow was observed at the outfall, or if the outfall was submerged, the immediate upstream structure was screened for wet-weather flow and sampled accordingly. A town-wide map of sampled outfalls is included in Appendix B. All wet-weather screening and sampling data can be found in Appendix C. Highlighted results indicate that benchmark criteria were exceeded. Supporting laboratory documentation for parameters requiring laboratory analysis is included in Appendix D.

Based on a comparison of the wet weather sampling results with the benchmark criteria discussed, no outfalls met the criteria above and indicate likely sewer input based on the 2016 MS4 Permit. Of the 39

samples taken, 18 samples showed *E. Coli* concentrations exceeding benchmark criteria. In addition to elevated bacteria counts, 1 of the 3 outfalls sampled for phosphorus exceeded benchmark criteria for phosphorus. A list of outfalls with benchmark exceedances for *E. Coli* and phosphorus is included in Table 3 below.

Table 3: Outfalls with Benchmark Exceedances	
Parameter	Outfall
Escherichia Coli (<i>E. Coli</i>)	OF-1, OF-171, OF-249, OF-252, OF-293, OF-300, OF-3000, OF-301, OF-307, OF-337, OF-389, OF-42, OF-4287, OF-4288, OF-4351, OF-4358, OF-4523, OF-4574
Total Phosphorus	OF-172

A condition assessment of each outfall was performed during the inspections. Any identified defects are included in Table 4. Damage to the outfall may be indicative of old or failing pipes tributary to the outfall. Holes and cracks in the pipe can allow pollutants to enter the drainage system. Proper system maintenance is critical to minimizing the potential for pollutants to reach surface waters. Although not all pipe defects will impact water quality, it is also important to maintain infrastructure in good condition to prevent flooding and avoid costly emergency repairs.

Table 4: Condition Assessment Findings	
Observed Defect	Outfall
Buried in Leaves/Sediment	OF-172, OF-3058, OF-4493, OF-4581
Cracking/Chipping	OF-254, OF-3016

3.0 RECOMMENDATIONS

The Town of Tewksbury is committed to improving water quality within the Town, and in turn, is committed to the investigation, identification, and remediation of pollution from their MS4 to the extent practicable and in accordance with 2016 MS4 Permit. To accomplish this goal, Weston & Sampson offers the following recommendations based on the results of the inspection and sampling that was performed as part of this project.

3.1 Outfall Prioritization

As previously noted, 19 outfalls had significant benchmark exceedances, though none of these outfalls were identified as having likely sewer input. These outfalls should be prioritized during catchment investigations to determine if the MS4 is contributing to poor water quality. Outfalls which exceeded the benchmark criteria for *E. Coli* and phosphorus are included in Table 3 in Section 2.1.1 of this report.

3.2 Maintenance

During the inspections, some drainage structures were noted to have both structural and non-structural defects. A summary of observed defects is included in Table 4 in Section 2.1.1. Improvements should be prioritized to ensure the integrity of the storm drain infrastructure and prevent any localized flooding that could result if the drainage system were to further deteriorate. The Town should prioritize the structural defects found during the investigation for future maintenance and repair.

APPENDIX A

System Vulnerability Factor (SVF) Matrix

APPENDIX A. Outfall/Interconnection Catchment System Vulnerability Factor (SVF) Inventory

TOWN OF TEWKSBURY, MA

REVISION DATE: 04-03-2024

New Outfall ID	Outfall ID	Receiving Water	History of SSOs	Common or Twin Invert Manholes	Common Trench Construction	Storm/Sanitary Crossings	Sanitary Lines with Under-drains	Inadequate LOS	Former Combined Sewers	Sanitary Sewer Defects	SSO Potential in Event of System Failures	Sanitary and Storm Drain Infrastructure > 40 years	Septic with Poor Soils or Water Table Separation	History of Board of Health Actions Addressing Septic Failure	Wet Weather Sampling Required?	Wet Weather Sampling Required?
Information Source			Town Staff	Maps	Maps	Maps	Maps	Town Staff	Town Staff	Town Staff	Town Staff	Land Use Information, Visual Observation	Land Use/GIS Maps, Aerial Photography	Town Staff	Yes = >0 No = 0	
Scoring Criteria			Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = >0 No = 0	
OF-4155	SH-0008	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4245	SH-0098	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4274	SH-0127	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4275	SH-0128	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4299	SH-0153	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-4301	SH-0155	SHAWSHEEN	0	0	0	1	0	0	0	0	1	1	0	1	4	Yes
OF-4303	SH-0157	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-314	SH-0169	SHAWSHEEN	0	0	0	1	0	0	0	1	1	0	0	1	4	Yes
OF-4319	SH-0173	SHAWSHEEN	0	0	0	1	0	0	0	0	1	1	0	1	4	Yes
OF-370	SH-0179	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-4328	SH-0182	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-288	SH-0204	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4408	SH-0262	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-4423	SH-0277	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4426	SH-0280	SHAWSHEEN	1	0	0	1	0	0	0	0	1	0	0	1	4	Yes
OF-43	SH-0349	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-42	SH-0350	Ames Pond	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-9	SH-0365	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-3059	SH-0383	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-337	SH-0385	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-19	SH-0399	Pinnacle Brook	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-4553	SH-0413	Pinnacle Brook	0	0	0	0	0	0	0	0	1	0	0	1	2	Yes
OF-4631	SH-0491	Pinnacle Brook	0	0	0	1	0	0	0	0	1	0	0	1	3	Yes
OF-132	CO-0006	Concord River	1	0	0	1	0	0	0	0	0	0	0	1	3	Yes
OF-199	CO-0008	CONCORD	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-136	CO-0027	Concord River	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-286	IP-0014	IPSWICH	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-285	IP-0015	IPSWICH	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-4058	ME-0006	MERRIMACK	0	0	0	1	0	0	0	0	0	0	1	1	3	Yes
OF-4101	ME-0049	MERRIMACK	0	0	0	1	0	0	0	0	1	0	1	0	3	Yes
OF-4102	ME-0050	MERRIMACK	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-3082	ME-0051	MERRIMACK	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4113	ME-0061	Merrimack River	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4114	ME-0062	Merrimack River	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-4135	ME-0083	MERRIMACK	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4146	ME-0094	MERRIMACK	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-4148	SH-0001	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-97	SH-0003	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-290	SH-0009	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-316	SH-0011	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-3021	SH-0012	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-93	SH-0016	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	1	3	Yes
OF-99	SH-0033	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	1	3	Yes
OF-66	SH-0034	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	1	3	Yes
OF-96	SH-0038	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-270	SH-0051	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-342	SH-0054	Shawsheen River	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-226	SH-0079	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-224	SH-0080	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4234	SH-0087	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4235	SH-0088	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4236	SH-0089	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes
OF-4238	SH-0091	Shawsheen River	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-322	SH-0101	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-321	SH-0102	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-319	SH-0104	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes
OF-4267	SH-0120	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4287	SH-0140	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4288	SH-0141	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4289	SH-0142	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-3000	SH-0143	Strong Water Brook	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4291	SH-0144	Strong Water Brook	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4292	SH-0145	Content Brook	0	0	0	0	0	0	0	0	0	1	0	1	2	Yes
OF-4296	SH-0150	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4297	SH-0151	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4298	SH-0152	SHAWSHEEN	1	0	0	1	0	0	0	0	0	1	0	1	4	Yes
OF-4305	SH-0159	Shawsheen River	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes
OF-4306	SH-0160	Content Brook	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes

New Outfall ID	Outfall ID	Receiving Water	History of SSOs	Common or Twin Invert Manholes	Common Trench Construction	Storm/Sanitary Crossings	Sanitary Lines with Under-drains	Inadequate LOS	Former Combined Sewers	Sanitary Sewer Defects	SSO Potential in Event of System Failures	Sanitary and Storm Drain Infrastructure > 40 years	Septic with Poor Soils or Water Table Separation	History of Board of Health Actions Addressing Septic Failure	Wet Weather Sampling Required?	Wet Weather Sampling Required?
Information Source			Town Staff	Maps	Maps	Maps	Maps	Town Staff	Town Staff	Town Staff	Town Staff	Land Use Information, Visual Observation	Land Use/GIS Maps, Aerial Photography	Town Staff		
Scoring Criteria			Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = >0 No = 0	
OF-332	SH-0161	Content Brook	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes
OF-390	SH-0162	Content Brook	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-313	SH-0170	SHAWSHEEN	0	0	0	1	0	0	0	1	0	0	0	1	3	Yes
OF-4320	SH-0174	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-274	SH-0175	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-3073	SH-0181	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4351	SH-0205	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4352	SH-0206	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4353	SH-0207	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4354	SH-0208	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-293	SH-0210	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4359	SH-0213	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-385	SH-0214	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-253	SH-0228	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4397	SH-0251	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-333	SH-0258	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4406	SH-0260	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes
OF-232	SH-0290	Shawsheen River	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4447	SH-0301	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-3003	SH-0323	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-22	SH-0330	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4503	SH-0362	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-8	SH-0364	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4508	SH-0367	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-10	SH-0368	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4519	SH-0378	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-25	SH-0381	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4523	SH-0382	Strong Water Brook	0	0	0	1	0	0	0	0	0	0	1	1	3	Yes
OF-4525	SH-0384	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-171	SH-0387	Long Pond	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-12	SH-0397	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-31	SH-0398	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-20	SH-0400	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-15	SH-0401	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4546	SH-0406	Pinnacle Brook	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4548	SH-0408	Pinnacle Brook	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-1	SH-0427	Ames Pond	0	0	0	1	0	0	0	0	0	0	0	1	2	Yes
OF-4569	SH-0429	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-4574	SH-0434	Ames Pond	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4576	SH-0436	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4577	SH-0437	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-3051	SH-0439	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-4581	SH-0441	Long Pond	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-4590	SH-0450	SHAWSHEEN	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-344	SH-0451	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-354	SH-0452	SHAWSHEEN	0	0	0	1	0	0	0	0	1	0	0	0	2	Yes
OF-3007	SH-0456	Shawsheen River	0	0	0	0	0	0	0	0	1	0	0	0	1	Yes
OF-4602	SH-0462	Shawsheen River	0	0	0	1	0	0	0	0	0	1	0	1	3	Yes
OF-4613	SH-0473	SHAWSHEEN	0	0	0	1	0	0	0	1	0	0	0	1	3	Yes
OF-4614	SH-0474	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-353	SH-0477	SHAWSHEEN	0	0	0	1	0	0	0	1	0	0	0	1	3	Yes
OF-295	SH-0487	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	1	1	Yes
OF-94	SH-0488	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	1	3	Yes
OF-162	CO-0005	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-154	CO-0010	CONCORD	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4007	CO-0011	CONCORD	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-198	CO-0012	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-112	CO-0014	CONCORD	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4012	CO-0016	CONCORD	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4024	CO-0028	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-191	CO-0030	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-141	CO-0031	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	0	No
OF-4027	CO-0032	CONCORD	0	0	0	0	0	0	0	0	0	0	0	0	2	Yes
OF-195	CO-0033	CONCORD	0	0	0	1	0	0	0	0	0	0	1	0	1	Yes
OF-196	CO-0034	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4032	CO-0037	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-133	CO-0038	CONCORD	0	0	0	1	0	0	0	0	0	0	0	0	0	No
OF-212	IP-0002	IPSWICH	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-223	IP-0003	IPSWICH	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4038	IP-0004	IPSWICH	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4039	IP-0005	IPSWICH	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3070	IP-0008	IPSWICH	0	0	0	0	0	0	0	0	0	0	0	0	0	No

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Information Source			Town Staff	Maps	Maps	Maps	Maps	Town Staff	Town Staff	Town Staff	Town Staff	Land Use Information, Visual Observation	Land Use/GIS Maps, Aerial Photography	Town Staff		
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OF-4050	IP-0016	IPSWICH	0	0	0	0	0	0	0	1	0	0	0	0	1	Yes
OF-4053	ME-0001	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4054	ME-0002	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4055	ME-0003	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4056	ME-0004	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4057	ME-0005	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4059	ME-0007	MERRIMACK	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-189	ME-0009	MERRIMACK	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-3010	ME-0010	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-185	ME-0022	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-183	ME-0023	MERRIMACK	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-200	ME-0027	Trull Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-123	ME-0029	Trull Brook	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-122	ME-0030	Trull Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4088	ME-0036	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3056	ME-0037	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3083	ME-0038	MERRIMACK	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-39	ME-0040	Trull Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-55	ME-0041	Trull Brook	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4094	ME-0042	MERRIMACK	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4095	ME-0043	Trull Brook	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4097	ME-0045	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4099	ME-0047	Trull Brook	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-40	ME-0052	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4105	ME-0053	Trull Brook	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4109	ME-0057	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-115	ME-0059	Trull Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-104	ME-0063	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3034	ME-0067	MERRIMACK	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-3084	ME-0069	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4122	ME-0070	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-87	ME-0074	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4127	ME-0075	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4128	ME-0076	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4129	ME-0077	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4130	ME-0078	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-91	ME-0079	MERRIMACK	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-169	ME-0081	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-92	ME-0084	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-88	ME-0085	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4138	ME-0086	MERRIMACK	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4152	SH-0005	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-311	SH-0010	Richardson Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4160	SH-0013	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4162	SH-0015	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-266	SH-0019	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4169	SH-0022	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4168	SH-0024	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4172	SH-0025	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-254	SH-0026	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-100	SH-0030	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-131	SH-0031	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-130	SH-0032	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-65	SH-0035	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-64	SH-0036	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4184	SH-0037	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-95	SH-0039	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4187	SH-0040	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-108	SH-0041	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-109	SH-0042	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-152	SH-0043	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4192	SH-0045	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4193	SH-0046	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-271	SH-0047	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-268	SH-0048	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-269	SH-0049	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4197	SH-0050	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4199	SH-0052	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4202	SH-0055	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3061	SH-0056	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4205	SH-0058	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-215	SH-0059	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes

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OF-214	SH-0060	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-221	SH-0061	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3031	SH-0066	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-3029	SH-0067	SHAWSHEEN	0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-3030	SH-0068	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-364	SH-0070	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-362	SH-0072	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3052	SH-0075	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3081	SH-0077	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4228	SH-0081	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4229	SH-0082	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4231	SH-0084	Shawsheen River	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4232	SH-0085	Shawsheen River	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4233	SH-0086	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3035	SH-0090	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4269	SH-0122	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-220	SH-0146	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4295	SH-0148	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4304	SH-0158	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-330	SH-0163	Content Brook	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-328	SH-0165	Content Brook	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4312	SH-0166	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4313	SH-0167	Content Brook	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4314	SH-0168	Content Brook	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4322	SH-0176	SHAWSHEEN	0	0	0	1	0	0	0	1	0	1	0	0	3	Yes
OF-4324	SH-0178	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4329	SH-0183	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4330	SH-0184	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4331	SH-0185	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-281	SH-0187	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	1	Yes
OF-389	SH-0189	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-280	SH-0190	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4358	SH-0212	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4361	SH-0215	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-275	SH-0216	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-297	SH-0217	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4364	SH-0218	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-4365	SH-0219	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4378	SH-0232	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4379	SH-0233	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4386	SH-0240	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4388	SH-0242	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-4389	SH-0243	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4390	SH-0244	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4393	SH-0247	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4394	SH-0248	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4395	SH-0249	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4396	SH-0250	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-317	SH-0253	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-307	SH-0254	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-302	SH-0255	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-301	SH-0256	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4405	SH-0259	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-312	SH-0261	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-383	SH-0263	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-80	SH-0264	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-82	SH-0265	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4412	SH-0266	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-79	SH-0267	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-75	SH-0270	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-76	SH-0271	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4418	SH-0272	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4422	SH-0276	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4424	SH-0278	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-304	SH-0279	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-205	SH-0282	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-204	SH-0283	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-222	SH-0284	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4431	SH-0285	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4434	SH-0288	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-233	SH-0289	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-229	SH-0291	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes

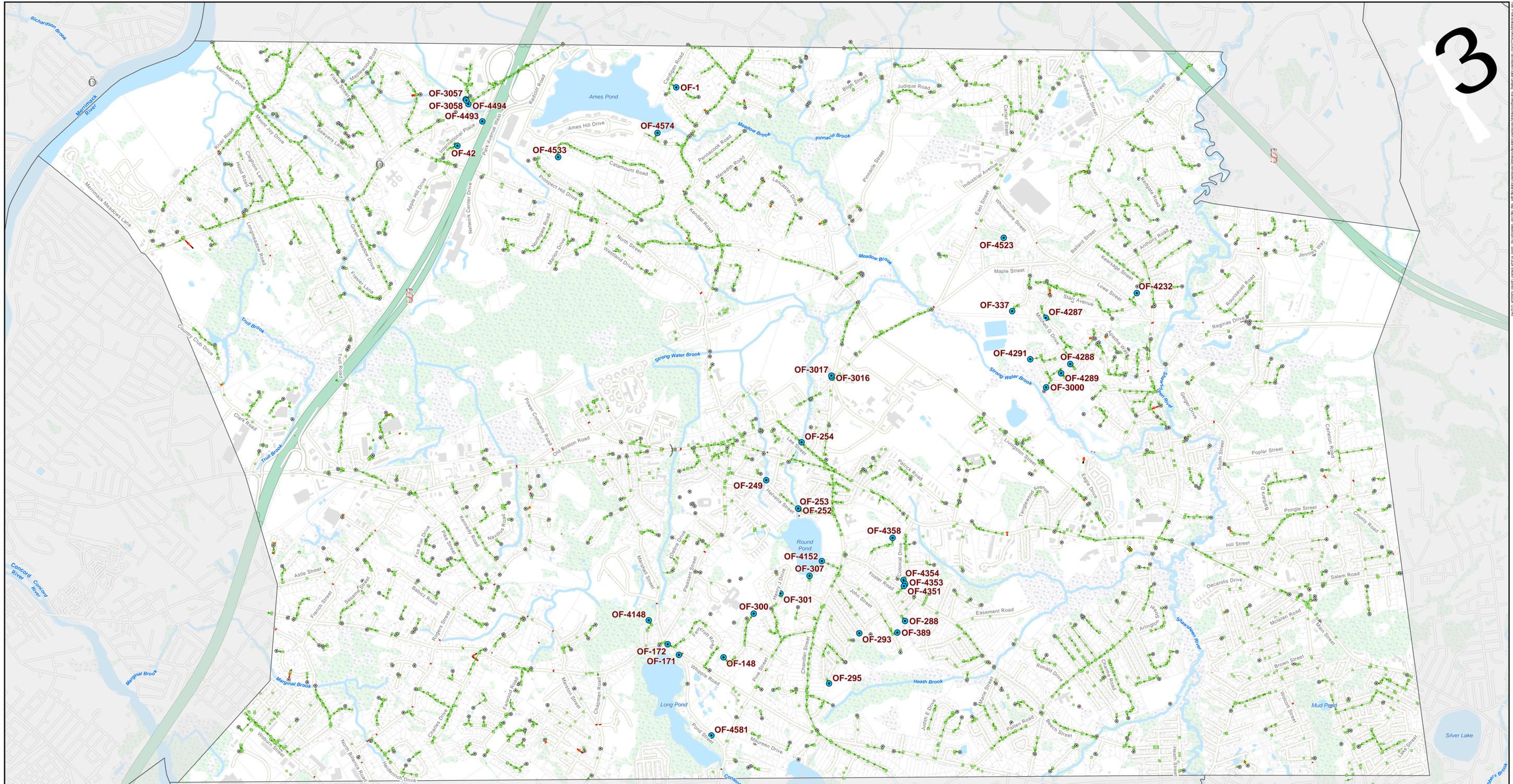
New Outfall ID	Outfall ID	Receiving Water	History of SSOs	Common or Twin Invert Manholes	Common Trench Construction	Storm/Sanitary Crossings	Sanitary Lines with Under-drains	Inadequate LOS	Former Combined Sewers	Sanitary Sewer Defects	SSO Potential in Event of System Failures	Sanitary and Storm Drain Infrastructure > 40 years	Septic with Poor Soils or Water Table Separation	History of Board of Health Actions Addressing Septic Failure	Wet Weather Sampling Required?	Wet Weather Sampling Required?
Information Source			Town Staff	Maps	Maps	Maps	Maps	Town Staff	Town Staff	Town Staff	Town Staff	Land Use Information, Visual Observation	Land Use/GIS Maps, Aerial Photography	Town Staff		
Scoring Criteria			Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = >0 No = 0	
OF-246	SH-0292	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-231	SH-0293	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4446	SH-0300	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-357	SH-0305	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-338	SH-0306	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3015	SH-0307	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3017	SH-0308	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-374	SH-0309	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4456	SH-0310	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4462	SH-0316	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4463	SH-0317	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-23	SH-0329	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-373	SH-0337	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-378	SH-0338	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-32	SH-0339	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-29	SH-0344	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	1	0	3	Yes
OF-4486	SH-0345	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4493	SH-0352	Ames Pond	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-4494	SH-0353	Ames Pond	0	0	0	0	0	0	0	1	0	0	1	0	2	Yes
OF-4495	SH-0354	Ames Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-267	SH-0355	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-3002	SH-0356	SHAWSHEEN	0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-4500	SH-0359	Ames Pond	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4501	SH-0360	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4502	SH-0361	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4511	SH-0370	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4512	SH-0371	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4514	SH-0373	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-349	SH-0374	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4516	SH-0375	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4517	SH-0376	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-336	SH-0377	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-26	SH-0380	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-315	SH-0390	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-294	SH-0391	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4533	SH-0392	Ames Pond	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4543	SH-0402	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4544	SH-0403	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4545	SH-0405	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4547	SH-0407	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4549	SH-0409	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4550	SH-0410	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4551	SH-0411	Pinnacle Brook	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-148	SH-0414	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-47	SH-0415	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-3090	SH-0417	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4559	SH-0419	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-4561	SH-0421	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-4563	SH-0423	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3006	SH-0424	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3096	SH-0425	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4570	SH-0430	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3005	SH-0433	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-44	SH-0435	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4585	SH-0445	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-346	SH-0447	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4588	SH-0448	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4589	SH-0449	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4593	SH-0453	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-239	SH-0454	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-240	SH-0455	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-206	SH-0457	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4598	SH-0458	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-387	SH-0460	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-4603	SH-0463	SHAWSHEEN	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-265	SH-0475	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-360	SH-0479	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4620	SH-0480	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-303	SH-0489	SHAWSHEEN	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4630	SH-0490	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-101	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-102	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes

New Outfall ID	Outfall ID	Receiving Water	History of SSOs	Common or Twin Invert Manholes	Common Trench Construction	Storm/Sanitary Crossings	Sanitary Lines with Under-drains	Inadequate LOS	Former Combined Sewers	Sanitary Sewer Defects	SSO Potential in Event of System Failures	Sanitary and Storm Drain Infrastructure > 40 years	Septic with Poor Soils or Water Table Separation	History of Board of Health Actions Addressing Septic Failure	Wet Weather Sampling Required?	Wet Weather Sampling Required?
Information Source			Town Staff	Maps	Maps	Maps	Maps	Town Staff	Town Staff	Town Staff	Town Staff	Land Use Information, Visual Observation	Land Use/GIS Maps, Aerial Photography	Town Staff		
Scoring Criteria			Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = >0 No = 0	
OF-113	-	Concord River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-124	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-128	-	Concord River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-129	-	Concord River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-134	-	Concord River	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-135	-	Concord River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-14	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-143	-	Concord River	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-145	-	Long Pond	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-149	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-157	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-158	-	Concord River	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-161	-	Concord River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-17	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-172	-	Long Pond	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-178	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-18	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-180	-	Merrimack	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-184	-	Merrimack	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-187	-	Concord River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-188	-	Concord River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-190	-	Concord River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-2	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-203	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-207	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-208	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-218	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-219	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-228	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-230	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-234	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-235	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-236	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-238	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-241	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-248	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-249	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-252	-	Round Pond	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-256	-	Shawsheen	1	0	0	1	0	0	0	0	0	0	0	0	2	Yes
OF-257	-	Shawsheen	1	0	0	1	0	0	0	0	0	0	0	0	2	Yes
OF-259	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-261	-	Round Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-263	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-27	-	Shawsheen	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-272	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-278	-	Shawsheen	1	0	0	1	0	0	0	0	0	0	0	0	2	Yes
OF-279	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-28	-	Shawsheen	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-282	-	Shawsheen	0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-287	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-289	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-291	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-292	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-299	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-3001	-	Strong Water Brook	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3004	-	Strong Water Brook	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3012	-	Merrimack	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3013	-	Merrimack	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3014	-	Merrimack River	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-3016	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3020	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3028	-	Merrimack	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3036	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3038	-	Ames Pond	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3057	-	Ames Pond	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-3058	-	Ames Pond	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-3060	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3062	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3064	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3080	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-309	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-3091	-	Richardson Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	No

New Outfall ID	Outfall ID	Receiving Water	History of SSOs	Common or Twin Invert Manholes	Common Trench Construction	Storm/Sanitary Crossings	Sanitary Lines with Under-drains	Inadequate LOS	Former Combined Sewers	Sanitary Sewer Defects	SSO Potential in Event of System Failures	Sanitary and Storm Drain Infrastructure > 40 years	Septic with Poor Soils or Water Table Separation	History of Board of Health Actions Addressing Septic Failure	Wet Weather Sampling Required?	Wet Weather Sampling Required?
Information Source			Town Staff	Maps	Maps	Maps	Maps	Town Staff	Town Staff	Town Staff	Town Staff	Land Use Information, Visual Observation	Land Use/GIS Maps, Aerial Photography	Town Staff		
Scoring Criteria			Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = 1 No = 0	Yes = >0 No = 0	
OF-3094	-	Ames Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-3095	-	Richardson Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-323	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-329	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-340	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-343	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-345	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-35	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-350	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-355	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-365	-	Shawsheen River	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-367	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-372	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-375	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-377	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-381	-	Shawsheen River	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-382	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-386	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-388	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-391	-	Shawsheen River	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-4	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-41	-	Shawsheen	0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-45	-	Ames pond	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4637	-	-	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4638	-	-	0	0	0	1	0	0	0	1	0	1	0	0	3	Yes
OF-48	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-49	-	Merrimack	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-50	-	Merrimack	0	0	0	1	0	0	0	0	0	1	1	0	3	Yes
OF-51	-	Merrimack	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-52	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-53	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-54	-	Merrimack	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-56	-	Merrimack	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-57	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-6	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-62	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-67	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-68	-	Shawsheen	0	0	0	0	0	0	0	0	0	0	1	0	1	Yes
OF-69	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-72	-	Concord	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-83	-	Merrimack	0	0	0	0	0	0	0	0	0	0	0	0	0	No
OF-85	-	Merrimack	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
OF-98	-	Shawsheen	0	0	0	1	0	0	0	0	0	0	1	0	2	Yes
OF-4415	SH-0268	SHAWSHEEN	0	0	0	0	0	0	0	0	0	0	0	0	0	No
AOF-6035		Meadow Brook Wetland	0	0	0	1	0	0	0	0	0	0	0	0	1	Yes
AOF-6065		Unnamed wetland	0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
AOF-6092		Heath Brook	0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-46		Trull Brook (MA84A-14)	0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-4640 (Interconnection)			0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-4641 (Interconnection)			0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-4642 (Interconnection)			0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-4643 (Interconnection)			0	0	0	0	0	0	0	0	0	1	0	0	1	Yes
OF-4644			0	0	0	1	0	0	0	0	0	1	0	0	2	Yes
OF-4645			0	0	0	0	0	0	0	0	0	1	0	0	1	Yes

APPENDIX B

Wet Weather Outfall Sampling Results Map



Legend

● (Blue circle with dot)	Sampled; No Evidence of an Illicit Discharge	■ (Light green square)	DEP Wetlands
○ (Black circle)	Not Inspected	■ (Light green square)	Marsh/Bog
■ (Green square)	Catch Basin	■ (Light green square)	Wooded marsh
○ (Green circle)	Stormwater Manhole	■ (Light green square)	Cranberry Bog
— (Green line)	Drain Pipe	■ (Light green square)	Salt Marsh
— (Red line)	Culvert	■ (Light blue square)	Open Water
— (Yellow line)	Swale	■ (Light blue square)	Reservoir (with PWSID)
		■ (Light blue square)	Tidal Flats
		■ (Light blue square)	Beach/Dune

1,000 0 1,000 2,000
Scale in Feet

ATTACHMENT B
TOWN OF TEWKSBURY, MASSACHUSETTS
WET WEATHER OUTFALL SCREENING

WET WEATHER OUTFALL SAMPLING RESULT

JUNE 2024 SCALE: NOTED

Weston & Sampson

APPENDIX C

Wet Weather Outfall Screening and Sampling Results

Tewksbury, MA - Wet Weather Outfall Sampling Results

Outfall ID	Location	Receiving Water	Watershed Type	Outfall Size/ Material	Sample Date	Field Testing Results					Lab Results							
						Estimated Flow Rate (GPM)	Temperature (°F)	Conductivity (uS/cm)	Salinity (ppt)	Chlorine (mg/L)	E.coli (mpn/100mL)	Ammonia (mg/L)	Surfactants (mg/L)	Total Phosphorus (mg/L)	BOD (mg/L)	Dissolved Oxygen (mg/L)	Chloride (mg/L)	Total Suspended Solids (mg/L)
OF-1	97 Cardigan Rd	Unnamed Wetland	Medium Priority	24" HDPE	12/18/23 8:53 AM	15	55.4	134.0	0	0	435	0.05	<0.10	-	-	-	-	-
OF-293	27 Boisvert Rd	Heath Brook Wetlands	Low Priority	12" RCP	12/18/23 9:02 AM	15	63.7	86.3	0.04	0	345	<0.05	<0.05	-	-	-	-	-
OF-3058	Andover Street At Highwood Drive	Meadow Brook	Low Priority	12" RCP	12/18/23 9:16 AM	10	54.7	389.0	0.2	0	53	0.06	<0.05	-	-	-	-	-
OF-3057	Highwood Drive	Meadow Brook	Low Priority	36" RCP	12/18/23 9:20 AM	20	56.4	266.0	0.1	0	24	<0.05	<0.05	-	-	-	-	-
OF-288	17 Starbird Av	Heath Brook Wetlands	Low Priority	15" CMP	12/18/23 9:29 AM	1	61.2	18.0	0.01	0.02	3	<0.05	<0.05	-	-	-	-	-
OF-4494	1795 Andover St	Shawsheen	Low Priority	12" RCP	12/18/23 9:37 AM	10	57.6	59.0	0	0	39	0.08	<0.05	-	-	-	-	-
OF-42	International Place	Unnamed Wetland	Low Priority	12" RCP	12/18/23 9:52 AM	10	58.0	173.0	0	0	1410	0.06	<0.05	-	-	-	-	-
OF-4351	Colonial Drive Water Tank	Shawsheen	Low Priority	12" RCP	12/18/23 9:58 AM	10	62.1	11.0	0.01	0	1990	0.06	<0.05	-	-	-	-	-
OF-4493	International	Shawsheen	Low Priority	12" RCP	12/18/23 10:04 AM	5	56.0	256.0	0.1	0	16	0.18	<0.10	-	-	-	-	-
OF-4354	Colonial Drive Water Tank	Shawsheen	Low Priority	12" RCP	12/18/23 10:13 AM	5	62.1	13.4	0.01	0	3	<0.05	0.06	-	-	-	-	-
OF-4353	Colonial Drive Water Tank	Shawsheen	Low Priority	15" RCP	12/18/23 10:28 AM	5	59.7	67.9	0.03	0	6	0.33	<0.10	-	-	-	-	-
OF-4533	End Of Catamount Rd	Shawsheen	Low Priority	12" RCP	12/18/23 10:38 AM	50	59.1	242.0	0.1	0.13	31	0.07	<0.05	-	-	-	-	-
OF-300	20 Bruce St	Unnamed Wetland	Low Priority	15" CMP	12/18/23 10:51 AM	25	60.1	98.0	0.05	0	770	0.06	<0.10	-	-	-	-	-
OF-4574	51 Overlook Dr	Ames Pond (Ma83001)	Medium Priority	12" RCP	12/18/23 10:57 AM	5	51.4	68.0	0	0	>2420	<0.10	<0.05	-	-	-	-	-
OF-301	17 Henry J Dr	Unnamed Wetland	Low Priority	12" RCP	12/18/23 11:10 AM	50	60.3	89.0	0.04	0	490	0.08	<0.10	-	-	-	-	-
OF-3000	246 Mitchell G Dr	Detention Basin	Low Priority	24" HDPE	12/18/23 11:20 AM	5	54.6	65.6	0	0	1410	0.08	<0.05	-	-	-	-	-
OF-171	9 Pond St	Long Pond (Ma83010)	Low Priority	15" HDPE	12/18/23 11:38 AM	20	60.4	68.5	0.03	0	291	<0.05	<0.10	0.094	<4.0	11	-	<2.0
OF-4291	280 Mitchell G Dr	Shawsheen	Medium Priority	24" RCP	12/18/23 11:46 AM	25	57.5	77.3	0.1	0	120	0.05	<0.05	-	-	-	-	-
OF-4523	70 Royal Crest Cr	Shawsheen	Low Priority	12" RCP	12/18/23 12:07 PM	5	59.3	10.7	0	0	613	0.1	<0.05	-	-	-	-	-
OF-4148	3 Catherwood Rd	Shawsheen	Low Priority	12" RCP	12/18/23 12:46 PM	1	65.3	7.5	0	0	42	0.05	<0.10	-	-	-	-	-
OF-337	91 Martha Av	Strong Water Brook Wetland	Low Priority	12" RCP	12/18/23 13:04 PM	5	55.1	91.3	0	0	435	<0.05	<0.10	-	-	-	-	-
OF-389	120 John St	Heath Brook Wetland	Low Priority	18" CMP	12/18/23 13:10 PM	10	62.8	5.2	0	0	411	<0.05	0.06	-	-	-	-	-
OF-4287	71 Sciarappa Wy	Shawsheen	Low Priority	18" RCP	12/18/23 13:11 PM	5	58.4	2.3	0	0	1410	<0.05	<0.05	-	-	-	-	-
OF-295	25 Tomahawk Dr	Unnamed Wetland	Low Priority	6" OTH	12/18/23 13:30 PM	10	63.1	15.9	0.01	0	11	0.06	0.05	-	-	-	-	-
OF-4288	191 Mitchel G Drive	Shawsheen	Low Priority	12" RCP	12/18/23 13:32 PM	35	58.3	25.8	0	0	260	<0.05	<0.05	-	-	-	-	-
OF-4289	221 Mitchell G Dr	Shawsheen	Low Priority	18" RCP	12/18/23 13:43 PM	20	59.4	28.5	0	0	63	<0.05	<0.10	-	-	-	-	-
OF-4358	60 David Morris Road	Shawsheen	Low Priority	15" CMP	12/18/23 13:51 PM	10	62.8	79.4	0.04	0	2420	<0.10	<0.10	-	-	-	-	-
OF-4232	156 Lowe St	Shawsheen	Low Priority	18" CMP	12/18/23 14:00 PM	5	59.6	54.5	0	0	107	0.09	<0.05	-	-	-	-	-
OF-148	2 Bruce St	Unnamed Wetland	Low Priority	12" CMP	3/7/24 8:00 AM	2	49.6	1715	0.85	0.04	3	0.23	<0.05	-	-	-	-	-
OF-307	61 John E Smith Drive	Round Pond	Low Priority	12" CMP	3/7/24 8:40 AM	1	52.2	153	0.07	0	488	<0.05	<0.05	-	-	-	-	-
OF-4152	9 Mckenzie Cr	Shawsheen	Low Priority	Unknown	3/7/24 9:23 AM	1	53.6	48	0.02	0	11	0.1	<0.05	-	-	-	-	-
OF-252	142 Helvetia St	Tributary To Round Pond	Low Priority	12" CMP	3/7/24 9:39 AM	1	53.1	20	0.01	0	>2420	0.08	<0.05	-	-	-	-	-
OF-253	142 Helvetia St	Tributary To Round Pond	Low Priority	12" CMP	3/7/24 9:56 AM	1	50.9	286	0.14	0	63	0.08	<0.10	-	-	-	-	-
OF-172	2 Ferncroft Rd	Long Pond	Low Priority	12" RCP	3/7/24 10:40 AM	1	82.6	301	0.15	0	89	0.11	<0.10	0.213	<4.0	11	-	-
OF-4581	Off Of Pond Street Across Dav	Shawsheen	Low Priority	Unknown	3/7/24 11:05 AM	1	63.5	252	0.12	0	<1	0.14	<0.10	0.057	<4.0	11	-	-
OF-254	67 Lee St	Strong Water Brook (Ma83-07)	Low Priority	12" RCP	3/7/24 12:16 PM	3	47.1	367	0.18	0	19	0.11	<0.05	-	-	-	96	-
OF-3017	175 Chandler Street	Detention Basin	Low Priority	12" HDPE	3/7/24 12:43 PM	2	63.9	122	0.06	0	62	0.25	0.14	-	-	-	-	-
OF-3016	264 East St	Detention Basin	Low Priority	12" RCP	3/7/24 12:50 PM	1	56.7	244	0.12	0	72	0.36	0.12	-	-	-	-	-
OF-249	51 James St	Unnamed Wetland	Low Priority	12" RCP	3/7/24 1:06 PM	1	60.8	226	0.11	0.22	387	0.23	0.12	-	-	-	-	-

*The 2016 MS4 Permit identifies likely sewer input indicators as follows:

Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water. E.Coli = 126 CFU/100 mL.

Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and detectable levels of chlorine.

The catchment area to this outfall has a suspected illicit connection based upon the MS4 Permit criteria, which indicates likely sewer input.

The outfall sampling results exceed water quality standards/benchmark criteria.

APPENDIX D

Laboratory Documentation

NELSON ANALYTICAL LAB

490 East Industrial Park Drive
 Manchester, NH 03109
 (603)622-0200



NH ELAP Accreditation #NH1005
 Maine Certification # NH01005
 Vermont State Certification # VT1005
 www.nelsonanalytical.com

Client: Weston & Sampson:

03 January 2024

55 Walkers Brooks Drive Reading MA , 01867:

Enclosed are the results of analytical testing performed on the following samples:

Laboratory ID	Client Sample ID	Sample Location	Sample matrix	Date sampled	Date received
123121623.01	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-1	Water	18-Dec-23 08:53	18-Dec-23 15:30
123121623.02	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-3057	Water	18-Dec-23 09:20	18-Dec-23 15:30
123121623.03	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-3058	Water	18-Dec-23 09:16	18-Dec-23 15:30
123121623.04	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-42	Water	18-Dec-23 09:52	18-Dec-23 15:30
123121623.05	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4493	Water	18-Dec-23 10:04	18-Dec-23 15:30
123121623.06	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4494	Water	18-Dec-23 09:28	18-Dec-23 15:30
123121623.07	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4533	Water	18-Dec-23 10:38	18-Dec-23 15:30
123121623.08	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4574	Water	18-Dec-23 10:57	18-Dec-23 15:30
123121623.09	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-3000	Water	18-Dec-23 11:20	18-Dec-23 15:30
123121623.10	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4291	Water	18-Dec-23 11:46	18-Dec-23 15:30
123121623.11	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4523	Water	18-Dec-23 12:07	18-Dec-23 15:30
123121623.12	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-337	Water	18-Dec-23 13:04	18-Dec-23 15:30
123121623.13	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4287	Water	18-Dec-23 13:15	18-Dec-23 15:30
123121623.14	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4288	Water	18-Dec-23 13:32	18-Dec-23 15:30
123121623.15	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4289	Water	18-Dec-23 13:43	18-Dec-23 15:30
123121623.16	Tewksbury MA Wet Weather Outfall:	Stormwater, OF-4232	Water	18-Dec-23 14:00	18-Dec-23 15:30

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt, "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #=Sample(s) received at laboratory do not meet method specified temperature criteria.
 Solid samples are reported on a dry weight basis unless noted otherwise.
 Subcontract Laboratories: SUB2: Nelson Analytical Maine NH2018 SUB 7: Nelson Analytical EAI Div. NH1007, SUB4: NH2073, SUB5: NH2530, SUB8: NH2136, SUB9: NH2557
<http://des.nh.gov/organization/divisions/water/dwgb/nhlap/>
http://health.vermont.gov/environ/ph_lab/PublicHealthLaboratory.aspx
<https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml>
<https://www.mass.gov/info-details>



RP240103026

Laboratory ID

Client Sample ID

Sample Location

Sample matrix

Date sampled

Date received

The results in this report relate only to the submitted samples. If you have any questions concerning this report, please feel free to contact us at (603)622-0200.

Approved By:

Andrew Nelson

Laboratory Director



Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt, "²" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #=Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 08:53

123121623.01

Tewksbury MA Wet Weather Outfall

Stormwater, OF-1

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	435	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:25	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:20

123121623.02

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-3057

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	24	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:26	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:16

123121623.03

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-3058

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.06	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	53	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:26	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:52

123121623.04

**Tewksbury MA Wet Weather
 Outfall
 Stormwater, OF-42**

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.06	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	1410	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:27	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 10:04

123121623.05

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-4493

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.18	0.10	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	16	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:28	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:28

123121623.06

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-4494

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.08	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	39	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:29	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 10:38

123121623.07

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-4533

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.07	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	31	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:30	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 10:57

123121623.08

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-4574

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.10	0.10	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	>2420	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:31	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 11:20

123121623.09

Tewksbury MA Wet Weather Outfall

Stormwater, OF-3000

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.08	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	1410	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:31	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 11:46

123121623.10

Tewksbury MA Wet Weather Outfall

Stormwater, OF-4291

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	120	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:32	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 12:07

123121623.11

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-4523

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.10	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	613	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:32	SM 5540C	SUB8

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<http://des.nh.gov/organization/divisions/water/dwqb/nhela/>
http://healthvermont.gov/enviro/ph_lab/PublicHealthLaboratory.aspx
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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:04

123121623.12

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-337

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	435	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:33	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:15

123121623.13

Tewksbury MA Wet Weather Outfall

Stormwater, OF-4287

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	1410	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:34	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:32

123121623.14

Tewksbury MA Wet Weather Outfall

Stormwater, OF-4288

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	260	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:34	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:43

123121623.15

Tewksbury MA Wet Weather Outfall

Stormwater, OF-4289

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	63	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:35	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:30

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 02:00

123121623.16

Tewksbury MA Wet Weather
 Outfall

Stormwater, OF-4232

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.09	0.05	mg/L	01/02/2023 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	107	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:38	SM 5540C	SUB8

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<https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml>
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Chain of Custody

THOUSANDS BURY MA Wet weather outfall sampling
 Weston & Sampson, Andy Gaughan, 978-516-8964
 Gaughan.Andrew@wseinc.com

ID	Date	Time	E Coli	Ammonia	Surfactants	
OF-1	12/18	8:53	X	X	X	1
OF-3057		9:20	X			2
OF-3058		9:16				3
OF-42		9:52				4
OF-4473		10:04				5
OF-4494		9:28				6
OF-4533		10:38				7
OF-4574		10:57				8
OF-3000		11:20				9
OF-4291		11:46				10
OF-4523		12:07				11
OF-337		1:04				12
OF-4287		1:15				13
OF-4288		1:32				14
OF-4289		1:43				15
OF-4282		2:00				16

AMMUNITION: 225 12/18

12/18/23 5:30 S.O
 Date Rec'd: 12/18 Time Rec'd: 5:30 Temp Rec'd: S.O
 Rec'd by: [Signature] Location: 75
 Cooler: Y N Ice: Y N
 Chlorine: Pos Neg NA
 Bottle: TCI 16 MIN 149ML HCL LC OTHER

He 250

12/18/23
 12/18/23

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Client: Weston & Sampson:

03 January 2024

55 Walkers Brooks Drive Reading MA , 01867:

Enclosed are the results of analytical testing performed on the following samples:

Laboratory ID	Client Sample ID	Sample Location	Sample matrix	Date sampled	Date received
123121622.01	Tewksbury, MA:	Stormwater, OF-293	Water	18-Dec-23 09:02	18-Dec-23 15:30
123121622.02	Tewksbury, MA:	Stormwater, OF-288	Water	18-Dec-23 09:21	18-Dec-23 15:30
123121622.03	Tewksbury, MA:	Stormwater, OF-4351	Water	18-Dec-23 09:53	18-Dec-23 15:30
123121622.04	Tewksbury, MA:	Stormwater, OF-4353	Water	18-Dec-23 10:20	18-Dec-23 15:30
123121622.05	Tewksbury, MA:	Stormwater, OF-4354	Water	18-Dec-23 10:16	18-Dec-23 15:30
123121622.06	Tewksbury, MA:	Stormwater, OF-300	Water	18-Dec-23 10:48	18-Dec-23 15:30
123121622.07	Tewksbury, MA:	Stormwater, OF-301	Water	18-Dec-23 11:04	18-Dec-23 15:30
123121622.08	Tewksbury, MA:	Stormwater, OF-171	Water	18-Dec-23 11:30	18-Dec-23 15:30
123121622.09	Tewksbury, MA:	Stormwater, OF-4148	Water	18-Dec-23 12:41	18-Dec-23 15:30
123121622.10	Tewksbury, MA:	Stormwater, OF-389	Water	18-Dec-23 13:05	18-Dec-23 15:30
123121622.11	Tewksbury, MA:	Stormwater, OF-295	Water	18-Dec-23 13:30	18-Dec-23 15:30
123121622.12	Tewksbury, MA:	Stormwater, OF-4358	Water	18-Dec-23 13:45	18-Dec-23 15:30

The results in this report relate only to the submitted samples. If you have any questions concerning this report, please feel free to contact us at (603)622-0200.

Approved By:



Andrew Nelson Laboratory Director



Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt, "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #=Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:02

123121622.01

Tewksbury, MA

Stormwater, OF-293

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	345	1	mpn/100mL	12/18/2023 17:00	SM 9223B	LS

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:38	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:21

123121622.02

Tewksbury, MA

Stormwater, OF-288

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	3	1	mpn/100mL	12/18/2023 17:00	SM 9223B	LS

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:39	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 09:53

123121622.03

Tewksbury, MA

Stormwater, OF-4351

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.06	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	1990	1	mpn/100mL	12/18/2023 17:00	SM 9223B	LS

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	12/19/2023 21:51	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 10:20

123121622.04

Tewksbury, MA

Stormwater, OF-4353

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.33	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	6	1	mpn/100mL	12/18/2023 17:00	SM 9223B	LS

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:55	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 10:16

123121622.05

Tewksbury, MA

Stormwater, OF-4354

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	3	1	mpn/100mL	12/18/2023 17:00	SM 9223B	LS

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	0.06	0.05	mg/L	12/19/2023 21:56	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 10:48

123121622.06

Tewksbury, MA

Stormwater, OF-300

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.06	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	770	1	mpn/100mL	12/18/2023 17:00	SM 9223B	LS

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:57	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 11:04

123121622.07

Tewksbury, MA

Stormwater, OF-301

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.08	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	490	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:58	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 11:30

123121622.08

Tewksbury, MA

Stormwater, OF-171

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

Biochemical Oxygen Demand

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
BOD	<4.0	4.0	mg/L	12/19/2023 19:30	SM 5210B	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	291	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:58	SM 5540C	SUB8

Phosphorus, as P

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Phosphorus, as P	0.094	0.010	mg/L	12/20/2023 12:00	SM4500PE-11	SUB8

Total Suspended Solids

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
TSS	<2.0	2.0	mg/L	12/20/2023 12:00	SM 2540D	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppb; " <" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 12:41

123121622.09

Tewksbury, MA

Stormwater, OF-4148

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.05	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	42	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 21:59	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:05

123121622.10

Tewksbury, MA

Stormwater, OF-389

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	411	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	0.06	0.05	mg/L	12/19/2023 22:02	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:30

123121622.11

Tewksbury, MA

Stormwater, OF-295

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.06	0.05	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	11	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	0.05	0.05	mg/L	12/19/2023 22:03	SM 5540C	SUB8

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Date Reported : 03-Jan-24 12:25

REPORT OF ANALYSIS

sampled Date: 18-Dec-2023 01:45

123121622.12

Tewksbury, MA

Stormwater, OF-4358

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.10	0.10	mg/L	01/02/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	2420	1	mpn/100mL	12/18/2023 17:00	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	12/19/2023 22:04	SM 5540C	SUB8

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Client: Weston & Sampson:

22 March 2024

55 Walkers Brooks Drive Reading MA , 01867:

Enclosed are the results of analytical testing performed on the following samples:

Laboratory ID	Client Sample ID	Sample Location	Sample matrix	Date sampled	Date received
124030668.01	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-148	Water	07-Mar-24 08:00	07-Mar-24 14:00
124030668.02	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-307	Water	07-Mar-24 08:40	07-Mar-24 14:00
124030668.03	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF171	Water	07-Mar-24 09:00	07-Mar-24 14:00
124030668.04	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-4152	Water	07-Mar-24 09:20	07-Mar-24 14:00
124030668.05	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-252	Water	07-Mar-24 09:45	07-Mar-24 14:00
124030668.06	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-253	Water	07-Mar-24 10:00	07-Mar-24 14:00
124030668.07	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-172	Water	07-Mar-24 10:40	07-Mar-24 14:00
124030668.08	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-145 OF-4581	Water	07-Mar-24 11:00	07-Mar-24 14:00
124030668.09	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-3017	Water	07-Mar-24 12:40	07-Mar-24 14:00
124030668.10	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-3016	Water	07-Mar-24 12:50	07-Mar-24 14:00
124030668.11	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-252 OF-249	Water	07-Mar-24 13:05	07-Mar-24 14:00
124030668.12	Tewksbury Wet Weather, Tewksbury, MA, ENG23-0700:	OF-254	Water	07-Mar-24 12:20	07-Mar-24 14:00

The results in this report relate only to the submitted samples. If you have any questions concerning this report, please feel free to contact us at (603)622-0200.

Approved By:



Andrew Nelson Laboratory Director



Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt, "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.
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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 08:00

124030668.01

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-148**

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.23	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	3	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	03/08/2024 23:55	SM 5540C	SUB8

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http://healthvermont.gov/enviro/ph_lab/PublicHealthLaboratory.aspx
<https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml>
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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 08:40

124030668.02

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-307**

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	<0.05	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	488	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	03/08/2024 23:57	SM 5540C	SUB8

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http://healthvermont.gov/enviro/ph_lab/PublicHealthLaboratory.aspx
<https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml>
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NELSON ANALYTICAL LAB

RP240322071

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(603)622-0200

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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 09:00

124030668.03

Tewksbury Wet Weather,
Tewksbury, MA, ENG23-0700
OF171

Dissolved Oxygen

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Dissolved Oxygen	11	1	mg/L	03/07/2024 14:25	SM4500OG	LS

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 09:20

124030668.04

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-4152**

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.10	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	11	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	03/09/2024 00:04	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 09:45

124030668.05

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-252**

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.08	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	>2420	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	03/09/2024 00:04	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 10:00

124030668.06

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-253**

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.08	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	63	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.10	0.10	mg/L	03/09/2024 00:05	SM 5540C	SUB8

Notes: mg/L=ppm; ug/L=ppb; ng/L=ppt. "<" denotes "less than". This report of analysis may not be modified in any way, or reproduced except in full, without written approval from Nelson Analytical, LLC. Results reported above relate only to samples as submitted, unless specifically noted otherwise. Nelson Analytical, LLC is currently accredited by the New Hampshire Environmental Lab Accreditation Program, the Vermont Laboratory Accreditation Program, the Massachusetts Laboratory Certification Program and the Maine Laboratory Accreditation Program. For a list of current accredited tests, please visit the websites listed below. Sampling performed by the lab is according to the lab document "Water Sampling Instructions". EPA standards list pH & Chlorine as field parameters which should be tested immediately upon sample collection. Samples tested for pH after submission are beyond the hold time. Samples will be analyzed as quickly as laboratory operations allow. Metals samples may be analyzed the same day they are received. #-Sample(s) received at laboratory do not meet method specified temperature criteria.

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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 10:40

124030668.07

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-172**

Ammonia

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Ammonia as N	0.11	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

Biochemical Oxygen Demand

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
BOD	<4.0	4.0	mg/L	03/08/2024 16:38	SM 5210B	SUB8

Dissolved Oxygen

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Dissolved Oxygen	11	1	mg/L	03/07/2024 14:25	SM4500OG	LS

E.Coli Water

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
E. coli Bacteria	89	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Surfactants	<0.10	0.10	mg/L	03/09/2024 00:06	SM 5540C	SUB8

Phosphorus, as P

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Phosphorus, as P	0.213	0.01	mg/L	03/13/2024 12:00	SM4500PE-11	SUB8

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Date Reported : 22-Mar-24 16:05

REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 11:00

124030668.08

**Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700**

~~OF-145~~ **OF-4581**

Ammonia

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Ammonia as N	0.14	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

Biochemical Oxygen Demand

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
BOD	<4.0	4.0	mg/L	03/08/2024 16:38	SM 5210B	SUB8

Dissolved Oxygen

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Dissolved Oxygen	11	1	mg/L	03/07/2024 14:25	SM4500OG	LS

E.Coli Water

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
E. coli Bacteria	<1	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Surfactants	<0.10	0.10	mg/L	03/09/2024 00:09	SM 5540C	SUB8

Phosphorus, as P

<u>Analyte</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>Method</u>	<u>Analyst</u>
Phosphorus, as P	0.057	0.01	mg/L	03/13/2024 12:00	SM4500PE-11	SUB8

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REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 12:40

124030668.09

Tewksbury Wet Weather,
Tewksbury, MA, ENG23-0700
OF-3017

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.25	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	62	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	0.14	0.10	mg/L	03/08/2024 23:59	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 12:50

124030668.10

Tewksbury Wet Weather,
Tewksbury, MA, ENG23-0700
OF-3016

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.36	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	72	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	0.12	0.10	mg/L	03/09/2024 00:01	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 01:05

124030668.11

Tewksbury Wet Weather,
Tewksbury, MA, ENG23-0700
~~OF-252~~ OF-249

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.23	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	387	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	0.12	0.10	mg/L	03/09/2024 00:10	SM 5540C	SUB8

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REPORT OF ANALYSIS

sampled Date: 07-Mar-2024 12:20

124030668.12

Tewksbury Wet Weather,
 Tewksbury, MA, ENG23-0700
 OF-254

Ammonia

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Ammonia as N	0.11	0.05	mg/L	03/15/2024 12:00	E350.1	SUB8

Chloride

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Chloride	96	6	mg/L	03/07/2024 17:00	SM 4500Cl-B	LS

E.Coli Water

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
E. coli Bacteria	19	1	mpn/100mL	03/07/2024 15:30	SM 9223B	KPD

MBAS

Analyte	Result	Reporting Limit	Units	Analyzed	Method	Analyst
Surfactants	<0.05	0.05	mg/L	03/09/2024 00:11	SM 5540C	SUB8

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Solid samples are reported on a dry weight basis unless noted otherwise.
 Subcontract Laboratories: SUB2: Nelson Analytical Maine NH2019 SUB 7; Nelson Analytical EAI Div. NH1007; SUB4:NH2073, SUB5:NH2530, SUB8:NH2136, SUB9:NH2557
<http://des.nh.gov/organization/divisions/water/dwqb/nhlap/>
http://healthvermont.gov/enviro/ph_lab/PublicHealthLaboratory.aspx
<https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml>
<https://www.mass.gov/certified-laboratories>

12403-668, RP240322071

NELSON ANALYTICAL LAB

490 East Industrial Park Drive
 Manchester, NH 03109
 Phone: (603) 783-9097
 Fax: (603) 622-0200
 E-Mail: info@nelsonanalytical.com

Date Recd: _____ Time Recd: _____ Temp Recd: _____
 Received by: _____
 Checked by: _____
 Chlorine: Pos Neg N/A
 Bottles: 40ml HCL 40ml MeOH 40z Glass
 1L Amber HCL 250ml LC
 Other: _____

Turnaround Requirements

Please inquire about rush service; if we are able to meet your needs, we will not charge a rush fee. Please call for prior approval.
 Same day ()
 One Day ()
 Two Day ()
 Three Day ()
 Normal ()

Project Information

Project #: ENG 23-0700
 Project Name: TENKSBUry met Heather
 Town/Site: TENKSBUry MA
 Sampler: Andrew Mojciak
 Company: Heston & Sampson
 Project Manager: _____
 Report to: Andrew Mojciak
 Invoice to: Andrew Mojciak
 Phone: 603-600-8958
 E-Mail: amojciak.andrew@hessinc.com

Detection Requirements

Please specify any detection requirements:
 9 Soil DW Drinking Water GW Groundwater WW Wastewater SW Surface Water OX X Other (specify): _____

Sample Matrix Key

Receipt Conditions (Lab Use Only):
 Laboratory Supplied Containers? Yes No
 Containers Initialed/Property Labeled? Yes No
 Were samples derived on ice? Yes No
 Bought directly from field? Yes No
 Sample storage requirements:
 ROOM TEMP / FREEZER / REFRIGERATOR

Sample Information

Sample ID	Collection Date/Time	Sample Matrix (see key)	# of Containers	E.Coli	Ammonia	Surfactants	Phosphorus	Dissolved Oxygen	BOD	Chloride	Fecal Coliform	Laboratory ID
OF-148 -1	3/7 8:00		3	X	X	X						
OF-307 -2	3/7 8:40		3	X	X	X						
OF-171 -3	3/7 9:00		1					X				
OF-4152 -4	3/7 9:20		3	X	X	X						
OF-252 -5	3/7 9:45		3	X	X	X						
OF-253 -6	3/7 10AM		3	X	X	X						
DE-172 -7	3/7 10:40		6	X	X	X	X	X				
OF-415 OF-4581 -8	3/7 11:00		6	X	X	X	X	X				
OF-3017 -9	3/7 12:40		3	V	X	X						
OF-3016 -10	3/7 12:50		3	X	X	X						
OF-249 -11	3/7 1:05		3	X	X	X						
OF-854 -12	3/7 1220		3	X	X	X						

Relinquished by: _____

Received by: _____

NOTES

Date Recd: 3-7-24 Time Recd: 1400
 Recd by: RM Location: Ed
 Cooler: Pos Neg N/A
 Chlorine: Pos Neg N/A
 Bottles: 40ml HCL 40ml MeOH 40z Glass
 1L Amber HCL 250ml LC

Relinquished by: _____

Received by: _____

NOTES

FRM-NH-Environmental Sample Submission 07/08/05/2019

3-DI bottles 13-250ml

12403-668

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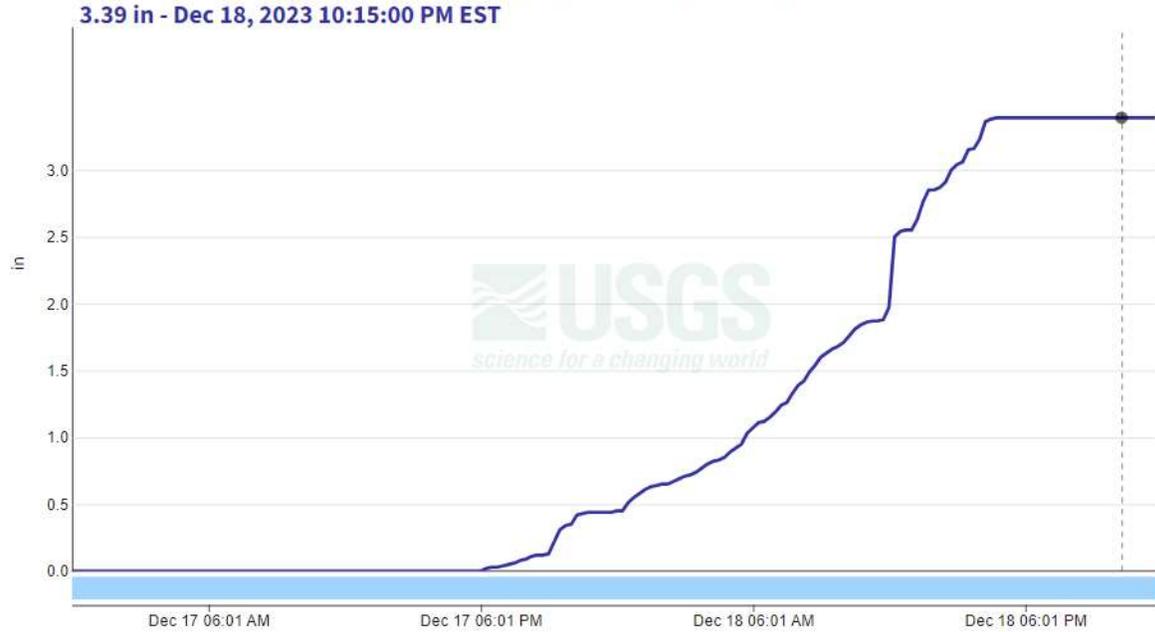
APPENDIX E

48-Hour Precipitation Totals

Shawsheen River at Balmoral Street at Andover, MA - 01100627

December 17, 2023 - December 18, 2023

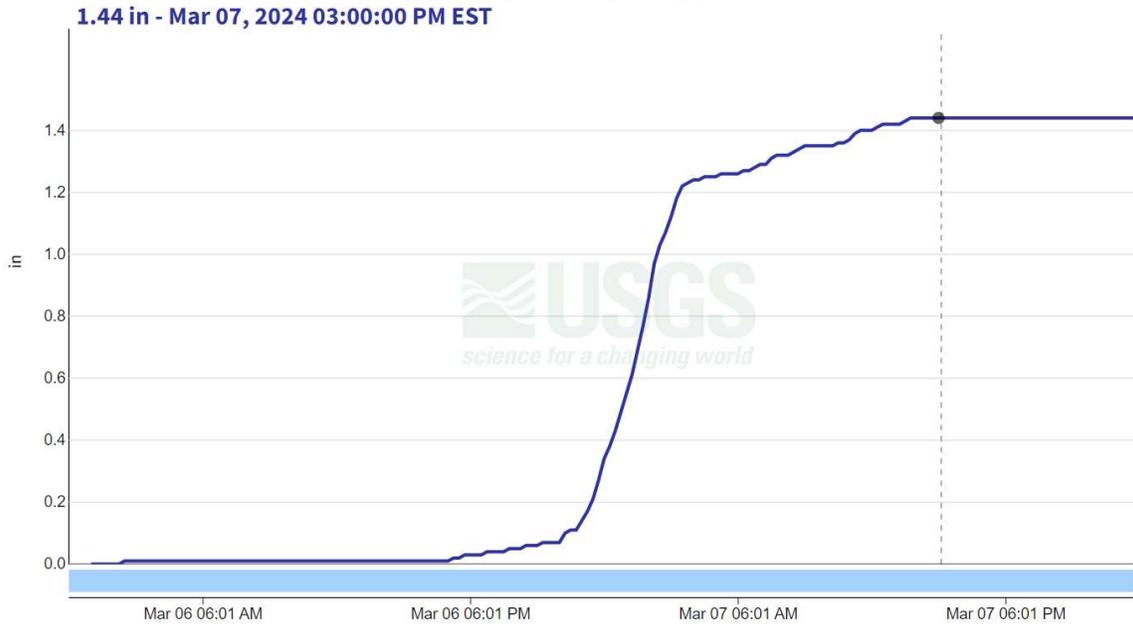
Precipitation, total, inches



Sampling took place on 12/18/2023 from 7:00AM to 3:00PM.

Shawsheen River at Balmoral Street at Andover, MA - 01100627

March 6, 2024 - March 7, 2024
Precipitation, total, inches



Sampling took place on 3/7/2024 from 7:00AM to 3:00PM.

APPENDIX F

Wet Weather Outfall Inspection Reports

