Town of East Longmeadow

STORMWATER MANAGEMENT PLAN

NPDES Permit # MA0410005

June 2019

Revision 1: June 2020

Revision 2: June 2021

Tighe&Bond
Engineers | Environmental Specialists

Tighe&Bond

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Commonly Used Abbreviations	Definition
BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit
CMRSWC	Central Massachusetts Regional Stormwater Coalition
CWA	Clean Water Act
EPA	Environmental Protection Agency
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
MACRIS	Massachusetts Cultural Resources Information System
MassDEP	Massachusetts Department of Environmental Protection
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
POTW	Publicly Owned Treatment Works
PVPC CRSWC	Pioneer Valley Planning Commission Connecticut River Stormwater Coalition
PY	Permit Year
SOP	Standard Operating Procedure
SSO	Sanitary Sewer Overflow
SWMP	Stormwater Management Program
TMDL	Total Maximum Daily Load
USFWS	U.S. Fish & Wildlife Service

SECTION 1

Section 1 Introduction

The Town of East Longmeadow is located in Hampden County in the Pioneer Valley region of western Massachusetts. East Longmeadow is a part of the City of Springfield Metropolitan Statistical Area, and is approximately five miles southeast of downtown Springfield. It is abutted by the Towns of Longmeadow to the west, Hampden to the east, and Wilbraham to the northeast, the City of Springfield to the north and northwest, and the Towns of Enfield and Somer, Connecticut to the south.

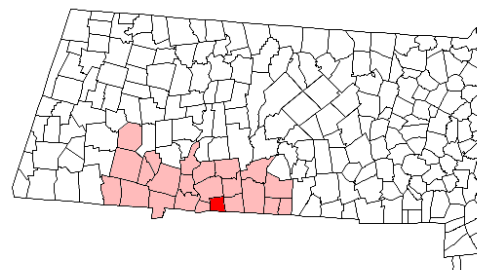

Figure 1.1 Location of East Longmeadow, Hampden County, Massachusetts

East Longmeadow is 13.0 square miles in size, of which 0.04 square miles is water, and is home to approximately 16,296 according to 2017 U.S. Census estimates.[1] Protecting the quality of East Longmeadow's water resources, including ponds, rivers, and groundwater supplies, is a priority for the Town. The Town has developed stormwater policy initiatives, provided education to its businesses and citizens, publicly discussed the issues related to stormwater runoff, and offered opportunities for residents and businesses to pitch in with clean-up efforts.

1.1 Purpose of this Plan

In an on-going effort to minimize stormwater impacts within East Longmeadow, the Town has developed this Stormwater Management Plan (SWMP). The SWMP is required by the U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts ("Small MS4 General Permit"). The SWMP describes and details the activities and measures that will be implemented by the Town to meet the terms and conditions of the permit.

The SWMP will be updated and/or modified during the permit term as the Town's activities are modified, changed, or updated to meet permit conditions. Other requirements of the Small MS4 General Permit, such as a Notice of Intent (NOI), Authorization to Discharge letter, and documentation showing Endangered Species Act and Historic Properties eligibility criteria have been certified and are located in the Appendices of this Plan.

1.2 Regulatory Requirements

1.2.1 Overview of EPA's NPDES MS4 Program

Through the NPDES program, the EPA nationally regulates the discharge of stormwater runoff that is transported into local water bodies via MS4s.

[1] https://www.census.gov/quickfacts/fact/table/eastlongmeadowtownhampdencountymassachusetts

EPA's MS4 stormwater program was enacted in two phases:

- Phase I, issued in 1990, requires *medium* and *large* cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges.
- Phase II, issued in 1999, requires regulated *small* MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges.

A **municipal separate storm sewer system (MS4)** is a conveyance or system of conveyances that is:

- owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.,
- designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches),
- not a combined sewer, and
- not part of a sewage treatment plant, or publicly owned treatment works (POTW).

In Massachusetts, the EPA Region 1 and the Massachusetts Department of Environmental Protection (MassDEP) jointly administer the municipal stormwater program. EPA and MassDEP originally authorized East Longmeadow to discharge stormwater in 2003 under a *NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems*, known as the "2003 General Permit."

Under the Small MS4 General Permit, the Town has developed and implemented a Stormwater Management Program to reduce the contamination of stormwater runoff. The Small MS4 Program contains six "minimum control measures" (MCMs) that, when implemented, should result in a reduction in pollutants discharged into receiving waters:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management
6. Good Housekeeping and Pollution Prevention

The 2003 General Permit expired in May 2008, but remained in full force and effect until a replacement permit was issued on April 13, 2016. The reissued NPDES *General Permit for Stormwater Discharges from Small MS4 in Massachusetts* substantially increases stormwater management requirements and mandates specific timelines for compliance.

This SWMP was developed to be consistent with the requirements of the 2016 Small MS4 General Permit for Massachusetts. Once implemented, the SWMP described herein will satisfy the requirements for compliance under the 2016 Small MS4 General Permit.

1.2.2 East Longmeadow's Regulated Area

The Town of East Longmeadow meets EPA's regulatory threshold for Phase II of the MS4 program, and therefore is required to be covered under a NPDES permit for its stormwater discharges from the MS4 in its Urbanized Area.

The Town of East Longmeadow is charged by the EPA with operating and maintaining its MS4 to manage stormwater runoff, as well as to protect public health and safety, preserve environmental resources, and safeguard town character.

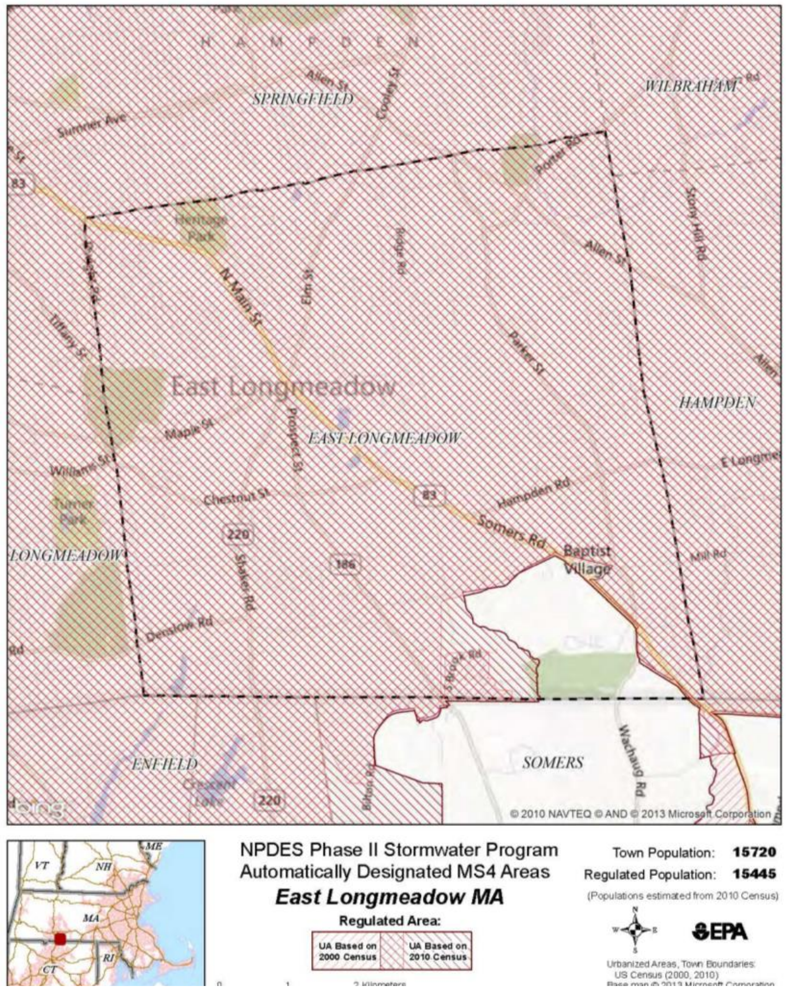

Figure 1.2. East Longmeadow's Urbanized Area based on 2000 and 2010 Census data.

Urbanized Areas (also known as "regulated areas") are defined by the latest U.S. decennial census. An urbanized area encompasses a densely settled territory that consists of core census block groups or blocks that have a population of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile or are included to link outlying densely settled territory with a densely settled urban core. [2]

According to EPA Region 1, the area covered by the 2000 census and the 2010 census are regulated by EPA under the MS4 program. East Longmeadow is considered nearly entirely to be urbanized area regulated under the MS4 program, as illustrated by the hatching in Figure 1.2,[3] with the exception of the corner of the Town southeast of Pease Road.

[2] U.S. EPA. *Fact Sheet: Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts.* September 2014. For a complete definition of Urbanized Area see Census Bureau; Urban Area Criteria for the 2010 Census, 76 Federal Register 53030 (August 24, 2011) https://www.federalregister.gov/documents/2011/08/24/2011-21647/urban-area-criteria-for-the-2010-census

[3] https://www3.epa.gov/region1/npdes/stormwater/ma/ram/east-longmeadow.pdf

1.3 East Longmeadow's Stormwater Management Program under the 2003 Small MS4 General Permit

East Longmeadow’s stormwater management program is managed within the Department of Public Works (DPW). Currently, stormwater management tasks are carried out by various Town departments and volunteer boards, including the Town Manager, Planning and Community Development Department, Planning Board, Health Department, Conservation, Building Department, and Town Council.

The Town of East Longmeadow has achieved all of the measurable goals for the BMPs selected in the 2003 NOI and those added in subsequent years to reflect unplanned stormwater activities by the Town. The following paragraphs include brief descriptions of current practices the Town undertakes as part of its Stormwater Management Program.

1.3.1 MCM 1: Public Education and Outreach

The Town met the 2003 General Permit requirement of distributing educational material to the community early in the permit term by passive distribution of educational materials. The Town continues to utilize the DPW webpage and passive distribution of brochures to disseminate information regarding stormwater pollution, management, and permitting. The Town has provided stormwater brochures at Town Hall, the Library, and the DPW office; distributed an Environmental Services Booklet at Town Hall office; and maintains a poster with information on the NPDES program in the lobby of the Library and a display board with stormwater information outside of DPW offices.

The DPW maintains a designated Stormwater webpage,[4] which includes information about and links to the Town’s stormwater management by-law, stormwater rules and regulations, stormwater application, stormwater application checklist, and EPA’s 2016 Massachusetts Small MS4 General Permit.

Information about the Town’s recycling program is also available on the Town website, which discourages illegal dumping and improper disposal of hazardous materials and yard waste. In addition to curbside pickup of solid waste and recyclables, the Town publishes links to a brochure on the benefits of composting; textiles disposal options; information on medication and sharps disposal; the Town of East Longmeadow Somers Road Transfer Station, which is open Saturdays and Wednesdays; and various recycling events.

1.3.2 MCM 2: Public Involvement and Participation

The Town posts notices of public meetings and hearings on the Town website, which complies with State and Local public meeting notice requirements. The Town provides many opportunities for the public to participate in implementation of the stormwater management program. Residents of all ages can participate in pollution prevention, such as recycling and proper disposal of household hazardous waste. The Town previously participated annually in a 5-Town hazardous waste collection day, and currently allows for households to dispose of up to $100 worth of hazardous waste annually via a partnership with NEDT, a household hazardous waste collection center in Westfield, MA.[5]

[4] https://www.eastlongmeadowma.gov/191/Stormwater

[5] https://www.eastlongmeadowma.gov/751/Hazardous-Waste

1.3.3 MCM 3: Illicit Discharge and Detection Elimination

The Town has developed and implemented an IDDE program in accordance with the requirements of the 2003 General Permit.

The Town met the illicit discharge educational requirements through press releases and website article publication early in the permit term. All known stormwater outfalls are mapped in the Town's GIS, and new outfalls are added as they are constructed or identified. The Town's *Stormwater Management By-Law* (Section 8.070, as revised 3/15/2012[6]) prohibits illicit connections and unauthorized discharges to the MS4, defines prohibited non-stormwater discharges, and establishes the Town's authority to ensure compliance through inspection, monitoring, and enforcement.

The DPW has been working with the Board of Health and local businesses to identify failing septic systems and illicit discharges, and utilizes a camera system to inspect stormwater lines for illicit connections.

1.3.4 MCM 4: Construction Site Stormwater Runoff Control and MCM 5: Post-Construction Stormwater Management

The Town of East Longmeadow *Stormwater Management By-Law* (Section 8.070, as revised 3/15/2012) applies to activities that will result in disturbance of one or more acres of land or will be part of a project that will disturb greater than one acre, and requires proponents of such projects to prepare, submit, and follow a stormwater management and erosion control plan. The by-law includes penalties for violations, and the associated *Rules and Regulations for the Management of Stormwater*[7] contain inspection and long-term operation and maintenance requirements. A stormwater inspection checklist is available on the stormwater website,[8] and the DPW reviews site plans undergoing the Planning Board approval process.

1.3.5 MCM 6: Pollution Prevention and Good Housekeeping

The Town of East Longmeadow has developed and implemented a robust Good Housekeeping and Pollution Prevention Program. The Town sweeps roads annually in the spring and collector roads are swept a second time. The Town has developed a GIS based application to track inspection and cleaning of catch basins, and annually cleans at least 33% of all catch basins in Town. Maintenance/housekeeping training is held annually.

The Town has completed a Stormwater Pollution Prevention Plan (SWPPP) for the transfer station, and continues to implement BMPs described in the SWPPP. The winter road maintenance program includes use of an automated salt spreader to monitor and limit salt application. The Town implements a municipal maintenance program, including inspections and cleaning of oil-water separator in the vehicle wash bay system.

1.3.6 Additional Permit Requirements

1.3.6.1 Groundwater Recharge and Infiltration

Section 4.2, Stormwater Management Performance Standards of the Town's *Rules and Regulations for the Management of Stormwater* requires that loss of annual recharge to

[6] https://www.eastlongmeadowma.gov/DocumentCenter/View/87/StormWater-Management-By-Law

[7] https://www.eastlongmeadowma.gov/DocumentCenter/View/139/SW-Rules-and-Regulations

[8] https://www.eastlongmeadowma.gov/DocumentCenter/View/137/Stormwater-Inspection-Checklist

groundwater be minimized through the use of infiltration measures to the maximum extent practicable.

Additionally, per Section 4.3 Erosion and Sediment Control Performance Standards, the erosion and sediment control plan should be designed to maximize groundwater recharge.

1.3.6.2 Record Keeping

The Town maintains stormwater management program records and summarizes the actions taken by MCM in the annual report to EPA.

1.3.6.3 Discharges to Water Quality Impaired Waters and Total Maximum Daily Load (TMDL) Allocations

Per the Massachusetts Year 2014 Integrated List of Waters,[9] there are no water quality impaired waters identified within the Town of East Longmeadow.

1.4 Summary of Requirements of EPA's 2016 Small MS4 General Permit

EPA released a draft of a "next generation" Massachusetts Small MS4 General Permit for public comment on September 30, 2014. Following the public comment period and public hearings (which ended February 29, 2015), EPA responded to comments and finalized and promulgated the permit. The final permit was issued on April 13, 2016 with an effective date of July 1, 2017. On June 29, 2017, the EPA administratively postponed the effective date of the permit for one year to July 1, 2018. The MassDEP also adopted this delayed effective date.

The 2016 Small MS4 General Permit[10] is intended to be more prescriptive than the 2003 General Permit, and to build upon the regulations already in place. The new General Permit substantially increases stormwater management requirements and mandates specific timelines for compliance, as summarized below:

1. **Public Education and Outreach**: More specific messages required and prescriptive deadlines compared to the 2003 Small MS4 General Permit.
2. **Public Involvement and Participation**: Public notice of the SWMP and an annual public meeting to provide an opportunity for public comments are required.
3. **Illicit Discharge Detection and Elimination (IDDE) Program**: Interconnections are required to be added to the outfall inventory. Catchment areas need to be delineated and investigations prioritized. Dry weather screening and sampling of high priority and low priority MS4 interconnections and outfalls is required to be performed by the end of permit year (PY) 3. Wet weather screening is required to be performed in the spring for catchments with the presence of one or more System Vulnerability Factors. For impaired waters without TMDLs, a multi-step approach to address the discharges is required to be implemented, including Best Management Practices (BMPs), source identification, and an evaluation of retrofit feasibility.

[9] https://www.mass.gov/files/documents/2016/08/sa/14list2_0.pdf

[10] https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/final-2016-ma-sms4-gp.pdf

4. **Construction Site Stormwater Runoff Control**: If they do not already exist, inspection and enforcement procedures are required to be added to the site plan review procedure.
5. **Stormwater Management in New Development and Redevelopment**: For new development, the first inch of runoff from all impervious surfaces on site is required to be retained on-site, or pollutant removal shall be provided via a BMP. For redevelopment, the first 0.80 inches of runoff is required to be retained from all impervious surfaces on site or pollutant removal shall be provided via a BMP. Offsite mitigation may be used for redevelopment projects.
6. **Good Housekeeping and Pollution Prevention**: A program to repair and rehabilitate the MS4 infrastructure is required to be developed, and municipal streets are required to be swept/cleaned a minimum of once per year in the spring. All activities that occur at a municipal facility and potential pollutants associated with each activity are required to be included in the SWPPP for the facility.
7. **TMDLs**: Increased requirements for public outreach, street sweeping, and pollution source identification and removal relative to the 2003 Small MS4 General Permit.

According to Section 1.10.b of the 2016 General Permit, East Longmeadow must modify or update the BMPs being implemented under the 2003 General Permit to meet the terms and conditions of part 2.3 of the 2016 General Permit. **Appendix B** includes a list of BMPs completed under the 2003 Small MS4 General Permit and BMPs included in the NOI and SWMP which comply with the 2016 Small MS4 General Permit. This list identifies how the intent of each 2003 BMP is being met under the 2016 BMPs.

1.5 Authorization for East Longmeadow to Discharge Stormwater

An NOI must be submitted within 90 days of the effective date of the permit. A copy of the NOI submitted to EPA on September 26, 2018[11] is included in **Appendix A**. Documentation of the Town of East Longmeadow's Authorization to Discharge, issued by EPA on May 30, 2019,[12] is also provided in **Appendix A**.

1.6 General Eligibility Determination

Section 1.2.1 of the Small MS4 General Permit authorizes the discharge of stormwater from small MS4s if the MS4 is determined to meet general eligibility criteria:

- *Small MS4 within the Commonwealth of Massachusetts*
- *Not a large or medium MS4 as defined in 40 CFR 122.26(b)(4) or (7)*
- *Located either fully or partially within an urbanized area as determined by the 2010 Census or located in a geographic area designated by EPA as requiring a permit*

The Town of East Longmeadow is located within Hampden County, Massachusetts. The population of East Longmeadow is 16,291 according to 2017 Census data,[13] the MS4 is

[11] https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/east-longmeadow.pdf

[12] https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/east-longmeadow-auth.pdf

[13] https://www.census.gov/quickfacts/eastlongmeadowtownhampdencountymassachusetts

not within a designated County, and the Town has not been designated by the Director as part of a large or medium MS4. As shown on Figure 1.2, based on 2000 and 2010 census listings, East Longmeadow is partially located within an urbanized area.

1.7 Special Eligibility Determinations

1.7.1 Endangered Species Act

On behalf of the Town of East Longmeadow, Tighe & Bond completed the Endangered Species Act Eligibility Determination screening process in accordance with Part 1.9.1 and Appendix C of the 2016 Small MS4 General Permit, and determined that the Town of East Longmeadow meets Criterion C, wherein the Town's stormwater discharges and discharge related activities will have "no affect" on federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the US Fish and Wildlife Service (USFWS).

Refer to **Appendix C** of the SWMP for supporting information, including the USFWS Official Species List for the project area and the Endangered Species Act Certification.

1.7.2 National Historic Properties

On behalf of the Town of East Longmeadow, Tighe & Bond completed the National Historic Preservation Act Eligibility Determination screening process in accordance with Part 1.9.2 and Appendix D of the Small MS4 General Permit, and determined that the Town of East Longmeadow meets Criterion A, as the discharges do not have the potential to cause effects on historic properties.

Refer to **Appendix D** of the SWMP for supporting information, including a list of the federal- and state-listed historic areas, buildings, burial grounds, objects, and structures in the Town of East Longmeadow's regulated area from the Massachusetts Cultural Resource Information System (MACRIS) and the National Register of Historic Places.

1.8 SWMP Program Implementation

In April of 2019, the East Longmeadow Town Council approved a bylaw creating a Stormwater Enterprise Fund to support the Town's stormwater management program and services.[14]

As required by Section 1.10.2 of the 2016 Small MS4 General Permit, Table 1-1 below includes the names and titles of people responsible for program implementation, and shall be updated annually. If a position is unfilled, the title of the position shall be listed and the SWMP will be modified to include the name once the position is filled.

[14] https://www.eastlongmeadowma.gov/DocumentCenter/View/7816/Stormwater-Enterprise-Fund-Bylaw

Table 1-1
Names and Titles of Persons Responsible for SWMP Implementation

Name	Title	Department	Contact Information	Role / Responsibilities
Bruce Fenney	Superintendent	DPW	(413) 525-5400 ext. 1200 Bruce.Fenney@EastLongmeadowMA.gov	Manages the Town's SWMP and compliance with the MS4 Permit. Oversees stormwater operations, including outfall screening, IDDE training, and the Good Housekeeping program
Thomas O'Brien	Chair	Conservation Commission	(413) 525-5400 ext. 1700	Assists with development of construction regulations, inspections, and enforcement
Mary E. McNally	Town Manager	Town Manager	(413) 525-5400 ext. 1100 TownManager@EastLongmeadowMA.gov	Assists with development of construction and post-construction regulations, retrofit inventory, green infrastructure report, low impact design report
Bethany Yeo	Director	Planning and Community Development	(413) 525-5400 ext. 1700 Bethany.Yeo@EastLongmeadowMA.gov	Assists with development of construction and post-construction regulations, public outreach and education, retrofit inventory, green infrastructure report, low impact design report
Michael J. Kane	Council President	Town Council	Michael.Kane@EastLongmeadowMA.gov	Assists with development of retrofit inventory, green infrastructure report, low impact design report

SECTION 2

Section 2
Watershed Resources

2.1 Watershed Inventory

The Town of East Longmeadow is located within the Connecticut River and Scantic River sub-watersheds within the Connecticut River watershed (Figure 2.1), which is a part of the Long Island Sound Drainage Basin (Figure 2.2).

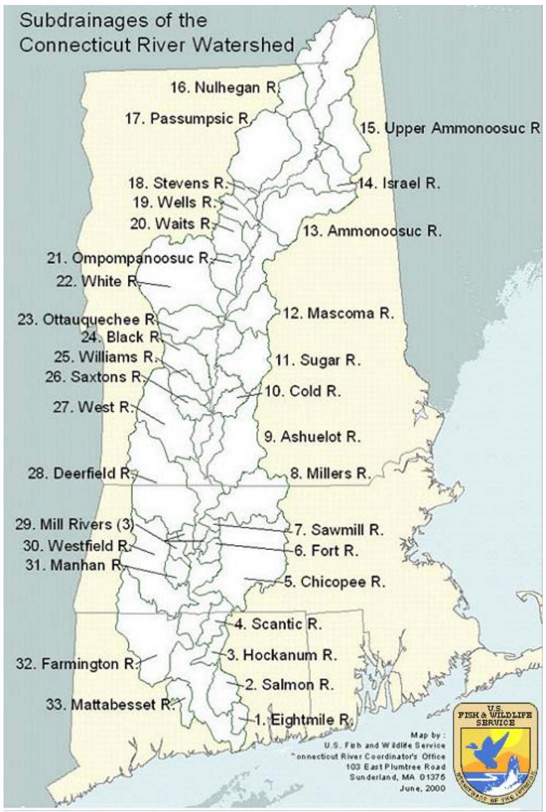

Figure 2.1. Subdrainage Basins of the CT River Watershed; the Scantic River subdrainage is labeled as number 4.

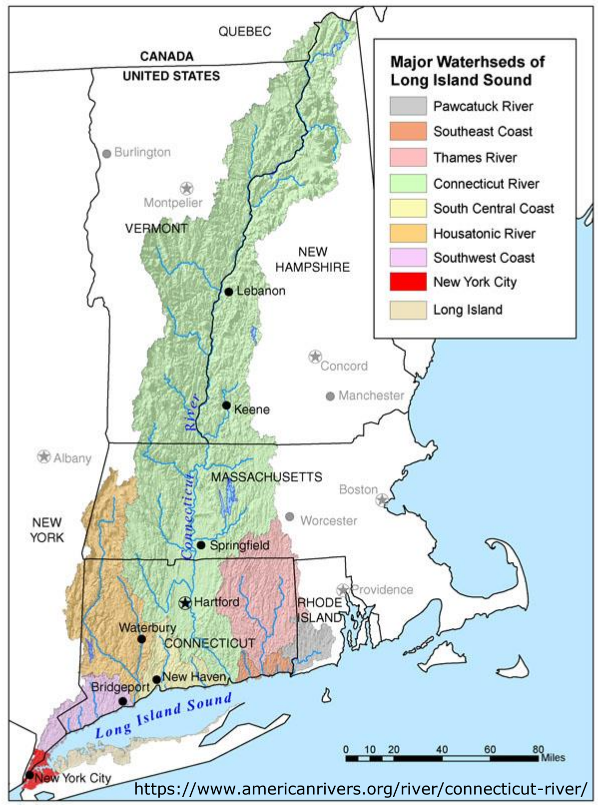

Figure 2.2. Major Watersheds of the Long Island Sound Drainage Basin; the Connecticut River is highlighted in green.

Within East Longmeadow, the main tributary streams are Pecousic Brook (in the northwest), Watchuag Brook (in the southeast), Mill River (in the northeast), and Jawbuck Brook and Freshwater Brook (in the southwest).

The Town has abundant wetland resource areas, primarily adjacent to streams and brooks with some isolated pockets of wetland areas. There is a mapped high yield aquifer within the southwest corner of the Town, but the aquifer is not currently in use as a drinking water supply.

The Town purchases its water from the City of Springfield, which sources its drinking water from the Cobble Mountain Reservoir in the town of Blandford, Massachusetts.[15]

2.2 Receiving Waters

The following table lists all receiving waters, impairments, and number of outfalls discharging to each waterbody segment. Receiving waters and outfalls are also shown on the map provided with the NOI in **Appendix A**. Annual updates to the summary of receiving waters and number of outfalls are provided in **Appendix F**.

Table 2-1
Summary of Receiving Waters and Number of Outfalls

Waterbody Segment that Receives Flow from the MS4	Number of Outfalls into Receiving Water Segment	Pollutant(s) Causing Impairments
Freshwater Book	5	N/A
Wetland/tributary to Freshwater Brook	1	N/A
Pecousic Brook	25	N/A
Wetland/Tributary to Pecousic Brook	7	N/A
Schnelock Brook	3	N/A
Wetland/Tributary to Schnelock Brook	2	N/A
South Branch Mill River	7	N/A
Wetland/Tributary to South Branch Mill River	23	N/A
Watchuag Brook	1	N/A
Wetland/Tributary to Watchuag Brook	34	N/A
Wetland/Tributary to Jawbuck Brook Reservoir	3	N/A
Wetland/Tributary to Unnamed Pond on Somers Road	1	N/A
Isolated Wetland Chestnut Street	3	N/A
Isolated Wetland Evergreen Drive	4	N/A
Isolated Wetland Melvin Avenue	1	N/A
Isolated Wetland Pease Road	3	N/A
Isolated Wetland Prospect Street	1	N/A
Isolated Wetland Shaker Road	2	N/A
Interconnections with Springfield	4	N/A
Interconnections with Longmeadow	5	N/A
Outside Receiving Water	196	
Total	**331**	

[15] https://www.eastlongmeadowma.gov/183/About-Our-Water

None of the receiving waters within East Longmeadow are identified as having pollutants causing impairments per the Massachusetts Year 2014 Integrated List of Waters, as further discussed in Section 2.3.

2.3 Water Quality

2.3.1 2014 Integrated List of Waters

To meet the requirements of the Clean Water Act (CWA), States must assess and categorize surface water bodies for attainment of designated uses (habitat for fish, fish and shellfish consumption, swimming, etc.).

States must also identify any water bodies that are not expected to meet surface water quality standards after implementation of technology-based controls. These sources are prioritized for establishing TMDLs for use in permit setting.

Massachusetts meets the CWA reporting requirements through the creation of an Integrated Waters List in which waters are categorized as follows:

- Category 1: Unimpaired
- Category 2: Attaining some uses; others not assessed
- Category 3: No uses assessed
- Category 4a: TMDL completed
- Category 4b: Impairment controlled by alternative pollution control requirements
- Category 4c: Impairment not caused by pollutant (i.e., by non-native aquatic plants)
- Category 5: TMDL required

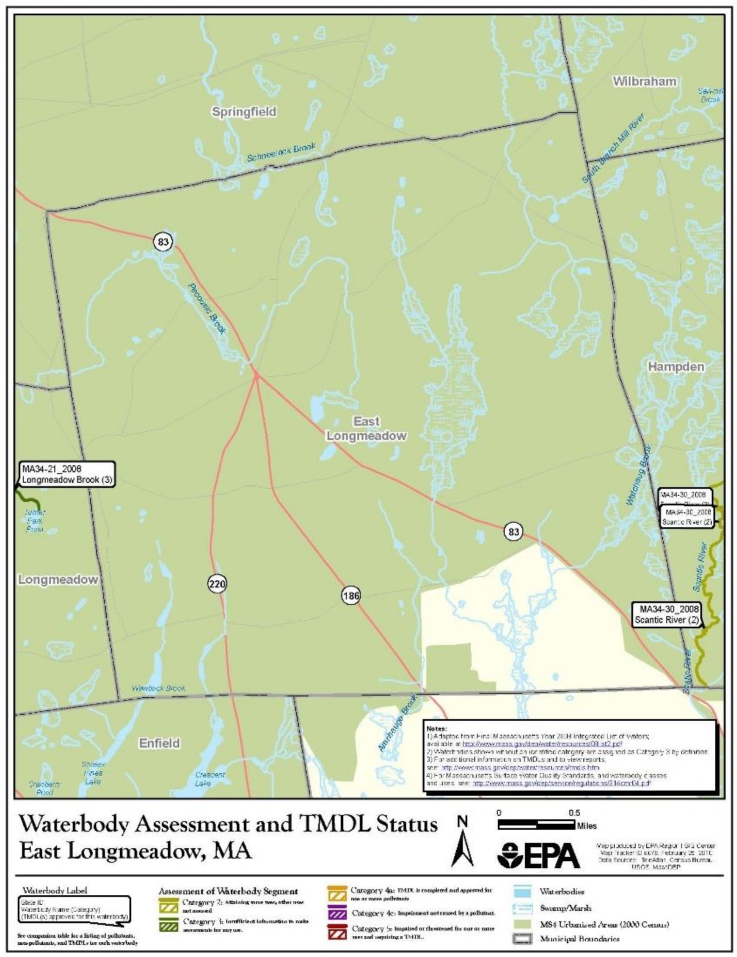

Figure 2.3. 2010 Waterbody Assessment and TMDL Status Map of East Longmeadow.

As of the date of this SWMP, Massachusetts waters categorized as impaired surface waters were identified in the Final Massachusetts Year 2014 Integrated List of Waters. The 2014 Integrated List does not include any waterbodies located within the Town of East Longmeadow. Figure 2.3, a waterbody assessment and TMDL status summary figure from 2010, also shows no impaired waterbodies within East Longmeadow.

A draft 2016 Integrated List of Waters is available from MassDEP,[16] which has not been finalized as of the date of this SWMP, and is not yet the official EPA 303(d) list. The 2016 Integrated List also does not include any waterbodies located within the Town of East Longmeadow.

As of June 2021, the Massachusetts Year 2016 Integrated List of Waters has been finalized,[17] and a draft Massachusetts Year 2018/2020 Integrated List of Waters[18] has been made available for public review. Neither the Year 2016 nor the Year 2018/2020 Integrated Lists identify any new impaired waters within the Town of East Longmeadow.

2.3.2 Applicable TMDLs

The Connecticut River watershed contributes to the Long Island Sound. Although none of the receiving waterbodies in East Longmeadow are impaired for nitrogen according to the Massachusetts Integrated List of Waters, the Town of East Longmeadow is required by EPA to incorporate additional MCMs and BMPs to address the Final TMDL for Nitrogen in the Long Island Sound.

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[16] MassDEP, Bureau of Water Resources, "Draft Massachusetts Year 2016 Integrated List of Waters". June 2017. Accessed online at: https://www.mass.gov/files/documents/2017/08/zu/16ilwplist.pdf

[17] MassDEP, Bureau of Water Resources, "Massachusetts Year 2016 Integrated List of Waters". December 2019. Accessed online at: https://www.mass.gov/doc/final-massachusetts-year-2016-integrated-list-of-waters/download

[18] MassDEP, Bureau of Water Resources, "Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle – Draft for Public Comment". April 2021. https://www.mass.gov/doc/draft-massachusetts-integrated-list-of-waters-for-the-clean-water-act-20182020-reporting-cycle/download

SECTION 3

Section 3
BMPs to Address 2016 Small MS4 GP MCMs

3.1 MCM 1: Public Education and Outreach

Objective: *The permittee shall implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced.*

This section of the SWMP describes how to comply with the Public Education and Outreach requirements in General Permit Section 2.3.2.

3.1.1 MCM 1 BMPs from NOI

BMP ID	BMP Media/ Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1A	Multi-media (print and web materials)	Distribute an annual message in the spring (Apr/May) that encourages proper use and disposal of grass clippings and encourages use of slow-release fertilizers Distribute an annual message in the summer (Jun/Jul) that encourages proper management of pet waste Distribute an annual message in the fall (Aug/Sept/Oct) that encourages proper disposal of leaf litter	Residents	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of three (3) timed messages annually on specific Nitrogen TMDL related topics	2018

BMP ID	BMP Media/ Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1B	Multi-media (print and web materials)	Distribute an annual message in the spring (Apr/May) that encourages proper use and disposal of grass clippings and encourages use of slow-release fertilizers Distribute an annual message in the summer (Jun/Jul) that encourages proper management of pet waste Distribute an annual message in the fall (Aug/Sept/Oct) that encourages proper disposal of leaf litter	Businesses, Institutions, and Commercial Facilities	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of three (3) timed messages annually on specific Nitrogen TMDL related topics	2018
1C	Multi-media (print and web materials)	Education and outreach on stormwater management topics of significance in East Longmeadow (including proper erosion and sedimentation control, permit requirements, and design standards). Educational topics will include but are not limited to those in Part 2.3.2.d.iii	Developers (Construction)	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of two (2) educational messages spaced at least a year apart	2019
1D	Multi-media (print and web materials)	Education and outreach on stormwater management topics of significance in East Longmeadow (including pollution prevention, illicit discharges, information about the Multi-Sector General Permit). Educational topics will include but are not limited to those in Part 2.3.2.d.iv	Industrial Facilities	DPW	Distribute a minimum of two (2) educational messages spaced at least a year apart	2020

3.1.2 MCM 1 Implementation Plan

BMP 1A Education and Outreach to Residents

Education and outreach goals for BMP 1A include:

- Increasing awareness of the impact of human activities on stormwater runoff and water quality
- Changing residential behavior over time
- Reaching broad audiences with information that appeals to a diverse public
- Meeting the education and outreach requirements of the 2016 Small MS4 General Permit Appendix F part B.I., Nitrogen TMDL requirements associated with the Long Island Sound TMDL

East Longmeadow will distribute annual timed messages in accordance with the requirements of 2016 Small MS4 General Permit Appendix F part B.I. as follows:

- Annual spring message (April/May) encouraging proper use and disposal of grass clippings and encourages use of slow-release fertilizers
- Annual summer message (June/July) encouraging proper pet waste management
- Annual fall message (August/September/October) encouraging proper disposal of leaf litter

The Town will build upon the existing public education and outreach program to disseminate educational materials to residents via the internet, email, direct mailing, local cable channel, and/or public posting. The Town will coordinate public educational strategies with the Pioneer Valley Planning Commission's Connecticut River Stormwater Committee (PVPC CRSWC) and take advantage of existing materials wherever possible. Section 3.1.5 includes free resources the Town can take advantage of to supplement the program, including educational documents targeted towards residents.

BMP 1B Education and Outreach to Businesses, Institutions, and Commercial Facilities

Education and outreach goals for BMP 1B include:

- Increasing awareness of business practices that may contribute to stormwater pollution
- Changing behavior over time
- Improving compliance with local code
- Meeting the education and outreach requirements of 2016 Small MS4 General Permit Appendix F part B.I., Nitrogen TMDL requirements associated with the Long Island Sound TMDL

East Longmeadow will distribute annual timed messages in accordance with the requirements of 2016 Small MS4 General Permit Appendix F part B.I. as follows:

- Annual spring message (April/May) encouraging proper use and disposal of grass clippings and encourages use of slow-release fertilizers
- Annual summer message (June/July) encouraging proper pet waste management
- Annual fall message (August/September/October) encouraging proper disposal of leaf litter

The Town will build upon the existing public education and outreach program to disseminate educational materials to businesses, institutions, and commercial facilities within Town via the internet, direct mailing, and/or posting of print materials at public buildings. The Town will coordinate public educational strategies with PVPC CRSWC and take advantage of existing materials wherever possible. Section 3.1.5 includes free resources the Town can take advantage of to supplement the program, including educational documents targeted towards businesses, institutions, and commercial facilities.

BMP 1C Education and Outreach to Developers

Education and outreach goals for BMP 1C include:

- Increasing awareness of the impact of construction activities on stormwater runoff and water quality
- Changing developer behavior over time
- Improving compliance with local code

East Longmeadow will provide educational materials and general outreach to developers for stormwater management topics relevant to East Longmeadow. Topics may include:

- Proper sediment and erosion control management practices
- Information about Low Impact Development (LID) principles and technologies
- Information about EPA’s construction general permit (CGP)

The Town will build upon the existing public education and outreach program to disseminate educational materials to developers via the internet and/or attaching educational materials to permit applications. The Town will coordinate public educational strategies with PVPC CRSWC and take advantage of existing materials wherever possible. Section 3.1.5 includes free resources the Town can take advantage of to supplement the program, including educational documents targeted towards developers.

BMP 1D Education and Outreach to Industrial Facilities

Education and outreach goals for BMP 1D include:

- Increasing awareness of industrial activities that may contribute to stormwater pollution
- Changing behavior over time
- Improving compliance with local code

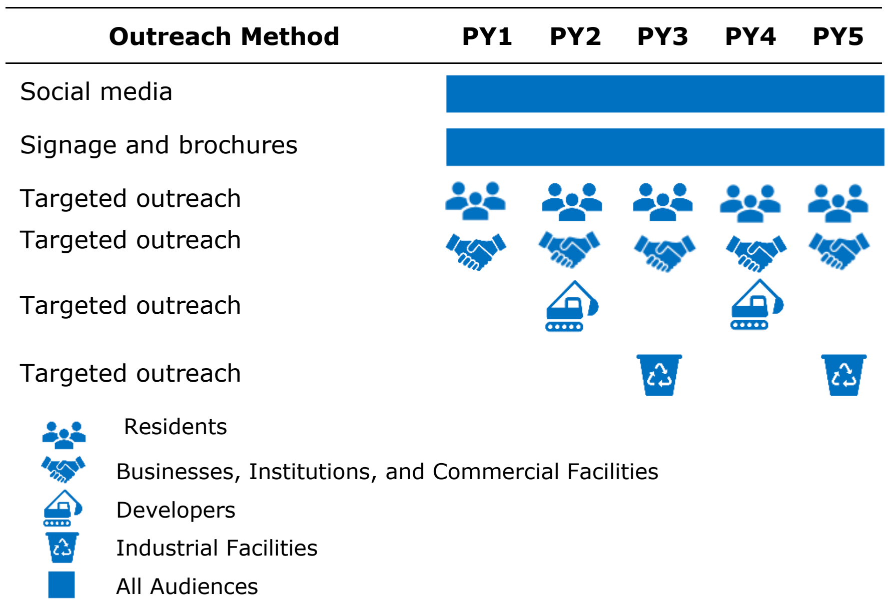
East Longmeadow will provide educational materials and general outreach to industrial facilities within Town for stormwater management topics relevant to East Longmeadow. Topics may include:

- Equipment inspection and maintenance
- Proper storage of industrial materials (emphasize pollution prevention)
- Proper management and disposal of wastes
- Proper management of dumpsters
- Minimization of use of salt or other de-icing/anti-icing materials

- Proper storage of salt or other de-icing/anti-icing materials (cover/prevent runoff to storm system and groundwater contamination)
- Benefits of appropriate on-site infiltration of stormwater runoff from areas with low exposure to industrial materials such as roofs or employee parking
- Proper maintenance of parking lot surfaces (sweeping)
- Requirements for coverage under EPA's Multi-Sector General Permit (MSGP)

The Town will build upon the existing public education and outreach program to disseminate educational materials to industrial facilities within Town via the internet and/or direct mailing. The Town will coordinate public educational strategies with PVPC CRSWC and take advantage of existing materials wherever possible. Section 3.1.5 includes free resources the Town can take advantage of to supplement the program, including educational documents targeted towards industrial facilities.

3.1.3 MCM 1 Implementation Schedule



3.1.4 Public Education and Outreach Goals and Progress

Per Section 2.3.2.e of the General Permit, the public education and outreach program shall provide focused messages for specific audiences and show evidence that progress toward the goals of the program have been achieved. The following methods may be used by the Town to evaluate the effectiveness of the educational messages and overall education program:

- Quantify the number of each audience that is reached during direct mailings
- Track changes in behavior for specific issues addressed with education throughout the permit term (e.g., issues with erosion/sediment control during construction, pet waste bags found in catch basins, etc.)

The above methods used to evaluate the effectiveness of the program, and any additional methods developed after the date of this SWMP, shall be tied to the defined goals of the program and the overall objective of changes in behavior and knowledge.

3.1.5 MCM 1 Guidelines and Resources

The following links include free or low-cost resources East Longmeadow can use to supplement the Public Education program.

EPA Public Education
https://cfpub.epa.gov/npstbx/

EPA Stormwater Management Program Resources – Public Education
https://www.epa.gov/npdes-permits/stormwater-tools-new-england#peo

EPA Stormwater Education Toolkit (SET)
http://www.stormwater.ucf.edu/toolkit/

EPA National Menu of BMPs for Stormwater
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#edu

MassDEP Public Education
https://www.mass.gov/guides/stormwater-outreach-materials-to-help-towns-comply-with-the-ms4-permit

Developing an Effective Stormwater Education and Outreach Program for Your Community
http://www.urbanwaterslearningnetwork.org/wp-content/uploads/2016/04/Manual-Stormwater-Education-and-Outreach_2014.pdf

EPA - *Evaluation of the Role of Public Outreach and Stakeholder Engagement in Stormwater Funding Decisions in New England: Lessons from Communities*
https://www.epa.gov/sites/production/files/2015-09/documents/eval-sw-fundingnew-england.pdf

Urban Waters
http://www.nmstormwater.org/for-municipalities

Think Blue Massachusetts: Residents, Businesses, Developers, Industrial Facilities, and MS4 Communities
https://www.thinkbluemassachusetts.org/

3.1.6 MCM 1 Checklist of Key Documentation

Annual reports will summarize implementation of the public education and outreach program, and any changes to the proposed plan, while documentation of BMP progress will be kept in Appendix F. The following checklist includes the required documentation for MCM 1. See Section 5 of this Plan for additional record keeping information.

- ☐ All educational materials provided to target audiences
- ☐ Distribution lists for target audiences
- ☐ Dates of distribution of educational materials
- ☐ Annually track changes in social media subscription and use
- ☐ Note educational goals and opinion on effectiveness based on results tracked; modify education and outreach program if necessary

3.2 MCM 2: Public Involvement and Participation

Objective: *The permittee shall provide opportunities to engage the public to participate in the review and implementation of the SWMP.*

This section of the SWMP describes how to comply with the Public Involvement and Participation requirements in General Permit Section 2.3.3.

3.2.1 MCM 2 BMPs from NOI

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
2A	Public Review	SWMP review (Plan and reports available at public meetings)	DPW	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2018
2B	Public Participation	Provide public participation opportunities (e.g., clean-up events)	All Town Departments, Boards, and Committees	Ongoing compliance	2018

3.2.2 MCM 2 Implementation Plan

<u>BMP 2A Stormwater Management Plan Public Review</u>

East Longmeadow shall provide the public with an opportunity to review this Stormwater Management Plan prior to finalizing it, and with other opportunities to participate in the Town's Stormwater Program on an annual basis.

While the DPW is the responsible party for this BMP, multiple Town Departments can help aid in successful implementation, as public participation in stormwater management initiatives often crosses Departments.

This SWMP was presented at a public meeting on June 25, 2019 to solicit input from the general public. Additionally, the SWMP is available to the public for review and comment at the DPW office.

<u>BMP 2B Public Participation in Stormwater Management Program</u>

Public involvement and participation goals for BMP 2B include:

- Increasing public involvement in and knowledge of East Longmeadow's stormwater program
- Improving water quality through local clean up and waste collection events

East Longmeadow shall continue to provide notice for public meetings per Massachusetts General Law requirements, including meetings pertaining to the Stormwater Management Program.

The Town shall continue to provide annual opportunities for public participation in the Program. These opportunities may include, but are not limited to:

- Stormwater-related events with school groups
- 5-Town Hazardous waste drop off day
- Yard waste collection days
- Adopt-a-Stream program

Appendix E includes a document with helpful tips for organizing and conducting volunteer clean-up events that East Longmeadow may reference. The Town shall document all public participation activities in the Annual Reports, and documentation should seek to quantify results or impact to better evaluate the public involvement and participation program effectiveness.

3.2.3 MCM 2 Implementation Schedule

BMP	PY1	PY2	PY3	PY4	PY5
2A Stormwater Management Plan Public Review	●	●	●	●	●
2B Public Participation in Stormwater Management Program	↔	↔	↔	↔	↔

● = annual requirement

↔ = ongoing requirement

3.2.4 MCM 2 Guidelines and Resources

The following links include free or low-cost resources East Longmeadow can use to supplement the Public Involvement program.

EPA National Menu of BMPs for Stormwater
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#inv

EPA - *Evaluation of the Role of Public Outreach and Stakeholder Engagement in Stormwater Funding Decisions in New England*
https://www.epa.gov/sites/production/files/2015-09/documents/eval-sw-funding-new-england.pdf

Manchester Urban Ponds Restoration Program - *Tips for Organizing and Conducting Volunteer Clean-up Events*
Available in Appendix E of this SWMP

Massachusetts Open Meeting Law Guide
http://www.mass.gov/ago/docs/government/oml/oml-guide.pdf

3.2.5 MCM 2 Checklist of Key Documentation

Documentation of BMP progress will be kept in Appendix F. The following checklist includes the required documentation for MCM 2. See Section 5 of this Plan for additional record keeping information.

- ☐ Public meeting dates and topics when stormwater management is discussed
- ☐ Dates of public participation activities and quantification of participation (such as number of volunteers/participants, number of bags collected, etc.)

3.3 MCM 3: Illicit Discharge Detection and Elimination (IDDE) Program

Objective: *The permittee shall implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges.*

This section of the SWMP describes how to comply with the Illicit Discharge Detection and Elimination Program requirements in General Permit Section 2.3.4.

3.3.1 MCM 3 BMPs from NOI

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
3A	IDDE Ordinance/By-Law	Complete. Continue to enforce and update as necessary	DPW	Review current procedures and modify if necessary within 1 year of permit effective date	2018
3B	SSO Inventory	Develop SSO inventory in accordance of permit conditions	DPW	Complete within 1 year of effective date of permit. Track # of SSOs identified and corrective measures planned and completed	2018
3C	Storm sewer system map	Outfall Inventory Complete. Improve map during IDDE Program implementation as new data is collected. Add data to GIS map as required by Section 2.3.4.5, including interconnections with other MS4 systems, waterbody use impairments, and catchment delineations.	DPW	Update existing GIS map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
3D	Written IDDE program	Create written IDDE program	DPW	Complete written IDDE program within 1 year of the effective date of permit, update components annually as needed	2018

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
3E	Employee training	Provide internal training to employees involved in IDDE program and utilize PVPC CRSWC sponsored training	DPW, PVPC CRSWC	Train annually. Track employees trained, training topic, date/time, and materials presented, include details in annual report	2018
3F-1	Assessment and Priority Ranking of Outfalls & Interconnections	Dry Weather Outfall Screening & Sampling in accordance with IDDE Plan and permit conditions	DPW	Complete 3 years after effective date of permit. Track # of illicit discharges identified & volume removed, sampling results	2018
3F-2	Assessment and Priority Ranking of Outfalls & Interconnections	Catchment Investigations according to IDDE Program and permit conditions	DPW	Complete 10 years after effective date of permit. Track # and percentage of MS4 catchments evaluated. Track # of illicit discharges identified & volume removed. Summarize screening/sampling results	2019

3.3.2 MCM 3 Implementation Plan

A written IDDE Plan has been developed by the Town of East Longmeadow. Refer to this Plan for the complete IDDE program and requirements of MCM 3. This SWMP section presents a brief summary of the information presented in the IDDE Plan.

BMP 3A IDDE By-Law

The IDDE program shall include adequate legal authority to prohibit, investigate, and eliminate illicit discharges and implement enforcement procedures and actions. East Longmeadow has met this requirement by adopting a by-Law entitled *Stormwater Management* (Section 8.070 of the Town's By-Laws) in May of 2010. This by-law prohibits illicit discharges to the Town's drainage system. The Town Manager or their designee serves as the enforcement agency for the by-law. See Section 2 and Appendix A of the IDDE Plan for additional information.

BMP 3B SSO Inventory

The Town must identify all known locations where sanitary sewer overflows (SSOs) have discharged to the municipal drainage system within the past five (5) years and create an inventory in accordance with the requirements of section 2.3.4.4 of the 2016 Small MS4 General Permit that includes the following information:

- Location (approximate street crossing/address and receiving water, if any)
- Date(s) and time(s) of each known SSO occurrence
- Estimated volume(s) of each known SSO occurrence

- Description of the occurrence indicating known or suspected cause(s)
- Mitigation and corrective measures completed, with dates implemented
- Mitigation and correction measures planned, with implementation schedules

This inventory must be kept up to date and appended to this SWMP. Each municipal Department can aid in the development and maintenance of the inventory by reporting instances of SSOs found during field work to the DPW. The SSO inventory is available in **Appendix G**. See Section 4 of the IDDE Plan for additional information.

SSO Reporting: *In the event of an overflow or bypass, a notification must be reported within 24 hours by phone to MassDEP, EPA, and other relevant parties. Follow up the verbal notification with a written report following MassDEP's SSO/Bypass notification form within 5 calendar days of the time you become aware of the overflow, bypass, or backup.*

The MassDEP contacts are:	The EPA contacts are:
Western Region (413) 784-1100 436 Dwight Street Springfield, MA 01103 24-hr Emergency Line: (888) 304-1133	EPA New England (617) 918-1510 5 Post Office Square Boston, MA 02109

BMP 3C Storm Sewer System Map

A comprehensive map of East Longmeadow's drainage system has been developed, and the Town has met a large portion of the requirements of this BMP. Town staff should continue to update the map as necessary to reflect new infrastructure, newly discovered information, corrections or modifications, improved connectivity, and progress made. The outfall inventory is complete. See Section 3 of the IDDE Plan for additional information.

BMP 3D Written IDDE Program

East Longmeadow has implemented a town-wide IDDE Plan, finalized in 2019, which includes procedures and timelines developed in accordance with the final General Permit. The Town should continue to update and modify the Plan on an as-needed basis.

The IDDE Plan will include outfall screening on High and Low Priority Outfalls within 3 years of the permit's effective date, catchment investigations for 100% of the Problem Outfalls within 7 years of the permit's effective date, and 100% of all catchment investigations within 10 years of the permit's effective date.

The outfall/interconnection inventory and initial ranking and the dry weather outfall and interconnection screening and sampling results will be included in the IDDE Plan, which will be available at the DPW Office, located at 60 Center Square in East Longmeadow. See the IDDE Plan in **Appendix J** for additional information.

BMP 3E Employee Training

Employees involved in the IDDE Program must be trained annually on the Program, including how to recognize illicit discharges and SSOs in accordance with the IDDE Plan. See Section 9 of the IDDE Plan for additional information.

BMP 3F-1 Dry Weather Outfall/Interconnection Screening and Sampling

Dry weather outfall screening and sampling methods are described in Section 6 of the IDDE Plan included in **Appendix J**. Field investigations must be completed during dry weather conditions to confirm whether any Low or High Priority outfalls have dry weather flow, which may be indicative of illicit connections/discharges. The initial catchment delineation and priority ranking must be updated by the end of Permit Year 3 based on the data gathered in the field.

All data gathered during implementation of this BMP must be reported annually, including the number of illicit discharged identified, corrective measures planned and implemented, estimated volume removed, and a summary of screening and sampling results. See Section 6.4 of the IDDE Plan for additional information.

BMP 3F-2 Outfall/Interconnection Catchment Investigations

Each catchment associated with an outfall or interconnection within the MS4 must be investigated based on identified System Vulnerability Factors (SVF, i.e., the likelihood that illicit discharges/connections exist) in that particular area. For all catchments, key junction manholes shall be opened and inspected for evidence of illicit connections during dry weather conditions. For catchments with one or more SVF, wet weather monitoring must be completed. The Town will identify the number of outfall catchments in the MS4 that have been evaluated using the catchment investigation procedure developed under BMP 3D.

All data gathered during implementation of this BMP must be reported annually, including number and percentage of MS4 catchments evaluated, number of illicit discharges identified, corrective measures planned and implemented, estimated volume removed, and a summary of screening/sampling results. At the conclusion of field work for this BMP, the outfall/interconnection inventory should be updated and reprioritized for ongoing screening once every five years. See Section 7.6 of the IDDE Plan for additional information.

3.3.3 MCM 3 Implementation Schedule

EPA's implementation timeline for the IDDE Program is available in **Appendix E**.

BMP	PY1	PY2	PY3	PY4	PY5
3A IDDE By-Law	✓				
3B SSO Inventory	✓	●	●	●	●
3C Storm Sewer System Map	⟵	●	⟷	⟷	⟶
3D Written IDDE Program	✓				
3E Employee Training	●	●	●	●	●
3F-1 Dry Weather Screening and Sampling	⟵	⟷	⟶		
3F-2 Catchment Investigations		⟵	⟷	⟷	⟶

✓ = BMP complete

● = annual requirement or year due

⟷ = ongoing requirement

3.3.4 MCM 3 Guidelines and Resources

The following links include free or low-cost resources East Longmeadow can use to supplement the IDDE program. The Town-specific procedures in the IDDE Plan were developed using the IDDE Guidance Manual and New England Source Tracking Protocol linked below. A link to the Town's Stormwater Management By-Law is also provided below.

Center for Watershed Protection - *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*
https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf

EPA Stormwater Management Program Resources – IDDE
https://www.epa.gov/npdes-permits/stormwater-tools-new-england#idde

EPA New England - *Bacterial Source Tracking Protocol*
https://www3.epa.gov/region1/npdes/stormwater/ma/2014AppendixI.pdf

EPA National Menu of BMPs for Stormwater
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#ill

East Longmeadow General By-Laws (Section 8.070: Stormwater Management)
https://www.eastlongmeadowma.gov/DocumentCenter/View/87/StormWater-Management-By-Law

3.3.5 MCM 3 Checklist of Key Documentation

Documentation of BMP progress should be kept in Appendix F. The following checklist includes the required documentation for MCM 3. More information about IDDE reporting is located in Section 9 of the IDDE Plan. See Section 5 of this Plan for additional record keeping information.

- ☐ Log of phone calls and complaints received regarding suspected illicit connections and other storm drain issues, including dates and actions taken
- ☐ SSO inventory (updated annually), including the number of illicit discharges/ connections identified and/or removed and the volume of sewage removed
- ☐ Illicit discharge corrective measures implemented and/or proposed, with implementation schedule
- ☐ Drainage system map
- ☐ Data collected during dry and wet weather outfall/interconnection investigations, including the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening results, and results of all analyses (summarize on an annual basis and for the entire permit term)
- ☐ Number and percent of total outfall catchments served by the MS4 evaluated using the catchment investigation procedure
- ☐ Presence or absence of System Vulnerability Factors for each catchment
- ☐ Data collected during key junction manhole investigations
- ☐ Inspection and maintenance records
- ☐ Frequency and type of employee training, including employees trained, training topic, date/time, and materials presented

3.4 MCM 4: Construction Site Stormwater Runoff Control

Objective: *To minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the U.S. through the permittee's MS4.*

This section of the SWMP describes how to comply with the Construction Site Stormwater Runoff Control requirements in General Permit Section 2.3.5.

3.4.1 MCM 4 BMPs from NOI

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
4A	Construction By-Law and Regulations, Site Plan Review Procedures	Modify local by-law and regulations, if necessary, to contain new MS4 provisions per section 2.3.5.	Planning Board, ConCom, Town Manager, Town Council, Town Counsel, DPW	Adopt modified by-law and regulations within 1 year of permit effective date	2018
4B	Site Inspections and Enforcement Procedures	Develop and implement written procedures for site inspections and sediment and erosion control measures enforcement procedures per section 2.3.5.	Planning Board, ConCom, Town Manager, Town Council, Town Counsel, DPW	Inspect 100% of construction sites as outlined in the document and take enforcement actions as needed	2018

3.4.2 MCM 4 Implementation Plan

Per the 2016 Small MS4 General Permit, East Longmeadow must develop and implement the following items, which will be adopted as regulation modifications or a formalized procedure. Note that while East Longmeadow can choose to implement these items Town-wide, they are only required for disturbances within the regulated area that are greater than or equal to one acre or less than one acre if that disturbance is part of a larger common plan of development or sale that would disturb one or more acres.

- A regulatory mechanism that requires the use of sediment and erosion control practices at construction sites, as well as controls for other wastes on construction sites such as demolition debris, litter, and sanitary wastes
- Written procedures for site inspections and enforcement of sediment and erosion control measures, including the responsible party for site inspections and enforcement authority, due within one year of the effective date of the permit
- Requirements for construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site

- Requirements for construction site operators within the MS4 jurisdiction to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes
- Written procedures for site plan review and inspection and enforcement, due within one year of the effective date of the permit

BMP 4A Construction By-Law and Regulations, Site Plan Review Procedures

The Town implements and enforces a program to reduce pollutants in stormwater runoff discharged to the MS4 system from construction activities, including use of sediment and erosion control practices, at sites greater than one acre. The Town adopted a by-law entitled *Stormwater Management By-Law* (Section 8.070 of the Town By-Laws) in 2010 that provides guidance for site planning and stormwater runoff control during construction and post-construction to protect local water resources from discharges, with the Town Manager serving as the enforcement agency. The Town has Stormwater Rules and Regulations[19] and an Inspection Checklist available for public review on their website.

BMP 4B Site Inspections and Enforcement Procedures

East Longmeadow shall modify the written procedures for site inspections and enforcement of sediment and erosion control measures within the existing Rules and Regulations. The modified Rules and Regulations will include procedures for receipt and consideration of information submitted by the public and for consideration of potential water quality impacts, evaluation of opportunities for use of LID and green infrastructure, a requirement for BMP inspections during- and post-construction, and procedures for tracking site reviews, inspections, and enforcement actions.

3.4.3 MCM 4 Implementation Schedule

BMP	PY1	PY2	PY3	PY4	PY5
4A Construction By-Law and Regulations, Site Plan Review Procedures	●				
4B Site Inspections and Enforcement Procedures	●				

● = year due

3.4.4 MCM 4 Guidelines and Resources

The following links include East Longmeadow specific regulatory documents and free or low-cost resources East Longmeadow can use to supplement the Construction program. Links to the Town's *Stormwater Management By-law*, Rules and Regulations, and Inspection Checklist are also provided below.

[19] https://www.eastlongmeadowma.gov/DocumentCenter/View/139/SW-Rules-and-Regulations

EPA Construction General Permit SWPPP template and inspection forms
https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents

Massachusetts Stormwater Handbook
https://www.mass.gov/guides/massachusetts-stormwater-handbook-and-stormwater-standards

EPA SWMP Resources – *Construction Site Runoff Control*
https://www.epa.gov/npdes-permits/stormwater-tools-new-england#csrc

EPA National Menu of BMPs for Stormwater
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#constr

East Longmeadow *Stormwater Management By-Law*
https://www.eastlongmeadowma.gov/DocumentCenter/View/87/StormWater-Management-By-Law

East Longmeadow Rules and Regulations for the Management of Stormwater
https://www.eastlongmeadowma.gov/DocumentCenter/View/139/SW-Rules-and-Regulations

East Longmeadow Stormwater Inspection Checklist
https://www.eastlongmeadowma.gov/DocumentCenter/View/137/Stormwater-Inspection-Checklist

CMRSWC SOP 5: Construction Site Inspection
https://www.centralmastormwater.org/sites/centralmastormwater/files/uploads/construction_inspection_sop_final.pdf

CMRSWC SOP 6: Erosion and Sedimentation Control
https://www.centralmastormwater.org/sites/centralmastormwater/files/uploads/erosion_and_sedimentation_control_sop_final.pdf

3.4.5 MCM 4 Checklist of Key Documentation

Documentation of BMP progress should be kept in **Appendix F.** The following checklist includes the required documentation for MCM 4. See Section 5 of this Plan for additional record keeping information.

- ☐ Number of site reviews, inspections, and enforcement actions
- ☐ Site Inspection Forms
- ☐ Modifications to by-laws, regulations, policies, and/or procedures as necessary

3.5 MCM 5: Post-Construction Stormwater Management

Objective: *Reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater after construction on new or redeveloped sites.*

This section of the SWMP describes how to comply with the Stormwater Management in New Development and Redevelopment requirements in General Permit Section 2.3.6.

3.5.1 MCM 5 BMPs from NOI

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
5A	Post-Construction By-Law and Regulations	Modify local by-law and regulations to contain new MS4 provisions per section 2.3.6.a.	DPW, Town Manager, Town Counsel	Adopt modified by-law and regulations within 2 years of permit effective date	2019
5B	Assess street and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover to help determine if changes to design standards for streets and parking lots can be modified to support low impact design options	DPW, Planning Board, Town Council, Town Counsel, PVPC CRSWC	Complete report no later than 4 years of permit effective date	2020
5C	Assess allowing green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	DPW, Planning Board, Town Council, Town Counsel, PVPC CRSWC	Complete report no later than 4 years of permit effective date	2020
5D	Retrofit Feasibility Assessment	Conduct detailed inventory of Town-owned properties and rank for retrofit potential, identify at least 5 sites owned by the Town with potential for modifications or retrofits	DPW, Town Manager, Town Council, Planning Board	Complete report no later than 4 years of permit effective date. Beginning in year 5 keep running list of at least 5 retrofit sites	2020

3.5.2 MCM 5 Implementation Plan

BMP 5A Post-Construction By-Law and Regulations

The Town shall implement and enforce a program to reduce pollutants in stormwater runoff discharged to the municipal drainage system from post-construction activities for all new development and redevelopment sites greater than one acre. East Longmeadow has met this requirement by adopting a by-law entitled *Stormwater Management By-Law* (Section 8.070 of the Town's By-Laws) in 2010 and associated *Stormwater Management Rules and Regulations*. This by-law provides guidance for site planning and stormwater runoff control during construction and post-construction to protect local water resources from discharges. The Town Manager serves as the enforcement agency for the by-law.

The Town will modify the permit application for Stormwater Management Permits to specify that as-built plans must be submitted to the DPW no later than two years after completion of construction projects.

BMP 5B Assess Street and Parking Lot Guidelines

In accordance with General Permit Section 2.3.6.b, East Longmeadow shall develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover. This assessment shall be used to provide information to allow the Town to determine if changes to design standards for streets and parking lots can be made to support low impact design (LID) options. Input will be gathered from multiple Town departments.

The final report will be appended to this SWMP once completed, and report recommendations will be implemented by Permit Year 9 with progress reported annually.

BMP 5C Assess Feasibility of Allowing Green Infrastructure

As detailed in General Permit Section 2.3.6.c, East Longmeadow shall develop a report assessing local regulations to determine the feasibility of making green roofs, infiltration practices, and water harvesting devices allowable when appropriate site conditions exist.

The Town shall implement all recommendations in accordance with the schedules contained in the assessment.

BMP 5D Retrofit Feasibility Assessment

The Town must identify at least five town-owned properties that could potentially be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges through a reduction of impervious area. This inventory must be updated annually starting in Permit Year 5.

Section 2.3.6.d of the 2016 Small MS4 General Permit describes factors and considerations for selecting potential sites with the goal of reducing impervious area and improving water quality. The Town should continue to look for cost-efficient opportunities to improve drainage, replace existing catch basins with deep sump catch basins, and add water quality BMPs.

Long-term tracking of O&M should be recorded in the Town's GIS database for recent drainage improvement projects and going forward.

3.5.3 MCM 5 Implementation Schedule

BMP	PY1	PY2	PY3	PY4	PY5
5A Post-Construction By-Law and Regulations		●			
5B Assess Street and Parking Lot Guidelines				●	
5C Assess Feasibility of Allowing Green Infrastructure				●	
5D Retrofit Feasibility Assessment				● →	→

● = year due

3.5.4 MCM 5 Guidelines and Resources

The following links include free or low-cost resources East Longmeadow can use to supplement the Post-Construction program.

Massachusetts Stormwater Handbook
https://www.mass.gov/guides/massachusetts-stormwater-handbook-and-stormwater-standards

EPA SWMP Resources – *Post Construction Stormwater Control*
https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm

EPA National Menu of BMPs for Stormwater
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#post

EPA Small MS4 Permit Technical Support Document – Stormwater Retrofit Techniques for Restoring Urban Drainages in Massachusetts and New Hampshire
https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/BMPRetrofit.pdf

EPA – *Green Infrastructure Opportunities that Arise During Municipal Operations*
https://www.epa.gov/nep/green-infrastructure-opportunities-arise-during-municipal-operations

EPA - *Managing Stormwater in Your Community: A Guide for Building an Effective Post-Construction Program*
https://www3.epa.gov/npdes/pubs/stormwaterinthecommunity.pdf

EPA - *Managing Stormwater with LID Practices: Addressing Barriers to LID*
https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/AddressingBarrier2LID.pdf

Metropolitan Area Planning Council LID Toolkit
https://www.mapc.org/resource-library/low-impact-development-toolkit/

3.5.5 MCM 5 Checklist of Key Documentation

Documentation of BMP progress should be kept in Appendix F. The following checklist includes the required documentation for MCM 5. See Section 5 of this Plan for additional record keeping information.

- ☐ Measures the Town has taken to ensure adequate long-term operation and maintenance of stormwater BMPs and to require submission of as-built plans
- ☐ Modifications to East Longmeadow's by-laws, regulations, policies, and/or procedures as necessary
- ☐ Status of BMP 5B and 5C assessments, including any planned or completed changes to local regulations and guidelines (BMP 5B) and findings and progress towards making the practices allowable (BMP 5C)
- ☐ Retrofit inventory, including all sites that have been modified or retrofitted. Sites should include town-owned sites identified in the inventory as well as non-municipal property modified or retrofitted to mitigate impervious area

3.6 MCM 6: Good Housekeeping and Pollution Prevention

Objective: *The permittee shall implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.*

This section of the SWMP describes how to comply with the Good Housekeeping and Pollution Prevention requirements in General Permit Section 2.3.7.

3.6.1 MCM 6 BMPs from NOI

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
6A	Operation & Maintenance Procedures – Parks and Open Space	Develop an inventory of and O&M procedures for parks and open spaces, buildings and facilities within the Urbanized Area where pollutants are exposed to stormwater runoff, and locations where vehicles and equipment are stored	DPW, Recreation Department	Complete and implement 2 years after permit effective date	2018
6B	O&M Procedures – MS4 Infrastructure	Establish and implement program for repair and rehabilitation of MS4 infrastructure	DPW	Complete and implement 2 years after permit effective date	2018
6C	Catch Basin Cleaning Program	Implement procedures and schedule to optimize catch basin cleaning such that each catch basin is no more than 50% full	DPW	Track frequency and material quantity of catch basin cleaning in Town. In first Annual Report and in SWMP, document plan for optimizing catch basin cleaning	2019
6D	Street Sweeping Program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	DPW	Sweep all streets and permittee-owned parking lots once per year in the spring and once in the fall. Rural uncurbed roads under exemption may be swept once per year	2018

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
6E	Winter Road Maintenance Program	Establish and implement procedures for winter road maintenance, including the use and storage of salt and sand	DPW	Implement salt use optimization during deicing season, include description of program and program modifications in annual reports	2018
6F	Stormwater Treatment Structures Inspection and Maintenance Procedures	Develop inspection and maintenance procedures and frequencies for all stormwater treatment structures	DPW	Inspect and maintain 100% of treatment structures to ensure proper function	2018
6G	Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for transfer station, DPW service building, and other waste handling facilities where pollutants are exposed to stormwater	DPW	Complete SWPPPs within 2 years of permit effective date, implement in following years	2018

3.6.2 MCM 6 Implementation Plan

BMP 6A Operation & Maintenance Procedures – Parks and Open Space

East Longmeadow must develop a written Town-Wide Operation and Maintenance (O&M) Program for municipal facilities and equipment, including parks and open space, buildings and facilities, including schools, where pollutants are exposed to stormwater runoff, and vehicles and equipment. This plan will include an inventory of the municipally-owned facilities and equipment. The inventory and written program will be appended to this SWMP.

BMP 6B O&M Procedures – MS4 Infrastructure

The Town shall develop a plan describing the activities and procedures used to maintain MS4 infrastructure in a timely manner to reduce the discharge of pollutants from the MS4. The written program developed under this BMP will be appended to the SWMP once completed.

BMP 6C Catch Basin Cleaning Program

The Town must clean and inspect catch basins to make sure that catch basins are no more than 50% full. Develop and implement a program to optimize routine inspections, cleaning, and maintenance of catch basins. If a catch basin is consistently less than 50% fill, the Town can reduce the frequency of cleanings. If a catch basin is more than 50% full during two consecutive cleanings/inspections, the Town must investigate the contributing drainage area for sources of excessive sediment loading and abate contributing sources when possible.

The Town must also store and dispose/reuse catch basin cleanings according to MassDEP policies. The Town-Wide O&M Program referred to under BMP 6A will include additional recommendations and guidance for this BMP.

BMP 6D Street Sweeping Program

The Town must establish and implement procedures for sweeping and/or cleaning streets and Town-owned parking lots. All streets must be swept and/or cleaned at least once per year in the spring (excluding rural streets with no curbs or catch basins). More frequent sweeping shall occur in targeted areas on the basis of pollutant load reduction potential. Store and dispose/reuse street sweepings according to MassDEP policies. For rural streets with no curbs or catch basins, the Town must sweep at least once per year or develop a targeted inspection and sweeping plan for those streets. The Town-Wide O&M Program plan referred to under BMPs 6A will include additional recommendations and guidance for this BMP.

BMP 6E Winter Road Maintenance Program

The Town shall establish and implement procedures for winter road maintenance, including the use and storage of salt and sand and the evaluation of at least one salt/chloride alternative for use in the municipality. The Town-Wide O&M Program plan referred to under BMP 6A will include additional recommendations and guidance.

BMP 6F Stormwater Treatment Structures Inspection and Maintenance Procedures

The Town shall develop inspection and maintenance procedures and frequencies for all stormwater treatment structures. An important first step will be to improve the inventory, mapping, and record keeping procedures for Town-owned or operated stormwater BMPs, such as detention ponds and swales. The inventory should be developed within two years of the permit effective date, per Section 2.3.4.5.a of the General Permit.

All Town-owned water quality BMPs must be inspected annually at a minimum. Note that drainage manholes and catch basins are not considered stormwater treatment structures for this BMP (structure maintenance procedures will be developed and implemented under BMPs 6B and 6C).

BMP 6G Stormwater Pollution Prevention Plans (SWPPPs)

In accordance with General Permit Section 2.3.7.b, East Longmeadow must develop and implement SWPPPs for Town-owned or operated waste handling facilities where pollutants are exposed to stormwater, including the transfer station and the DPW service building. SWPPP requirements include "regular" employee training for all members of the Pollution Prevention Team (at a minimum). Additionally, quarterly site inspections are required at these sites according to General Permit Section 2.3.7.b.iii.

3.6.3 MCM 6 Implementation Schedule

BMP	PY1	PY2	PY3	PY4	PY5
6A O&M Program for Municipal Facilities and Equipment		●			
6B O&M Program for MS4 Infrastructure		●			
6C Catch Basin Cleaning Program	●	—	—	—	→
6D Street Sweeping Program	←	●	—	—	→

BMP	PY1	PY2	PY3	PY4	PY5
6E Winter Road Maintenance Program	↔	↔	↔	↔	↔
6F Stormwater Treatment Structures Inspection and Maintenance Procedures	●	●	●	●	●
6G Stormwater Pollution Prevention Plans (SWPPPs)		●			

● = annual requirement or year due
↔ = ongoing requirement

3.6.4 MCM 6 Guidelines and Resources

The following links include free or low-cost resources East Longmeadow can use to supplement the Good Housekeeping and Pollution Prevention program.

EPA Stormwater Management Program Resources – Good Housekeeping
https://www.epa.gov/npdes-permits/stormwater-tools-new-england#gh

EPA National Menu of BMPs for Stormwater
https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#poll

Center for Watershed Protection - *Municipal Pollution Prevention/Good Housekeeping Practices*
https://owl.cwp.org/mdocs-posts/urban-subwatershed-restoration-manual-series-manual-9/

MassDEP - *Management of Catch Basin Cleanings*
https://www.mass.gov/files/documents/2018/03/09/catch-basins.pdf

MassDEP - *Reuse & Disposal of Street Sweepings*
https://www.mass.gov/files/documents/2018/05/14/street-sweepings.pdf

MassDEP - *Snow Disposal Guidance*
https://www.mass.gov/guides/snow-disposal-guidance

CMRSWC SOP 9: Inspecting Constructed BMPs
https://www.centralmastormwater.org/sites/centralmastormwater/files/uploads/constructed_bmp_inspection_sop_final.pdf

3.6.5 MCM 6 Checklist of Key Documentation

Documentation of BMP progress should be kept in **Appendix F**. The following checklist includes the required documentation for MCM 6. See Section 5 of this Plan for additional record keeping information.

- ☐ O&M procedures for municipal facilities and equipment
- ☐ Inventory of municipal facilities and equipment
- ☐ Plan for optimizing catch basin cleaning and number of catch basins, quantity cleaned and inspected, total volume of material removed from all catch basins
- ☐ Miles of streets cleaned and the volume of material removed
- ☐ All records associated with SWPPP quarterly site inspections, maintenance activities, and training
- ☐ Inventory of Town-owned or operated stormwater treatment structures
- ☐ Inspection and maintenance procedures for Town-owned or operated stormwater treatment structures, including maintenance schedules and inspection results

SECTION 4

Section 4
BMPs to Address Specific Waterbody Requirements

4.1 Long Island Sound TMDL for Nitrogen

As described in Section 3.2.3, the Town of East Longmeadow is located within the Connecticut River watershed, which in turn is located within the Long Island Sound watershed. The Long Island Sound has an EPA-approved TMDL for Nitrogen. Discharges from MS4s in Massachusetts to waters that are tributaries to the Long Island Sound are subject to the requirements of Appendix F, part B.1. of the 2016 MA Small MS4 General Permit.

4.1.1 Enhanced BMPs

4.1.1.1 MCM 1: Public Education and Outreach

BMPs 1A/1B: Education and outreach to Residential and Business/Commercial/Institution stakeholders will be supplemented with annual timed messages on specific topics as follows:

- April/May: annual message in the spring that encourages the proper use and disposal of grass clippings and the proper use of slow-release fertilizers
- June/July: annual message in the summer that encourages the proper management of pet waste, including noting any existing ordinances where appropriate
- August/September/October: annual message in the fall that encourages the proper disposal of leaf litter

4.1.1.2 MCM 3: IDDE Program

BMP 3D: Per Section 2.3.4.7.a.iii. of the 2016 Small MS4 General Permit, outfalls to receiving waters associated with approved TMDLs applicable to the permittee, where illicit discharges have the potential to contain the pollutant identified as the cause of the water quality impairment should be identified as High Priority outfalls.

As the entirety of the Town is located within the Connecticut River / Long Island Sound watershed, ranking all outfalls within the Town as High Priority does not allow for differentiation or priority use of resources in the IDDE Program. Therefore, upon the development of the final Nitrogen Source Identification Report in permit year four, potential catchments determined to have high nitrogen loading will be reassessed as High Priority catchments.

4.1.1.3 MCM 5: Stormwater Management in New Development and Redevelopment

BMP 5A: The Town's existing *Stormwater Management By-law* or Rules and Regulations will be modified to contain new provisions related to optimization of stormwater management BMPs for nitrogen removal.

BMP 5D: The report containing a detailed inventory of MS4-owned properties and a running list of at least 5 sites that have potential for retrofits that will be developed will include options for nitrogen-reduction BMPs with a listing of planned structural BMPs and a plan and schedule for implementation.

4.1.1.4 MCM 6: Good Housekeeping and Pollution Prevention

BMP 6A: Written O&M procedures for permittee-owned properties will include procedures for proper management of fertilizers, grass cuttings, and leaf litter, and will establish requirements for use of slow-release fertilizers on permittee-owned property.

BMP 6D: Street sweeping of all municipally owned streets and parking lots will be increased to two times per year (spring and fall) except rural streets with no curbs or catch basins, which the Town must sweep at least once per year or develop a targeted inspection and sweeping plan.

4.1.2 Other Enhanced Requirements

Nitrogen Source Identification Report: Appendix F, part B.1 of the 2016 MA Small MS4 General Permit requires the development and submission of a Nitrogen Source Identification Report as part of the year 4 annual report, and the evaluation of all properties identified as presenting retrofit opportunities or areas for structural BMP installation as part of MCM 5 or identified in the Nitrogen Source Identification Report in the year 5 annual report.

Annual Report: The annual report will contain a table tracking existing structural BMPs installed in the Town from the Table 3 list in Attachment 1 of Appendix H of the 2016 MA MS4 General Permit, the total area treated by the design storage volume, and the estimated nitrogen removed per year.

4.2 Additional Requirements for Discharges to Surface Drinking Water Supplies and Their Tributaries

According to Section 3.0 of the 2016 Small MS4 General Permit, MS4s that discharge to public surface drinking water supply sources or their tributaries should consider these waters a priority in the implementation of the SWMP. To date, there are no public surface drinking water supply sources or their tributaries within the Town of Southampton’s regulated area.

SECTION 5

Section 5
Program Evaluation, Record Keeping, and Reporting

5.1 Program Evaluation

The Town of East Longmeadow will annually self-evaluate its compliance with the terms and conditions of the 2016 MA Small MS4 permit, the appropriateness of the selected BMPs in achieving the objectives of each MCM, and progress towards achieving the identified measurable goal. Each self-evaluation will be submitted in the Annual Report, and annual evaluation documentation will be maintained as part of the SWMP.

5.2 Record Keeping

The Town will keep all records required by the 2016 General Permit for at least five years, including, but not limited to the following key information:

- Monitoring results
- Copies of reports
- Records of outfall/interconnection screening
- Follow-up and elimination of illicit discharges
- Maintenance records
- Inspection records

Checklists of record keeping items East Longmeadow should maintain are also included under each BMP in Section 3 of the SWMP. Records relating to the 2016 General Permit, including the SWMP, will be made available to the public, as required by Section 4.2.c of the Permit.

5.3 Annual Reports

The Town will submit annual reports each year of the Small MS4 permit term, due ninety days from the close of each reporting period (i.e., September 28). The reporting period will be a one-year period commencing on the permit effective date, and subsequent anniversaries thereof, except that the first annual report under the 2016 General Permit shall also cover the period from May 1, 2018 to the permit effective date, July 1, 2018. Under the 2016 General Permit, annual reports will consist of a simple update provided to EPA and more robust documentation included in Appendix F of this SWMP.

Per Section 4.4.b of the 2016 General Permit, the annual reports shall contain the following information:

i. *A self-assessment review of compliance with the permit terms and conditions.*
ii. *An assessment of the appropriateness of the selected BMPs.*
iii. *The status of any plans or activities required by part 2.1 and/ or part 2.2, including:*

- *Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response including all items required by part 2.1.1;*
- *For discharges subject to TMDL related requirements, identification of specific BMPs used to address the pollutant identified as the cause of impairment and assessment of the BMPs' effectiveness at controlling the pollutant (part 2.2.1. and Appendix F) and any deliverables required by Appendix F;*
- *For discharges to water quality limited waters a description of each BMP required by Appendix H and any deliverables required by Appendix H.*

iv. *An assessment of the progress towards achieving the measurable goals and objectives of each control measure in part 2.3 including:*

- *Evaluation of the public education program including a description of the targeted messages for each audience; method of distribution and dates of distribution; methods used to evaluate the program; and any changes to the program.*
- *Description of the activities used to promote public participation including documentation of compliance with state public notice regulations.*
- *Description of the activities related to implementation of the IDDE program including: status of the map; status and results of the illicit discharge potential ranking and assessment; identification of problem catchments; status of all protocols described in part 2.3.4.(program responsibilities and systematic procedure); number and identifier of catchments evaluated; number and identifier of outfalls screened; number of illicit discharges located; number of illicit discharges removed; gallons of flow removed; identification of tracking indicators and measures of progress based on those indicators; and employee training.*
- *Evaluation of the construction runoff management including number of project plans reviewed; number of inspections; and number of enforcement actions.*
- *Evaluation of stormwater management for new development and redevelopment including status of ordinance development (2.3.6.a.ii.), review and status of the street design assessment (2.3.6.b.), assessments to barriers to green infrastructure (2.3.6.c), and retrofit inventory status (2.3.6.d.)*
- *Status of the O&M Programs required by part 2.3.7.a.*
- *Status of SWPPP required by part 2.3.7.b. including inspection results.*
- *Any additional reporting requirements in part 3.0.*

v. *All outfall screening and monitoring data collected by or on behalf of the permittee during the reporting period and cumulative for the permit term, including but not limited to all data collected pursuant to part 2.3.4. The permittee shall also provide a description of any additional monitoring data received by the permittee during the reporting period.*

vi. *Description of activities for the next reporting cycle.*

vii. *Description of any changes in identified BMPs or measurable goals.*

viii. *Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.*

5.4 SWMP Modifications

Per Section 4.1 of the 2016 Small MS4 General Permit, the Town shall complete the following tasks:

a. The permittee shall annually self-evaluate its compliance with the terms and conditions of this permit and submit each self-evaluation in the Annual Report. The permittee shall also maintain the annual evaluation documentation as part of the SWMP.

b. The permittee shall evaluate the appropriateness of the selected BMPs in achieving the objectives of each control measure and the defined measurable goals. Where a BMP is found to be ineffective the permittee shall change BMPs in accordance with the provisions below. In addition, permittees may augment or change BMPs at any time following the provisions below:

- *Changes adding (but not subtracting or replacing) components or controls may be made at any time.*
- *Changes replacing an ineffective or infeasible BMP specifically identified in the SWMP with an alternative BMP may be made as long as the basis for the changes is documented in the SWMP by, at a minimum:*
    - *An analysis of why the BMP is ineffective or infeasible;*
    - *Expectations on the effectiveness of the replacement BMP; and*
    - *An analysis of why the replacement BMP is expected to achieve the defined goals of the BMP to be replaced.*

The permittee shall indicate BMP modifications along with a brief explanation of the modification in each Annual Report.

c. EPA or MassDEP may require the permittee to add, modify, repair, replace or change BMPs or other measures described in the annual reports as needed:

- *To address impacts to receiving water quality caused or contributed to by discharges from the MS4; or*
- *To satisfy conditions of this permit.*

Any changes requested by EPA or MassDEP will be in writing and will set forth the schedule for the permittee to develop the changes and will offer the permittee the opportunity to propose alternative program changes to meet the objective of the requested modification.

The Town may update or revise the SWMP as needed as the Town's activities are modified, changed, or updated to meet permit conditions during the permit term. If it is necessary to modify or update the SWMP, the Town should follow this procedure to formalize the changes:

- Keep a log with a description of the modification, the date, and the name and signature of the person making it
- Re-sign and date the certification statement in Section 6 of this SWMP

An amendment log and certification statements are located in **Appendix H**.

SECTION 6

Section 6
SWMP Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name: ________________________________ Title: ________________________

Signature: ________________________________ Date: ________________________

A letter that authorizes the Town of East Longmeadow Director of Public Works to sign and certify certain documents prepared under the Small MS4 General Permit is included in **Appendix I**.

J:\E\E0714 East Longmeadow Engineering Services\056 - MS4 Services Year 3 Compliance\Reports\SWMP Updates\Town of East Longmeadow SWMP_text_2021.docx

APPENDIX A

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part I: General Conditions

General Information

Name of Municipality or Organization: Town of East Longmeadow

State: MA

EPA NPDES Permit Number (if applicable): MA041005

Primary MS4 Program Manager Contact Information

Name: Bruce Fenney

Title: DPW Superintendent

Street Address Line 1: 60 Center Square

Street Address Line 2:

City: East Longmeadow

State: MA

Zip Code: 01028

Email: bruce.fenney@eastlongmeadowma.gov

Phone Number: (413) 525-5400

Fax Number:

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed): Physical location: DPW Office, 60 Center Square, East Longmeadow

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☑ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete?
(Part II, III, IV or V, Subpart B.3.(a.) of 2003 permit): 100%

If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published: Copy of map is attached

If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted?
(Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit): Yes

Effective Date or Estimated Date of Adoption (MM/DD/YY): 05/17/10

Construction/Erosion and Sediment Control (ESC) Authority Adopted?
(Part II,III,IV or V, Subpart B.4.(a.) of 2003 permit): Yes

Effective Date or Estimated Date of Adoption (MM/DD/YY): 05/17/10

Post- Construction Stormwater Management Adopted?
(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit): Yes

Effective Date or Estimated Date of Adoption (MM/DD/YY): 05/17/10

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and, if applicable, the segment ID and any impairments.

Massachusetts list of impaired waters: [Massachusetts 2014 List of Impaired Waters- http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf](http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf)

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Freshwater Brook	5										
Wetland/Tributary to Freshwater Brook	1										
Pecousic Brook	25										
Wetland/Tributary to Pecousic Brook	7										
Schnelock Brook	3										
Wetland/Tributary to Schnelock Brook	2										
South Branch Mill River	7										
Wetland/Tributary to South Branch Mill River	23										
Watchuag Brook	1										
Wetland/Tributary to Watchuag Brook	34										
Wetland/Tributary to Jawbuck Brook Reservoir	3										
Wetland/Tributary to Unnamed Pond on Somers Road	1										
Isolated Wetland Chestnut Street	3										
Isolated Wetland Evergreen Drive	4										
Isolated Wetland Melvin Avenue	1										
Isolated Wetland Pease Road	3										
Isolated Wetland Prospect Street	1										
Isolated Wetland Shaker Road	2										

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Outside Receiving Waterbody	193	☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
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Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	**BMP Description**	**Targeted Audience**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal**	**Beginning Year of BMP Imple-mentation**
Multi-media (print and web materials)	Distribute an annual message in the spring (Apr/May) that encourages proper use and disposal of grass clippings and encourages use of slow-release fertilizers Distribute an annual message in the summer (Jun/Jul) that encourages proper management of pet waste Distribute an annual message in the fall (Aug/Sept/Oct) that encourages proper disposal of leaf litter	1A - Residents	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of three (3) timed messages annually on specific Nitrogen TMDL related topics	2018

Multi-media (print and web materials)	Distribute an annual message in the spring (Apr/May) that encourages proper use and disposal of grass clippings and encourages use of slow-release fertilizers Distribute an annual message in the summer (Jun/Jul) that encourages proper management of pet waste Distribute an annual message in the fall (Aug/Sept/Oct) that encourages proper disposal of leaf litter	1B - Businesses, Institutions and Commercial Facilities	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of three (3) timed messages annually on specific Nitrogen TMDL related topics	2018
Multi-media (print and web materials)	Education and outreach on stormwater management topics of significance in East Longmeadow (including proper erosion and sedimentation control, permit requirements, and design standards). Educational topics will include but are not limited to those in Part 2.3.2.d.iii	1C - Developers (construction)	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of 2 educational messages spaced at least a year apart	2019

Multi-media (print and web materials)	Education and outreach on stormwater management topics of significance in East Longmeadow (including pollution prevention, illicit discharges, information about the Multi-Sector General Permit). Educational topics will include but are not limited to those in Part 2.3.2.d.iv	1D - Industrial Facilities	DPW, Planning Board, PVPC CRSWC	Distribute a minimum of 2 educational messages spaced at least a year apart	2020

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

BMP Categorization	Brief BMP Description (enter your own text to override the drop down menu)	Responsible Department/Parties (enter your own text to override the drop down menu)	Additional Description/ Measurable Goal	Beginning Year of BMP Imple-mentation
2A - Public Review	SWMP review (Plan and reports available at public meetings)	DPW	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2018
2B - Public Participation	Provide public participation opportunities (e.g,. clean-up events)	All Town Departments, Boards, and Committees	Ongoing compliance	2018

Part III: Stormwater Management Program Summary (continued)

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Imple-mentation
3A - IDDE Ordinance/Bylaw	Complete. Continue to enforce and update as necessary	DPW	Review current procedures and modify if necessary within 1 year of permit effective date	2018
3B - SSO inventory	Develop SSO inventory in accordance of permit conditions	DPW	Complete within 1 year of effective date of permit. Track # of SSOs identified and corrective measures planned and completed	2018
3C - Storm sewer system map	Outfall inventory complete. Improve map during IDDE program implementation as new data is collected. Add data to GIS map as required by Section 2.3.4.5, including interconnections with other MS4 systems, waterbody use impairments, and catchment delineations	DPW	Update existing GIS map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
3D - Written IDDE program	Create written IDDE program	DPW	Complete written IDDE program within 1 year of the effective date of permit, update components annually as needed	2018
3E - Employee training	Provide internal training to employees involved in IDDE program and utilize PVPC CRSWC sponsored training	DPW, PVPC CRSWC	Train annually. Track employees trained, training topic, date/time, and materials presented, include details in annual report	2018

3F - Assessment and Priority Ranking of Outfalls & Interconnections	1. Dry Weather Outfall Screening & Sampling in accordance with IDDE Plan and permit conditions	DPW	Complete 3 years after effective date of permit. Track # of illicit discharges identified & volume removed, sampling results	2018
3F - Assessment and Priority Ranking of Outfalls & Interconnections	2. Catchment Investigations according to IDDE Program and permit conditions	DPW	Complete 10 years after effective date of permit. Track # and percentage of MS4 catchments evaluated. Track # of illicit discharges identified & volume removed. Summarize screening/sampling results	2019

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
4A - Construction Bylaw and Regulations, Site Plan Review Procedures	Modify local bylaw and regulations, if necessary, to contain new MS4 provisions per section 2.3.5.	Planning Board, ConCom, Town Manager, Town Council, Town Counsel, DPW	Adopt modified bylaw and regulations within 1 year of permit effective date	2018
4B - Site Inspections and Enforcement Procedures	Develop and implement written procedures for site inspections and sediment and erosion control measures enforcement procedures per section 2.3.5.	Planning Board, ConCom, Town Manager, Town Council, Town Counsel, DPW	Inspect 100% of construction sites as outlined in the document and take enforcement actions as needed	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
5A - Post-Construction Bylaw and Regulations	Modify local bylaw and regulations to contain new MS4 provisions per section 2.3.6.a.	DPW, Town Manager, Town Counsel	Adopt modified bylaw and regulations within 2 years of permit effective date	2019
5B - Assess street and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover to help determine if changes to design standards for streets and parking lots can be modified to support low impact design options	DPW, Planning Board, Town Council, Town Manager, Town Counsel, PVPC CRSWC	Complete report no later than 4 years of permit effective date	2020
5C - Assess allowing green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	DPW, Planning Board, Town Council, Town Manager, Town Counsel, PVPC CRSWC	Complete report no later than 4 years of permit effective date	2020

5D - Retrofit Feasibility Assessment	Conduct detailed inventory of Town-owned properties and rank for retrofit potential, identify at least 5 sites owned by the Town with potential for modifications or retrofits	DPW, Town Manager, Town Council, Planning Board	Complete report no later than 4 years of permit effective date. Beginning in year 5 keep running list of at least 5 retrofit sites	2020

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
6A - Operation & Maintenance (O&M) Procedures - Parks and Open Space	Develop an inventory of and O&M procedures for parks and open space, buildings and facilities within the Urbanized Area where pollutants are exposed to stormwater runoff, and locations where vehicles and equipment are stored	DPW, Recreation Department	Complete and implement 2 years after effective date of permit	2018
6B - O&M Procedures - MS4 Infrastructure	Establish and implement program for repair and rehabilitation of MS4 infrastructure	DPW	Complete and implement 2 years after effective date of permit	2018
6C - Catch Basin Cleaning Program	Implement procedures and schedule to optimize catch basin cleaning such that each catch basin is no more than 50% full	DPW	Track frequency and material quantity of catch basin cleaning in town. In first Annual Report and in SWMP, document plan for optimizing catch basin cleaning	2019
6D - Street Sweeping Program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	DPW	Sweep all streets and permittee-owned parking lots once per year in the spring and once in the fall. Rural uncurbed roads under exemption may be swept once per year	2018

6E - Winter Road Maintenance Program	Establish and implement procedures for winter road maintenance, including the use and storage of salt and sand	DPW	Implement salt use optimization during deicing season, include description of program and program modifications in annual reports	2018
6F - Stormwater Treatment Structures Inspection and Maintenance Procedures	Develop inspection and maintenance procedures and frequencies for all stormwater treatment structures	DPW	Inspect and maintain 100% of treatment structures to ensure proper function	2018
6G - Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for transfer station, DPW service building, and and other waste handling facilities where pollutants are exposed to stormwater	DPW	Complete SWPPPs within 2 years of permit effective date, implement in following years	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Applicable TMDL	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Long Island Sound TMDL (Nitrogen)	Adhere to requirements in part B.I of Appendix F	All Town Departments, Boards, and Committees

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) select the pollutant of concern and indicate applicable waterbody IDs or write "all waterbodies" if applicable. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Pollutant	**Waterbody ID(s)**	**Action Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

1. Per the Massachusetts Year 2014 Integrated List of Waters, there are no impaired waterbodies located within the Town of East Longmeadow.

2. The Federal Endangered Species Eligibility Determination screening process has been completed and the Town of East Longmeadow meets Criterion C. Per the official species list from the US Fish & Wildlife Service (USFWS) New England Ecological Services Field Office, the Northern Long-eared bat may exist in the Town, as it is listed as potentially present State-wide in Massachusetts. Based on an assessment of the Town's stormwater discharge and discharge-related activities, the Town's stormwater discharges and discharge related activities will have no affect on listed species or critical habitat. If, during the course of the permit term, the Town plans to install a structural stormwater BMP not identified in the NOI, the Town will conduct an endangered species screening for the proposed site and will contact the USFWS if it is determined that the new activity "may affect" or is "not likely to adversely affect" listed species or critical habitat under the jurisdiction of the USFWS.

3. The National Historic Preservation Act Eligibility Determination screening process has been completed and the Town of East Longmeadow meets Criterion A. The Town's stormwater discharges do not have the potential to cause effects on historic properties. The Town will consult with the State Historic Preservation Officer as needed during the permit term.

4. The outfalls and associated receiving waters in Part II are based on mapping as of September 2018 and are subject to change during implementation of the Stormwater Management Program as newly constructed outfalls are added to the map and inventory; locations are adjusted; or outfalls are removed if they are determined to be non-municipally owned/operated or reclassified as a BMP inlet, culvert, or other structure. Changes to the outfall inventory and mapping will be formalized in Annual Reports to EPA.

Detailed explanations of the above notes are included in the Town's Stormwater Management Plan.

Part V: Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Denise Menard

Title: Town Manager

Signature:

Date: 09/24/18

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part V: Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: DENISE MEWARD

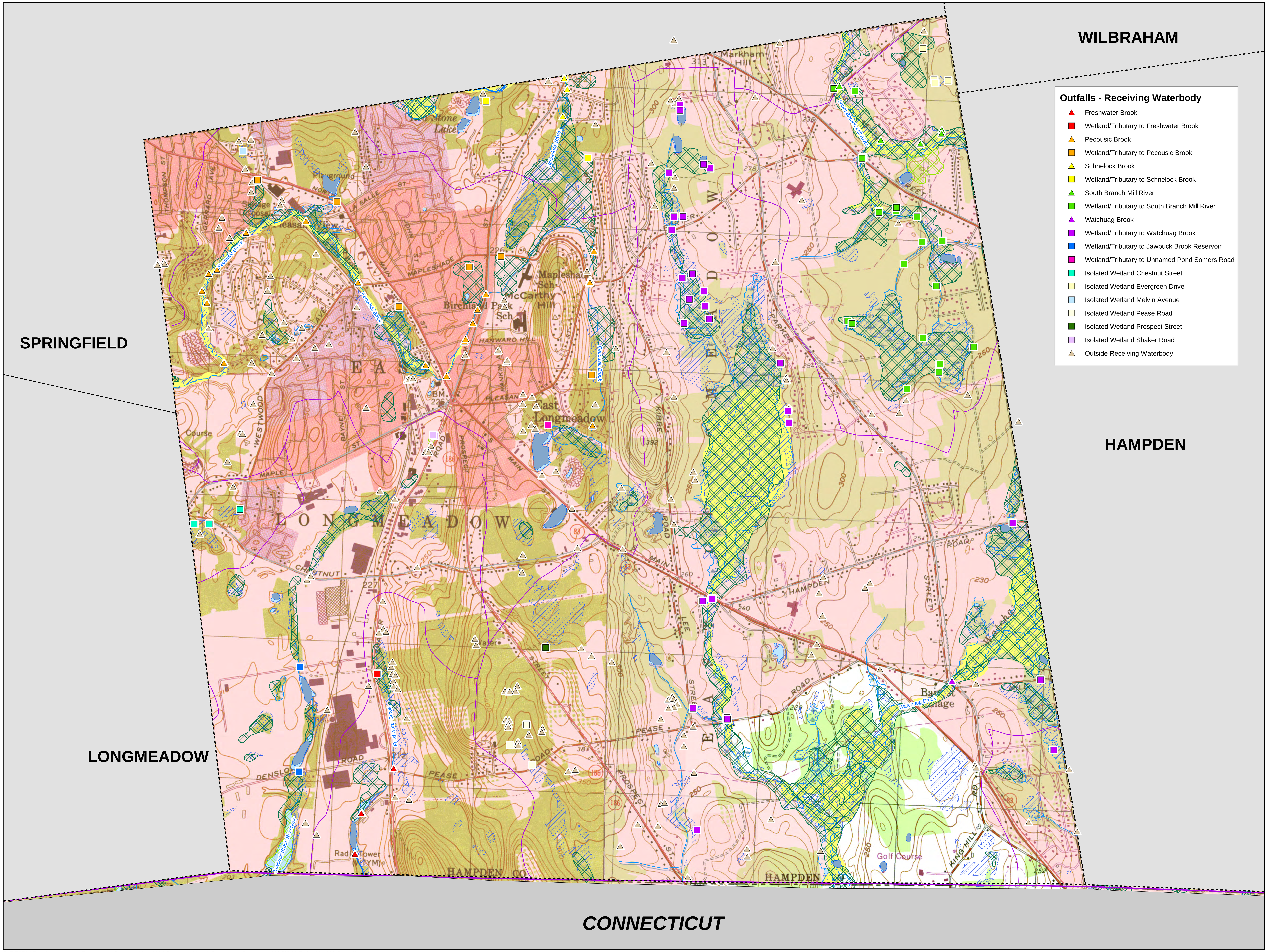
Title: Town Manager

Signature: Denise Meward

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Date: 9/24/2018

Note: When prompted during signing, save the document under a new file name



Legend

Town Boundary
Major Basins
Subbasin

Water Body Segments - Rivers

Category

- 2 - Attaining some uses; other uses not assessed
- 3 - No uses assessed
- 4A -Impaired - TMDL is completed
- 4C - Impairment not caused by a pollutant
- 5 - Impaired - TMDL required

Water Body Segments - Lakes, Estuaries

Category

- 2 - Attaining some uses; other uses not assessed
- 3 - No uses assessed
- 4A -Impaired - TMDL is completed
- 4C - Impairment not caused by a pollutant
- 5 - Impaired - TMDL required

National Wetlands Inventory Wetland Areas

- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Estuarine and Marine Deepwater
- Freshwater Pond
- Lake
- Riverine
- Other
- NWI Rivers and Streams

MassDEP Hydrology

- Public Surface Water Supply (PSWS)
- Water Bodies
- Hydrology

MassDEP Wetlands

- Inland Wetlands

MassDOT Roads

Road Type

- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road, Collector
- 100-Year Floodplain (FEMA)
- Urbanized Area 2000
- Urbanized Area 2010

LOCUS MAP

N

0 1,200 2,400 Feet

1:11,500

NOTES

1. Based on USGS Topo Map: Springfield South, 1979 (10 ft), Hampden, 1979 (10 ft)
2. MassGIS: 2014 Integrated List Data (2016), Major Drainage Basins (2003), Subbasins (2007), Community Boundary (2017), National Wetland Inventory (2007), FEMA National Flood Hazard (2017), MassDOT Major Roads (2014), Urban Area (2000 and 2010)
3. Town of East Longmeadow: Outfalls

OUTFALLS AND RECEIVING WATERBODIES

Notice of Intent
East Longmeadow, Massachusetts

September 2018

Tighe&Bond
Engineers | Environmental Specialists

J:\E\E0714 East Longmeadow Engineering Services\18A - MS4 Services - Year 1 Compliance\Permitting\NOI\GIS\MXD\24x36_NOI_Rec_Waters.mxd

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

VIA EMAIL

May 30, 2019

Denise Menard
Town Manager

And;

Bruce Fenney
DPW Superintendent
60 Center Square
East Longmeadow, MA. 01028
bruce.fenney@eastlongmeadowma.gov

Re: National Pollutant Discharge Elimination System Permit ID #: MAR041005, Town of East Longmeadow

Dear Bruce Fenney:

The 2016 NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (MS4 General Permit) is a jointly issued EPA-MassDEP permit. Your Notice of Intent (NOI) for coverage under this MS4 General Permit has been reviewed by EPA and appears to be complete. You are hereby granted authorization by EPA and MassDEP to discharge stormwater from your MS4 in accordance with the applicable terms and conditions of the MS4 General Permit, including all relevant and applicable Appendices. This authorization to discharge expires at midnight on **June 30, 2022.**

For those permittees that certified Endangered Species Act eligibility under Criterion C in their NOI, this authorization letter also serves as EPA's concurrence with your determination that your discharges will have no effect on the listed species present in your action area, based on the information provided in your NOI.

As a reminder, your first annual report is due by **September 30, 2019** for the reporting period from May 1, 2018 through June 30, 2019.

Information about the permit and available resources can be found on our website: https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit. Should you have any questions regarding this permit please contact Newton Tedder at tedder.newton@epa.gov or (617) 918-1038.

Sincerely,

Thelma Murphy, Chief
Stormwater and Construction Permits Section
Office of Ecosystem Protection
United States Environmental Protection Agency, Region 1

and;

Lealdon Langley, Director
Wetlands and Wastewater Program
Bureau of Water Resources
Massachusetts Department of Environmental Protection

APPENDIX B

Appendix B
Summary of 2003 and 2016 MS4 General Permit BMPs

BMPs identified in the 2003 General Permit NOI have evolved over the permit term due to staff changes and Stormwater Program modifications; 2003 BMPs listed below are current as of the 2018 Annual Report.

The intent of the 2003 BMPs are being met under the following proposed 2016 General Permit BMPs per the NOI:

MCM 1: Public Education and Outreach

1A - Classroom Education – now under BMPs 1A and 2B

1B – Educational Displays – now under BMP 1 (A-D)

1C – Newspaper Press Releases – now under BMP 1 (A-D)

1D – Informational Pamphlets – now under BMP 1 (A-D)

1E – Hazardous Waste Collection Day – now under BMPs 1A and 2B

1F – Local Cable Access – now under BMP 1 (A-D)

1G (addition) – Environmental Services Guide Booklet – now under BMP 1 (A-D)

MCM 2: Public Involvement and Participation

2A – Adopt-a-Stream Program – now under BMP 2B

2B – Water Quality Monitoring – now under BMP 2B

2C – Attitude Surveys – now under BMPs 1 (A-D) and 2B

2D – Community Hotline – now under BMPs 1A and 2B

2E (addition) – Catch Basin Marking Program – now under BMP 2B

MCM 3: Illicit Discharge Detection and Elimination

3A – Mapping Stormwater Outfalls – now under BMP 3C

3B – Development of Illicit Discharge Plan – now under BMP 3D

3C – Non-Stormwater Discharge Ordinance – now under BMP 3A

3D – Inform Employees, Businesses, Public – now under BMPs 6E, 1A, and 1B

3E – Failing Septic Systems – now under BMP 3F

3F – Industrial / Business Connections – now under BMPs 1C and 1D

3G (addition) – Inspections of Stormwater Lines for Illicit Connections – now under BMP 3F

MCM 4: Construction Site Stormwater Runoff Control

4A – Construction Runoff Ordinance – now under BMP 4A

4B – Construction Plan Review – now under BMP 4A

4C – Inspection / Reporting – now under BMP 4B)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

5A – Post Construction Runoff Ordinance – now under BMP 5A

5B – Site Plan Review – now under BMPs 4A and 5A

5C – Stormwater System Maintenance Plan (replaced with Inspection Reporting)– now under BMPs 6B and 6F

5C (addition)– Homeowners Association Involvement– now under BMPs 1A and 1B

Appendix B
Summary of 2003 and 2016 MS4 General Permit BMPs

MCM 6: Pollution Prevention and Good Housekeeping in Municipal Operations

6A – Municipal Maintenance Activity Program – now under BMPs 6A, 6B, 6F

6B – Training of Municipal Employees – now under BMP 3E

6C – Stormwater Pollution Prevention Plan / MSGP – now under BMP 6G

6D – Pest Control – now under BMP 6F

6E – Catch Basin Cleaning Program – now under BMP 6C

6F – Street Sweeping Program – now under BMP 6D

6G – Used Oil Recycling – now under BMPs 1 (A-D), 2B, and 6A

6H – Hazardous Waste Collection – now under BMP 2B

6I – Road Salt Application – now under BMP 6E

6J – Illegal Dumping – now under BMPs 1 (A-D) and 2B

BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

7A – Not Applicable – now under Part III Actions for Meeting TMDL Requirements (Long Island Sound TMDL for Nitrogen, requirements in part B.I of Small MS4 GP Appendix F)

APPENDIX C

Endangered Species Act Eligibility Certification

TO: Town of East Longmeadow Stormwater Management Program Files

FROM: Tighe & Bond

COPY: Bruce Fenney, Superintendent Public Works; Denise Menard, Town Manager

DATE: August 31, 2018

Tighe & Bond has completed the National Endangered Species Eligibility Determination screening process in accordance with Part 1.9.1 and Appendix C of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (see Attachment A of this memorandum), effective July 1, 2018[1], and determined that the **Town of East Longmeadow** meets **Criterion C**, where informal consultation with U.S. Fish and Wildlife (USFWS) resulted in a finding that the stormwater discharges and discharge related activities will have "no affect" on listed species or critical habitat. Tighe & Bond followed EPA's screening process required by the 2016 Small MS4 General Permit as follows:

Tighe & Bond went to the USFWS Information for Planning and Consultation (IPaC) website[2] and requested an Official Species List from the USFWS New England Ecological Services Field Office, included in Attachment B to this memorandum. The Official Species List lists the following species that may occur or could potentially be affected by activities in the Town:

- Northern Long-eared Bat.

The Official Species List documents that there are no critical habitats in East Longmeadow.

Tighe & Bond then went to the USFWS New England Field Office website for Endangered Species Reviews/Consultations[3] and selected the Massachusetts state list[4] to review which Towns have federally-listed species. A copy of the list of Federally Listed Endangered and Threatened Species in Massachusetts is included in Attachment C to this memorandum. Based on review of this list, the Northern Long-eared Bat is listed statewide.

Tighe & Bond then reviewed Step 1 Part B of the USFWS endangered species consultation, and visited the Massachusetts Natural Heritage and Endangered Species Program (NHESP) species information and conservation website about the Northern Long-eared Bat[5].

The NHESP website included a map showing the known locations of the Northern Long-eared Bat within Massachusetts. Attachment D to this memorandum includes a map showing that there are no known Northern Long-eared Bat winter hibernacula or maternity roost trees within or near the Town of East Longmeadow.

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[1] Revised General Permit effective date according to June 29, 2017 EPA memorandum from the EPA Region 1 Acting Regional Administrator.

[2] http://ecos.fws.gov/ipac/

[3] https://www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm

[4] https://www.fws.gov/newengland/pdfs/MA%20species%20by%20town.pdf

[5] http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/rare-mammals/northern-long-eared-bat.html

Based on the results of the NHESP website review, Tighe & Bond determined there is no potential habitat for any listed species within the action area, and therefore no further coordination is required with the USFWS. Attachment E provides the results of Tighe & Bond's informal consultation on behalf of the Town of East Longmeadow with the USFWS "no species present" letter that states "no species are known to occur in the project area".

Step 1 – Determine if you can meet USFWS Criterion A

"USFWS Criterion A: You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the Information, Planning, and Conservation (IPaC) online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area. See Attachment 1 to Appendix C for instructions on how to use IPaC."

No, the Town of East Longmeadow's IPaC action area contains the Northern Long-eared Bat.

Step 2 – Determine if You Can Meet Eligibility USFWS Criteria B

"USFWS Criterion B: You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer "Yes" to **all** of the following questions:

1) Does your action area contain one or more of the following species: Sandplain gerardia, Small whorled Pogonia, American burying beetle, Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?

   No, the Town of East Longmeadow's action area does not contain any of the above listed species.

Step 3 – Determine if You Can Meet Eligibility USFWS Criteria C

"You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer "Yes" to both of the following questions:

1) Does your action area contain one or more of the following species: Northern Long-eared Bat, Sandplain gerardia, Small whorled Pogonia and/or American burying beetle and does not contain any following species: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?

   Yes, the Town of East Longmeadow's action area contains the Northern Long-eared Bat, but none of the other subsequent species.

2) Did the assessment of your discharge and discharge related activities indicate that there would be "no affect" on listed species or critical habitat and EOA provided concurrence with your determination?

   Yes, Tighe & Bond performed an informal consultation with USFWS and determined that the Town's discharges and discharge related activities will have "no affect" on listed species or critical habitat (see discussion above).

3) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will conduct an endangered species screening for the proposed site and contact the USFWS if you determine that the new activity "may affect" or is "not likely to adversely affect" listed species or critical habitat under the jurisdiction of the USFWS."

Yes, during the course of the permit term the Town of East Longmeadow agrees to conduct an endangered species screening for the proposed site and contact USFWS if they plan to install a structural BMP not identified in the NOI.

Tighe & Bond's review of all questions under Step 3 resulted in "Yes" and thereby has determined the Town of East Longmeadow's action area meets the endangered species' eligibility requirements included in **Criterion C.**

J:\E\E0714 East Longmeadow Engineering Services\18A - MS4 Services - Year 1 Compliance\Permitting\Eligibility Determinations\ESA Memo\Draft East Longmeadow ESA Eligibility Criterion C Memo Text_August 2018.docx

Attachment A

Appendix C of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts

APPENDIX C
ENDANGERED SPECIES GUIDANCE

A. Background

In order to meet its obligations under the Clean Water Act and the Endangered Species Act (ESA), and to promote the goals of those Acts, the Environmental Protection Agency (EPA) is seeking to ensure the activities regulated by this general permit do not adversely affect endangered and threatened species or critical habitat. Applicants applying for permit coverage must assess the impacts of their stormwater discharges and discharge-related activities on federally listed endangered and threatened species ("listed species") and designated critical habitat ("critical habitat") to ensure that those goals are met. Prior to obtaining general permit coverage, applicants must meet the ESA eligibility provisions of this permit by following the steps in this Appendix[1].

Applicants also have an independent ESA obligation to ensure that their activities do not result in any prohibited "take" of listed species[12]. The term "Take" is used in the ESA to include harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. "Harass" is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Many of the measures required in this general permit and in these instructions to protect species may also assist in ensuring that the applicant's activities do not result in a prohibited take of species in violation of section 9 of the ESA. If the applicant has plans or activities in an area where endangered and threatened species are located, they may wish to ensure that they are protected from potential take liability under ESA section 9 by obtaining an ESA section 10 permit or by requesting formal consultation under ESA section 7. Applicants that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should confer with the appropriate United States Fish and Wildlife Service (USFWS) office or the National Marine Fisheries Service (NMFS), (jointly the Services).

Currently, there are 20 species of concern for applicants applying for permit coverage, namely the Dwarf wedgemussel *(Alasmidonta heterodon)*, Northeastern bulrush (*Scirpus ancistrochaetus*), Sandplain gerardia *(Agalinis acuta)*, Piping Plover (*Charadrius melodus*), Roseate Tern (*Sterna dougallii*), Northern Red-bellied cooter (*Pseudemys rubriventis)*, Bog Turtle (*Glyptemys muhlenbergii*), Small whorled Pogonia (*Isotria medeoloides*), Puritan tiger beetle (*Cicindela puritana*), American burying beetle (*Nicrophorus americanus*), Northeastern beach tiger beetle (*Cicindela dorsalis*), Northern Long-eared Bat *(Myotis septentriolis)*Atlantic Sturgeon *(Acipenser oxyrinchus*), Shortnose Sturgeon *(Acipenser brevirostrum)*, North Atlantic Right Whale (*Eubalaena glacialis*) Humpback Whale *(Megaptera novaengliae)*, Fin Whale (*Balaenoptera physalus)*, Kemp's Ridley Sea Turtle *(Lepidochelys kempii)*, Loggerhead Sea Turtle *(Caretta caretta)*, Leatherback Sea Turtle *(Dermochelys coriacea)*, and the Green Turtle *(Chelonia*

[1] EPA strongly encourages applicants to begin this process at the earliest possible stage to ensure the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission.

[2] Section 9 of the ESA prohibits any person from "taking" a listed species (e.g. harassing or harming it) unless: (1) the taking is authorized through an "incidental take statement" as part of completion of formal consultation according to ESA section 7; (2) where an incidental take permit is obtained under ESA section 10 (which requires the development of a habitat conversion plan; or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

mydas). The Atlantic Sturgeon, Shortnose Sturgeon, North Atlantic Right Whale, Humpback Whale, Fin Whale, Loggerhead Sea Turtle, Kemp's Ridley Sea Turtle, Leatherback Sea Turtle and Green Turtle are listed under the jurisdiction of NMFS. The Dwarf wedgemussel, Northeastern bulrush, Sandplain gerardia, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Small whorled Pogonia, Roseate Tern, Puritan tiger beetle, Northeastern beach tiger beetle, Northern Long-eared Bat and American burying beetle are listed under the jurisdiction of the U.S. Fish and Wildlife Service.

Any applicant seeking coverage under this general permit, must consult with the Services where appropriate. When listed species are present, permit coverage is only available if EPA determines, or the applicant determines and EPA concurs, that the discharge or discharge related activities will have "no affect" on the listed species or critical habitat, or the applicant or EPA determines that the discharge or discharge related activities are "not likely to adversely affect" listed species or critical habitat and formal or informal consultation with the Services has been concluded and results in written concurrence by the Services that the discharge is "not likely to adversely affect" an endangered or threatened species or critical habitat.

EPA may designate the applicants as non-Federal representatives for the general permit for the purpose of carrying out formal or informal consultation with the Services (See 50 CFR §402.08 and §402.13). By terms of this permit, EPA has automatically designated operators as non-Federal representatives for the purpose of conducting formal or informal consultation with the U.S. Fish and Wildlife Service. EPA has not designated operators as non-Federal representatives for the purpose of conducting formal or informal consultation with the National Marine Fisheries Service. EPA has determined that discharges from MS4s are not likely to adversely affect listed species or critical habitat under the jurisdiction of the National Marine Fisheries Service. EPA has initiated informal consultation with the National Marine Fisheries Service on behalf of all permittees and no further action is required by permittees in order to fulfill ESA requirements of this permit related to species under the jurisdiction of NMFS

B. The U.S. Fish and Wildlife Service ESA Eligibility Process

Before submitting a notice of intent (NOI) for coverage by this permit, applicants must determine whether they meet the ESA eligibility criteria by following the steps in Section B of this Appendix. Applicants that cannot meet the eligibility criteria in Section B must apply for an individual permit.

The USFWS ESA eligibility requirements of this permit relating to the Dwarf wedgemussel, Northeastern bulrush, Sandplain gerardia, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Small whorled Pogonia, Roseate Tern, Puritan tiger beetle, Northeastern beach tiger beetle, Northern Long-eared Bat and American burying beetle may be satisfied by documenting that one of the following criteria has been met:

USFWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the stormwater discharges or discharge related activities.

USFWS Criterion B: In the course of formal or informal consultation with the Fish and Wildlife Service, under section 7 of the ESA, the consultation resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the stormwater discharges and discharge related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation).

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the stormwater discharge and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the applicant and affirmed by EPA, that the stormwater discharges and discharge related activities will have “no affect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

1. The Steps to Determine if the USFWS ESA Eligibility Criteria Can Be Met

To determine eligibility, you must assess the potential effects of your known stormwater discharges and discharge related activities on listed species or critical habitat, PRIOR to completing and submitting a Notice of Intent (NOI). You must follow the steps outlined below and document the results of your eligibility determination.

Step 1 – Determine if you can meet USFWS Criterion A

USFWS Criterion A: You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the Information, Planning, and Conservation (IPaC) online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area. See Attachment 1 to Appendix C for instructions on how to use IPaC.

If you have met USFWS Criterion A skip to Step # 4.

If you have not met USFWS Criterion A, go to Step # 2.

Step 2 – Determine if You Can Meet Eligibility USFWS Criteria B

USFWS Criterion B: You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer “Yes” to **all** of the following questions:

1) Does your action area contain one or more of the following species: Sandplain gerardia, Small whorled Pogonia, American burying beetle, Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?
   AND
2) Did your assessment of the discharge and discharge related activities indicate that the discharge or discharge related activities “may affect” or are “not likely to adversely affect” listed species or critical habitat?
   AND
3) Did you contact the USFWS and did the formal or informal consultation result in either a “no jeopardy” opinion by the USFWS (for formal consultation) or concurrence by the

USFWS that your activities would be "not likely to adversely affect" listed species or critical habitat (for informal consultation)?
AND

4) Do you agree to implement all measures upon which the consultation was conditioned?
5) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will re-initiate informal or formal consultation with USFWS as necessary?

Use the guidance below Step 3 to understand effects determination and to answer these questions.

If you answered "Yes" to all four questions above, you have met eligibility USFWS Criteria B. Skip to Step 4.

If you answered "No" to any of the four questions above, go to Step 3.

Step 3 – Determine if You Can Meet Eligibility USFWS Criterion C

USFWS Criterion C: You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer "Yes" to both of the following question:

1) Does your action area contain one or more of the following species: Northern Long-eared Bat, Sandplain gerardia, Small whorled Pogonia and/or American burying beetle and **does not** contain one any following species: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?[3]
OR
2) Did the assessment of your discharge and discharge related activities and indicate that there would be "no affect" on listed species or critical habitat and EPA provided concurrence with your determination?
3) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will to conduct an endangered species screening for the proposed site and contact the USFWS if you determine that the new activity "may affect" or is "not likely to adversely affect" listed species or critical habitat under the jurisdiction of the USFWS.

Use the guidance below to understand effects determination and to answer these questions.

If you answered "Yes" to both the question above, you have met eligibility USFWS Criterion C. Go to Step 4.

If you answered "No" to either of the questions above, you are not eligible for coverage by this permit. You must submit an application for an individual permit for your stormwater discharges. (See 40 CFR 122.21).

USFWS Effects Determination Guidance:

If you are unable to certify eligibility under USFWS Criterion A, you must assess whether your stormwater discharges and discharge-related activities "may affect", will have "no affect" or are "not likely to adversely affect" listed species or critical habitat. "Discharge-related activities" include: activities which cause, contribute to, or result in point source stormwater pollutant discharges; and measures to provide treatment for stormwater discharges including the siting, construction and operational procedures to control, reduce or prevent water pollution. Please be aware that no protection from incidental take liability is provided under this criterion.

The scope of effects to consider will vary with each system. If you are having difficulty in determining whether your system is likely to cause adverse effects to a listed species or critical habitat, you should contact the USFWS for assistance. In order to complete the determination of effects it may be necessary to follow the formal or informal consultation procedures in section 7 of the ESA.

Upon completion of your assessment, document the results of your effects determination. If your results indicate that stormwater discharges or discharge related activities will have "no affect" on threatened or endangered species or critical habitat and EPA concurs with your determination, you are eligible under USFWS Criterion C of this Appendix. Your determination may be based on measures that you implement to avoid, eliminate, or minimized adverse effects.

If the determination is "May affect" or "not likely to adversely affect" you must contact the USFWS to discuss your findings and measures you could implement to avoid, eliminate, or minimize adverse effects. If you and the USFWS reach agreement on measures to avoid adverse effects, you are eligible under USFWS Criterion B. Any terms and/or conditions to protect listed species and critical habitat that you relied on in order to complete an adverse effects determination, must be incorporated into your Storm Water Management Program (required by this permit) and implemented in order to maintain permit eligibility.

If endangered species issues cannot be resolved: If you cannot reach agreement with the USFWS on measures to avoid or eliminate adverse effects then you are not eligible for coverage under this permit. You must seek coverage under an individual permit.

Effects from stormwater discharges and discharge-related activities which could pose an adverse effect include:

- *Hydrological:* Stormwater discharges may cause siltation, sedimentation, or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.
- *Habitat:* Excavation, site development, grading and other surface disturbance activities, including the installation or placement of treatment equipment may adversely affect listed species or their habitat. Stormwater from the small MS4 may inundate a listed species habitat.

- *Toxicity:* In some cases, pollutants in the stormwater may have toxic effects on listed species.

Step 4 - Document Results of the Eligibility Determination

Once the USFWS ESA eligibility requirements have been met, you shall include documentation of USFWS ESA eligibility in the Storm Water Management Program required by the permit. Documentation for the various eligibility criteria are as follows:

- USFWS Criterion A: A copy of the IPaC generated preliminary determination letter indicating that no listed species or critical habitat is present within your action area. You shall also include a statement on how you determined that no listed species or critical habitat are in proximity to your stormwater system or discharges.
- USFWS Criterion B: A dated copy of the USFWS letter of concurrence on a finding of "no jeopardy" (for formal consultation) or "not likely to adversely affect" (for informal consultation) regarding the ESA section 7 consultation.
- USFWS Criterion C: A dated copy of the EPA concurrence with the operator's determination that the stormwater discharges and discharge-related activities will have "no affect" on listed species or critical habitat.

C. Submittal of Notice of Intent

Once the ESA eligibility requirements of Part C of this Appendix have been metyoumay submit the Notice of Intent indicating which Criterion you have met to be eligible for permit coverage. Signature and submittal of the NOI constitutes your certification, under penalty of law, of eligibility for permit coverage under 40 CFR 122.21.

D. Duty to Implement Terms and Conditions upon which Eligibility was Determined

You must comply with any terms and conditions imposed under the ESA eligibility requirements to ensure that your stormwater discharges and discharge related activities do not pose adverse effects or jeopardy to listed species and/or critical habitat. You must incorporate such terms and conditions into your Storm Water Management Program as required by this permit. If the ESA eligibility requirements of this permit cannot be met, then you may not receive coverage under this permit and must apply for an individual permit.

E. Services Information

United States Fish and Wildlife Service Office

National websites for Endangered Species Information:
Endangered Species home page: http://endangered.fws.gov
ESA Section 7 Consultations: http://endangered.fws.gov/consultation/index.html
Information, Planning, and Conservation System (IPAC): http://ecos.fws.gov/ipac/

U.S. FWS – Region 5
Supervisor

New England Field Office
U.S. Fish and Wildlife Services
70 Commercial Street, Suite 300
Concord, NH 03301

Natural Heritage Network

The Natural Heritage Network comprises 75 independent heritage program organizations located in all 50 states, 10 Canadian provinces, and 12 countries and territories located throughout Latin America and the Caribbean. These programs gather, manage, and distribute detailed information about the biological diversity found within their jurisdictions. Developers, businesses, and public agencies use natural heritage information to comply with environmental laws and to improve the environmental sensitivity of economic development projects. Local governments use the information to aid in land use planning.

The Natural Heritage Network is overseen by NatureServe, the Network's parent organization, and is accessible on-line at: http://www.natureserve.org/nhp/us_programs.htm, which provides websites and other access to a large number of specific biodiversity centers.

U.S. Fish and Wildlife IPaC system instructions

Use the following protocol to determine if any federally listed species or designated critical habitats under USFWS jurisdiction exist in your action area:

Enter your project specific information into the “Initial Project Scoping” feature of the Information, Planning, and Conservation (IPaC) system mapping tool, which can be found at the following location:

http://ecos.fws.gov/ipac/

a. Indicate the action area[1] for the MS4 by either:
    a. Drawing the boundary on the map or by uploading a shapefile.
    Select “Continue”

c. Click on the “SEE RESOURCE LIST” button and on the next screen you can export a trust resources list.This will provided a list of natural resources of concern, which will include an Endangered Species Act Species list. You may also request an official species list under “REGULATORY DOCUMENTS” Save copies and retain for your records

[1] The action area is defined by regulation as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action (50 CFR §402.02). This analysis is not limited to the "footprint" of the action nor is it limited by the Federal agency's authority. Rather, it is a biological determination of the reach of the proposed action on listed species. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area.

The documentation used by a Federal action agency to initiate consultation should contain a description of the action area as defined in the Services' regulations and explained in the Services' consultation handbook. If the Services determine that the action area as defined by the action agency is incorrect, the Services should discuss their rationale with the agency or applicant, as appropriate. Reaching agreement on the description of the action area is desirable but ultimately the Services can only consult when an action area is defined properly under the regulations.

For storm water discharges or discharge related activities, the action area should encompass the following:

- The immediate vicinity of, or nearby, the point of discharge into receiving waters.
- The path or immediate area through which or over which storm water flows from the municipality to the point of discharge into the receiving water. This includes areas in the receiving water downstream from the point of discharge.
- Areas that may be impacted by construction or repair activities. This extends as far as effects related to noise (from construction equipment, power tools, etc.) and light (if work is performed at night) may reach.

The action area will vary with the size and location of the outfall pipe, the nature and quantity of the storm water discharges, and the type of receiving waters, among other factors.

Attachment B

East Longmeadow
IPaC Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: August 14, 2018
Consultation Code: 05E1NE00-2018-SLI-2714
Event Code: 05E1NE00-2018-E-06348
Project Name: East Longmeadow MS4

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2018-SLI-2714

Event Code: 05E1NE00-2018-E-06348

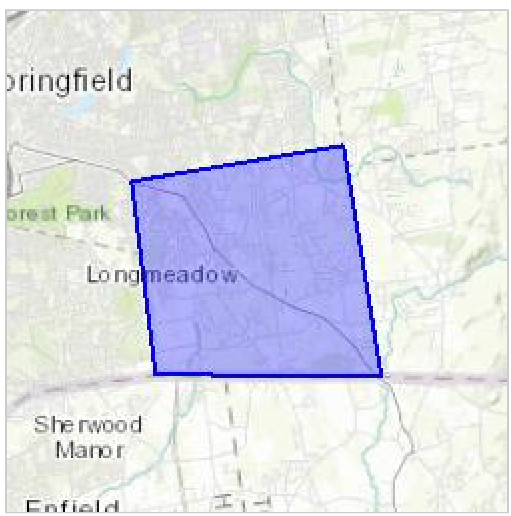
Project Name: East Longmeadow MS4

Project Type: Regulation Promulgation

Project Description: This project is applying for coverage under the 2016 MS4 General Permit. The project consists of the Town of East Longmeadow's small municipal separate storm sewer systems (MS4) that falls within the urbanized area of the town. Based on EPA's 2016 MS4 General Permit, the Town of East Longmeadow must apply for permit coverage for the Town's MS4 stormwater discharges and assess the impacts of the stormwater discharges and discharge-related activities on endangered and threatened species, and designated critical habitats that fall within the areas that fall within the MS4.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.062032321061764N72.500428063842W



Counties: Hampden, MA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Attachment C

Federally Listed Endangered and Threatened Species in Massachusetts

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

[1]Migratory only, scattered along the coast in small numbers

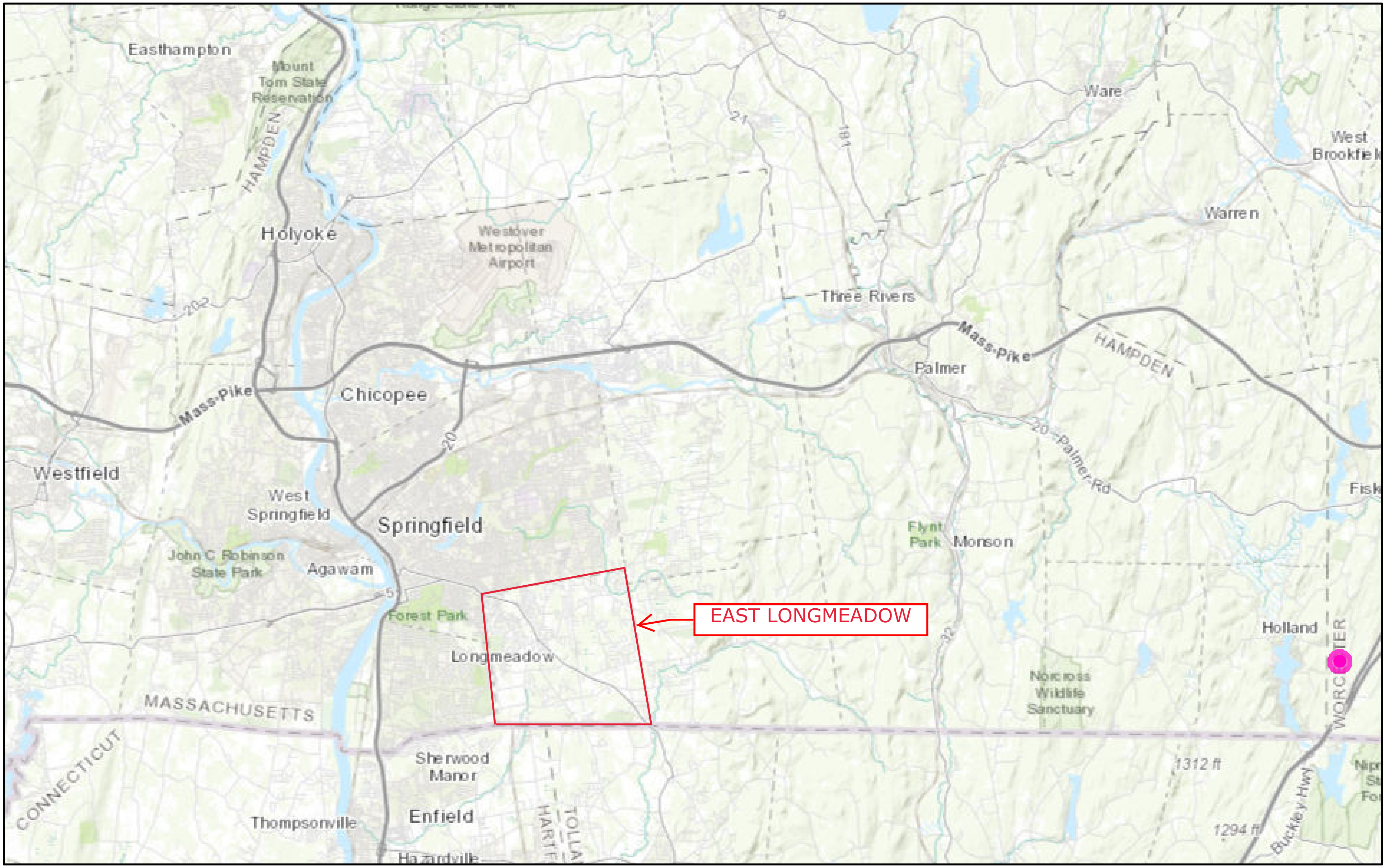
-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Updated 02/05/2016

Attachment D

NHESP Northern Long-eared Bat Hibernacula Map and Fact Sheet

East Longmeadow NHESP NLEB



August 14, 2018

Statewide NLEB Symbology

● Hibernaculum

MA Northern Long-eared Bat Winter Hibernacula (with ¼ mile buffer)

1:288,895

0 1.75 3.5 7 mi

0 2.75 5.5 11 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Natural Heritage
& Endangered Species
Program
Massachusetts Division of Fisheries & Wildlife
1 Rabbit Hill Road, Westborough, MA 01581
tel: (508) 389-6360, fax: (508) 389-7891
www.nhesp.org

Northern Long-eared Bat

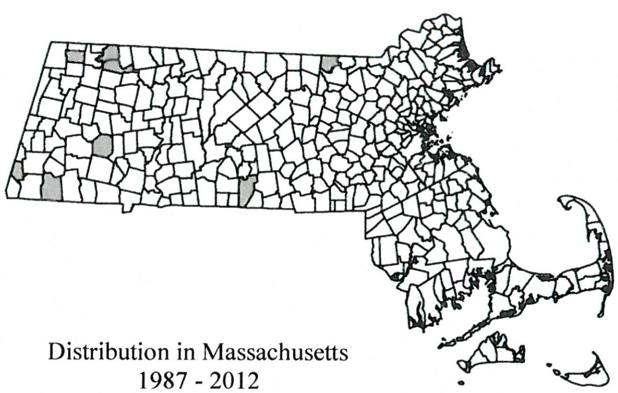
Myotis septentrionalis

State Status: **Endangered**
Federal Status: **Threatened**

Photo: Tammy Ciesla, MassWildlife

Description: The Northern Long-eared Bat is a small bat with large ears, which when pushed forward extend at least 4 mm past its nose. Its fur and wing membranes are light brown, giving it an overall somewhat uniform brown appearance. The hairs on its back are bicolored, with a dark base and lighter tip. The Northern Long-eared Bat averages 50-95 mm in total length, with a tail of 35-42 mm. In weight, it averages 5-8 g. This bat is typically found roosting in trees and feeding in forested habitats, but may occasionally be found in human habitations.

Similar Species: The best diagnostic character to distinguish the Long-eared Bat from other species in Massachusetts is its long ears. The Little Brown Myotis and rare Indiana Myotis are similar in appearance, but have shorter ears which typically do not extend beyond their nose when pushed forward. The Little Brown Myotis also has glossier fur and a shorter tail relative to its body length. The Indiana Myotis has a keeled calcar (a ridge of cartilage between the foot and the tail), which the Northern Long-eared Bat lacks. Other features of interest in identification include the bat's hairless interfemoral membrane (the skin stretching between the legs and tail) and lack of a black face mask (which is characteristic of Small-footed Myotis).



Distribution in Massachusetts
1987 - 2012
Based on records in the
Natural Heritage Database

Habitat in Massachusetts: In the warmer months, colonies of Northern Long-eared Bats may be found roosting and foraging in forested areas. Preferred roosts are in clustered stands of large trees, especially in live or dead hardwoods with large, tall cavities. These bats are found in other tree roosts as well, and occasionally in human-made structures. Northern Long-eared Bats forage under the forest canopy in structurally complex habitats, often above small ponds, vernal pools or streams, along gravel paths or roads, and at the forest edge. The bats are widespread in Massachusetts, and have been found in 11 of 14 counties. In winter, Northern Long-eared Bats hibernate in natural caves and abandoned mines, preferring habitats where the humidity is so high that water droplets sometimes cover their fur. Winter hibernacula (hibernation sites) have been reported in Berkshire, Franklin, Hampden, Middlesex, and Worcester counties.

Range: The Northern Long-eared Bat is found across forested parts of the eastern United States and Canada, west to British Columbia, Wyoming, and Montana, and south into Florida. It was historically common in New England, the Canadian Maritimes, Quebec and Ontario, and uncommon in the western extremes of its range.

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.

Life Cycle/Behavior: In the summer months, Northern Long-eared Bats emerge at dusk from daytime roosts for the first in a series of feeding flights. Their long tails and large wing membranes allow the bats to fly slowly and navigate through cluttered environments. These special adaptations also enable them to glean prey from foliage, in addition to catching insects on the fly. These bats locate resting insects through a combination of passive listening and the emission of high frequency echolocation calls.

Between August and October, the body weight of Northern Long-eared Bats increases by up to 45%, as they store fat for winter. In late summer, the bats begin to "swarm" around the entrances of caves, and are thought to be testing the air of possible hibernacula. This is the time when mating occurs, with females storing the sperm within their bodies until spring. By early November, the bats enter hibernation sites. Their metabolisms slow and they enter torpor, but will rouse occasionally throughout the winter to drink water. Northern Long-eared Bats share caves with a number of other species, but tend to hibernate singly or in small groups in deep cracks or crevices. They return to the same hibernacula in multiple years, but may not hibernate in the same location every year. Little data are available on migration, but the bats are known to travel up to 56 km from foraging sites to winter hibernacula.

Females bear and rear single young from mid-May through July. The longevity record for the Northern Long-eared Bat is 18 years.

Population status in Massachusetts, including Threats: The Northern Long-eared Bat is listed as Endangered under the Massachusetts Endangered Species Act. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. In addition, listed animals are specifically protected from activities that disrupt nesting, breeding, feeding, or migration.

Once a common species in the northern United States, populations of the Northern Long-eared Bat have been devastated by the spread of White-nose Syndrome. Populations in infected hibernacula in the Northeast have suffered catastrophic losses of 90-100%. White-nose Syndrome is caused by *Geomyces destructans*, a species new to science, but closely related to fungi that naturally grow in caves. The fungus grows over bats while they hibernate, causing them to rouse from dormancy frequently, lose valuable stored fat, and fail to survive the winter. The fungus is believed to be passed from cave to cave primarily by the movements of breeding male bats, but human transport is also thought to be responsible for the infection of some hibernacula.

Management Recommendations: The U.S. Fish & Wildlife Service is working in concert with government and non-profit groups to understand the spread of the fungus and potential for stopping its spread, as well as exploring opportunities for captive breeding of the most vulnerable species. Access to suitable, undisturbed hibernacula is essential to the survival of the Northern Long-eared Bat, and protection of known sites is paramount. Human disturbance of hibernacula can be discouraged or prevented with the use of gated entrances, in order to avoid arousal of hibernating bats and the spread of fungal spores.

References:

Caceres, M.C., and R.M. Barclay. 2000. Myotis septentrionalis. *Mammalian Species* 634: 1-4.

French, T.W., J.E. Cardoza, and G.S. Jones. *Homeowner's Guide to Bats*. Massachusetts Department of Fisheries & Wildlife: Westborough, MA.

Hamilton, Jr., W.J., and J.O. Whitaker, Jr. 1979. *Mammals of the Eastern United States*, Second Edition. Cornell University Press: Ithaca, NY.

U.S. Fish & Wildlife Service. 2012. "White-nose Syndrome." http://whitenosesyndrome.org/

Updated 2012
Map Updated 2012

Attachment E

USFWS New England Field Office
"No Species Present" Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 8, 2018

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm (accessed January 2018)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact David Simmons of this office at 603-227-6425 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

APPENDIX D

National Historic Preservation Act Eligibility Certification

TO: Town of East Longmeadow Stormwater Management Program Files

FROM: Tighe & Bond

COPY: Bruce Fenney, Superintendent Public Works; Denise Menard, Town Manager

DATE: August 31, 2018

Tighe & Bond has completed the National Historic Preservation Act Eligibility Determination screening process in accordance with Part 1.9.2 and Appendix D of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits from Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (see Attachment A of this memorandum), effective July 1, 2018[1], and determined that the **Town of East Longmeadow** meets **Criterion A,** wherein the discharges do not have the potential to cause effects on historic properties.

Tighe & Bond followed EPA's screening process included in Appendix D of the 2016 Small MS4 General Permit by answering the screening questions as follows:

Question 1: "Is the facility an existing facility authorized by the previous permit or a new facility and the applicant is not undertaking any activity involving subsurface land disturbance less than an acre?"

Yes, the Town of East Longmeadow is a an existing facility authorized under the 2003 Massachusetts Small MS4 General Permit and is not, as part of developing and submitting the Notice of Intent for permit coverage, undertaking any activity involving subsurface land disturbance less than an acre.

Based on this screening process, the Town of East Longmeadow's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not have an effect on a property that is listed or eligible for listing on the National Register of Historic Places (NRHP), meeting **Criterion A**, and no further action is necessary at this time.

Attachment B to this memorandum includes a list of the inventoried and state-listed historic areas, buildings, burial grounds, objects, and structures downloaded from the Massachusetts Cultural Resource Information System (MACRIS) that is current as of August 14, 2018. As of August 14, 2018, there are three properties in the Town that are listed in the NRHP.

If the Town undertakes construction on or around a property that is listed or eligible for listing, the Town will coordinate with the State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officers (THPOs) as needed by submitting a Project Notification Form and associated documentation for the project. As applicable for each project, the Town will implement measures to avoid or minimize adverse impacts on places listed, or eligible for listing, on the NRHP, including any conditions imposed by the SHPO or THPO. If the Town fails to document and implement such measures, those discharges are ineligible for coverage under EPA's Small MS4 General Permit.

J:\E\E0714 East Longmeadow Engineering Services\18A - MS4 Services - Year 1 Compliance\Permitting\Eligibility Determinations\NHPA Eligibility Memo \Draft East Longmeadow NHPA Criterion A Eligibility Memo_July 2018.docx

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[1] Revised General Permit effective date according to June 29, 2017 EPA memorandum from the EPA Region 1 Acting Regional Administrator.

Attachment A

Appendix D of U.S. EPA’s National Pollutant Discharge Elimination System (NPDES) General Permits from Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts

Appendix D
National Historic Preservation Act Guidance

Background

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of Federal "undertakings" on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term federal "undertaking" is defined in the NHPA regulations to include a project, activity, or program of a federal agency including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA's issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit is a federal undertaking within the meaning of the NHPA regulations and EPA has determined that the activities to be carried out under the general permit require review and consideration, in order to be in compliance with the federal historic preservation laws and regulations. Although individual submissions for authorization under the general permit do not constitute separate federal undertakings, the screening processes provides an appropriate site-specific means of addressing historic property issues in connection with EPA's issuance of the permit. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has included a screening process for applicants to identify whether properties listed or eligible for listing on the National Register of Historic Places are within the path of their discharges or discharge-related activities (including treatment systems or any BMPs relating to the discharge or treatment process) covered by this permit.

Applicants seeking authorization under this general permit must comply with applicable, State, Tribal, and local laws concerning the protection of historic properties and places and may be required to coordinate with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO) and others regarding effects of their discharges on historic properties.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a federal undertaking has no potential to have an effect on historic properties fulfills an agency's obligations under NHPA. EPA has reason to believe that the vast majority of activities authorized under this general permit will have no potential effects on historic properties. This permit typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the facility. EPA does not anticipate effects on historic properties from the pollutants in the authorized discharges. Thus, to the extent EPA's issuance of this general permit authorizes discharges of such constituents, confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to cause effects on historical properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit authorization. These existing dischargers should have already addressed NHPA issues in the previous general permit as they were required to certify that they were either not affecting historic properties or they had obtained written agreement from the applicable SHPO or THPO regarding methods of mitigating potential impacts. To the extent this permit authorizes renewal of prior coverage without relevant changes in operations the discharge has no potential to have an effect on historic properties.

Activities with Potential to Have an Effect on Historic Properties

EPA believes this permit may have some potential to have an effect on historic properties the applicant undertakes the construction and/or installation of control measures that involve subsurface disturbance that involves less than 1 acre of land. (Ground disturbances of 1 acre or more require coverage under the Construction General Permit.) Where there is disturbance of land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if the applicant is establishing new or altering existing control measures to manage their discharge that will involve subsurface ground disturbance of less than 1 acre, they will need to ensure (1) that historic properties will not be impacted by their activities or (2) that they are in compliance with a written agreement with the SHPO, THPO, or other tribal representative that outlines all measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Examples of Control Measures Which Involve Subsurface Disturbance

The type of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch basins, drainage inlets
- Ponds, bioretention areas
- Ditches, trenches, channels, swales
- Culverts, pipes
- Land manipulation; contouring, sloping, and grading
- Perimeter Drains
- Installation of manufactured treatment devices

EPA cautions applicants that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

Certification

Upon completion of this screening process the applicant shall certify eligibility for this permit using one of the following criteria on their Notice of Intent for permit coverage:

> **Criterion A**: The discharges do not have the potential to cause effects on historic properties.

Criterion B: A historic survey was conducted. The survey concluded that no historic properties are present. Discharges do not have the potential to cause effects on historic properties.

Criterion C: The discharges and discharge related activities have the potential to have an effect on historic properties, and the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Authorization under the general permit is available only if the applicant certifies and documents permit eligibility using one of the eligibility criteria listed above. Small MS4s that cannot meet any of the eligibility criteria in above must apply for an individual permit.

Screening Process

Applicants or their consultant need to answer the questions and follow the appropriate procedures below to assist EPA in compliance with 36 CFR 800.

***Question 1**:* Is the facility an existing facility authorized by the previous permit or a new facility and the applicant is not undertaking any activity involving subsurface land disturbance less than an acre?

YES - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.
The applicant should certify eligibility for this permit using Criterion A on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

NO- Go to Question 2.

***Question 2**:* Is the property listed in the National Register of Historic Places or have prior surveys or disturbances revealed the existence of a historic property or artifacts?

NO - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.
The applicant should certify eligibility for this permit using Criterion B on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

YES - The applicant or their consultant should prepare a complete information submittal to the SHPO. The submittal consists of:

- ●Completed Project Notification Form- forms available at http://www.sec.state.ma.us/mhc/mhcform/formidx.htm;

- USGS map section with the actual project boundaries clearly indicated; and
- Scaled project plans showing existing and proposed conditions.

(1) Please note that the SHPO does not accept email for review. Please mail a paper copy of your submittal (Certified Mail, Return Receipt Requested) or deliver a paper copy of your submittal (and obtain a receipt) to:

State Historic Preservation Officer
Massachusetts Historical Commission
220 Morrissey Blvd.
Boston MA 02125.

(2) Provide a copy of your submittal and the proof of MHC delivery showing the date MHC received your submittal to:

NPDES Permit Branch Chief
US EPA Region 1 (OEP06-1)
5 Post Office Square, Suite 100
Boston MA 02109-3912.

The SHPO will comment within thirty (30) days of receipt of complete submittals, and may ask for additional information. Consultation, as appropriate, will include EPA, the SHPO and other consulting parties (which includes the applicant). The steps in the federal regulations (36 CFR 800.2 to 800.6, etc.) will proceed as necessary to conclude the Section 106 review for the undertaking. **The applicant should certify eligibility for this permit using Criterion C on their Notice of Intent for permit coverage.**

Attachment B

Town of East Longmeadow
MACRIS Database of Inventoried and State-Listed Properties and Districts

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): East Longmeadow; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
ELG.A	Baptist Village		East Longmeadow	
ELG.901	East Longmeadow - Hampden Boundary Marker		East Longmeadow	1906
ELG.911	East Longmeadow - Connecticut Boundary Marker		East Longmeadow	1906
ELG.915	East Longmeadow - Longmeadow Boundary Marker		East Longmeadow	c 1894
ELG.903	East Longmeadow - Hampden Boundary Marker	Allen St	East Longmeadow	c 1894
ELG.918	East Longmeadow - Springfield Boundary Marker	Allen St	East Longmeadow	c 1894
ELG.4	Hall, William Henry Store and Post Office	38 Center Sq	East Longmeadow	c 1830
ELG.1	East Longmeadow Town Hall and Library	60 Center Sq	East Longmeadow	1882
ELG.921	East Longmeadow 75th Anniversary Monument	60 Center Sq	East Longmeadow	1969
ELG.913	East Longmeadow - Longmeadow Boundary Marker	Chestnut St	East Longmeadow	c 1894
ELG.15	Brown, Francis House	137 Chestnut St	East Longmeadow	c 1810
ELG.14 *	Burt, Elijah House	201 Chestnut St	East Longmeadow	1720
ELG.912	East Longmeadow - Longmeadow Boundary Marker	Denslow Rd	East Longmeadow	c 1894
ELG.917	East Longmeadow - Springfield Boundary Marker	Elm St	East Longmeadow	c 1894
ELG.19	Burt, Lucius Colton House	28 Elm St	East Longmeadow	c 1831
ELG.18	Cooley, Joseph House	197 Elm St	East Longmeadow	r 1800
ELG.17	Cooley, Clark Jr. House	354 Elm St	East Longmeadow	c 1810
ELG.902	East Longmeadow - Hampden Boundary Marker	Hampden Rd	East Longmeadow	1882
ELG.43	McGregory, Ebenezer House	112 Hampden Rd	East Longmeadow	r 1865
ELG.44	Fuller, Dea. Henry Clinton House	210 Hampden Rd	East Longmeadow	1812
ELG.22	Kibbe House	251 Kibbe Rd	East Longmeadow	c 1800
ELG.914	East Longmeadow - Longmeadow Boundary Marker	Maple St	East Longmeadow	c 1894
ELG.5	Peaseley, John House	87 Maple St	East Longmeadow	1852

Inv. No.	Property Name	Street	Town	Year
ELG.46	Norcross, James Franklin House	89 Maple St	East Longmeadow	c 1879
ELG.21	Moody, Serva House	74 Mapleshade Ave	East Longmeadow	1783
ELG.20	Birchland Park Junior High School	175 Mapleshade Ave	East Longmeadow	1951
ELG.38	McIntosh, Andrew House and Grist Mill Office	82 Meadowbrook Rd	East Longmeadow	c 1820
ELG.40	East Longmeadow First Baptist Church	89 Meadowbrook Rd	East Longmeadow	r 1820
ELG.37	Hills, Lucy House	116 Meadowbrook Rd	East Longmeadow	1866
ELG.36	Dwight, Daniel House	126 Meadowbrook Rd	East Longmeadow	c 1865
ELG.35	Dwight, Daniel Barn	138 Meadowbrook Rd	East Longmeadow	
ELG.39	Dwight, Oliver House	141 Meadowbrook Rd	East Longmeadow	c 1830
ELG.900	East Longmeadow - Hampden Boundary Marker	Mill Rd	East Longmeadow	c 1894
ELG.916	East Longmeadow - Springfield Boundary Marker	North Main St	East Longmeadow	c 1894
ELG.922	North Main Street Bridge over Conrail	North Main St	East Longmeadow	1964
ELG.10	Pleasant View Grade School	328 North Main St	East Longmeadow	1915
ELG.802	Baptist Village Cemetery	Parker St	East Longmeadow	1783
ELG.33	East Longmeadow First Baptist Church	48 Parker St	East Longmeadow	1970
ELG.32	Pease, Chester House	97 Parker St	East Longmeadow	c 1820
ELG.31	Eaast Longmeadow First Baptist Church Parsonage	135 Parker St	East Longmeadow	c 1888
ELG.30	Braley, William II House	164 Parker St	East Longmeadow	1828
ELG.25	Chapman, Elijah House	309 Parker St	East Longmeadow	c 1830
ELG.26	Eaton, Daniel House	498 Parker St	East Longmeadow	c 1750
ELG.42	First Baptist Church Meeting House and School	54 Pease Rd	East Longmeadow	1807
ELG.41 *	Swetland - Pease House	191 Pease Rd	East Longmeadow	c 1793
ELG.28	East Longmeadow District #5 Schoolhouse	285 Pease Rd	East Longmeadow	1871
ELG.803	Greenlawn Cemetery	Pleasant St	East Longmeadow	1817
ELG.801	Brookside Cemetery	Porter Rd	East Longmeadow	1803
ELG.904	East Longmeadow - Hampden Boundary Marker	Porter Rd	East Longmeadow	c 1894
ELG.919	East Longmeadow - Springfield Boundary Marker	Porter Rd	East Longmeadow	c 1894
ELG.27	Ashley, Stephen House	22 Porter Rd	East Longmeadow	c 1805
ELG.905	East Longmeadow - Wilbraham Boundary Marker	168 Porter Rd	East Longmeadow	1894
ELG.23	East Longmeadow District #6 Schoolhouse	208 Porter Rd	East Longmeadow	1872
ELG.24	Hancock, John House	222 Porter Rd	East Longmeadow	c 1795
ELG.800	Billings Hill Cemetery	Prospect St	East Longmeadow	1803
ELG.909	East Longmeadow - Connecticut Boundary Marker	Prospect St	East Longmeadow	1906
ELG.9	Green, Pownal - Page, W. W. House	79 Prospect St	East Longmeadow	c 1830
ELG.8	Foote, Calvin House	107 Prospect St	East Longmeadow	1831
ELG.7	Rankin, James H. House	125 Prospect St	East Longmeadow	r 1870

Inv. No.	Property Name	Street	Town	Year
ELG.6	Webster, Amos House	165 Prospect St	East Longmeadow	c 1830
ELG.16	East Longmeadow Distrit #4 Schoolhouse	232 Prospect St	East Longmeadow	1792
ELG.923	Quarryman, The	School St	East Longmeadow	1994
ELG.11	East Longmeadow District #4 Schoolhouse	35 School St	East Longmeadow	1868
ELG.910	East Longmeadow - Connecticut Boundary Marker	Shaker Rd	East Longmeadow	1906
ELG.47	East Longmeadow Fire Station	35 Shaker Rd	East Longmeadow	1924
ELG.29	Hunn, Ephraim Jr. House	463 Shaker Rd	East Longmeadow	1822
ELG.907	East Longmeadow - Connecticut Boundary Marker	Somers Rd	East Longmeadow	1906
ELG.3 *	First Congregational Church of East Longmeadow	7 Somers Rd	East Longmeadow	1828
ELG.2	Adolphus Swedish Evangelical Lutheran Church	30 Somers Rd	East Longmeadow	1891
ELG.908	East Longmeadow - Connecticut Boundary Marker	Somersville Rd	East Longmeadow	1906
ELG.34	Ellis, Jerusha House	56 Somersville Rd	East Longmeadow	c 1830
ELG.45	McGregory, Ebenezer House	43 South Bend Ln	East Longmeadow	1790
ELG.12	Frost, Warren House	203 Westwood Ave	East Longmeadow	c 1830
ELG.13	Hale, John House	245 Westwood Ave	East Longmeadow	1792

* Listed in the National Register of Historic Places

APPENDIX E

Massachusetts MS4 First-Year Stormwater Management Program (SWMP) Checklist
(For Permittees Authorized Under the Previous Permit), EPA Region 1

Massachusetts MS4 First-Year Stormwater Management Program (SWMP) Checklist (For Permittees Authorized Under the Previous Permit)

The Massachusetts MS4 First-Year SWMP Checklist sets out Minimum Control Measure (MCM) elements that must be included in SWMPs by July 1, 2019 for all permittees that were covered under the previous MS4 permit. MCM incorporation deadlines for newly designated MS4s differ from MCM deadlines for MS4s authorized under the previous permit. Deadlines for newly designated permittees are set out in Section 1.10.3. Deadlines for previously authorized permittees are set out in Section 1.10.2. Use this checklist as a guide as you review and update your SWMP to address these requirements.

SMALL MS4 AUTHORIZATION

☐ Date that the NOI was submitted and the location of the NOI

☐ Date that authorization was granted and the location of the authorization letter

RECEIVING WATERS

☐ Identify all receiving waters and impairments to waterbodies

☐ Identify the number of outfalls that discharge to each waterbody segment

ELIGIBILITY DETERMINATION UNDER THE ENDANGERED SPECIES ACT (Attach and reference your NOI)

☐ Appendix C determination under the U.S. Fish and Wildlife Endangered Species Act (ESA)

☐ The Criterion used to certify ESA eligibility

☐ Additional measures required by the U.S. Fish and Wildlife Service (if any)

ELIGIBILITY DETERMINATION UNDER THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)
(Attach and reference your NOI)

☐ Appendix D property screening determination

☐ The Criterion used to certify NHPA eligibility

☐ Additional documents from the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO)

☐ Additional measures required by the SHPO/THPO to avoid/minimize adverse impacts (if any)

MCM 1: PUBLIC EDUCATION AND OUTREACH

☐ Identify all planned BMPs

☐ Identify the locations of applicable materials for each BMP

☐ Identify the target audience(s)

☐ Identify the measurable goals

☐ Identify the dates that message(s) are sent to each target audience

☐ Identify the responsible parties involved in ensuring the completion of the BMP

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

☐ The location of the SWMP for public access

☐ Provisions for public participation in SWMP development

☐ Identify any additional planned BMPs, responsible party or parties, location of the documents required to complete the BMP, and measurable goals

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

☐ Reference legal authority

☐ Identify the department responsible for illicit connection enforcement

☐ Annual Sanitary Sewer Overflow (SSO) Inventory

☐ MS4 system map

☐ IDDE Program Document

☐ Outfall/interconnection inventory and ranking

☐ Employee training content and dates

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

☐ Reference legal authority

☐ Site plan review procedures

☐ Procedures for site inspection and enforcement of sediment and erosion control measures

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

☐ Reference legal authority

☐ Green infrastructure report

☐ List of municipal retrofit opportunities

☐ Guidelines for street design and parking lots

MCM 6: GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE-OWNED OPERATION

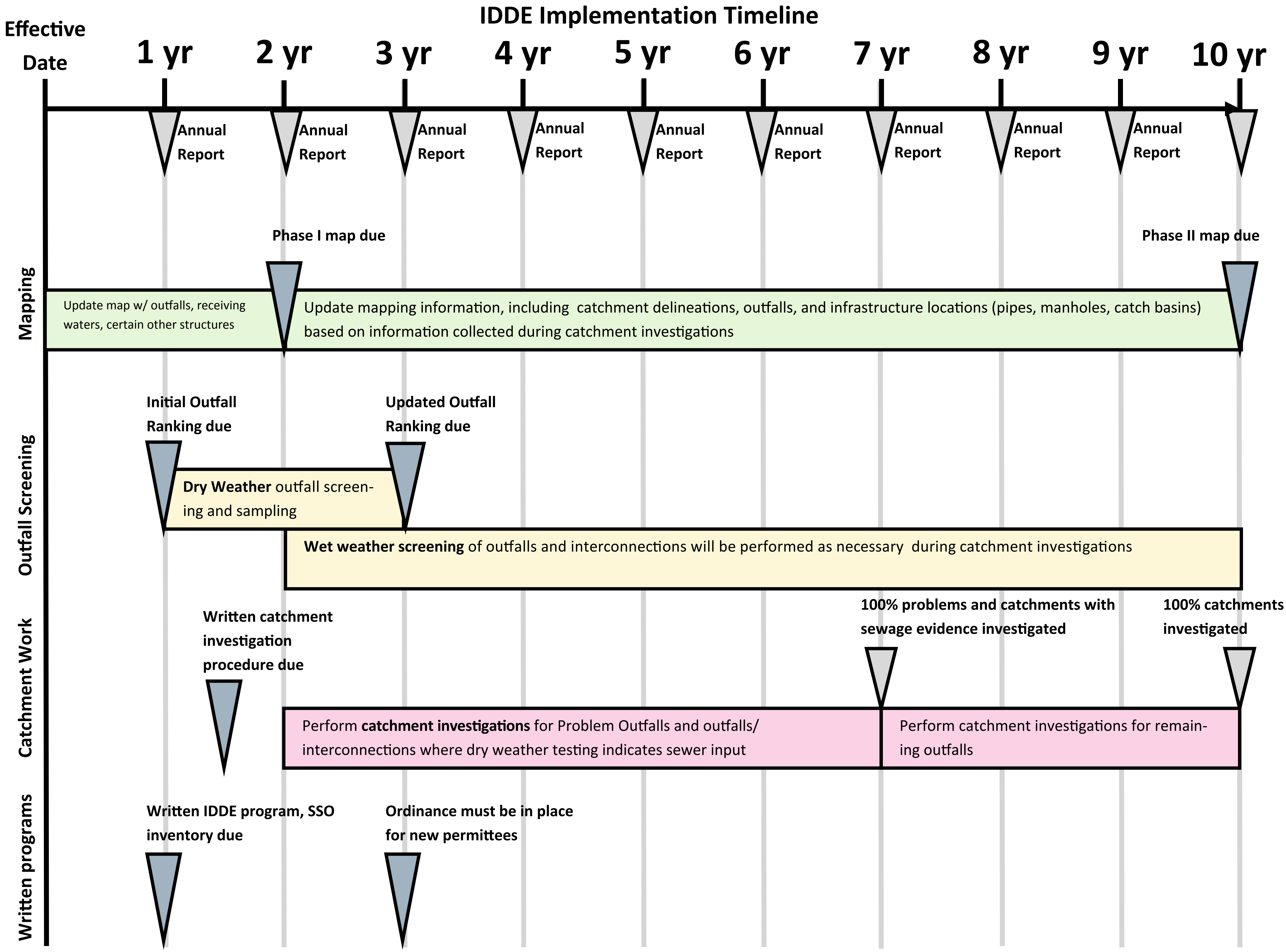
☐ Catch basin cleaning program

☐ Street sweeping program

☐ Stormwater treatment structure inspection and maintenance procedures

☐ Winter road maintenance program

Illicit Discharge Detection and Elimination Plan Implementation Timeline, EPA Region 1


IDDE Implementation Timeline
Effective Date
1 yr
2 yr
3 yr
4 yr
5 yr
6 yr
7 yr
8 yr
9 yr
10 yr
Annual Report
Mapping
Phase I map due
Phase II map due
Update map w/ outfalls, receiving waters, certain other structures
Update mapping information, including catchment delineations, outfalls, and infrastructure locations (pipes, manholes, catch basins) based on information collected during catchment investigations
Outfall Screening
Initial Outfall Ranking due
Updated Outfall Ranking due
Dry Weather outfall screening and sampling
Wet weather screening of outfalls and interconnections will be performed as necessary during catchment investigations
Catchment Work
Written catchment investigation procedure due
100% problems and catchments with sewage evidence investigated
100% catchments investigated
Perform catchment investigations for Problem Outfalls and outfalls/ interconnections where dry weather testing indicates sewer input
Perform catchment investigations for remaining outfalls
Written programs
Written IDDE program, SSO inventory due
Ordinance must be in place for new permittees

Potential Pollutants Associated with Municipal Activities, California Stormwater BMP Handbook

Pollutant Impacts on Water Quality	
Sediment	Sediment is a common component of stormwater, and can be a pollutant. Sediment can be detrimental to aquatic life (primary producers, benthic invertebrates, and fish) by interfering with photosynthesis, respiration, growth, reproduction, and oxygen exchange in water bodies. Sediment can transport other pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality analytical parameter.
Nutrients	Nutrients including nitrogen and phosphorous are the major plant nutrients used for fertilizing landscapes, and are often found in stormwater. These nutrients can result in excessive or accelerated growth of vegetation, such as algae, resulting in impaired use of water in lakes and other sources of water supply. For example, nutrients have led to a loss of water clarity in Lake Tahoe. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to fish.
Bacteria and Viruses	Bacteria and viruses are common contaminates of stormwater. For separate storm drain systems, sources of these contaminants include animal excrement and sanitary sewer overflow. High levels of indicator bacteria in stormwater have led to the closure of beaches, lakes, and rivers to contact recreation such as swimming.
Oil and Grease	Oil and grease includes a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Sources of oil and grease include leakage, spills, cleaning and sloughing associated with vehicle and equipment engines and suspensions, leaking and breaks in hydraulic systems, restaurants, and waste oil disposal.
Metals	Metals including lead, zinc, cadmium, copper, chromium, and nickel are commonly found in stormwater. Many of the artificial surfaces of the urban environment (e.g., galvanized metal, paint, automobiles, or preserved wood) contain metals, which enter stormwater as the surfaces corrode, flake, dissolve, decay, or leach. Over half the trace metal load carried in stormwater is associated with sediments. Metals are of concern because they are toxic to aquatic organisms, can bioaccumulate (accumulate to toxic levels in aquatic animals such as fish), and have the potential to contaminate drinking water supplies.
Organics	Organics may be found in stormwater at low concentrations. Often synthetic organic compounds (adhesives, cleaners, sealants, solvents, etc.) are widely applied and may be improperly stored and disposed. In addition, deliberate dumping of these chemicals into storm drains and inlets causes environmental harm to waterways.
Pesticides	Pesticides (including herbicides, fungicides, rodenticides, and insecticides) have been repeatedly detected in stormwater at toxic levels, even when pesticides have been applied in accordance with label instructions. As pesticide use has increased, so too have concerns about the adverse effects of pesticides on the environment and human health. Accumulation of these compounds in simple aquatic organisms, such as plankton, provides an avenue for biomagnification through the food web, potentially resulting in elevated levels of toxins in organisms that feed on them, such as fish and birds.
Gross Pollutants	Gross Pollutants (trash, debris and floatables) may include heavy metals, pesticides, and bacteria in stormwater. Typically resulting from an urban environment, industrial sites and construction sites, trash and floatables may create an aesthetic “eye sore” in waterways. Gross pollutants also include plant debris (such as leaves and lawn-clippings from landscape maintenance), animal excrement, street litter, and other organic matter. Such substances may harbor bacteria, viruses, vectors, and depress the dissolved oxygen levels in streams, lakes and estuaries sometimes causing fish kills.
Vector Production	Vector production (e.g., mosquitoes, flies, and rodents) is frequently associated with sheltered habitats and standing water. Unless designed and maintained properly, standing water may occur in treatment control BMP’s for 72 hours or more, thus providing a source for vector habitat and reproduction (Metzger, 2002).

Source: California Stormwater Quality Association, Stormwater BMP Handbook, 2003.

Potential pollutants likely associated with specific *municipal facilities*

Municipality Facility Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Building and Grounds Maintenance and Repair	X	X	X	X	X	X	X	X	X
Parking/Storage Area Maintenance	X	X	X	X	X	X	X		X
Waste Handling and Disposal	X	X	X	X	X	X	X	X	X
Vehicle and Equipment Fueling			X	X		X	X		
Vehicle and Equipment Maintenance and Repair				X		X	X		
Vehicle and Equipment Washing and Steam Cleaning	X	X	X	X		X	X		
Outdoor Loading and Unloading of Materials	X	X	X	X		X	X	X	X
Outdoor Container Storage of Liquids		X		X		X	X	X	X
Outdoor Storage of Raw Materials	X	X	X			X	X	X	X
Outdoor Process Equipment	X		X	X		X	X		
Overwater Activities			X	X	X	X	X	X	X
Landscape Maintenance	X	X	X		X			X	X
Source: California Stormwater BMP Handbook (http://www.cabmphandbooks.com/)(slightly modified)									

Potential pollutants likely associated with *municipal activities*

Municipal Program	Activities	Potential Pollutants								
		Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Roads, Streets, and Highways Operation and Maintenance	Sweeping and Cleaning	X		X	X		X			X
	Street Repair, Maintenance, and Striping/Painting	X		X	X		X	X		
	Bridge and Structure Maintenance	X		X	X		X	X		
Plaza, Sidewalk, and Parking Lot Maintenance and Cleaning	Surface Cleaning	X	X			X	X			X
	Graffiti Cleaning	X	X		X			X		
	Sidewalk Repair	X		X						
	Controlling Litter	X		X		X	X			X
Fountains, Pools, Lakes, and Lagoons Maintenance	Fountain and Pool Draining		X					X		
	Lake and Lagoon Maintenance	X	X	X		X			X	X
Landscape Maintenance	Mowing/Trimming/Planting	X	X	X		X			X	X
	Fertilizer & Pesticide Management	X	X						X	
	Managing Landscape Wastes			X					X	X
	Erosion Control	X	X							
Drainage System Operation and Maintenance	Inspection and Cleaning of Stormwater Conveyance Structures	X	X	X		X		X		X
	Controlling Illicit Connections and Discharges	X	X	X	X	X	X	X	X	X
	Controlling Illegal Dumping	X	X	X	X	X	X	X	X	X
	Maintenance of Inlet and Outlet Structures	X		X	X		X			X
Waste Handling and Disposal	Solid Waste Collection		X	X	X	X	X	X		X
	Waste Reduction and Recycling			X	X					X
	Household Hazardous Waste Collection			X	X		X	X	X	
	Controlling Litter			X	X	X		X		X
	Controlling Illegal Dumping	X		X		X	X		X	X
Water and Sewer Utility Operation and Maintenance	Water Line Maintenance	X				X	X			
	Sanitary Sewer Maintenance	X				X	X			X
	Spill/Leak/Overflow Control, Response, and Containment	X	X			X		X		X
Source: California Stormwater BMP Handbook (http://www.cabmphandbooks.com/)										

Tips for Organizing and Conducting Volunteer Clean-up Events, Manchester Urban Ponds Restoration Program

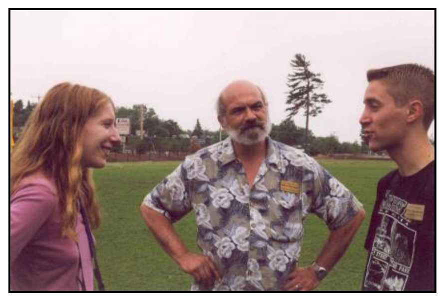
Tips for Organizing and Conducting Volunteer Clean-up Events

By: Jen Drociak –Acting Coordinator / Volunteer, Manchester Urban Ponds Restoration Program (UPRP)

Step 1: Plan Your Clean-Up Event

A. Land and / or Shore? Determine the Location(s): Determine where, in proximity to the waterbody, your group wishes to concentrate its efforts on during a clean-up event. To find heavily-littered areas, and / or areas that are prone to illegal dumping, walk along the shore, in advance, to identify location(s) for the clean-up event. Identify accessible paths along the shoreline and / or on public trails that are easy for people to walk. The location(s) may be largely determined by public (or lake / homeowner association) access points such as a public beach, boat-launch, or park. If the location is large, consider identifying smaller locations within the larger location which can be managed by individual group leaders and groups. Determining the location(s) will provide you with an idea of the footwear that may be needed for the task based upon the terrain. If the clean-up event will be located at a beach or a dry area, sandals or sneakers may be adequate. If it will be located in a wetland or mucky area, knee-boots may be appropriate. If it will be located in water, hip-boots may be most appropriate. Determining the location(s) will also provide you with a sense of how many volunteers your group is seeking for the clean-up event.

The UPRP typically focuses clean-up efforts in the parks adjacent to the ponds by skirting around the ponds themselves. This involves differing terrain, and thus footwear. There have been occasions, however, where one or more volunteers have also used a small fishing boat to retrieve trash from the water that is too deep to obtain via hip-waders.



B. Obtain Landowner Permission: Whether the location(s) of your clean-up event is / are municipally-owned or privately-owned, determine who owns the property in advance in order to obtain permission. If you do not know who the property owner is, visit your municipality's on-line assessor's website to review the tax map(s) and property card(s) associated with the area. It is typically easy to obtain permission to organize a clean-up on municipally-owned / public land. If the location(s) are on privately-owned land, talk to the land owner(s) and explain why you are organizing a clean-up in that area, along with the benefits of doing so. Obtain permission from them in writing, if you can, by considering they sign a form. Verbal permission may be adequate, however.

The UPRP organizes clean-up events on land owned by Public Works and Parks, Recreation, and Cemetery Departments. We have not had to seek private landowner permission. We simply notify the Manchester Public Works Department and Parks, Recreation, and Cemetery Department of the dates of the clean-up events.

C. Determine the Task(s) at Hand: Determine what you will request of your volunteers. Will it be the removal of trash only? If so, will it be the removal of large items only or all items including the minutia? Will it be the removal of yard waste only? Graffiti removal or other vandalism? All of the above? Determining the task(s) at hand will provide you with an idea of the supplies (and hours) you will need to perform the task(s).

The UPRP typically removes trash only. We typically do not pick up the minutia (cigarette butts, bottle caps, etc.) due to the large volume of trash we collect and the limited amount of time and volunteers we have at each clean-up event.

D. Determine the Check-In Location: Based upon the chosen location(s) of the clean-up event, consider and determine the most appropriate location for volunteers to initially gather to check in and obtain supplies, as well as to reconvene at the end of the clean-up event. This may be a kiosk, boat-launch, or specific location on a beach or in a park. Try to stay away from busy roads or areas that are difficult to access.

The UPRP typically requests that volunteers meet in one central / well-known location such as a kiosk in a parking lot or boat-launch. We have kept the initial meeting location at each clean-up event consistent over the years.

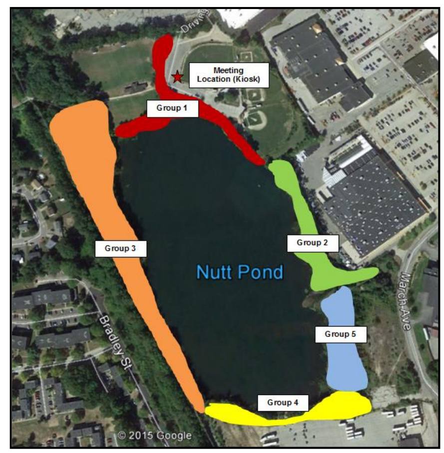
E. Determine the Most Appropriate Age(s) of Your Volunteers: Based upon the task(s) at hand, determine the most appropriate age(s) of your volunteers. Are you seeking adults only? Children? Both? Do you have tasks that all can partake in, or are the tasks age-specific?

The UPRP generally seeks volunteers of all ages for clean-up events and encourage everyone, despite their age or ability, to participate in a manner of how they most feel comfortable.

F. Determine the Desired Number of Volunteers: Based upon the number and location(s) that are chosen for the clean-up event, determine the desired number of volunteers to partake in the event.

The UPRP typically splits the area adjacent to the ponds into several areas, or groups of volunteers.

G. Create Map(s) of the Location(s) __OR__ Plan on Designating a "Group Leader" for Each Location: If the location(s) is / are large enough to break into more than one group during the clean-up event, consider making aerial photographic "maps" (or using topographic maps) of each group's area, indicating on the map the original meeting location, and the group's start and end point.



The UPRP has created aerial maps to use in the past. However, what we consider to be more helpful is having a "group leader" (returning volunteer or someone familiar with the area) lead a small group of other volunteers in each designated area.

Step 2: Schedule Your Clean-Up Event

A. Choose a Date: Choose a date for the clean-up event at a time of year that makes the most sense to your group. Keep in mind that while lakes and ponds have year-round residents, the majority of residents are likely seasonal and may not arrive for the season, or on or around Memorial Day weekend. Thus, a late-spring or late-fall cleanup may not be the most appropriate time as it may not garner the most volunteers. An early or mid-summer cleanup may be the most appropriate. Consider, perhaps, scheduling the event in conjunction with an annual lake association meeting or holiday barbeque. Also consider scheduling the date of the clean-up event at least a month in advance to allow time to prepare (gather supplies and recruit volunteers). Lastly, consider a rain date.

The UPRP typically schedules annual pond and park cleanups on Saturday mornings during the last two weeks in April and the first one or two weeks in May. This is because a) this time of year is typically after the snow has melted and b) this time of year is typically before "leaf-in" (and in the case of some of these areas, this is important, as the areas are overtaken with thick stands of invasive species). We do not offer rain dates.

B. Choose a Time: Determine the amount of time it may take to clean up the area(s) of your choosing. Will it take one hour? Two hours? More? This is also a factor of the number of volunteers that attend (typically the more volunteers that attend the least amount of time the clean-up will take). If you believe the area(s) may take more than two hours, it may be best to schedule a two-part clean-up event. Also consider the time of day most appropriate to your group, especially if it is scheduled in conjunction with (or before or after) another event such as an annual meeting or holiday barbeque.

The UPRP has realized that 1 ½ - 2 hours is a sufficient amount of time to allot to clean-up events. We also realize that volunteers typically do not have the time or patience to commit to any more time in one day than that. We have also typically scheduled the clean-up events from 9:00AM to 11:00AM, with a meeting time of no later than 8:50AM. Early-morning clean-up events afford volunteers to have the remainder of the day for other things.

Step 3: Determine and Obtain Necessary Supplies

A. Determine the Necessary Supplies: Determining the task(s) at hand will determine your necessary supplies. If your clean-up event is strictly a trash removal cleanup, you may only need to obtain latex gloves and trash bags. If your clean-up event also includes yard-waste removal, you may need to obtain paper yard-waste bags, rakes and / or other tools.

Since the UPRP clean-up events are strictly focused on trash-removal, the only supplies we must procure are latex gloves (medium sized) and trash bags. We also have a few hand-held trash-grabbers since some volunteers find them helpful in reaching difficult areas and / or to prevent excessive bending.

B. Obtain the Necessary Supplies: Determine how you will obtain the necessary supplies. Does your group have a budget? Will your group be purchasing your supplies? Will your group fundraise to purchase supplies? Will your group borrow supplies, from perhaps the town or city?

The UPRP typically obtains supplies from the Manchester Parks, Recreation, and Cemetery Department. These supplies typically only include latex gloves and trash bags, but have included, in the past, rakes, other tools and yard waste bags. We also typically have a large container of hand-sanitizer available.

C. Obtain a First-Aid Kit: Consider obtaining one or more First Aid kits (for one or more groups of volunteers) in case it is needed. It is better to be proactively safe!

The UPRP has one First-Aid kit for use.

D. Consider Providing Water and Snacks: If your group has the financial means, consider providing water and snacks to your volunteers for afterwards. If your group does not have the financial means, consider soliciting donations from local establishments or having your group bake some treats, and bring a large cooler of ice water (or iced-tea) and some paper (or reusable plastic) cups.

The UPRP does not regularly provide water and snacks to volunteers since we do not have a budget to do so. On occasion, we have been able to obtain donations for yogurt snacks from Stonyfield Farm. On occasion we have also brought or made a baked good.

Step 4: Determine Your Waste Disposal Options

A. Determine Your Waste Disposal Options: At the end of your clean-up event, determine how and where you will dispose of the trash that was collected. Is there a dumpster on site that your group has permission to use? Are there already trash and / or recycling carts on site that your group has permission to use? If not, consider contacting your municipality's Highway Department, Parks & Recreation Department, or Road Agent, at least a month in advance, who may be able to coordinate trash and / or recycling pickup from your municipality's vendor (i.e. Waste Management, Pinard, etc.). Determine when the trash and / or recycling will be picked up and what the requirements for pickup are (especially with items such as vehicular tires and batteries, etc.). In addition, consider recruiting volunteers with pick-up trucks, especially if your group is cleaning multiple areas, and trash must be stockpiled in one area at the end of the event. Similarly, if you cannot obtain trash pick-up services, volunteers with pick-up trucks, and a municipal sticker (or permission) may be able to haul the trash and / or recycling to your local landfill or transfer station for free.

The UPRP typically sends notification of the clean-up schedule to the Manchester Public Works Director as soon as the dates are calendared. The Public Works Director, or staff, has coordinated with Manchester's solid waste collection staff to collect the trash on the Monday following the cleanup event (which have been held on Saturdays). While there have been a few times the Public Works Department has made one or more 95-gallon recycling carts available for the clean-up events, they are generally not available, and therefore, recycling is not typically sorted from other debris. All (tied / secure) bags of trash have been neatly placed in the same locations over the years; typically underneath or adjacent to the informational kiosks. Trash collected that does not fit into bags is also neatly placed adjacent to the bagged trash. We also recruit volunteers with pick-up trucks so that trash from different areas of the cleanup can be taken to one designated location at the end of the event. In addition, one of our volunteers separates steel and other scrap metal and takes it to a scrap metal recycling facility.

Step 5: Advertise Your Clean-Up Event / Recruit Volunteers

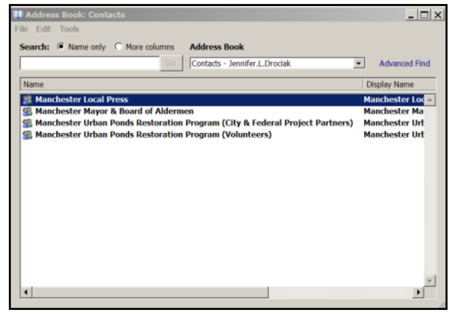
A. Determine Any Project Partners: In addition to volunteers who live around the waterbody, and any other residents of the town, determining any existing local groups or clubs that may be able to assist with the clean-up event is always helpful. Is there a local middle school, high school, or even college (if nearby) environmental club? A local chapter of the Student Conservation Association (SCA)? Any other organization, volunteer group, or club? A lot of these groups and / or clubs seek new community service projects and can help you garner additional / new volunteers.

The UPRP has partnered with the Student Conservation Association, local high school ecology clubs, local boy-scout troops, trout-fishing clubs, geo-cashing groups, and others in the past. This has helped garner additional / new volunteers.

B. Determine the Best Way(s) to Advertise Your Clean-Up Event: Determine the target audience of volunteers and consider the best way(s) to advertise your clean-up event. Is it by e-mail? Website? Post-card? Posting of a flyer on a community bulletin board and / or kiosk? An annual lake association newsletter? An advertisement in a local newspaper? TV? Radio? facebook / social media? All of the above? Remember, printed materials and postage cost money, as typically do newspaper and radio advertisements. If your group has available funds for this, that is one thing. If not, instead of simply placing a paid advertisement in a newspaper, try reaching out to a local news reporter to see if s/he will write a story about your cleanup (or write and submit an op-ed piece). This is usually good, free, advertisement. Also determine the most appropriate time to advertise for the clean-up event. Will you be advertising only once, or multiple times before the event?

The UPRP has typically advertised clean-up events in the following manners: 1) The UPRP webpage, 2) The City of Manchester website "Calendar of Events", 3) the UPRP facebook page, and 4) E-newsletter / e-mail. Local newspapers are also always gracious to cover the event(s) in a story beforehand. The UPRP typically sends posts the clean-up events on the website, and sends out an e-mail approximately three weeks in advance of the cleanup. The UPRP will then send weekly e-mails.

C. Create an E-Mail Distribution List: If you don't already have an e-mail distribution list, consider creating one. This may include names and e-mail addresses of lake association members, conservation commissioners, selectmen, municipal employees / department heads and others you know who may be interested. You can add to this with each clean-up event your group coordinates. If you have access to Constant Contact, Mailer, Mail Chimp, or other similar e-mail platform, this may be easier and more appropriate to use. If not, e-mail is a good starting place.



The UPRP has an e-mail distribution list which consists of approximately 200 individuals consisting of city aldermen, city department heads, conservation commissioners, media contacts, active school groups and other environmental organizations, and former volunteers. With every e-mail sent, an option is sent to opt-out of receiving e-mails by having a name and e-mail address removed from the list. This list is updated at least twice a year.

D. Before You Mail, Post, (or Hit the Send Button): Before you mail or post your flyer, or hit the send button to your e-mail distribution list, be sure to include the Who, What, Where, When, Why, and How to ensure all information is readily available. Why are you seeking volunteers? Who are you seeking as volunteers? What tasks are you seeking of volunteers? Where (general location and specific meeting location) are you seeking volunteers? When (date / time) are you seeking volunteers? Is there a rain date? How will the tasks be conducted? What should the volunteers wear or bring? What will be provided? Are you requesting an RSVP? For more information, who should they contact? Prepare your volunteers by letting them know what time to arrive, what to wear (clothes that can get dirty or wet, long pants, work gloves, boots or sturdy shoes, etc.), what to bring (sunscreen, insect repellant, water) and what to do in case of bad weather (rain date or cancellation information / phone number).

Manchester Urban Ponds Restoration Program

Spring 2014 Program Update

City of Manchester Environmental Protection Division
300 Winston Street
Manchester, NH 03103
(603) 665-6899 / www.manchesternh.gov/urbanponds

Visit Us on the Web!

www.manchesternh.gov/urbanponds

This winter, we've updated our website. You will no longer see an individual page for each waterbody. Instead, you will find the following pages:

- Home Page
- Clean-Up Events
- Water Quality Data
- Publications
- Contact Us

How's the Water?

New On-Line Publications Available!

- "All Ponds Water Quality Parameter Data Tables (2000 – 2013)."
- 2013 individual and regional VLAP and VRAP (water quality data) reports.
- Information on the McQuesten Brook Watershed Restoration Project!
- Pond Clean-Up Summary Tables & Graphs (2000-2013).

Watch Us on Manchester Public Television!

- **Monday April 14, 2014:** Jen Drociak will be visiting with Jane Beaulieu and taping a one-hour segment on the Manchester Urban Ponds Restoration Program on the Jane Beaulieu Report. This meeting is not taped live but is re-broadcast on Channel 23 on Monday (4/14) at 9:30pm, Tuesday (4/15) at 6:30pm, and Sunday (4/20) at 10:30am.
- **Wednesday April 23, 2014**: Jen Drociak and Jeff Marcoux will be presenting the history and current status of the Manchester Urban Ponds Restoration Program to the Manchester Conservation Commission. The meeting begins at 5:30pm and will be taped live on Channel 22 and later re-broadcast.

Read About Us in This Week's Hippo!

- **April 24, 2014 – May 1, 2014**

Join Us at an Annual Pond & Park Cleanup!

- **Saturday April 26, 2014** (9:00 – 11:00) Black Brook / Blodget Park
  Meet in parking lot
- **Saturday May 3, 2014** (9:00 – 11:00) Stevens Pond / Park
  Meet at informational kiosk at boat ramp
- **Saturday May 3, 2014** (9:00 – 12:00) Crystal Lake Park
  Sponsored by the Crystal Lake Preservation Association
  Meet at informational kiosk at beach
- **Saturday May 10, 2014** (9:00 – 12:00) Nutts Pond / Precourt Park
  Meet at informational kiosk
- **Sunday May 18, 2014** (9:00 – 11:00) Dorrs Pond / Livington Park
  Sponsored by the Manchester Student Conservation Association (SCA)
  Meet at informational kiosk in parking lot
- **Friday June 13, 2014** (8:00 – 12:00) McQuesten Pond & Brook
  Sponsored by the New Hampshire Rivers Council
  Meet at informational kiosk at Wolfe Park

Please dress appropriate for weather and wear rubber knee boots! Latex gloves and trash bags will be provided. Just bring yourself, a friend, and a sense of community spirit! Please arrive no later than 8:50am as we will break into groups and begin cleanups promptly at 9:00am.

Household Hazardous Waste Day
Saturday May 9, 2014 (9:00AM – 2:00PM)

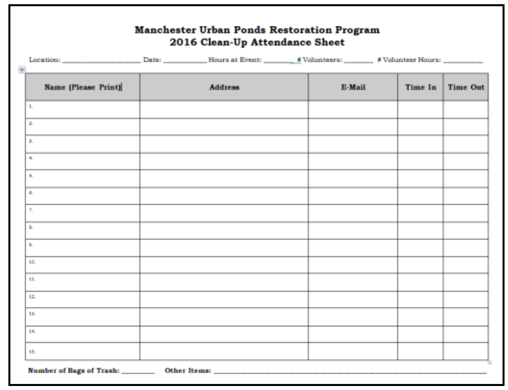
For Example: Seeking volunteers of all ages to assist in an annual trash clean-up at Black Brook and Blodget Park in Manchester on Saturday, April 23, 2016 from 9:00AM – 11:00AM. Volunteers will partner to clean the park and skirt the edges of the brook and wetland complex to remove accumulated trash. Please dress appropriately for weather as no rain date is scheduled. Latex gloves and trash bags will be provided, but please wear knee-boots, or hip-waders if you have them. No RSVP necessary. For more information, please visit www.manchesternh.gov/urbanponds or contact Jen Drociak at email@gmail.com or (603) ### - ####. We look forward to seeing you there!

Step 6: Conduct Your Clean-Up Event

A. Arrive Early: Consider arriving 15 minutes to one hour earlier than your volunteers so that you can set up at your check in location. Consider setting up the following: "Clean-Up Attendance Sheet", water and / or refreshments, first aid and safety, trash bags and clean-up supplies, organizational information (flyers, fact sheets, reports, etc.). Consider also walking around the location(s) to identify any new trash and / or safely concerns that may have accrued / arisen since your last visit.

The UPRP coordinator(s) typically meet on-site approximately 15-30 minutes in advance of volunteers to set up trash bags, latex gloves, and the "Clean-Up Attendance Sheet". We also survey the site to identify any new trash or safety hazards to relay to volunteers.

B. Welcome Your Volunteers and Ask Them to Sign-In: Welcome each volunteer upon arrival and ask that they sign a "Clean-Up Attendance Sheet" so that your group may account for number of volunteers and volunteer hours contributed to the clean-up event. Consider leaving the "Clean-Up Attendance Sheet" at the check-in location for those volunteers who may have to leave (and sign out) earlier than the full allotted time.


Manchester Urban Ponds Restoration Program
2016 Clean-Up Attendance Sheet

Location: ________ Date: ________ Hours at Event: ______ # Volunteers: ______ # Volunteer Hours: ________

Name (Please Print)	Address	E-Mail	Time In	Time Out
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Number of Bags of Trash: ______ Other Items: ________

The UPRP "Clean-Up Attendance Sheet" typically notes the location and date of the event, and has room to tally the number of volunteers, number of volunteer hours, number of bags of trash and other debris. It also has fields for volunteers to print their name, address, and e-mail, and note the time they checked in, and the time they checked out.

C. Ask Volunteers to Sign a Liability Waiver and Photo-Release Form: Trash found in a waterbody will likely be dirty, rusty, slimy, and sharp. In addition, your group may find broken glass, hypodermic needles and hazardous wastes. Heavy items should not be lifted alone. Caution is needed when handling all trash in order to avoid cuts and other injuries. Consider asking volunteers to sign a liability waiver and photo-release form. These can be two documents, or combined into one. The form should explain any dangers associated with the clean-up event and reminds volunteers to act responsibly for their own safety. The form helps protect you and your organization from potential liability if a volunteer is injured. In addition, with their permission, it allows you to use photographs taken that day. Examples of these forms can be found on-line.

D. Introduce Yourself and Provide Opening Remarks: Introduce yourself, thank special guests, sponsors / project partners (who have helped by providing goods or services), and volunteers. If the media is there, they may want to interview you or for you to provide a brief quote. Consider preparing remarks ahead-of-time, and allowing any special guests to also provide opening remarks to the group.

The UPRP coordinators typically introduce themselves, and thank any special guests (city aldermen, city employees, etc.), sponsors (municipal and local), and volunteers themselves.

E. Provide Volunteers with a Brief Background / History of the Area(s): To acquaint new volunteers to your group / program and to the area, consider providing a brief background / history about the waterbody / area, distinguishing features, and its importance to the community. Consider showing volunteers a map of the waterbody and / or watershed. Also consider providing information such as points of interest, recent (or upcoming) restoration projects in the area, and / or information relative to water quality / monitoring, exotic species, other volunteer opportunities, etc.

Many of the UPRP volunteers are returning volunteers. However, with any new volunteers, we typically offer basic information on the program itself, as well as the watershed, inlet / outlet, history fun-facts, and any recent / upcoming restoration projects. We have fact sheets on each of our ponds on our website, which we can also direct them to for more information.


Manchester Urban Ponds Restoration Program

Nutts Pond Facts


Manchester Urban Ponds Restoration Program

The History of Nutts Pond


Manchester Urban Ponds Restoration Program

Nutts Pond Stormwater Best Management Practices (BMP) Summary

F. Provide Necessary Supplies to Your Volunteers: Ensure your volunteers have ample supplies for the duration of the clean-up event. If they did not bring their own work gloves, request that they take two pairs of Latex gloves (in case one pair rips), and more than one trash bag, depending on the designated location(s). If your group is also removing yard waste, provide your volunteers with rakes and lawn-waste bags. Request that they return any unused pair of gloves, trash bags, and any supplies to you at the end of the clean-up event. Consider also leaving supplies out in a designated location along with the "Clean-Up Attendance Sheet" for volunteers who may show up late.

Many of the UPRP bring their own work gloves. We then issue two pairs of Latex gloves to each volunteer as well as multiple trash bags, depending on the specific area they will be cleaning up. We request that all unused supplies be returned at the end of the clean-up.

G. Provide Your Volunteers with Instructions for the Clean-Up Event: Provide your volunteers with instructions for the clean-up event such as what they will be retrieving (large trash only, all trash, etc.) what not to pick up (hypodermic needles, cigarette butts, etc.), if they are to separate trash from recycling or not (in which case they may carry two bags at once – different colors may be helpful - one for trash and one for recycling), what is considered recyclable if they are separating recycling from trash (this differs in each community and some vendors may not accept unclean / dirty recyclables from clean-up events), etc. Also provide your volunteers with safety tips and a general schedule of the clean-up event including the location to reconvene at the end and where to place trash. Ensure everyone knows there to focus their efforts and then to stop.

The UPRP typically only picks up large items, and does not typically separate trash from recycling, due to limited means. However, we have done so in the past and have provided volunteers with two trash bags – one for recycling, and one for trash.

H. Make It Fun! Play One or More Games While You're at It! Why not make things fun while you're out there picking up trash? Consider playing one or more games (especially if some of the volunteers are children) such as a scavenger hunt, who can find the most interesting or unusual piece of trash, who can find the largest piece of trash, who collects the most trash, etc. Consider offering a prize and / or certificate to the winner(s) of one or more of the games you play.

The UPRP has, for many years, asked volunteers to find the "Most Interesting or Unusual Piece of Trash" at each clean-up event. At the end of the clean-up, volunteers will place their found items in one location for "judging" by the coordinator(s) of the clean-up event. Certificates and / or prizes have been awarded to the winner(s), and photos have been taken. We have found some really interesting an unusual pieces of trash over the years, and have kept a list!

I. Relinquish Groups of Volunteers / Group Leader(s) to Designated Area(s): If you are separating volunteers into more than one group for your clean-up event, relinquish the groups to their designated location(s). If you don't have a group leader for each group, relinquish them with their maps in hand. If you have a group leader be sure to introduce the volunteers in each group to their group leader before relinquishing them to their designated location(s). Remember to consider that not all locations may need the same number of volunteers.

The UPRP typically asks one or more returning volunteers if they would agree to be group leaders. Not all locations require the same amount of volunteers, however. This is decided based upon the area of the designated location(s), as well as the amount of trash to be removed in the designated location(s). For example, one small area along the shoreline may only require two volunteers, but a larger area in another location with a lot of trash may require 4-6 or more volunteers.

J. Reconvene at Initial Check-In Area at Designated Time: After the allotted period of time has elapsed for the clean-up event, reconvene at your initial check-in area. Account for all volunteers that did not sign out early.

The UPRP always meets at our initial check-in area. We then account for each group leader and group of volunteers (who did not sign out early) to ensure all have safely returned.

K. Count Full Bags of Trash (or Weigh All Trash): Count all full bags of trash that were collected and returned. If one or more bags are returned and are not considered full, consider consolidating them to make full bags of trash. That way, your measurements of "full bags" collected for this, and any other clean-up events, are consistently measured / counted. If your group has access to a scale, you consider weighing your bags of trash, and any other trash, to account for pounds of trash collected. Another option is to ask if the vendor who is charged with collecting the trash after the event can inform your group of the weight of the collection when the truck enters the scale at the weigh-station before drop-off at the refuse facility.

Since trash collected at UPRP clean-up events has not been weighed by a scale, and trash has been weighed by vendor truck only occasionally, to be consistent, we always count full bags at the site, and consolidate bags of trash that are returned not full in order to make full bags.

L. Account for and Count Other Items: Account for and count the quantity of other items of trash collected that cannot fit into bags.

The UPRP always accounts for and counts any trash that is collected that cannot be bagged. This typically includes vehicular tires, shopping carts, wood debris, construction debris, or any other items that have been illegally dumped.

***M.* Share the Data with Volunteers:** Once you have tallied the final numbers of bags of trash and other items collected during the clean-up event, announce them to your volunteers so they know just how much trash and other debris they removed from the area, know how important their contribution of time and efforts were, and have immediate results of their work!

N. Tally Final Numbers on Clean-Up Attendance Sheet: Once you have tallied everything collected, write these numbers on your "Clean-Up Attendance Sheet".

O. Take Photographs: To commemorate the success of your clean-up event, take a photo of the trash collected, and of the group of volunteers who helped collect it!

The UPRP always photographs the trash collected (in and out of bags), as well as takes a group photograph in front of or aside the trash collected.

P. Award a Prize, or Two, or Three: If you played one or more games during the clean-up event, consider awarding a certificate or prize to your winner(s) and photographing them with their winning piece of trash!

The UPRP has, for many years, asked volunteers to find the "Most Interesting or Unusual Piece of Trash" at each clean-up event. At the end of the clean-up, volunteers will place their found items in one location for "judging" by the coordinator(s) of the clean-up. Certificates and / or prizes have been awarded to the winner(s), and photos have been taken.

Q. Thank the Volunteers: Before parting ways, be sure to thank your volunteers for their assistance! Encourage them to volunteer again. Be sure to individually thank any special guests (aldermen / selectmen, city employees, media, etc.).

At the end of each clean-up event, the UPRP notes upcoming clean-up events in order to encourage volunteers to return for the next event.

Above Left: Volunteers at the 100th Cleanup of the Manchester Urban Ponds Restoration Program.

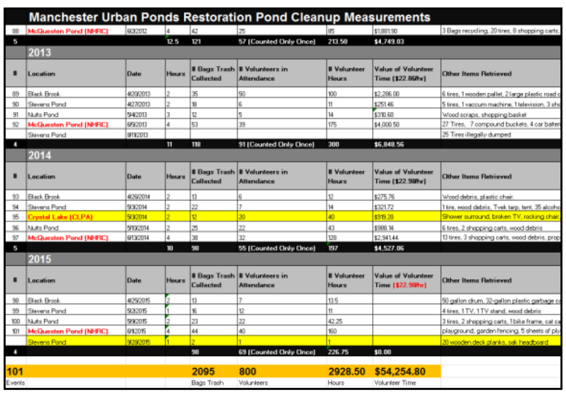
Above Right: Cake served to volunteers at the 100th official cleanup of the Manchester Urban Ponds Restoration Program .

R. Consider Having a Picnic / Cookout / or Lunch: If you have the financial means, consider having a picnic / cookout / lunch afterwards to celebrate your accomplishment. Or, consider soliciting local vendors for food donations in exchange for sponsor / partnership recognition at your clean-up event. If you're not able to make or supply lunch, consider encouraging volunteers to bring a brown-bag lunch for afterwards.

Step 7: Follow Up After the Clean-Up Event

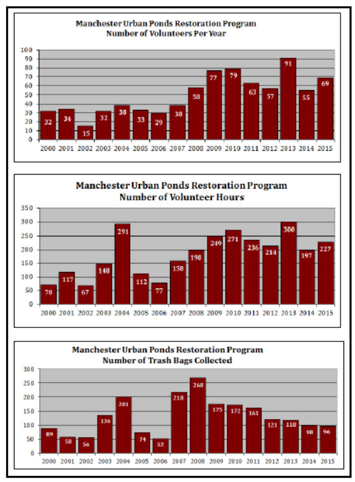
A. Update Your Electronic Records: Now is the time to transpose the information collected on the "Clean-Up Attendance Sheet" into an electronic record-retention system if you have access to one. Perhaps you have access to a database. If not, consider using a Microsoft Excel workbook / spreadsheet system to track measurements from your clean-up events. Now is also the time to update your existing e-mail distribution list with the names and e-mail addresses of those volunteers who participated in your clean-up event.

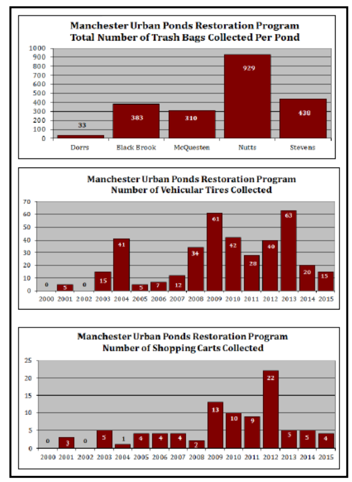
The UPRP has consistently used Microsoft Excel to track clean-up measurements. In the first worksheet of the workbook, we account for the number of our clean-up event, the location, date, hours spent at the event, numbers of bags of trash collected at the event, number of volunteers at the event, number of volunteer hours at the event, total value of volunteer time for the event, and other items retrieved at the event. For each year tracked, we created a "total" line with auto-calculations to account for the total of each year. To account for the value of volunteer time, we use figures taken from www.independentsector.org. In the second worksheet of the workbook, we account for pond cleanup attendees, where, for each clean-up event, we list the location, date, names (in alphabetical order), address, and hours at event. Similarly, for each year tracked, we created a "total" line. In the third worksheet of the workbook, we have created graphs based upon each year's total metrics. We then transpose these graphs to a Microsoft Word document, then an Adobe PDF document, and post on our website, and at the kiosks.



Manchester Urban Ponds Restoration Pond Cleanup Measurements

88	McQuesten Pond (NHRC)	6/2/2012	4	42	25	85	$1,881.90	3 Bags recycling, 20 tires, 8 shopping carts,
5			12.5	121	57 (Counted Only Once)	213.50	$4,749.03	
	2013							
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time ($22.86/hr)	Other Items Retrieved
89	Black Brook	4/20/2013	2	35	50	100	$2,286.00	6 tires, 1 wooden pallet, 2 large plastic road c
90	Stevens Pond	4/27/2013	2	18	6	11	$251.46	5 tires, 1 vaccum machine, 1 television, 3 sho
91	Nutts Pond	5/4/2013	3	12	5	14	$310.60	Wood scraps, shopping basket
92	McQuesten Pond (NHRC)	6/9/2013	4	53	39	175	$4,000.50	27 Tires, 7 compound buckets, 4 car batter
	Stevens Pond	8/11/2013						25 Tires illegally dumped
4			11	118	91 (Counted Only Once)	300	$6,848.56	
	2014							
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time ($22.98/hr)	Other Items Retrieved
93	Black Brook	4/26/2014	2	13	6	12	$275.76	Wood debris, plastic chair
94	Stevens Pond	5/3/2014	2	22	7	14	$321.72	1 tire, wood debris, Tvek tarp, tent, 35 alcoho
95	Crystal Lake (CLPA)	5/3/2014	2	12	20	40	$919.20	Shower surround, broken TV, rocking chair,
96	Nutts Pond	5/10/2014	2	25	22	43	$988.14	6 tires, 2 shopping carts, wood debris
97	McQuesten Pond (NHRC)	6/13/2014	4	38	32	128	$2,941.44	13 tires, 3 shopping carts, wood debris, prop
5			10	98	55 (Counted Only Once)	197	$4,527.06	
	2015							
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time ($22.98/hr)	Other Items Retrieved
98	Black Brook	4/25/2015	2	13	7	13.5		50 gallon drum, 32-gallon plastic garbage ca
99	Stevens Pond	5/2/2015	1	16	12	11		4 tires, 1 TV, 1 TV stand, wood debris
100	Nutts Pond	5/9/2015	2	23	22	42.25		3 tires, 2 shopping carts, 1 bike frame, cat ca
101	McQuesten Pond (NHRC)	6/1/2015	4	44	40	160		playground, garden fencing, 5 sheets of ply
	Stevens Pond	9/29/2015	1	2	1	1		20 wooden deck planks, oak headboard
4				98	69 (Counted Only Once)	226.75	$0.00	
101				2095	800	2928.50	$54,254.80	
Events				Bags Trash	Volunteers	Hours	Volunteer Time	





B. Follow Up With an E-mail or Thank-You Note: It is always nice to follow up with your new (and / or returning) volunteers by sending them a formal personalized thank-you via e-mail or US Postal Service. Besides, who doesn't like receiving a letter in the letter box, especially in this electronic day-in-age?

The UPRP, has, on occasion, sent personalized thank-you cards in the mail. Typically, however, we send a group thank-you via e-mail and attach photographs taken at the event(s), as well as re-cap tallies from the clean-up event(s).

C. Consider Writing an Article for Your Newsletter or the Newspaper: Consider writing an article for your newsletter, if you have one, or a local newsletter or newspaper, summarizing the event with photographs and tallies from the event. Volunteers who helped out at your clean-up event will feel proud of their accomplishment and the results. This is a good way to garner publicity about your group and its event as well as garner additional volunteers in the future.

The UPRP has often written newspaper articles and / or shared summary information about the clean-up events (at the end of the season) listing sponsors / project partners and volunteers, and including photographs of volunteers at the event, via an electronic newsletter.

From 2000 - 2005 **The Manchester Urban Ponds Restoration Program** (UPRP) was part of the Supplemental Environmental Projects Plan (SEPP) which was part of an agreement between the City of Manchester, NH Department of Environmental Services, and the US Environmental Protection Agency to address combined sewers in the City. Seven (7) waterbodies in Manchester have been evaluated and monitored for restoration potential. Specific restoration projects to meet the program's goals have also been identified, funded, and completed through this project. Since 2000, the Manchester Urban Ponds Restoration Program has organized 101 clean-up events. Over the past 15 years, 800 volunteers have spent 2,298.50 hours collecting 2,093 bags of trash! This does not include the items illegally “dumped” such as shopping carts (91), tires (388), car batteries, other car parts, construction debris, and other items. In addition, the value of volunteer time spent at these clean-ups has amounted to over $54,000 over the past 15 years! The Manchester Urban Ponds Restoration Program was awarded an EPA “Environmental Merit Award” in 2011. More information on the Manchester Urban Ponds Restoration Program can be found by visiting www.manchesternh.gov/urbanponds.

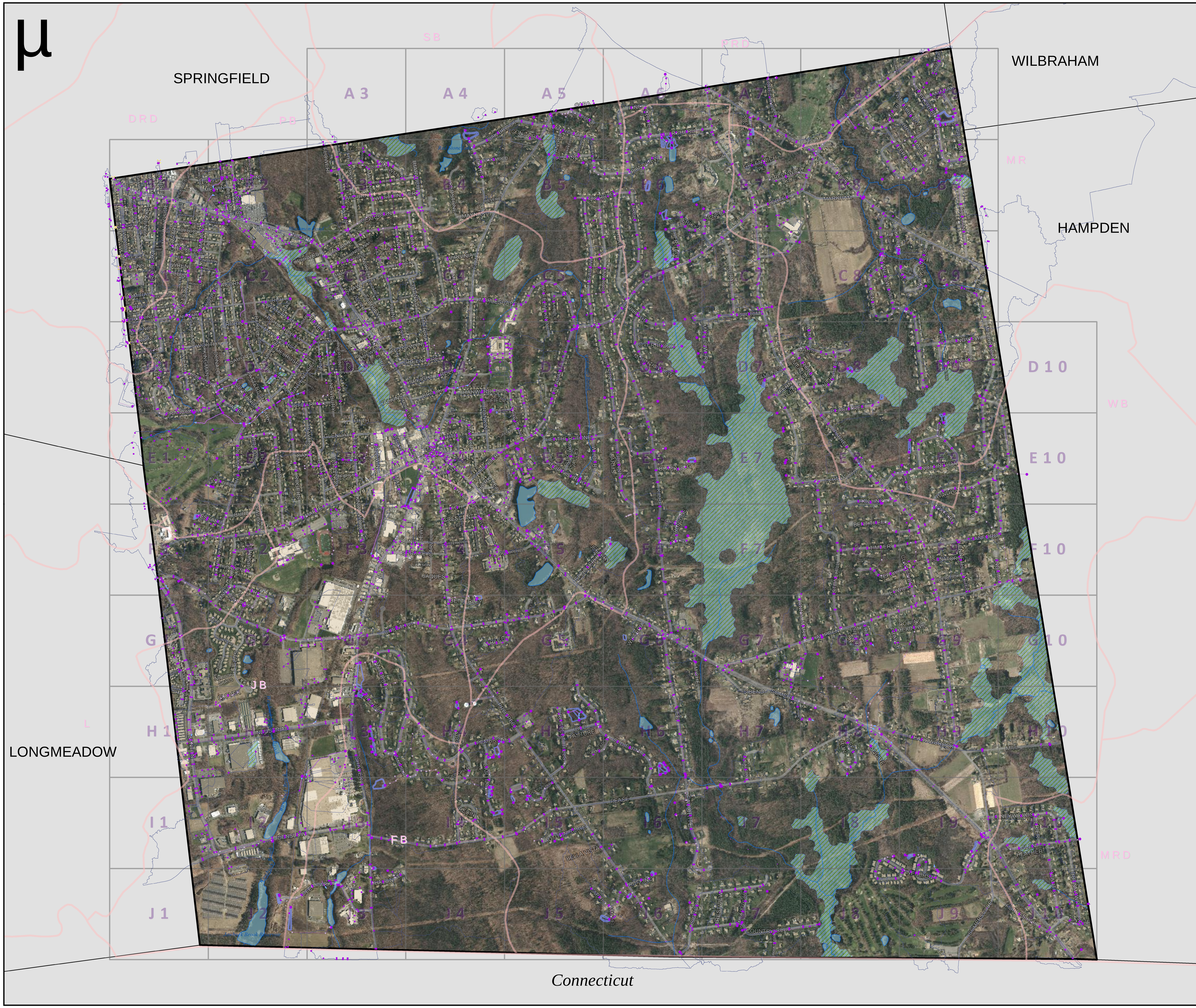
Jen Drociak lives in Manchester, NH and holds a Bachelor of Science degree in Environmental Conservation from the University of New Hampshire. She is employed with the New Hampshire Department of Environmental Services where she has worked as a program specialist for the Pollution Prevention Program, a restoration specialist for the NH Coastal Program where she established a monitoring program for pre- and post-restoration projects in NH’s salt marshes, and as the Volunteer River Assessment Program Coordinator where she provided technical assistance to approximately 200 volunteers who collected water quality samples for surface water quality assessments on NH’s rivers and streams. Jen has also worked for the Wastewater Engineering Bureau as a grants management specialist and is currently working for the Land Resources Management Bureau as a compliance specialist. Since 2000, Jen has also been involved with the Manchester Urban Ponds Restoration Program, and has served as acting coordinator since 2006 where she largely coordinates annual clean-up events and water quality monitoring.

Tighe&Bond

APPENDIX F

Town of East Longmeadow Phase 1 Stormwater System Map, updated June 2020

(maintained and updated online at:
https://eastlongmeadow.maps.arcgis.com/apps/webappviewer/index.html?id=d626c5f34de14e2b8cf60105cea94579)



Stormwater System
EAST LONGMEADOW, MA

8/26/2020

- Catch Basin
- Drain Manholes
- Standard Outfall
- Interconnection
- Drain Line
- Culvert
- Open Channel
- Detention Basin
- Drainage Basin
- Catchment
- East Longmeadow Border
- Linear Water Features
- Pond, Lake, Reservoir, etc
- Wetland
- Roadway ROW
- Structures
- Grid Index

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Please use this information as a guide and confirm all locations before instituting any plan or policy.

These data are not suitable for engineering applications or site work nor can the data be used to determine absolute delineation. Instead, the data should be used to portray zones of uncertainty and possible risks.

Map created by East Longmeadow IT Department

DRD-001	DRD - Inter	L-001	L	PB-010	PB	PB-072	PB	WB-013	WB	WB-073	WB
DRD-002	DRD - Inter	L-002	L	PB-011	PB	PB-073	PB	WB-014	WB	WB-075	WB
DRD-003	DRD	L-003	L	PB-012	PB	PB-074	PB	WB-015	WB	WB-076	WB
DRD-004	DRD	L-004	L	PB-013	PB	PB-075	PB	WB-016	WB	WB-077	WB
DRD-005	DRD - Inter	L-005	L	PB-014	PB	PB-076	PB	WB-017	WB	WB-078	WB
DRD-006	DRD - Inter	MR-001	MR	PB-015	PB	PB-077	PB	WB-018	WB	WB-079	WB
DRD-007	DRD - Inter	MR-002	MR	PB-016	PB	PB-078	PB	WB-019	WB	WB-080	WB
DRD-008	DRD - Inter	MR-003	MR	PB-017	PB	PB-079	PB	WB-020	WB	WB-081	WB
DRD-009	DRD - Inter	MR-004	MR	PB-018	PB	PB-080	PB	WB-021	WB	WB-082	WB
DRD-010	DRD - Inter	MR-005	MR	PB-019	PB	PB-081	PB	WB-022	WB	WB-083	WB
DRD-011	DRD - Inter	MR-006	MR	PB-020	PB	PB-082	PB	WB-023	WB	WB-084	WB
DRD-012	DRD - Inter	MR-007	MR	PB-022	PB	PB-083	PB	WB-024	WB	WB-085	WB
DRD-013	DRD - Inter	MR-008	MR	PB-023	PB	PB-084	PB	WB-025	WB	WB-086	WB
DRD-014	DRD - Inter	MR-009	MR	PB-024	PB	PB-086	PB	WB-026	WB	WB-087	WB
FB-001	FB	MR-010	MR	PB-026	PB	PB-087	PB	WB-027	WB	WB-088	WB
FB-002	FB	MR-011	MR	PB-027	PB	PB-088	PB	WB-028	WB	WB-089	WB
FB-003	FB	MR-012	MR	PB-028	PB	PB-089	PB	WB-029	WB	WB-090	WB
FB-005	FB	MR-013	MR	PB-029	PB	PB-090	PB	WB-030	WB	WB-091	WB
FB-006	FB	MR-014	MR	PB-030	PB	PB-091	PB	WB-031	WB	WB-092	WB
FB-007	FB	MR-015	MR	PB-031	PB	PB-092	PB	WB-032	WB	WB-093	WB
FB-008	FB	MR-016	MR	PB-032	PB	PB-093	PB	WB-033	WB	WB-094	WB
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FB-013	FB	MR-021	MR	PB-037	PB	PB-098	PB	WB-038	WB	WB-099	WB
FB-014	FB	MR-022	MR	PB-038	PB	PB-099	PB	WB-039	WB	WB-100	WB
FB-015	FB	MR-023	MR	PB-039	PB	PB-100	PB	WB-040	WB	WB-101	WB
FB-016	FB	MR-024	MR	PB-040	PB	PB-101	PB	WB-041	WB	WB-102	WB
FB-017	FB	MR-025	MR	PB-041	PB	PB-102	PB	WB-042	WB	WB-103	WB
FB-018	FB	MR-026	MR	PB-042	PB	PB-103	PB	WB-043	WB	WB-104	WB
FB-019	FB	MR-027	MR	PB-043	PB	PB-104	PB	WB-044	WB	WB-105	WB
FB-022	FB	MR-028	MR	PB-044	PB	PB-105	PB	WB-045	WB	WB-106	WB
FB-023	FB	MR-031	MR	PB-045	PB	PRD-001	PRD	WB-046	WB	WB-107	WB
FB-024	FB	MR-032	MR	PB-046	PB	PRD-002	PRD	WB-047	WB	WB-108	WB
FB-025	FB	MR-033	MR	PB-047	PB	PRD-003	PRD	WB-048	WB	WB-109	WB
JB-001	JB	MR-034	MR	PB-049	PB	PRD-004	PRD	WB-049	WB	WB-110	WB
JB-002	JB	MR-035	MR	PB-050	PB	PRD-005	PRD	WB-050	WB	WB-111	WB
JB-003	JB	MR-036	MR	PB-051	PB	PRD-006	PRD	WB-051	WB	WB-112	WB
JB-004	JB	MR-037	MR	PB-052	PB	SB-001	SB	WB-052	WB	WB-113	WB
JB-005	JB	MR-038	MR	PB-053	PB	SB-002	SB	WB-053	WB	WB-114	WB
JB-006	JB	MR-039	MR	PB-054	PB	SB-003	SB	WB-054	WB	WB-115	WB
JB-007	JB	MR-040	MR	PB-055	PB	SB-004	SB	WB-055	WB	WB-116	WB
JB-008	JB	MR-041	<Null>	PB-056	PB	SB-005	SB	WB-056	WB	WB-117	WB
JB-009	JB	MR-042	<Null>	PB-057	PB	SB-006	SB	WB-057	WB	WB-118	WB
JB-010	JB	MRD-001	MRD	PB-058	PB	SB-007	SB	WB-058	WB	WB-119	WB
JB-011	JB	MRD-002	MRD	PB-059	PB	SB-008	SB	WB-059	WB	WB-120	WB
JB-012	JB	MRD-003	MRD	PB-060	PB	WB-001	WB	WB-060	WB	WB-121	WB
JB-013	JB	MRD-004	MRD	PB-061	PB	WB-002	WB	WB-061	WB	WB-122	WB
JB-015	JB	MRD-005	MRD	PB-062	PB	WB-003	WB	WB-062	WB	WB-123	WB
JB-016	JB	PB-001	PB	PB-063	PB	WB-004	WB	WB-063	WB	WB-124	WB
JB-017	JB	PB-002	PB	PB-064	PB	WB-005	WB	WB-064	WB	WB-125	WB
JB-018	JB	PB-003	PB	PB-065	PB	WB-006	WB	WB-065	WB	WB-127	WB
JB-019	FB	PB-004	PB	PB-066	PB	WB-007	WB	WB-066	WB	WB-128	WB
JB-020	FB	PB-005	PB	PB-067	PB	WB-008	WB	WB-067	WB	WB-129	WB
JB-021	JB	PB-006	PB	PB-068	PB	WB-009	WB	WB-069	WB	WB-130	WB
JB-022	JB	PB-007	PB	PB-069	PB	WB-010	WB	WB-070	WB	WB-131	WB
JB-023	JB	PB-008	PB	PB-070	PB	WB-011	WB	WB-071	WB	WB-132	WB
JB-024	JB	PB-009	PB	PB-071	PB	WB-012	WB	WB-072	WB		

Dry Weather Screening Data as of June 30, 2020

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
597	2019-10-09 17:17:07.0000000	elmadpw	2019-10-09 17:17:07.0000000	elmadpw	DRD-001	DRD	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	HDPE	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
598	2019-10-09 17:17:08.0000000	elmadpw	2019-10-09 17:17:08.0000000	elmadpw	DRD-002	DRD	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	HDPE	NULL	NULL	NULL	NULL	Suburban_Re	NULL	None	NULL
599	2019-10-09 17:17:09.0000000	elmadpw	2019-10-09 17:17:09.0000000	elmadpw	DRD-003	DRD	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	HDPE	NULL	NULL	NULL	NULL	Suburban_Re	NULL	None	NULL
600	2019-10-09 17:17:10.0000000	elmadpw	2019-10-09 17:17:10.0000000	elmadpw	DRD-004	DRD	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
480	2019-09-24 13:46:41.0000000	elmadpw	2019-09-24 13:46:41.0000000	elmadpw	FB-001	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
475	2019-09-23 18:57:50.0000000	elmadpw	2019-09-23 18:57:50.0000000	elmadpw	FB-002	FB	2019-09-23 04:00:00.0000000	Josh C	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
474	2019-09-23 18:45:38.0000000	elmadpw	2019-09-23 18:45:38.0000000	elmadpw	FB-003	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
479	2019-09-24 12:48:28.0000000	elmadpw	2019-09-24 12:48:28.0000000	elmadpw	FB-005	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
477	2019-09-24 12:20:08.0000000	elmadpw	2019-09-24 12:20:08.0000000	elmadpw	FB-006	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
473	2019-09-23 18:08:40.0000000	elmadpw	2019-09-23 18:08:40.0000000	elmadpw	FB-007	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
472	2019-09-23 18:08:39.0000000	elmadpw	2019-09-23 18:08:39.0000000	elmadpw	FB-008	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	0.05000000	3.00000000	Suburban_Re	NULL	None	NULL
471	2019-09-23 18:08:37.0000000	elmadpw	2019-09-23 18:08:37.0000000	elmadpw	FB-009	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	0.15000000	2.00000000	NULL	NULL	None	NULL
476	2019-09-24 12:08:02.0000000	elmadpw	2019-09-24 12:08:02.0000000	elmadpw	FB-010	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	15.00000000	HDPE	NULL	Trickle	0.05000000	3.00000000	Suburban_Re	NULL	None	NULL
478	2019-09-24 12:34:44.0000000	elmadpw	2019-09-24 12:34:44.0000000	elmadpw	FB-011	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	15.00000000	HDPE	NULL	Trickle	0.05000000	3.00000000	Suburban_Re	NULL	None	NULL
468	2019-09-23 15:45:59.0000000	elmadpw	2019-09-23 15:45:59.0000000	elmadpw	FB-012	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	12.00000000	24.00000000	Urban_Res	NULL	None	NULL
469	2019-09-23 15:47:30.0000000	elmadpw	2019-09-23 15:47:30.0000000	elmadpw	FB-013	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	36.00000000	Steel_Iron	NULL	Trickle	15.00000000	36.00000000	Urban_Res	NULL	None	NULL
491	2019-09-24 17:54:15.0000000	elmadpw	2019-09-24 17:54:15.0000000	elmadpw	FB-014	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
488	2019-09-24 15:47:16.0000000	elmadpw	2019-09-24 15:47:16.0000000	elmadpw	FB-015	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
482	2019-09-24 14:27:00.0000000	elmadpw	2019-09-24 14:27:00.0000000	elmadpw	FB-016	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	15.00000000	RCP	NULL	Trickle	5.00000000	12.00000000	Urban_Res	NULL	None	NULL
483	2019-09-24 14:31:28.0000000	elmadpw	2019-09-24 14:31:28.0000000	elmadpw	FB-017	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	15.00000000	RCP	NULL	Trickle	10.00000000	10.00000000	Urban_Res	NULL	None	NULL
487	2019-09-24 15:31:22.0000000	elmadpw	2019-09-24 15:31:22.0000000	elmadpw	FB-018	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	HDPE	NULL	Trickle	3.00000000	12.00000000	Urban_Res	NULL	None	NULL
484	2019-09-24 14:51:15.0000000	elmadpw	2019-09-24 14:51:15.0000000	elmadpw	FB-019	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
470	2019-09-23 17:24:43.0000000	elmadpw	2019-09-23 17:24:43.0000000	elmadpw	FB-022	FB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
631	2020-03-02 19:38:55.0000000	elmadpw	2020-03-02 19:38:55.0000000	elmadpw	FB-022	FB	2020-03-02 17:00:00.0000000	crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	Trickle	8.00000000	18.00000000	Suburban_Re	NULL	None	NULL
505	2019-09-27 13:59:26.0000000	elmadpw	2019-09-27 13:59:26.0000000	elmadpw	FB-023	FB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	30.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
489	2019-09-24 17:15:38.0000000	elmadpw	2019-09-24 17:15:38.0000000	elmadpw	FB-024	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	18.00000000	HDPE	NULL	Trickle	6.00000000	18.00000000	Urban_Res	NULL	None	NULL
490	2019-09-24 17:27:17.0000000	elmadpw	2019-09-24 17:27:17.0000000	elmadpw	FB-025	FB	2019-09-24 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
498	2019-09-27 11:55:45.0000000	elmadpw	2019-09-27 11:55:45.0000000	elmadpw	JB-002	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	48.00000000	Steel_Iron	NULL	Trickle	0.75000000	12.00000000	Urban_Res	NULL	None	NULL
502	2019-09-27 12:55:10.0000000	elmadpw	2019-09-27 12:55:10.0000000	elmadpw	JB-003	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	30.00000000	RCP	NULL	Trickle	1.00000000	12.00000000	Urban_Res	NULL	None	NULL
501	2019-09-27 12:53:18.0000000	elmadpw	2019-09-27 12:53:18.0000000	elmadpw	JB-004	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	18.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
503	2019-09-27 12:59:11.0000000	elmadpw	2019-09-27 12:59:11.0000000	elmadpw	JB-005	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	36.00000000	RCP	NULL	Trickle	2.00000000	18.00000000	Urban_Res	NULL	None	NULL
493	2019-09-24 18:46:12.0000000	elmadpw	2019-09-24 18:46:12.0000000	elmadpw	JB-006	JB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	24.00000000	RCP	NULL	Trickle	0.50000000	18.00000000	Urban_Res	NULL	None	NULL
494	2019-09-24 18:51:30.0000000	elmadpw	2019-09-24 18:51:30.0000000	elmadpw	JB-007	JB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	78.00000000	Steel_Iron	NULL	Moderate	13.00000000	48.00000000	Urban_Res	NULL	None	NULL
508	2019-09-27 17:25:39.0000000	elmadpw	2019-09-27 17:25:39.0000000	elmadpw	JB-008	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
759	2020-06-18 16:15:02.0000000	elmadpw	2020-06-18 16:15:02.0000000	elmadpw	JB-008	JB	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Pond	None	NULL
511	2019-09-27 17:45:32.0000000	elmadpw	2019-09-27 17:45:32.0000000	elmadpw	JB-009	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	20.00000000	Steel_Iron	NULL	Trickle	4.00000000	14.00000000	Urban_Res	NULL	None	NULL
761	2020-06-18 16:25:01.0000000	elmadpw	2020-06-18 16:25:01.0000000	elmadpw	JB-009	JB	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	Steel_Iron	NULL	Trickle	1.00000000	3.00000000	other	Pond	None	NULL
509	2019-09-27 17:45:28.0000000	elmadpw	2019-09-27 17:45:28.0000000	elmadpw	JB-010	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	16.00000000	RCP	NULL	Trickle	16.00000000	16.00000000	Urban_Res	NULL	None	NULL
762	2020-06-18 17:19:33.0000000	elmadpw	2020-06-18 17:19:33.0000000	elmadpw	JB-010	JB	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	NULL	NULL	NULL	other	Pond	None	NULL
504	2019-09-27 13:29:05.0000000	elmadpw	2019-09-27 13:29:05.0000000	elmadpw	JB-011	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
507	2019-09-27 14:47:29.0000000	elmadpw	2019-09-27 14:47:29.0000000	elmadpw	JB-012	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	10.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
506	2019-09-27 14:28:21.0000000	elmadpw	2019-09-27 14:28:21.0000000	elmadpw	JB-013	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	30.00000000	RCP	NULL	Trickle	8.00000000	20.00000000	NULL	NULL	None	NULL
492	2019-09-24 18:22:53.0000000	elmadpw	2019-09-24 18:22:53.0000000	elmadpw	JB-015	JB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	36.00000000	Steel_Iron	NULL	Trickle	3.75000000	15.00000000	Urban_Res	NULL	None	NULL
481	2019-09-24 14:16:12.0000000	elmadpw	2019-09-24 14:16:12.0000000	elmadpw	JB-016	JB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	24.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
466	2019-09-23 15:15:03.0000000	elmadpw	2019-09-23 15:15:03.0000000	elmadpw	JB-017	JB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
465	2019-09-23 15:15:01.0000000	elmadpw	2019-09-23 15:15:01.0000000	elmadpw	JB-018	JB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
486	2019-09-24 15:11:43.0000000	elmadpw	2019-09-24 15:11:43.0000000	elmadpw	JB-019	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
485	2019-09-24 15:11:39.0000000	elmadpw	2019-09-24 15:11:39.0000000	elmadpw	JB-020	FB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
512	2019-09-27 17:45:33.0000000	elmadpw	2019-09-27 17:45:33.0000000	elmadpw	JB-021	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
755	2020-06-18 13:12:45.0000000	elmadpw	2020-06-18 13:12:45.0000000	elmadpw	JB-021	JB	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Pond	None	NULL
510	2019-09-27 17:45:30.0000000	elmadpw	2019-09-27 17:45:30.0000000	elmadpw	JB-022	JB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
763	2020-06-18 17:19:39.0000000	elmadpw	2020-06-18 17:19:39.0000000	elmadpw	JB-022	JB	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Pond	None	NULL
561	2019-10-03 16:55:30.0000000	elmadpw	2019-10-03 16:55:30.0000000	elmadpw	JB-023	JB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	20.00000000	RCP	NULL	No_Flow	NULL	NULL	other	school	None	NULL
560	2019-10-03 16:55:26.0000000	elmadpw	2019-10-03 16:55:26.0000000	elmadpw	JB-024	JB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	other	school	None	NULL
499	2019-09-27 12:35:51.0000000	elmadpw	2019-09-27 12:35:51.0000000	elmadpw	L-001	L	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	15.00000000	RCP	NULL	Trickle	3.00000000	8.00000000	OpenSpace	NULL	None	NULL
500	2019-09-27 12:43:28.0000000	elmadpw	2019-09-27 12:43:28.0000000	elmadpw	L-002	L	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
531	2019-10-02 11:58:54.0000000	elmadpw	2019-10-02 11:58:54.0000000	elmadpw	L-003	L	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
275	2019-08-26 12:36:17.0000000	elmadpw	2019-08-26 12:36:17.0000000	elmadpw	L-004	L	2019-08-26 04:00:00.0000000	Josh C	0.00000000	0.00000000	21.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
614	2019-10-18 18:46:13.0000000	elmadpw	2019-10-23 17:10:47.0000000	elmadpw	L-005	L	2019-10-18 04:00:00.0000000	Josh c	0.00000000	2.51000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
603	2019-10-15 15:07:43.0000000	elmadpw	2019-10-15 15:07:43.0000000	elmadpw	MR-001	MR	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
672	2020-03-11 14:25:24.0000000	elmadpw	2020-03-11 14:25:24.0000000	elmadpw	MR-001	MR	2020-03-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
602	2019-10-09 18:54:31.0000000	elmadpw	2019-10-09 18:54:31.0000000	elmadpw	MR-002	MR	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	20.00000000	HDPE	NULL	Trickle	1.00000000	7.00000000	Suburban_Re	NULL	None	NULL
675	2020-03-11 15:52:52.0000000	elmadpw	2020-03-11 15:52:52.0000000	elmadpw	MR-002	MR	2020-03-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
604	2019-10-15 15:21:48.0000000	elmadpw	2019-10-15 15:21:48.0000000	elmadpw	MR-003	MR	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
670	2020-03-10 12:51:14.0000000	elmadpw	2020-03-10 12:51:14.0000000	elmadpw	MR-003	MR	2020-03-10 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
606	2019-10-15 17:12:50.0000000	elmadpw	2019-10-15 17:12:50.0000000	elmadpw	MR-004	MR	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
607	2019-10-15 17:14:02.0000000	elmadpw	2019-10-15 17:14:02.0000000	elmadpw	MR-004	MR	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
671	2020-03-10 12:52:31.0000000	elmadpw	2020-03-10 12:52:31.0000000	elmadpw	MR-004	MR	2020-03-10 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
286	2019-08-29 12:50:33.0000000	elmadpw	2019-08-29 12:50:33.0000000	elmadpw	MR-005	MR	2019-08-29 04:00:00.0000000	Josh c	0.46000000	0.46000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
780	2020-06-24 18:03:22.0000000	elmadpw	2020-06-24 18:03:22.0000000	elmadpw	MR-005	MR	2020-06-24 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
285	2019-08-29 12:25:23.0000000	elmadpw	2019-08-29 12:25:23.0000000	elmadpw	MR-006	MR	2019-08-29 04:00:00.0000000	Josh c	0.46000000	0.46000000	21.00000000	RCP	NULL	Trickle	NULL	NULL	Urban_Res	NULL	None	NULL
781	2020-06-24 18:03:33.0000000	elmadpw	2020-06-24 18:03:33.0000000	elmadpw	MR-006	MR	2020-06-24 16:00:00.0000000	crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	9.00000000	18.00000000	OpenSpace	NULL	None	NULL
375	2019-09-17 15:14:01.0000000	elmadpw	2019-09-17 15:14:01.0000000	elmadpw	MR-007	MR	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	21.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
744	2020-06-01 17:26:01.0000000	elmadpw	2020-06-01 17:26:01.0000000	elmadpw	MR-007	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	21.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
376	2019-09-17 15:33:13.0000000	elmadpw	2019-09-17 15:33:13.0000000	elmadpw	MR-008	MR	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	22.00000000	22.00000000	Suburban_Re	NULL	None	NULL
687	2020-05-04 14:24:11.0000000	elmadpw	2020-05-04 14:24:11.0000000	elmadpw	MR-008	MR	2020-05-04 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	Moderate	36.00000000	36.00000000	Urban_Res	NULL	None	NULL
359	2019-09-16 14:48:11.0000000	elmadpw	2019-09-16 14:48:11.0000000	elmadpw	MR-009	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	30.00000000	RCP	NULL	Trickle	2.00000000	18.00000000	Urban_Res	NULL	None	NULL
773	2020-06-23 14:27:57.0000000	elmadpw	2020-06-23 14:27:57.0000000	elmadpw	MR-009	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
355	2019-09-16 12:52:16.0000000	elmadpw	2019-09-16 12:52:16.0000000	elmadpw	MR-010	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	24.00000000	RCP	NULL	Trickle	5.00000000	15.00000000	Urban_Res	NULL	None	NULL
777	2020-06-23 15:14:51.0000000	elmadpw	2020-06-23 15:14:51.0000000	elmadpw	MR-010	MR	2020-06-23 16:00:00.0000000	crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	1.50000000	12.00000000	OpenSpace	NULL	None	NULL
271	2019-07-22 14:47:34.0000000	elmadpw	2019-07-22 14:47:34.0000000	elmadpw	MR-011	MR	2019-07-22 04:00:00.0000000	Josh C Luke C	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
274	2019-08-01 11:47:32.0000000	elmadpw	2019-08-01 11:47:32.0000000	elmadpw	MR-011	MR	2019-08-01 04:00:00.0000000	Josh C Jason C	NULL	0.50000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
779	2020-06-24 15:11:14.0000000	elmadpw	2020-06-24 15:11:14.0000000	elmadpw	MR-011	MR	2020-06-24 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
296	2019-08-30 15:03:03.0000000	elmadpw	2019-08-30 15:03:03.0000000	elmadpw	MR-012	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	16.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
748	2020-06-01 18:18:50.0000000	elmadpw	2020-06-01 18:18:50.0000000	elmadpw	MR-012	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
608	2019-10-15 17:37:20.0000000	elmadpw	2019-10-15 17:37:20.0000000	elmadpw	MR-013	MR	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
747	2020-06-01 18:18:16.0000000	elmadpw	2020-06-01 18:18:16.0000000	elmadpw	MR-013	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	NULL	NULL	NULL	OpenSpace	NULL	None	NULL
298	2019-08-30 17:52:50.0000000	elmadpw	2019-08-30 17:52:50.0000000	elmadpw	MR-014	MR	2019-08-30 04:00:00.0000000	Josh C	0.00000000	0.46000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
750	2020-06-01 18:30:24.0000000	elmadpw	2020-06-01 18:30:24.0000000	elmadpw	MR-014	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
297	2019-08-30 17:09:22.0000000	elmadpw	2019-08-30 17:09:22.0000000	elmadpw	MR-015	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	15.00000000	NULL	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
707	2020-05-15 18:07:29.0000000	elmadpw	2020-05-15 18:07:29.0000000	elmadpw	MR-015	MR	2020-05-15 16:00:00.0000000	Crochetiere	0.13000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
284	2019-08-28 17:20:54.0000000	elmadpw	2019-08-28 17:20:54.0000000	elmadpw	MR-016	MR	2019-08-28 04:00:00.0000000	Josh C Jason C	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
751	2020-06-01 18:43:01.0000000	elmadpw	2020-06-01 18:43:01.0000000	elmadpw	MR-016	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
364	2019-09-16 17:27:08.0000000	elmadpw	2019-09-16 17:27:08.0000000	elmadpw	MR-017	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
764	2020-06-18 17:53:52.0000000	elmadpw	2020-06-18 17:53:52.0000000	elmadpw	MR-017	MR	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
366	2019-09-16 17:38:15.0000000	elmadpw	2019-09-16 17:38:15.0000000	elmadpw	MR-018	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	18.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
766	2020-06-18 18:04:45.0000000	elmadpw	2020-06-18 18:04:45.0000000	elmadpw	MR-018	MR	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
365	2019-09-16 17:33:51.0000000	elmadpw	2019-09-16 17:33:51.0000000	elmadpw	MR-019	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
765	2020-06-18 18:04:42.0000000	elmadpw	2020-06-18 18:04:42.0000000	elmadpw	MR-019	MR	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
299	2019-08-30 18:25:58.0000000	elmadpw	2019-08-30 18:25:58.0000000	elmadpw	MR-020	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	21.00000000	RCP	NULL	Moderate	2.00000000	10.00000000	Urban_Res	NULL	None	NULL
686	2020-05-04 12:55:48.0000000	elmadpw	2020-05-04 12:55:48.0000000	elmadpw	MR-020	MR	2020-05-04 16:00:00.0000000	Josh	0.00000000	0.00000000	21.00000000	RCP	NULL	Moderate	10.00000000	12.00000000	Urban_Res	NULL	None	NULL
294	2019-08-30 12:38:30.0000000	elmadpw	2019-08-30 12:38:30.0000000	elmadpw	MR-021	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	27.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
745	2020-06-01 17:28:03.0000000	elmadpw	2020-06-01 17:28:03.0000000	elmadpw	MR-021	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	27.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
295	2019-08-30 12:43:35.0000000	elmadpw	2019-08-30 12:43:35.0000000	elmadpw	MR-022	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
743	2020-06-01 17:24:15.0000000	elmadpw	2020-06-01 17:24:15.0000000	elmadpw	MR-022	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
293	2019-08-30 12:19:29.0000000	elmadpw	2019-08-30 12:19:29.0000000	elmadpw	MR-023	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
749	2020-06-01 18:19:00.0000000	elmadpw	2020-06-01 18:19:00.0000000	elmadpw	MR-023	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	7.00000000	18.00000000	other	Stream	None	NULL
292	2019-08-30 12:09:50.0000000	elmadpw	2019-08-30 12:09:50.0000000	elmadpw	MR-024	MR	2019-08-30 04:00:00.0000000	Josh c	0.00000000	0.46000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
746	2020-06-01 17:55:07.0000000	elmadpw	2020-06-01 17:55:07.0000000	elmadpw	MR-024	MR	2020-06-01 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
356	2019-09-16 13:52:22.0000000	elmadpw	2019-09-16 13:52:22.0000000	elmadpw	MR-025	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
778	2020-06-23 15:31:41.0000000	elmadpw	2020-06-23 15:31:41.0000000	elmadpw	MR-025	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
612	2019-10-18 12:40:25.0000000	elmadpw	2019-10-18 12:40:25.0000000	elmadpw	MR-026	MR	2019-10-18 04:00:00.0000000	Josh c	0.00000000	2.51000000	12.00000000	HDPE	NULL	Trickle	6.00000000	12.00000000	Suburban_Re	NULL	None	NULL
754	2020-06-18 12:47:12.0000000	elmadpw	2020-06-18 12:47:12.0000000	elmadpw	MR-026	MR	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	Trickle	3.00000000	9.00000000	OpenSpace	NULL	None	NULL
367	2019-09-16 17:59:01.0000000	elmadpw	2019-09-16 17:59:01.0000000	elmadpw	MR-027	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	36.00000000	RCP	NULL	Trickle	9.00000000	18.00000000	Urban_Res	NULL	None	NULL
693	2020-05-11 17:07:47.0000000	elmadpw	2020-05-11 17:07:47.0000000	elmadpw	MR-027	MR	2020-05-11 16:00:00.0000000	CROCHETIERE	0.00000000	0.00000000	36.00000000	RCP	NULL	Trickle	10.00000000	30.00000000	OpenSpace	NULL	None	NULL
377	2019-09-17 17:03:14.0000000	elmadpw	2019-09-17 17:03:14.0000000	elmadpw	MR-028	MR	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	NULL	NULL	NULL	NULL	NULL	Suburban_Re	NULL	None	NULL
629	2020-03-02 16:29:47.0000000	elmadpw	2020-03-02 16:29:47.0000000	elmadpw	MR-028	MR	2020-03-02 17:00:00.0000000	CROCHETIERE	0.00000000	0.00000000	8.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
370	2019-09-17 11:53:10.0000000	elmadpw	2019-09-17 11:53:10.0000000	elmadpw	MR-031	MR	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
673	2020-03-11 15:51:51.0000000	elmadpw	2020-03-11 15:51:51.0000000	elmadpw	MR-031	MR	2020-03-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	6.00000000	RCP	NULL	Trickle	4.00000000	3.00000000	OpenSpace	NULL	None	NULL
369	2019-09-17 11:52:57.0000000	elmadpw	2019-09-17 11:52:57.0000000	elmadpw	MR-032	MR	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	42.00000000	RCP	NULL	Trickle	13.00000000	32.00000000	Urban_Res	NULL	None	NULL
682	2020-03-12 15:18:38.0000000	elmadpw	2020-03-12 15:18:38.0000000	elmadpw	MR-032	MR	2020-03-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	42.00000000	RCP	NULL	Trickle	16.00000000	38.00000000	OpenSpace	NULL	None	NULL
363	2019-09-16 17:12:07.0000000	elmadpw	2019-09-16 17:12:07.0000000	elmadpw	MR-033	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
772	2020-06-23 13:58:27.0000000	elmadpw	2020-06-23 13:58:27.0000000	elmadpw	MR-033	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	8.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
362	2019-09-16 15:26:05.0000000	elmadpw	2019-09-16 15:26:05.0000000	elmadpw	MR-034	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	8.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
771	2020-06-23 13:55:15.0000000	elmadpw	2020-06-23 13:55:15.0000000	elmadpw	MR-034	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	8.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
361	2019-09-16 15:02:07.0000000	elmadpw	2019-09-16 15:02:07.0000000	elmadpw	MR-035	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	18.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
628	2020-03-02 15:14:48.0000000	elmadpw	2020-03-02 15:14:48.0000000	elmadpw	MR-035	MR	2020-03-02 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	Trickle	14.00000000	18.00000000	Suburban_Re	NULL	None	NULL
357	2019-09-16 14:20:56.0000000	elmadpw	2019-09-16 14:20:56.0000000	elmadpw	MR-036	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
776	2020-06-23 14:49:02.0000000	elmadpw	2020-06-23 15:17:32.0000000	elmadpw	MR-036	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
358	2019-09-16 14:21:00.0000000	elmadpw	2019-09-16 14:21:00.0000000	elmadpw	MR-037	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
775	2020-06-23 14:46:23.0000000	elmadpw	2020-06-23 14:46:23.0000000	elmadpw	MR-037	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
360	2019-09-16 14:48:13.0000000	elmadpw	2019-09-16 14:48:13.0000000	elmadpw	MR-038	MR	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	12.00000000	HDPE	NULL	Trickle	1.00000000	3.00000000	Urban_Res	NULL	None	NULL
774	2020-06-23 14:28:16.0000000	elmadpw	2020-06-23 14:28:16.0000000	elmadpw	MR-038	MR	2020-06-23 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	Trickle	1.50000000	4.00000000	OpenSpace	NULL	None	NULL
601	2019-10-09 18:31:10.0000000	elmadpw	2019-10-09 18:31:10.0000000	elmadpw	MR-039	MR	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
674	2020-03-11 15:52:12.0000000	elmadpw	2020-03-11 15:52:12.0000000	elmadpw	MR-039	MR	2020-03-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
605	2019-10-15 17:12:15.0000000	elmadpw	2019-10-15 17:12:15.0000000	elmadpw	MR-040	MR	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
669	2020-03-10 12:51:08.0000000	elmadpw	2020-03-10 12:51:08.0000000	elmadpw	MR-040	MR	2020-03-10 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
783	2020-06-24 18:04:16.0000000	elmadpw	2020-06-24 18:04:16.0000000	elmadpw	MR-041	NULL	2020-06-24 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	6.00000000	PVC	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
782	2020-06-24 18:03:47.0000000	elmadpw	2020-06-24 18:03:47.0000000	elmadpw	MR-042	NULL	2020-06-24 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	8.00000000	CMP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
381	2019-09-17 18:29:02.0000000	elmadpw	2019-09-17 18:29:02.0000000	elmadpw	MRD-001	MRD	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
638	2020-03-04 15:56:40.0000000	elmadpw	2020-03-04 15:56:40.0000000	elmadpw	MRD-001	MRD	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.25000000	15.00000000	Urban_Res	NULL	None	NULL
382	2019-09-17 18:47:34.0000000	elmadpw	2019-09-17 18:47:34.0000000	elmadpw	MRD-002	MRD	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	15.00000000	15.00000000	Suburban_Re	NULL	None	NULL
636	2020-03-04 14:55:10.0000000	elmadpw	2020-03-04 14:55:10.0000000	elmadpw	MRD-002	MRD	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	15.00000000	RCP	NULL	Trickle	15.00000000	15.00000000	OpenSpace	NULL	None	NULL
384	2019-09-18 12:09:05.0000000	elmadpw	2019-09-18 12:09:05.0000000	elmadpw	MRD-003	MRD	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
637	2020-03-04 15:56:27.0000000	elmadpw	2020-03-04 15:56:27.0000000	elmadpw	MRD-003	MRD	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
383	2019-09-18 11:48:45.0000000	elmadpw	2019-09-18 11:48:45.0000000	elmadpw	MRD-004	MRD	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	Moderate	0.75000000	4.50000000	Suburban_Re	NULL	None	NULL
635	2020-03-04 13:51:29.0000000	elmadpw	2020-03-04 13:51:29.0000000	elmadpw	MRD-004	MRD	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	24.00000000	RCP	NULL	Moderate	1.00000000	9.00000000	OpenSpace	NULL	None	NULL
634	2020-03-04 13:07:49.0000000	elmadpw	2020-03-04 14:57:07.0000000	elmadpw	MRD-005	MRD	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	15.00000000	Steel_Iron	NULL	Trickle	5.00000000	9.00000000	OpenSpace	NULL	None	NULL
276	2019-08-26 13:54:43.0000000	elmadpw	2019-08-26 13:54:43.0000000	elmadpw	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
277	2019-08-26 13:56:21.0000000	elmadpw	2019-08-26 14:16:15.0000000	elmadpw	NULL	NULL	2019-08-26 13:54:11.0000000	Josh 3	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	NULL	NULL
278	2019-08-26 14:15:36.0000000	elmadpw	2019-08-26 14:15:36.0000000	elmadpw	NULL	NULL	2019-08-26 14:11:29.0000000	Josh C	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	0.50000000	3.00000000	Urban_Res	NULL	NULL	NULL
280	2019-08-27 13:02:37.0000000	elmadpw	2019-08-27 13:02:37.0000000	elmadpw	NULL	NULL	2019-08-27 13:00:10.0000000	Josh C	0.00000000	0.00000000	48.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	NULL	NULL
281	2019-08-27 14:37:59.0000000	elmadpw	2019-08-27 14:37:59.0000000	elmadpw	NULL	NULL	2019-08-27 14:35:46.0000000	Josh C	0.00000000	0.00000000	48.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	NULL	NULL
282	2019-08-27 15:21:33.0000000	elmadpw	2019-08-27 15:21:33.0000000	elmadpw	NULL	NULL	2019-08-27 15:18:38.0000000	Josh C	0.00000000	0.00000000	60.00000000	RCP	NULL	Trickle	25.00000000	60.00000000	Urban_Res	NULL	NULL	NULL
310	2019-09-04 18:38:12.0000000	elmadpw	2019-09-04 18:38:12.0000000	elmadpw	NULL	NULL	2019-09-04 18:37:04.0000000	Josh c	0.00000000	NULL	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	NULL	NULL
559	2019-10-03 15:46:27.0000000	elmadpw	2019-10-03 15:46:27.0000000	elmadpw	PB-001	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	42.00000000	Steel_Iron	NULL	Trickle	1.00000000	20.00000000	OpenSpace	NULL	None	NULL

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
720	2020-05-20 16:00:33.0000000	elmadpw	2020-05-20 16:00:33.0000000	elmadpw	PB-001	PB	2020-05-20 16:00:00.0000000	crochetiere	0.00000000	0.00000000	42.00000000	RCP	NULL	Moderate	9.00000000	22.00000000	other	Brook	None	NULL
343	2019-09-11 15:22:54.0000000	elmadpw	2019-09-11 15:22:54.0000000	elmadpw	PB-002	PB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	Corru_Plastic	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
729	2020-05-28 14:30:00.0000000	elmadpw	2020-05-28 14:30:00.0000000	elmadpw	PB-002	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	Trickle	0.02500000	2.50000000	other	Into culvert	None	NULL
342	2019-09-11 15:22:46.0000000	elmadpw	2019-09-11 15:22:46.0000000	elmadpw	PB-003	PB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	NULL	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
726	2020-05-28 14:20:46.0000000	elmadpw	2020-05-28 14:20:46.0000000	elmadpw	PB-003	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
340	2019-09-11 15:22:28.0000000	elmadpw	2019-09-11 15:22:28.0000000	elmadpw	PB-004	PB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	Steel_Iron	NULL	Trickle	8.00000000	18.00000000	Urban_Res	NULL	None	NULL
731	2020-05-28 14:31:09.0000000	elmadpw	2020-05-28 14:31:09.0000000	elmadpw	PB-004	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	Steel_Iron	NULL	Substantial	10.00000000	20.00000000	other	Outlet culvert	None	NULL
341	2019-09-11 15:22:36.0000000	elmadpw	2019-09-11 15:22:36.0000000	elmadpw	PB-005	PB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
730	2020-05-28 14:30:36.0000000	elmadpw	2020-05-28 14:30:36.0000000	elmadpw	PB-005	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	NULL	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
322	2019-09-09 17:42:18.0000000	elmadpw	2019-09-09 17:42:18.0000000	elmadpw	PB-006	PB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	1.50000000	8.00000000	Urban_Res	NULL	None	NULL
727	2020-05-28 14:28:50.0000000	elmadpw	2020-05-28 14:28:50.0000000	elmadpw	PB-006	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	2.00000000	6.00000000	other	Stream	None	NULL
565	2019-10-03 18:11:59.0000000	elmadpw	2019-10-03 18:11:59.0000000	elmadpw	PB-007	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
728	2020-05-28 14:29:43.0000000	elmadpw	2020-05-28 14:29:43.0000000	elmadpw	PB-007	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	other	ACP	No_Flow	NULL	NULL	other	Stream	None	NULL
407	2019-09-19 11:43:30.0000000	elmadpw	2019-09-19 11:43:30.0000000	elmadpw	PB-008	PB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
405	2019-09-18 18:30:31.0000000	elmadpw	2019-09-18 18:30:31.0000000	elmadpw	PB-009	PB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
406	2019-09-19 11:35:03.0000000	elmadpw	2019-09-19 11:35:03.0000000	elmadpw	PB-010	PB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
309	2019-09-04 18:35:09.0000000	elmadpw	2019-09-04 18:35:09.0000000	elmadpw	PB-011	PB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
736	2020-05-28 18:22:21.0000000	elmadpw	2020-05-28 18:22:21.0000000	elmadpw	PB-011	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	15.00000000	30.00000000	other	Stream	None	NULL
323	2019-09-09 18:01:26.0000000	elmadpw	2019-09-09 18:01:26.0000000	elmadpw	PB-012	PB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
732	2020-05-28 14:36:41.0000000	elmadpw	2020-05-28 14:36:41.0000000	elmadpw	PB-012	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
596	2019-10-09 15:43:34.0000000	elmadpw	2019-10-09 15:43:34.0000000	elmadpw	PB-013	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	54.00000000	RCP	NULL	Moderate	8.00000000	36.00000000	Suburban_Re	NULL	None	NULL
408	2019-09-19 11:56:18.0000000	elmadpw	2019-09-19 11:56:18.0000000	elmadpw	PB-014	PB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
688	2020-05-11 12:35:23.0000000	elmadpw	2020-05-11 12:35:23.0000000	elmadpw	PB-014	PB	2020-05-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	1.00000000	5.00000000	Suburban_Re	NULL	None	NULL
534	2019-10-02 13:27:37.0000000	elmadpw	2019-10-02 13:27:37.0000000	elmadpw	PB-015	PB	2019-10-02 04:00:00.0000000	Josh	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
716	2020-05-19 19:04:53.0000000	elmadpw	2020-05-19 19:04:53.0000000	elmadpw	PB-015	PB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.75000000	5.00000000	other	Stream	None	NULL
542	2019-10-02 16:47:52.0000000	elmadpw	2019-10-02 16:47:52.0000000	elmadpw	PB-016	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	20.00000000	RCP	NULL	Trickle	18.00000000	20.00000000	NULL	NULL	None	NULL
546	2019-10-02 18:41:22.0000000	elmadpw	2019-10-02 18:41:22.0000000	elmadpw	PB-017	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	14.00000000	18.00000000	Suburban_Re	NULL	None	NULL
721	2020-05-20 17:12:13.0000000	elmadpw	2020-05-20 17:12:13.0000000	elmadpw	PB-017	PB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
543	2019-10-02 17:18:38.0000000	elmadpw	2019-10-02 17:18:38.0000000	elmadpw	PB-018	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
623	2019-10-28 12:41:07.0000000	elmadpw	2019-10-28 12:41:07.0000000	elmadpw	PB-019	PB	2019-10-28 04:00:00.0000000	Josh c	1.48000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
630	2020-03-02 18:44:36.0000000	elmadpw	2020-03-02 18:44:36.0000000	elmadpw	PB-019	PB	2020-03-02 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
535	2019-10-02 13:40:56.0000000	elmadpw	2019-10-02 13:40:56.0000000	elmadpw	PB-020	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	NULL	NULL	NULL	other	into culvert	None	NULL
717	2020-05-19 19:13:22.0000000	elmadpw	2020-05-19 19:13:22.0000000	elmadpw	PB-020	PB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	other	Into culvert	None	NULL
538	2019-10-02 14:54:44.0000000	elmadpw	2019-10-02 14:54:44.0000000	elmadpw	PB-022	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	10.00000000	other	ACP	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
532	2019-10-02 12:42:54.0000000	elmadpw	2019-10-02 12:42:54.0000000	elmadpw	PB-023	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	13.00000000	13.00000000	Urban_Res	NULL	None	NULL
533	2019-10-02 12:42:57.0000000	elmadpw	2019-10-02 12:42:57.0000000	elmadpw	PB-024	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	4.00000000	16.00000000	Urban_Res	NULL	None	NULL
592	2019-10-09 14:28:42.0000000	elmadpw	2019-10-09 14:28:42.0000000	elmadpw	PB-026	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	Trickle	0.25000000	1.00000000	Urban_Res	NULL	None	NULL
591	2019-10-09 14:28:38.0000000	elmadpw	2019-10-09 14:28:38.0000000	elmadpw	PB-027	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
590	2019-10-09 14:28:37.0000000	elmadpw	2019-10-09 14:28:37.0000000	elmadpw	PB-028	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	NULL	NULL	NULL	NULL	NULL	Urban_Res	NULL	None	NULL
594	2019-10-09 15:22:40.0000000	elmadpw	2019-10-09 15:22:40.0000000	elmadpw	PB-029	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
595	2019-10-09 15:33:49.0000000	elmadpw	2019-10-09 15:33:49.0000000	elmadpw	PB-030	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
519	2019-09-30 19:06:29.0000000	elmadpw	2019-09-30 19:06:29.0000000	elmadpw	PB-031	PB	2019-09-30 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	8.00000000	18.00000000	OpenSpace	NULL	None	NULL
704	2020-05-15 17:28:24.0000000	elmadpw	2020-05-15 17:28:24.0000000	elmadpw	PB-031	PB	2020-05-15 16:00:00.0000000	Crochetiere	0.13000000	0.00000000	20.00000000	RCP	NULL	Trickle	14.00000000	14.00000000	other	Stream	None	NULL
586	2019-10-09 11:55:45.0000000	elmadpw	2019-10-09 11:55:45.0000000	elmadpw	PB-032	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	Trickle	10.00000000	12.00000000	Urban_Res	NULL	None	NULL
585	2019-10-09 11:55:42.0000000	elmadpw	2019-10-09 11:55:42.0000000	elmadpw	PB-033	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	Trickle	6.50000000	12.00000000	Urban_Res	NULL	None	NULL
555	2019-10-03 14:56:33.0000000	elmadpw	2019-10-03 14:56:33.0000000	elmadpw	PB-034	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	20.00000000	RCP	NULL	Trickle	4.00000000	16.00000000	OpenSpace	NULL	None	NULL
552	2019-10-03 14:24:53.0000000	elmadpw	2019-10-03 14:24:53.0000000	elmadpw	PB-035	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	7.00000000	14.00000000	Urban_Res	NULL	None	NULL
554	2019-10-03 14:43:34.0000000	elmadpw	2019-10-03 14:43:34.0000000	elmadpw	PB-035	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	7.00000000	14.00000000	Urban_Res	NULL	None	NULL
557	2019-10-03 15:27:18.0000000	elmadpw	2019-10-03 15:27:18.0000000	elmadpw	PB-037	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
558	2019-10-03 15:31:15.0000000	elmadpw	2019-10-03 15:31:15.0000000	elmadpw	PB-037	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
556	2019-10-03 15:11:52.0000000	elmadpw	2019-10-03 15:11:52.0000000	elmadpw	PB-038	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	CMP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
523	2019-10-01 13:39:19.0000000	elmadpw	2019-10-01 13:39:19.0000000	elmadpw	PB-039	PB	2019-10-01 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	0.25000000	4.00000000	Urban_Res	NULL	None	NULL
514	2019-09-27 18:57:08.0000000	elmadpw	2019-09-27 18:57:08.0000000	elmadpw	PB-040	PB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
633	2020-03-03 16:45:00.0000000	elmadpw	2020-03-03 16:45:00.0000000	elmadpw	PB-040	PB	2020-03-03 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	15.00000000	15.00000000	Urban_Res	NULL	None	NULL
522	2019-10-01 13:00:33.0000000	elmadpw	2019-10-01 13:00:33.0000000	elmadpw	PB-041	PB	2019-10-01 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	CMP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
521	2019-10-01 12:53:09.0000000	elmadpw	2019-10-01 12:53:09.0000000	elmadpw	PB-042	PB	2019-10-01 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	CMP	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
524	2019-10-01 15:43:16.0000000	elmadpw	2019-10-01 15:43:16.0000000	elmadpw	PB-043	PB	2019-10-01 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
525	2019-10-01 15:44:47.0000000	elmadpw	2019-10-01 15:44:47.0000000	elmadpw	PB-044	PB	2019-10-01 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
520	2019-10-01 12:36:23.0000000	elmadpw	2019-10-01 12:36:23.0000000	elmadpw	PB-045	PB	2019-10-01 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
513	2019-09-27 18:41:08.0000000	elmadpw	2019-09-27 18:41:08.0000000	elmadpw	PB-046	PB	2019-09-27 04:00:00.0000000	Josh c	0.18000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
536	2019-10-02 14:07:20.0000000	elmadpw	2019-10-02 14:07:20.0000000	elmadpw	PB-047	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	4.00000000	15.00000000	Urban_Res	NULL	Sewage	NULL
537	2019-10-02 14:54:41.0000000	elmadpw	2019-10-02 14:54:41.0000000	elmadpw	PB-047	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	4.00000000	15.00000000	Urban_Res	NULL	Sewage	NULL
718	2020-05-20 14:01:33.0000000	elmadpw	2020-05-20 14:01:33.0000000	elmadpw	PB-047	PB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
344	2019-09-11 15:42:47.0000000	elmadpw	2019-09-11 15:42:47.0000000	elmadpw	PB-049	PB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.05000000	2.00000000	Urban_Res	NULL	None	NULL
733	2020-05-28 15:48:44.0000000	elmadpw	2020-05-28 15:48:44.0000000	elmadpw	PB-049	PB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
619	2019-10-22 17:59:47.0000000	elmadpw	2019-10-22 17:59:47.0000000	elmadpw	PB-050	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
515	2019-09-30 12:02:43.0000000	elmadpw	2019-09-30 12:02:43.0000000	elmadpw	PB-051	PB	2019-09-30 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.05000000	3.00000000	Urban_Res	NULL	None	NULL
516	2019-09-30 12:09:01.0000000	elmadpw	2019-09-30 12:09:01.0000000	elmadpw	PB-052	PB	2019-09-30 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	0.25000000	8.00000000	Urban_Res	NULL	None	NULL
530	2019-10-01 19:15:09.0000000	elmadpw	2019-10-01 19:15:09.0000000	elmadpw	PB-053	PB	2019-10-01 04:00:00.0000000	Josh c	0.00000000	0.00000000	36.00000000	CMP	NULL	Moderate	0.50000000	6.00000000	Urban_Res	NULL	None	NULL
517	2019-09-30 17:02:33.0000000	elmadpw	2019-09-30 17:02:33.0000000	elmadpw	PB-054	PB	2019-09-30 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.25000000	3.00000000	Urban_Res	NULL	None	NULL
528	2019-10-01 18:54:49.0000000	elmadpw	2019-10-01 18:54:49.0000000	elmadpw	PB-055	PB	2019-10-01 04:00:00.0000000	Josh c	NULL	NULL	15.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
529	2019-10-01 19:01:31.0000000	elmadpw	2019-10-01 19:01:31.0000000	elmadpw	PB-056	PB	2019-10-01 04:00:00.0000000	Josh c	NULL	NULL	21.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
584	2019-10-07 15:33:13.0000000	elmadpw	2019-10-07 17:07:11.0000000	elmadpw	PB-057	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	20.00000000	24.00000000	Urban_Res	NULL	None	NULL
283	2019-08-27 17:27:19.0000000	elmadpw	2019-08-27 17:27:19.0000000	elmadpw	PB-058	PB	2019-08-27 04:00:00.0000000	Josh C	0.00000000	0.00000000	60.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
279	2019-08-27 12:55:26.0000000	elmadpw	2019-08-27 12:55:26.0000000	elmadpw	PB-059	PB	2019-08-27 04:00:00.0000000	Josh C	0.00000000	0.00000000	60.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
579	2019-10-07 13:37:57.0000000	elmadpw	2019-10-07 13:37:57.0000000	elmadpw	PB-060	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	42.00000000	CMP	NULL	Trickle	5.50000000	28.00000000	Urban_Res	NULL	None	NULL
527	2019-10-01 17:45:55.0000000	elmadpw	2019-10-01 17:45:55.0000000	elmadpw	PB-061	PB	2019-10-01 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
544	2019-10-02 17:37:53.0000000	elmadpw	2019-10-02 17:37:53.0000000	elmadpw	PB-062	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.05000000	2.00000000	OpenSpace	NULL	None	NULL

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
526	2019-10-01 16:58:28.0000000	elmadpw	2019-10-01 16:58:28.0000000	elmadpw	PB-063	PB	2019-10-01 04:00:00.0000000	Josh c	0.01000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
618	2019-10-22 17:07:10.0000000	elmadpw	2019-10-22 17:07:10.0000000	elmadpw	PB-064	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
550	2019-10-03 12:28:16.0000000	elmadpw	2019-10-03 12:28:16.0000000	elmadpw	PB-065	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
553	2019-10-03 14:43:31.0000000	elmadpw	2019-10-03 14:43:31.0000000	elmadpw	PB-067	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
562	2019-10-03 17:27:30.0000000	elmadpw	2019-10-03 17:27:30.0000000	elmadpw	PB-068	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	school	None	NULL
563	2019-10-03 17:27:33.0000000	elmadpw	2019-10-03 17:27:33.0000000	elmadpw	PB-069	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	school	None	NULL
547	2019-10-02 18:54:32.0000000	elmadpw	2019-10-02 18:54:32.0000000	elmadpw	PB-070	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	5.00000000	12.00000000	Suburban_Re	NULL	None	NULL
722	2020-05-20 17:36:45.0000000	elmadpw	2020-05-20 17:36:45.0000000	elmadpw	PB-070	PB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	16.00000000	18.00000000	OpenSpace	NULL	None	NULL
404	2019-09-18 17:41:27.0000000	elmadpw	2019-09-18 17:41:27.0000000	elmadpw	PB-071	PB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.25000000	8.00000000	Suburban_Re	NULL	None	NULL
348	2019-09-13 15:23:40.0000000	elmadpw	2019-09-13 15:23:40.0000000	elmadpw	PB-072	PB	2019-09-13 04:00:00.0000000	Josh c Luke c	0.55000000	0.55000000	24.00000000	RCP	NULL	Trickle	6.00000000	12.00000000	Urban_Res	NULL	None	NULL
324	2019-09-09 18:35:40.0000000	elmadpw	2019-09-09 18:35:40.0000000	elmadpw	PB-073	PB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	36.00000000	RCP	NULL	Trickle	8.00000000	22.00000000	Urban_Res	NULL	None	NULL
311	2019-09-04 18:51:26.0000000	elmadpw	2019-09-04 18:51:26.0000000	elmadpw	PB-074	PB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	16.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
622	2019-10-22 19:11:59.0000000	elmadpw	2019-10-22 19:11:59.0000000	elmadpw	PB-075	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
621	2019-10-22 19:11:55.0000000	elmadpw	2019-10-22 19:11:55.0000000	elmadpw	PB-076	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
620	2019-10-22 19:04:38.0000000	elmadpw	2019-10-22 19:04:38.0000000	elmadpw	PB-077	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
549	2019-10-03 12:16:04.0000000	elmadpw	2019-10-03 12:16:04.0000000	elmadpw	PB-078	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
581	2019-10-07 13:56:34.0000000	elmadpw	2019-10-07 13:56:34.0000000	elmadpw	PB-079	PB	2019-10-07 04:00:00.0000000	Josh c justinc	0.00000000	0.00000000	20.00000000	CMP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
545	2019-10-02 17:47:10.0000000	elmadpw	2019-10-02 17:47:10.0000000	elmadpw	PB-080	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.10000000	3.00000000	OpenSpace	NULL	None	NULL
345	2019-09-12 13:48:13.0000000	elmadpw	2019-09-12 13:48:13.0000000	elmadpw	PB-081	PB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	16.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
576	2019-10-07 12:13:32.0000000	elmadpw	2019-10-07 12:13:32.0000000	elmadpw	PB-082	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	15.00000000	Steel_Iron	NULL	Trickle	3.00000000	15.00000000	OpenSpace	NULL	None	NULL
582	2019-10-07 15:15:36.0000000	elmadpw	2019-10-07 15:15:36.0000000	elmadpw	PB-083	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	48.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
577	2019-10-07 13:24:17.0000000	elmadpw	2019-10-07 13:24:17.0000000	elmadpw	PB-084	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	18.00000000	CMP	NULL	Trickle	3.00000000	12.00000000	Urban_Res	NULL	None	NULL
548	2019-10-02 19:01:08.0000000	elmadpw	2019-10-02 19:01:08.0000000	elmadpw	PB-086	PB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	Steel_Iron	NULL	Trickle	2.75000000	14.00000000	Urban_Res	NULL	None	NULL
719	2020-05-20 14:12:07.0000000	elmadpw	2020-05-20 14:12:07.0000000	elmadpw	PB-087	PB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.25000000	4.00000000	other	Stream	None	NULL
617	2019-10-22 15:36:24.0000000	elmadpw	2019-10-22 15:36:24.0000000	elmadpw	PB-088	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Commercial	NULL	None	NULL
615	2019-10-22 12:48:49.0000000	elmadpw	2019-10-22 12:48:49.0000000	elmadpw	PB-089	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	14.00000000	RCP	NULL	No_Flow	NULL	NULL	Commercial	NULL	None	NULL
616	2019-10-22 12:48:52.0000000	elmadpw	2019-10-22 12:48:52.0000000	elmadpw	PB-090	PB	2019-10-22 04:00:00.0000000	Josh c	0.00000000	0.00000000	16.00000000	RCP	NULL	NULL	NULL	NULL	Urban_Res	NULL	None	NULL
575	2019-10-07 12:09:14.0000000	elmadpw	2019-10-07 12:09:14.0000000	elmadpw	PB-091	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	15.00000000	PVC	NULL	NULL	NULL	NULL	NULL	NULL	Sewage,Other	dead animal
587	2019-10-09 12:37:29.0000000	elmadpw	2019-10-09 13:49:11.0000000	elmadpw	PB-092	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	CMP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
578	2019-10-07 13:37:55.0000000	elmadpw	2019-10-07 13:37:55.0000000	elmadpw	PB-093	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	12.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
580	2019-10-07 13:43:19.0000000	elmadpw	2019-10-07 13:43:19.0000000	elmadpw	PB-094	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
593	2019-10-09 15:08:11.0000000	elmadpw	2019-10-09 15:08:11.0000000	elmadpw	PB-095	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	40.00000000	RCP	NULL	Trickle	1.00000000	18.00000000	Urban_Res	NULL	None	NULL
588	2019-10-09 13:47:20.0000000	elmadpw	2019-10-09 13:47:20.0000000	elmadpw	PB-096	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	36.00000000	RCP	NULL	Moderate	1.50000000	12.00000000	Urban_Res	NULL	None	NULL
589	2019-10-09 13:47:23.0000000	elmadpw	2019-10-09 13:47:23.0000000	elmadpw	PB-097	PB	2019-10-09 04:00:00.0000000	Josh c	0.00000000	1.46000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
770	2020-06-19 12:56:53.0000000	elmadpw	2020-06-19 12:56:53.0000000	elmadpw	PB-097	PB	2020-06-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
551	2019-10-03 13:59:33.0000000	elmadpw	2019-10-03 13:59:33.0000000	elmadpw	PB-098	PB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	NULL	PVC	NULL	No_Flow	NULL	NULL	other	leaching basin	None	NULL
583	2019-10-07 15:22:17.0000000	elmadpw	2019-10-07 15:22:17.0000000	elmadpw	PB-099	PB	2019-10-07 04:00:00.0000000	Josh c justin c	0.00000000	0.00000000	12.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
518	2019-09-30 18:56:27.0000000	elmadpw	2019-09-30 18:56:27.0000000	elmadpw	PB-100	PB	2019-09-30 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
403	2019-09-18 17:27:21.0000000	elmadpw	2019-09-18 17:27:21.0000000	elmadpw	PB-101	PB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
347	2019-09-13 14:40:09.0000000	elmadpw	2019-09-13 14:40:09.0000000	elmadpw	PB-102	PB	2019-09-13 16:00:00.0000000	Josh c lukec	0.55000000	0.55000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
574	2019-10-04 15:29:16.0000000	elmadpw	2019-10-04 15:29:16.0000000	elmadpw	PRD-001	PRD	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
753	2020-06-18 12:15:49.0000000	elmadpw	2020-06-18 12:15:49.0000000	elmadpw	PRD-001	PRD	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	OpenSpace	NULL	None	NULL
354	2019-09-13 18:40:46.0000000	elmadpw	2019-09-13 18:40:46.0000000	elmadpw	PRD-002	PRD	2019-09-13 04:00:00.0000000	Josh c	0.55000000	0.55000000	24.00000000	RCP	NULL	Trickle	0.25000000	6.00000000	Urban_Res	NULL	None	NULL
760	2020-06-18 16:15:07.0000000	elmadpw	2020-06-18 16:15:07.0000000	elmadpw	PRD-002	PRD	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
610	2019-10-15 18:09:31.0000000	elmadpw	2019-10-15 18:09:31.0000000	elmadpw	PRD-003	PRD	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
757	2020-06-18 14:48:15.0000000	elmadpw	2020-06-18 14:48:15.0000000	elmadpw	PRD-003	PRD	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	NULL	NULL	NULL	NULL	NULL	other	Culvert	None	NULL
609	2019-10-15 18:09:30.0000000	elmadpw	2019-10-15 18:09:30.0000000	elmadpw	PRD-004	PRD	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
758	2020-06-18 14:50:30.0000000	elmadpw	2020-06-18 14:50:30.0000000	elmadpw	PRD-004	PRD	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	NULL	NULL	NULL	NULL	NULL	other	Culvert	None	NULL
611	2019-10-15 18:09:32.0000000	elmadpw	2019-10-15 18:09:32.0000000	elmadpw	PRD-005	PRD	2019-10-15 04:00:00.0000000	Josh c	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
756	2020-06-18 14:45:20.0000000	elmadpw	2020-06-18 14:45:20.0000000	elmadpw	PRD-005	PRD	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	other	Into culvert	None	NULL
573	2019-10-04 15:01:12.0000000	elmadpw	2019-10-04 15:01:12.0000000	elmadpw	PRD-006	PRD	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
752	2020-06-18 11:56:09.0000000	elmadpw	2020-06-18 11:56:09.0000000	elmadpw	PRD-006	PRD	2020-06-18 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
564	2019-10-03 17:51:32.0000000	elmadpw	2019-10-03 17:51:32.0000000	elmadpw	SB-001	SB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	13.00000000	12.00000000	OpenSpace	NULL	None	NULL
632	2020-03-03 14:55:04.0000000	elmadpw	2020-03-03 14:55:04.0000000	elmadpw	SB-001	SB	2020-03-03 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	12.00000000	12.00000000	Urban_Res	NULL	None	NULL
566	2019-10-03 18:53:01.0000000	elmadpw	2019-10-03 18:53:01.0000000	elmadpw	SB-002	SB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
714	2020-05-19 18:22:37.0000000	elmadpw	2020-05-19 18:22:37.0000000	elmadpw	SB-002	SB	2020-05-19 16:00:00.0000000	crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
571	2019-10-04 14:09:25.0000000	elmadpw	2019-10-04 14:09:25.0000000	elmadpw	SB-003	SB	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	44.00000000	Steel_Iron	NULL	Trickle	4.00000000	40.00000000	Suburban_Re	NULL	None	NULL
708	2020-05-18 13:46:42.0000000	elmadpw	2020-05-18 13:46:42.0000000	elmadpw	SB-003	SB	2020-05-18 16:00:00.0000000	Crochetiere	0.12000000	0.00000000	44.00000000	Steel_Iron	NULL	Moderate	9.00000000	44.00000000	other	Stream	None	NULL
572	2019-10-04 14:30:31.0000000	elmadpw	2019-10-04 14:30:31.0000000	elmadpw	SB-004	SB	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	18.00000000	HDPE	NULL	Trickle	0.02000000	1.25000000	Suburban_Re	NULL	None	NULL
723	2020-05-20 17:59:09.0000000	elmadpw	2020-05-20 17:59:09.0000000	elmadpw	SB-004	SB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
567	2019-10-03 18:53:06.0000000	elmadpw	2019-10-03 18:53:06.0000000	elmadpw	SB-005	SB	2019-10-03 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
715	2020-05-19 18:22:44.0000000	elmadpw	2020-05-19 18:22:44.0000000	elmadpw	SB-005	SB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	8.00000000	15.00000000	OpenSpace	NULL	None	NULL
568	2019-10-04 11:38:25.0000000	elmadpw	2019-10-04 11:38:25.0000000	elmadpw	SB-006	SB	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
712	2020-05-19 17:04:54.0000000	elmadpw	2020-05-19 17:04:54.0000000	elmadpw	SB-006	SB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
569	2019-10-04 13:43:22.0000000	elmadpw	2019-10-04 13:43:22.0000000	elmadpw	SB-007	SB	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	15.00000000	HDPE	NULL	Trickle	0.05000000	2.00000000	OpenSpace	NULL	None	NULL
713	2020-05-19 18:22:31.0000000	elmadpw	2020-05-19 18:22:31.0000000	elmadpw	SB-007	SB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	Moderate	0.50000000	6.00000000	other	Stream	None	NULL
570	2019-10-04 13:55:25.0000000	elmadpw	2019-10-04 13:55:25.0000000	elmadpw	SB-008	SB	2019-10-04 04:00:00.0000000	Josh c	0.12000000	0.00000000	40.00000000	Steel_Iron	NULL	Trickle	12.00000000	21.00000000	Suburban_Re	NULL	None	NULL
709	2020-05-18 13:56:33.0000000	elmadpw	2020-05-18 13:56:33.0000000	elmadpw	SB-008	SB	2020-05-18 16:00:00.0000000	Crochetiere	0.12000000	0.00000000	40.00000000	Steel_Iron	NULL	Trickle	15.00000000	40.00000000	other	Stream	None	NULL
467	2019-09-23 15:38:28.0000000	elmadpw	2019-09-23 15:38:28.0000000	elmadpw	WB-001	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
346	2019-09-13 11:54:23.0000000	elmadpw	2019-09-13 11:54:23.0000000	elmadpw	WB-002	WB	2019-09-13 04:00:00.0000000	Josh c Luke c	0.55000000	0.55000000	21.00000000	RCP	NULL	Trickle	0.25000000	3.00000000	Urban_Res	NULL	None	NULL
666	2020-03-09 18:30:58.0000000	elmadpw	2020-03-09 18:30:58.0000000	elmadpw	WB-002	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	21.00000000	RCP	NULL	Trickle	0.25000000	3.00000000	OpenSpace	NULL	None	NULL
460	2019-09-23 14:31:51.0000000	elmadpw	2019-09-23 14:31:51.0000000	elmadpw	WB-003	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
453	2019-09-23 12:47:29.0000000	elmadpw	2019-09-23 12:47:29.0000000	elmadpw	WB-004	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
459	2019-09-23 14:10:27.0000000	elmadpw	2019-09-23 14:10:27.0000000	elmadpw	WB-005	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
429	2019-09-20 13:48:23.0000000	elmadpw	2019-09-20 13:48:23.0000000	elmadpw	WB-006	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.25000000	5.00000000	Suburban_Re	NULL	None	NULL
428	2019-09-20 13:05:05.0000000	elmadpw	2019-09-20 13:05:05.0000000	elmadpw	WB-007	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.25000000	3.50000000	Suburban_Re	NULL	None	NULL
425	2019-09-20 12:16:35.0000000	elmadpw	2019-09-20 12:16:35.0000000	elmadpw	WB-008	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
427	2019-09-20 12:46:11.0000000	elmadpw	2019-09-20 12:46:11.0000000	elmadpw	WB-009	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
422	2019-09-19 17:04:51.0000000	elmadpw	2019-09-19 17:04:51.0000000	elmadpw	WB-010	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	Trickle	1.00000000	4.00000000	Suburban_Re	NULL	None	NULL
423	2019-09-19 17:09:41.0000000	elmadpw	2019-09-19 17:09:41.0000000	elmadpw	WB-011	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
424	2019-09-20 12:04:34.0000000	elmadpw	2019-09-20 12:04:34.0000000	elmadpw	WB-012	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
426	2019-09-20 12:32:46.0000000	elmadpw	2019-09-20 12:32:46.0000000	elmadpw	WB-013	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
313	2019-09-09 12:22:09.0000000	elmadpw	2019-09-09 12:22:09.0000000	elmadpw	WB-014	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
725	2020-05-20 19:10:03.0000000	elmadpw	2020-05-20 19:10:03.0000000	elmadpw	WB-014	WB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	6.00000000	6.00000000	other	Stream	None	NULL
308	2019-09-04 17:57:25.0000000	elmadpw	2019-09-04 17:57:25.0000000	elmadpw	WB-015	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
737	2020-05-29 15:30:12.0000000	elmadpw	2020-05-29 15:30:12.0000000	elmadpw	WB-015	WB	2020-05-29 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
307	2019-09-04 17:35:30.0000000	elmadpw	2019-09-04 17:35:30.0000000	elmadpw	WB-016	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	30.00000000	RCP	NULL	Moderate	0.05000000	5.00000000	Urban_Res	NULL	None	NULL
739	2020-05-29 17:48:47.0000000	elmadpw	2020-05-29 17:48:47.0000000	elmadpw	WB-016	WB	2020-05-29 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	0.50000000	5.00000000	OpenSpace	NULL	None	NULL
321	2019-09-09 16:57:58.0000000	elmadpw	2019-09-09 16:57:58.0000000	elmadpw	WB-017	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
700	2020-05-14 13:55:47.0000000	elmadpw	2020-05-14 13:55:47.0000000	elmadpw	WB-017	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	0.15000000	1.00000000	OpenSpace	NULL	None	NULL
540	2019-10-02 15:28:11.0000000	elmadpw	2019-10-02 15:28:11.0000000	elmadpw	WB-018	WB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	school's	None	NULL
312	2019-09-09 12:03:52.0000000	elmadpw	2019-09-09 12:03:52.0000000	elmadpw	WB-019	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	Moderate	0.75000000	4.00000000	Urban_Res	NULL	None	NULL
724	2020-05-20 19:09:41.0000000	elmadpw	2020-05-20 19:09:41.0000000	elmadpw	WB-019	WB	2020-05-20 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	0.50000000	5.00000000	OpenSpace	NULL	None	NULL
420	2019-09-19 15:43:24.0000000	elmadpw	2019-09-19 15:43:24.0000000	elmadpw	WB-020	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	into culvert	None	NULL
415	2019-09-19 13:58:27.0000000	elmadpw	2019-09-19 13:58:27.0000000	elmadpw	WB-021	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	1.50000000	7.00000000	Suburban_Re	NULL	None	NULL
416	2019-09-19 14:34:48.0000000	elmadpw	2019-09-19 14:34:48.0000000	elmadpw	WB-022	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	5.00000000	7.50000000	Suburban_Re	NULL	None	NULL
417	2019-09-19 14:51:11.0000000	elmadpw	2019-09-19 14:51:11.0000000	elmadpw	WB-023	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
464	2019-09-23 14:46:37.0000000	elmadpw	2019-09-23 14:46:37.0000000	elmadpw	WB-024	WB	2019-09-23 04:00:00.0000000	Josh c	NULL	NULL	12.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
463	2019-09-23 14:45:37.0000000	elmadpw	2019-09-23 14:45:37.0000000	elmadpw	WB-025	WB	2019-09-23 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
462	2019-09-23 14:43:47.0000000	elmadpw	2019-09-23 14:43:47.0000000	elmadpw	WB-026	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
461	2019-09-23 14:43:45.0000000	elmadpw	2019-09-23 14:43:45.0000000	elmadpw	WB-027	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
456	2019-09-23 14:10:23.0000000	elmadpw	2019-09-23 14:10:23.0000000	elmadpw	WB-028	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
457	2019-09-23 14:10:25.0000000	elmadpw	2019-09-23 14:10:25.0000000	elmadpw	WB-029	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
458	2019-09-23 14:10:26.0000000	elmadpw	2019-09-23 14:10:26.0000000	elmadpw	WB-030	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
454	2019-09-23 13:43:46.0000000	elmadpw	2019-09-23 13:43:46.0000000	elmadpw	WB-031	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None,Sewage	NULL
455	2019-09-23 13:43:51.0000000	elmadpw	2019-09-23 13:43:51.0000000	elmadpw	WB-032	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
541	2019-10-02 15:43:25.0000000	elmadpw	2019-10-02 15:43:25.0000000	elmadpw	WB-033	WB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	school	None	NULL
319	2019-09-09 15:36:13.0000000	elmadpw	2019-09-09 15:36:13.0000000	elmadpw	WB-034	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
320	2019-09-09 15:43:06.0000000	elmadpw	2019-09-09 15:43:06.0000000	elmadpw	WB-034	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
705	2020-05-15 17:28:43.0000000	elmadpw	2020-05-15 17:28:43.0000000	elmadpw	WB-034	WB	2020-05-14 16:00:00.0000000	CROCHETIERE	0.00000000	0.00000000	8.00000000	RCP	NULL	Trickle	2.00000000	4.50000000	OpenSpace	NULL	None	NULL
392	2019-09-18 13:58:48.0000000	elmadpw	2019-09-18 13:58:48.0000000	elmadpw	WB-035	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	8.00000000	12.00000000	Suburban_Re	NULL	None	NULL
646	2020-03-04 19:53:17.0000000	elmadpw	2020-03-04 19:53:17.0000000	elmadpw	WB-035	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	15.00000000	RCP	NULL	Trickle	15.00000000	15.00000000	OpenSpace	NULL	None	NULL
539	2019-10-02 15:14:41.0000000	elmadpw	2019-10-02 15:14:41.0000000	elmadpw	WB-036	WB	2019-10-02 04:00:00.0000000	Josh c	0.00000000	0.00000000	20.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
656	2020-03-06 13:49:40.0000000	elmadpw	2020-03-06 13:49:40.0000000	elmadpw	WB-036	WB	2020-03-06 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	Steel_Iron	NULL	Trickle	1.50000000	12.00000000	other	Stream	None	NULL
400	2019-09-18 15:47:25.0000000	elmadpw	2019-09-18 15:47:25.0000000	elmadpw	WB-037	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
657	2020-03-06 13:49:51.0000000	elmadpw	2020-03-06 13:49:51.0000000	elmadpw	WB-037	WB	2020-03-06 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
401	2019-09-18 15:47:32.0000000	elmadpw	2019-09-18 15:47:32.0000000	elmadpw	WB-038	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
658	2020-03-06 13:50:01.0000000	elmadpw	2020-03-06 13:50:01.0000000	elmadpw	WB-038	WB	2020-03-06 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	Trickle	0.50000000	4.00000000	OpenSpace	NULL	None	NULL
339	2019-09-11 14:35:12.0000000	elmadpw	2019-09-11 14:35:12.0000000	elmadpw	WB-039	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
697	2020-05-14 13:38:41.0000000	elmadpw	2020-05-14 13:38:41.0000000	elmadpw	WB-039	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
316	2019-09-09 14:24:05.0000000	elmadpw	2019-09-09 14:24:05.0000000	elmadpw	WB-040	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
702	2020-05-14 15:10:12.0000000	elmadpw	2020-05-14 15:10:12.0000000	elmadpw	WB-040	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
315	2019-09-09 13:50:19.0000000	elmadpw	2019-09-09 13:50:19.0000000	elmadpw	WB-041	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
703	2020-05-14 17:51:52.0000000	elmadpw	2020-05-14 17:51:52.0000000	elmadpw	WB-041	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	3.75000000	12.00000000	OpenSpace	NULL	None	NULL
317	2019-09-09 14:24:15.0000000	elmadpw	2019-09-09 14:24:15.0000000	elmadpw	WB-042	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
695	2020-05-12 12:47:03.0000000	elmadpw	2020-05-12 12:47:03.0000000	elmadpw	WB-042	WB	2020-05-12 16:00:00.0000000	Crochetiere	0.40000000	0.00000000	12.00000000	HDPE	NULL	Trickle	0.10000000	1.00000000	OpenSpace	NULL	None	NULL
337	2019-09-11 14:34:43.0000000	elmadpw	2019-09-11 14:34:43.0000000	elmadpw	WB-043	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	Urban_Res	NULL	None	NULL
699	2020-05-14 13:45:31.0000000	elmadpw	2020-05-14 13:45:31.0000000	elmadpw	WB-043	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
336	2019-09-11 12:56:15.0000000	elmadpw	2019-09-11 12:56:15.0000000	elmadpw	WB-044	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	Corru_Plastic	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
696	2020-05-13 13:38:16.0000000	elmadpw	2020-05-13 13:38:16.0000000	elmadpw	WB-044	WB	2020-05-13 16:00:00.0000000	Crochetiere	0.00000000	0.40000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
353	2019-09-13 17:40:43.0000000	elmadpw	2019-09-13 17:40:43.0000000	elmadpw	WB-045	WB	2019-09-13 04:00:00.0000000	Josh c Luke c	0.55000000	0.55000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
350	2019-09-13 17:21:58.0000000	elmadpw	2019-09-13 17:21:58.0000000	elmadpw	WB-046	WB	2019-09-13 04:00:00.0000000	Josh c	0.55000000	0.55000000	12.00000000	RCP	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
351	2019-09-13 17:22:10.0000000	elmadpw	2019-09-13 17:22:10.0000000	elmadpw	WB-047	WB	2019-09-13 04:00:00.0000000	Josh c	0.55000000	0.55000000	36.00000000	HDPE	NULL	Trickle	3.00000000	33.00000000	Urban_Res	NULL	None	NULL
352	2019-09-13 17:28:10.0000000	elmadpw	2019-09-13 17:28:10.0000000	elmadpw	WB-048	WB	2019-09-13 04:00:00.0000000	Josh c	0.55000000	0.55000000	36.00000000	HDPE	NULL	Trickle	0.25000000	4.00000000	Urban_Res	NULL	None	NULL
349	2019-09-13 17:03:35.0000000	elmadpw	2019-09-13 17:03:35.0000000	elmadpw	WB-049	WB	2019-09-13 04:00:00.0000000	Josh c	0.55000000	0.55000000	18.00000000	RCP	NULL	Trickle	4.00000000	15.00000000	Urban_Res	NULL	None	NULL
287	2019-08-29 17:31:15.0000000	elmadpw	2019-08-29 17:31:15.0000000	elmadpw	WB-050	WB	2019-08-29 04:00:00.0000000	Josh C	0.46000000	0.46000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
784	2020-06-24 18:11:14.0000000	elmadpw	2020-06-24 18:11:14.0000000	elmadpw	WB-050	WB	2020-06-24 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	NULL	NULL	NULL	OpenSpace	NULL	None	NULL
379	2019-09-17 17:35:56.0000000	elmadpw	2019-09-17 17:35:56.0000000	elmadpw	WB-051	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	PVC	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
650	2020-03-05 13:30:55.0000000	elmadpw	2020-03-05 13:30:55.0000000	elmadpw	WB-051	WB	2020-03-05 17:00:00.0000000	Crochetiere	0.00000000	0.15000000	8.00000000	PVC	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
380	2019-09-17 17:48:28.0000000	elmadpw	2019-09-17 17:48:28.0000000	elmadpw	WB-052	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	NULL	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
649	2020-03-05 13:30:33.0000000	elmadpw	2020-03-05 13:30:33.0000000	elmadpw	WB-052	WB	2020-03-05 17:00:00.0000000	Crochetiere	0.00000000	0.15000000	8.00000000	HDPE	NULL	Moderate	0.50000000	2.50000000	OpenSpace	NULL	None	NULL
378	2019-09-17 17:23:52.0000000	elmadpw	2019-09-17 17:23:52.0000000	elmadpw	WB-053	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
651	2020-03-05 14:42:28.0000000	elmadpw	2020-03-05 14:42:28.0000000	elmadpw	WB-053	WB	2020-03-05 17:00:00.0000000	Crochetiere	0.00000000	0.15000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
288	2019-08-29 17:54:54.0000000	elmadpw	2019-08-29 17:54:54.0000000	elmadpw	WB-054	WB	2019-08-29 04:00:00.0000000	Josh c	0.46000000	0.46000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
655	2020-03-06 13:03:39.0000000	elmadpw	2020-03-06 13:03:39.0000000	elmadpw	WB-054	WB	2020-03-06 17:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	1.50000000	20.00000000	other	Stream	None	NULL
335	2019-09-11 12:40:07.0000000	elmadpw	2019-09-11 12:40:07.0000000	elmadpw	WB-055	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	Corru_Plastic	NULL	Trickle	1.00000000	10.00000000	Suburban_Re	NULL	None	NULL
683	2020-03-12 15:37:29.0000000	elmadpw	2020-03-12 15:37:29.0000000	elmadpw	WB-055	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	20.00000000	HDPE	NULL	Trickle	3.50000000	15.00000000	OpenSpace	NULL	None	NULL
314	2019-09-09 12:53:41.0000000	elmadpw	2019-09-09 12:53:41.0000000	elmadpw	WB-056	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
624	2019-10-28 14:26:52.0000000	elmadpw	2019-10-28 14:26:52.0000000	elmadpw	WB-056	WB	2019-10-28 04:00:00.0000000	Josh c	1.48000000	0.00000000	12.00000000	RCP	NULL	Trickle	2.75000000	7.00000000	Urban_Res	NULL	None	NULL
734	2020-05-28 16:59:49.0000000	elmadpw	2020-05-28 16:59:49.0000000	elmadpw	WB-056	WB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	2.00000000	5.00000000	OpenSpace	NULL	None	NULL
372	2019-09-17 14:26:09.0000000	elmadpw	2019-09-17 14:26:09.0000000	elmadpw	WB-057	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
690	2020-05-11 15:12:56.0000000	elmadpw	2020-05-11 15:12:56.0000000	elmadpw	WB-057	WB	2020-05-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
373	2019-09-17 14:26:24.0000000	elmadpw	2019-09-17 14:26:24.0000000	elmadpw	WB-058	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
689	2020-05-11 14:19:35.0000000	elmadpw	2020-05-11 14:19:35.0000000	elmadpw	WB-058	WB	2020-05-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
368	2019-09-16 18:29:30.0000000	elmadpw	2019-09-16 18:29:30.0000000	elmadpw	WB-059	WB	2019-09-16 04:00:00.0000000	Josh c	0.00000000	0.20000000	30.00000000	RCP	NULL	Trickle	4.00000000	18.00000000	Urban_Res	NULL	None	NULL
694	2020-05-11 18:28:38.0000000	elmadpw	2020-05-11 18:28:38.0000000	elmadpw	WB-059	WB	2020-05-11 16:00:00.0000000	CROCHETIERE	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	6.50000000	16.00000000	OpenSpace	NULL	None	NULL

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
326	2019-09-10 12:59:10.0000000	elmadpw	2019-09-10 12:59:10.0000000	elmadpw	WB-060	WB	2019-09-10 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	Urban_Res	NULL	None	NULL
769	2020-06-19 12:11:19.0000000	elmadpw	2020-06-19 12:11:19.0000000	elmadpw	WB-060	WB	2020-06-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
325	2019-09-10 12:59:09.0000000	elmadpw	2019-09-10 12:59:09.0000000	elmadpw	WB-061	WB	2019-09-10 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
768	2020-06-19 12:09:12.0000000	elmadpw	2020-06-19 12:09:12.0000000	elmadpw	WB-061	WB	2020-06-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
327	2019-09-10 12:59:11.0000000	elmadpw	2019-09-10 12:59:11.0000000	elmadpw	WB-062	WB	2019-09-10 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	Urban_Res	NULL	None	NULL
767	2020-06-19 12:08:06.0000000	elmadpw	2020-06-19 12:08:06.0000000	elmadpw	WB-062	WB	2020-06-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
328	2019-09-10 12:59:12.0000000	elmadpw	2019-09-10 12:59:12.0000000	elmadpw	WB-063	WB	2019-09-10 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
681	2020-03-12 15:15:50.0000000	elmadpw	2020-03-12 15:15:50.0000000	elmadpw	WB-063	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
371	2019-09-17 13:57:43.0000000	elmadpw	2019-09-17 13:57:43.0000000	elmadpw	WB-064	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
691	2020-05-11 15:13:38.0000000	elmadpw	2020-05-11 15:13:38.0000000	elmadpw	WB-064	WB	2020-05-11 16:00:00.0000000	crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
374	2019-09-17 14:51:10.0000000	elmadpw	2019-09-17 14:51:10.0000000	elmadpw	WB-065	WB	2019-09-17 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
692	2020-05-11 15:21:05.0000000	elmadpw	2020-05-11 15:21:05.0000000	elmadpw	WB-065	WB	2020-05-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
329	2019-09-10 12:59:15.0000000	elmadpw	2019-09-10 12:59:15.0000000	elmadpw	WB-066	WB	2019-09-10 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.25000000	8.00000000	Suburban_Re	NULL	None	NULL
676	2020-03-12 13:52:52.0000000	elmadpw	2020-03-12 13:52:52.0000000	elmadpw	WB-066	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.50000000	6.50000000	OpenSpace	NULL	None	NULL
680	2020-03-12 15:15:31.0000000	elmadpw	2020-03-12 15:15:31.0000000	elmadpw	WB-066	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.50000000	6.50000000	OpenSpace	NULL	None	NULL
330	2019-09-10 12:59:19.0000000	elmadpw	2019-09-10 12:59:19.0000000	elmadpw	WB-067	WB	2019-09-10 04:00:00.0000000	Josh c	0.00000000	0.00000000	10.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
685	2020-03-12 15:38:13.0000000	elmadpw	2020-03-12 15:38:13.0000000	elmadpw	WB-067	WB	2020-03-11 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	10.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
318	2019-09-09 14:29:30.0000000	elmadpw	2019-09-09 14:29:30.0000000	elmadpw	WB-069	WB	2019-09-09 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
701	2020-05-14 14:59:33.0000000	elmadpw	2020-05-14 14:59:33.0000000	elmadpw	WB-069	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
613	2019-10-18 15:46:34.0000000	elmadpw	2019-10-18 15:46:34.0000000	elmadpw	WB-070	WB	2019-10-18 04:00:00.0000000	Josh c	0.00000000	2.51000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
706	2020-05-15 17:28:46.0000000	elmadpw	2020-05-15 17:28:46.0000000	elmadpw	WB-070	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	NULL	NULL	NULL	OpenSpace	NULL	None	NULL
442	2019-09-20 17:05:45.0000000	elmadpw	2019-09-20 17:05:45.0000000	elmadpw	WB-071	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
443	2019-09-20 17:18:22.0000000	elmadpw	2019-09-20 17:18:22.0000000	elmadpw	WB-072	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
495	2019-09-24 19:09:42.0000000	elmadpw	2019-09-24 19:09:42.0000000	elmadpw	WB-073	WB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
496	2019-09-24 19:10:52.0000000	elmadpw	2019-09-24 19:10:52.0000000	elmadpw	WB-073	WB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
497	2019-09-24 19:14:45.0000000	elmadpw	2019-09-24 19:14:45.0000000	elmadpw	WB-073	WB	2019-09-24 04:00:00.0000000	Josh c	0.04000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
627	2020-02-12 14:03:03.0000000	elmadpw	2020-02-12 14:03:03.0000000	elmadpw	WB-073	WB	2020-02-12 17:00:00.0000000	Crochetiere	0.13000000	0.00000000	12.00000000	RCP	NULL	Moderate	1.00000000	5.00000000	Urban_Res	NULL	None	NULL
409	2019-09-19 12:51:11.0000000	elmadpw	2019-09-19 12:51:11.0000000	elmadpw	WB-074	WB	2019-09-19 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
413	2019-09-19 12:59:17.0000000	elmadpw	2019-09-19 12:59:17.0000000	elmadpw	WB-074	WB	2019-09-19 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
411	2019-09-19 12:54:55.0000000	elmadpw	2019-09-19 12:54:55.0000000	elmadpw	WB-075	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
412	2019-09-19 12:55:27.0000000	elmadpw	2019-09-19 12:55:27.0000000	elmadpw	WB-075	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
626	2020-02-12 13:57:38.0000000	elmadpw	2020-02-12 13:57:38.0000000	elmadpw	WB-075	WB	2020-02-12 17:00:00.0000000	Crochetiere	0.13000000	0.00000000	12.00000000	RCP	NULL	Trickle	0.50000000	4.00000000	Urban_Res	NULL	None	NULL
410	2019-09-19 12:53:42.0000000	elmadpw	2019-09-19 12:53:42.0000000	elmadpw	WB-076	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
414	2019-09-19 12:59:58.0000000	elmadpw	2019-09-19 12:59:58.0000000	elmadpw	WB-076	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
625	2020-02-12 13:45:30.0000000	elmadpw	2020-02-12 13:45:30.0000000	elmadpw	WB-076	WB	2020-02-12 17:00:00.0000000	Crochetiere	0.13000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.50000000	3.00000000	Urban_Res	NULL	None	NULL
291	2019-08-29 18:51:01.0000000	elmadpw	2019-08-29 18:51:01.0000000	elmadpw	WB-077	WB	2019-08-29 04:00:00.0000000	Josh c	0.46000000	0.46000000	18.00000000	RCP	NULL	Trickle	0.05000000	2.50000000	Urban_Res	NULL	None	NULL
659	2020-03-09 12:52:00.0000000	elmadpw	2020-03-09 12:52:00.0000000	elmadpw	WB-077	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.25000000	4.00000000	OpenSpace	NULL	None	NULL
397	2019-09-18 15:10:27.0000000	elmadpw	2019-09-18 15:10:27.0000000	elmadpw	WB-078	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
654	2020-03-06 12:36:32.0000000	elmadpw	2020-03-06 12:36:32.0000000	elmadpw	WB-078	WB	2020-03-06 17:00:00.0000000	CROCHETIERE	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
395	2019-09-18 14:50:17.0000000	elmadpw	2019-09-18 14:50:17.0000000	elmadpw	WB-079	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.25000000	6.00000000	Suburban_Re	NULL	None	NULL
660	2020-03-09 12:52:18.0000000	elmadpw	2020-03-09 12:52:18.0000000	elmadpw	WB-079	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Moderate	1.00000000	6.00000000	OpenSpace	NULL	None	NULL
398	2019-09-18 15:10:29.0000000	elmadpw	2019-09-18 15:10:29.0000000	elmadpw	WB-080	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	42.00000000	RCP	NULL	Trickle	15.00000000	36.00000000	Suburban_Re	NULL	None	NULL
652	2020-03-05 19:35:55.0000000	elmadpw	2020-03-05 19:35:55.0000000	elmadpw	WB-080	WB	2020-03-05 17:00:00.0000000	Crochetiere	0.00000000	0.15000000	42.00000000	RCP	NULL	Trickle	20.00000000	22.00000000	OpenSpace	NULL	None	NULL
396	2019-09-18 14:54:45.0000000	elmadpw	2019-09-18 14:54:45.0000000	elmadpw	WB-081	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
653	2020-03-06 12:22:54.0000000	elmadpw	2020-03-06 12:22:54.0000000	elmadpw	WB-081	WB	2020-03-05 17:00:00.0000000	Crochetiere	0.00000000	0.15000000	15.00000000	RCP	NULL	Trickle	5.00000000	13.00000000	OpenSpace	NULL	None	NULL
399	2019-09-18 15:30:53.0000000	elmadpw	2019-09-18 15:30:53.0000000	elmadpw	WB-082	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
662	2020-03-09 14:47:17.0000000	elmadpw	2020-03-09 14:47:17.0000000	elmadpw	WB-082	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	12.00000000	12.00000000	OpenSpace	NULL	None	NULL
334	2019-09-11 12:40:03.0000000	elmadpw	2019-09-11 12:40:03.0000000	elmadpw	WB-083	WB	2019-09-11 04:00:00.0000000	Josh	0.00000000	0.00000000	12.00000000	Corru_Plastic	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
665	2020-03-09 15:30:53.0000000	elmadpw	2020-03-09 15:30:53.0000000	elmadpw	WB-083	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	Trickle	6.00000000	12.00000000	OpenSpace	NULL	None	NULL
331	2019-09-11 11:36:49.0000000	elmadpw	2019-09-11 11:36:49.0000000	elmadpw	WB-084	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
678	2020-03-12 15:12:24.0000000	elmadpw	2020-03-12 15:12:24.0000000	elmadpw	WB-084	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
333	2019-09-11 11:42:56.0000000	elmadpw	2019-09-11 11:42:56.0000000	elmadpw	WB-085	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	NULL	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
684	2020-03-12 15:37:52.0000000	elmadpw	2020-03-12 15:37:52.0000000	elmadpw	WB-085	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
332	2019-09-11 11:39:32.0000000	elmadpw	2019-09-11 11:39:32.0000000	elmadpw	WB-086	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
679	2020-03-12 15:13:03.0000000	elmadpw	2020-03-12 15:13:03.0000000	elmadpw	WB-086	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	Steel_Iron	NULL	Trickle	3.00000000	6.00000000	NULL	NULL	None	NULL
433	2019-09-20 14:54:30.0000000	elmadpw	2019-09-20 14:54:30.0000000	elmadpw	WB-088	WB	2019-09-20 04:00:00.0000000	Josh c	NULL	NULL	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
431	2019-09-20 14:54:28.0000000	elmadpw	2019-09-20 14:54:28.0000000	elmadpw	WB-089	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
434	2019-09-20 14:55:06.0000000	elmadpw	2019-09-20 14:55:06.0000000	elmadpw	WB-090	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
435	2019-09-20 14:55:12.0000000	elmadpw	2019-09-20 14:55:12.0000000	elmadpw	WB-091	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
436	2019-09-20 14:55:19.0000000	elmadpw	2019-09-20 14:55:19.0000000	elmadpw	WB-092	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
437	2019-09-20 14:55:27.0000000	elmadpw	2019-09-20 14:55:27.0000000	elmadpw	WB-093	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
432	2019-09-20 14:54:29.0000000	elmadpw	2019-09-20 14:54:29.0000000	elmadpw	WB-094	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	4.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
438	2019-09-20 14:55:32.0000000	elmadpw	2019-09-20 14:55:32.0000000	elmadpw	WB-095	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
439	2019-09-20 14:55:39.0000000	elmadpw	2019-09-20 14:55:39.0000000	elmadpw	WB-096	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
421	2019-09-19 16:52:30.0000000	elmadpw	2019-09-19 16:52:30.0000000	elmadpw	WB-097	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	0.50000000	5.00000000	Suburban_Re	NULL	None	NULL
430	2019-09-20 13:55:57.0000000	elmadpw	2019-09-20 13:55:57.0000000	elmadpw	WB-098	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
444	2019-09-20 17:36:15.0000000	elmadpw	2019-09-20 17:36:15.0000000	elmadpw	WB-099	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	3.00000000	9.00000000	Suburban_Re	NULL	None	NULL
445	2019-09-20 17:58:12.0000000	elmadpw	2019-09-20 17:58:12.0000000	elmadpw	WB-100	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
446	2019-09-20 18:35:29.0000000	elmadpw	2019-09-20 18:35:29.0000000	elmadpw	WB-101	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
440	2019-09-20 15:39:12.0000000	elmadpw	2019-09-20 15:39:12.0000000	elmadpw	WB-102	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.02500000	2.00000000	Suburban_Re	NULL	None	NULL
441	2019-09-20 15:45:02.0000000	elmadpw	2019-09-20 15:45:02.0000000	elmadpw	WB-102	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.02500000	2.00000000	Suburban_Re	NULL	None	NULL
387	2019-09-18 12:46:57.0000000	elmadpw	2019-09-18 12:46:57.0000000	elmadpw	WB-103	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
639	2020-03-04 16:25:19.0000000	elmadpw	2020-03-04 16:25:19.0000000	elmadpw	WB-103	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
388	2019-09-18 12:47:03.0000000	elmadpw	2019-09-18 12:47:03.0000000	elmadpw	WB-104	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
640	2020-03-04 16:25:45.0000000	elmadpw	2020-03-04 16:25:45.0000000	elmadpw	WB-104	WB	2020-03-04 17:00:00.0000000	crochetiere	0.15000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
386	2019-09-18 12:46:38.0000000	elmadpw	2019-09-18 12:46:38.0000000	elmadpw	WB-105	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	3.00000000	16.00000000	Suburban_Re	NULL	None	NULL
642	2020-03-04 18:23:01.0000000	elmadpw	2020-03-04 18:23:01.0000000	elmadpw	WB-105	WB	2020-03-04 17:00:00.0000000	crochetiere	0.15000000	0.00000000	30.00000000	RCP	NULL	Trickle	10.00000000	22.00000000	OpenSpace	NULL	None	NULL
389	2019-09-18 13:01:44.0000000	elmadpw	2019-09-18 13:01:44.0000000	elmadpw	WB-106	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL

OBJECTID	CreationDate	Creator	EditDate	Editor	Outfall_ID	Subbasin_Abbr	Date1	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
648	2020-03-04 19:53:57.0000000	elmadpw	2020-03-04 19:53:57.0000000	elmadpw	WB-106	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
390	2019-09-18 13:01:46.0000000	elmadpw	2019-09-18 13:01:46.0000000	elmadpw	WB-107	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
643	2020-03-04 19:37:01.0000000	elmadpw	2020-03-04 19:37:01.0000000	elmadpw	WB-107	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
391	2019-09-18 13:52:21.0000000	elmadpw	2019-09-18 13:52:21.0000000	elmadpw	WB-108	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
647	2020-03-04 19:53:33.0000000	elmadpw	2020-03-04 19:53:33.0000000	elmadpw	WB-108	WB	2020-03-04 17:00:00.0000000	CROCHETIERE	0.15000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
393	2019-09-18 14:07:39.0000000	elmadpw	2019-09-18 14:07:39.0000000	elmadpw	WB-109	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
645	2020-03-04 19:52:51.0000000	elmadpw	2020-03-04 19:52:51.0000000	elmadpw	WB-109	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
394	2019-09-18 14:16:13.0000000	elmadpw	2019-09-18 14:16:13.0000000	elmadpw	WB-110	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
644	2020-03-04 19:52:28.0000000	elmadpw	2020-03-04 19:52:28.0000000	elmadpw	WB-110	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
306	2019-09-04 17:15:13.0000000	elmadpw	2019-09-04 17:15:13.0000000	elmadpw	WB-111	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
738	2020-05-29 17:48:15.0000000	elmadpw	2020-05-29 17:48:15.0000000	elmadpw	WB-111	WB	2020-05-29 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	4.00000000	9.00000000	OpenSpace	NULL	None	NULL
290	2019-08-29 18:30:20.0000000	elmadpw	2019-08-29 18:30:20.0000000	elmadpw	WB-112	WB	2019-08-29 04:00:00.0000000	Josh C	0.46000000	0.46000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
663	2020-03-09 15:04:30.0000000	elmadpw	2020-03-09 15:04:30.0000000	elmadpw	WB-112	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
289	2019-08-29 18:30:14.0000000	elmadpw	2019-08-29 18:30:14.0000000	elmadpw	WB-113	WB	2019-08-29 04:00:00.0000000	Josh c	0.46000000	0.46000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
664	2020-03-09 15:04:42.0000000	elmadpw	2020-03-09 15:04:42.0000000	elmadpw	WB-113	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
402	2019-09-18 17:00:02.0000000	elmadpw	2019-09-18 17:00:02.0000000	elmadpw	WB-114	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	10.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
661	2020-03-09 14:46:30.0000000	elmadpw	2020-03-09 14:46:30.0000000	elmadpw	WB-114	WB	2020-03-09 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	10.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
303	2019-09-04 12:50:55.0000000	elmadpw	2019-09-04 12:50:55.0000000	elmadpw	WB-115	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	10.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
740	2020-06-01 15:33:38.0000000	elmadpw	2020-06-01 15:33:38.0000000	elmadpw	WB-115	WB	2020-05-29 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	10.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
302	2019-09-04 12:47:31.0000000	elmadpw	2019-09-04 12:47:31.0000000	elmadpw	WB-116	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
741	2020-06-01 15:33:58.0000000	elmadpw	2020-06-01 15:33:58.0000000	elmadpw	WB-116	WB	2020-05-29 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
304	2019-09-04 15:33:54.0000000	elmadpw	2019-09-04 15:33:54.0000000	elmadpw	WB-117	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	15.00000000	NULL	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
735	2020-05-28 17:40:50.0000000	elmadpw	2020-05-28 17:40:50.0000000	elmadpw	WB-117	WB	2020-05-28 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
305	2019-09-04 17:03:40.0000000	elmadpw	2019-09-04 17:03:40.0000000	elmadpw	WB-118	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
742	2020-06-01 15:34:21.0000000	elmadpw	2020-06-01 15:34:21.0000000	elmadpw	WB-118	WB	2020-05-29 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	0.25000000	1.50000000	OpenSpace	NULL	None	NULL
419	2019-09-19 15:42:49.0000000	elmadpw	2019-09-19 15:42:49.0000000	elmadpw	WB-119	WB	2019-09-19 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	into culvert	None	NULL
338	2019-09-11 14:34:48.0000000	elmadpw	2019-09-11 14:34:48.0000000	elmadpw	WB-120	WB	2019-09-11 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	7.50000000	12.00000000	Suburban_Re	NULL	None	NULL
698	2020-05-14 13:40:36.0000000	elmadpw	2020-05-14 13:40:36.0000000	elmadpw	WB-120	WB	2020-05-14 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Moderate	9.00000000	20.00000000	other	Stream	None	NULL
385	2019-09-18 12:46:30.0000000	elmadpw	2019-09-18 12:46:30.0000000	elmadpw	WB-121	WB	2019-09-18 04:00:00.0000000	Josh c	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
641	2020-03-04 18:22:39.0000000	elmadpw	2020-03-04 18:22:39.0000000	elmadpw	WB-121	WB	2020-03-04 17:00:00.0000000	Crochetiere	0.15000000	0.00000000	30.00000000	RCP	NULL	Trickle	1.50000000	20.00000000	OpenSpace	NULL	None	NULL
449	2019-09-23 12:19:35.0000000	elmadpw	2019-09-23 12:19:35.0000000	elmadpw	WB-122	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	NULL	NULL	NULL	Suburban_Re	NULL	None	NULL
451	2019-09-23 12:29:39.0000000	elmadpw	2019-09-23 12:29:39.0000000	elmadpw	WB-122	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	NULL	NULL	NULL	Suburban_Re	NULL	None	NULL
450	2019-09-23 12:22:55.0000000	elmadpw	2019-09-23 12:22:55.0000000	elmadpw	WB-123	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
452	2019-09-23 12:29:42.0000000	elmadpw	2019-09-23 12:29:42.0000000	elmadpw	WB-123	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
447	2019-09-20 18:42:36.0000000	elmadpw	2019-09-20 18:42:36.0000000	elmadpw	WB-124	WB	2019-09-20 04:00:00.0000000	Josh c	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
448	2019-09-23 12:02:45.0000000	elmadpw	2019-09-23 12:02:45.0000000	elmadpw	WB-125	WB	2019-09-23 04:00:00.0000000	Josh c	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	0.50000000	10.00000000	Suburban_Re	NULL	None	NULL
418	2019-09-19 15:13:58.0000000	elmadpw	2019-09-19 15:13:58.0000000	elmadpw	WB-126	WB	2019-09-19 04:00:00.0000000	Josh c	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
273	2019-07-26 14:27:52.0000000	EastLongmeadowGIS	2019-08-02 15:42:18.0000000	EastLongmeadowGIS	WB-127	NULL	2019-07-26 14:25:27.0000000	MR	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Re	NULL	None	NULL
300	2019-09-04 12:23:04.0000000	elmadpw	2019-09-04 12:23:04.0000000	elmadpw	WB-127	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	18.00000000	HDPE	NULL	Trickle	0.10000000	2.00000000	Urban_Res	NULL	None	NULL
711	2020-05-19 15:49:34.0000000	elmadpw	2020-05-19 15:49:34.0000000	elmadpw	WB-127	WB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.25000000	1.00000000	OpenSpace	NULL	None	NULL
272	2019-07-26 14:24:33.0000000	EastLongmeadowGIS	2019-08-02 15:42:26.0000000	EastLongmeadowGIS	WB-128	NULL	2019-07-26 14:22:33.0000000	MR	0.00000000	0.00000000	4.00000000	HDPE	NULL	No_Flow	0.00000000	0.00000000	Suburban_Re	NULL	None	NULL
301	2019-09-04 12:26:38.0000000	elmadpw	2019-09-04 12:26:38.0000000	elmadpw	WB-128	WB	2019-09-04 04:00:00.0000000	Josh c	0.00000000	NULL	4.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
710	2020-05-19 15:44:43.0000000	elmadpw	2020-05-19 15:44:43.0000000	elmadpw	WB-128	WB	2020-05-19 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	4.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
667	2020-03-10 11:30:53.0000000	EastLongmeadowGIS	2020-03-10 11:30:53.0000000	EastLongmeadowGIS	WB-130	WB	2020-03-10 16:00:00.0000000	JC	NULL	NULL	18.00000000	HDPE	NULL	Trickle	5.00000000	18.00000000	OpenSpace	NULL	None	NULL
668	2020-03-10 11:32:48.0000000	EastLongmeadowGIS	2020-03-10 11:32:48.0000000	EastLongmeadowGIS	WB-131	WB	2020-03-10 16:00:00.0000000	JC	NULL	NULL	18.00000000	HDPE	NULL	Trickle	5.00000000	18.00000000	OpenSpace	NULL	None	NULL
677	2020-03-12 15:10:34.0000000	elmadpw	2020-03-12 15:10:34.0000000	elmadpw	WB-132	WB	2020-03-12 16:00:00.0000000	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	9.00000000	15.00000000	other	Detention basin	None	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
597	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
598	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
599	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
600	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
480	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
475	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
474	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	Other	needs to be dug out	Normal	Normal	NULL
479	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
477	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
473	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessi	Normal	NULL
472	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
471	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
476	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
478	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
468	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
469	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
491	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
488	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
482	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
483	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
487	0None	Brown,Clear	NULL	0Clear	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	Oil_Stains	NULL	Normal	Oil_Sheen	NULL
484	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessi	Normal	NULL
470	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
631	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
505	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
489	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
490	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
498	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
502	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
501	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
503	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
493	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None,Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal,Colors	NULL
494	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
508	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
759	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
511	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
761	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
509	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
762	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
504	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
507	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None,Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
506	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
492	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
481	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
466	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
465	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
486	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
485	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
512	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
755	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
510	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
763	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
561	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
560	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
499	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
500	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
531	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
275	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
614	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
603	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
672	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
602	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessi	Normal	NULL
675	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
604	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
670	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
606	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
607	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
671	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
286	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
780	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
285	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
781	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
375	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
744	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
376	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
687	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
359	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
773	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
355	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
777	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
271	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
274	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
779	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
296	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
748	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
608	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
747	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
298	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
750	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
297	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
707	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
284	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
751	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
364	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
764	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
366	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
766	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
365	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
765	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
299	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
686	0None	Clear	NULL	1Faint_color	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive,Norm	Normal,Excessive_	NULL
294	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
745	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
295	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
743	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
293	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
749	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
292	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
746	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
356	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
778	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
612	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
754	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
367	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Inhibited,Excess	Normal	NULL
693	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
377	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive,Inhibi	Normal	NULL
629	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
370	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
673	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
369	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
682	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
363	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
772	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
362	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
771	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
361	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
628	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
357	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
776	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
358	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
775	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
360	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
774	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
601	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
674	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
605	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
669	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
783	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
782	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
381	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
638	0None	Clear	NULL	0Clear	0ClearTurbidi	None,Other	Pet waste bags	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
382	0None	Clear	NULL	0Clear	0ClearTurbidi	Other	pet waste bags	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
636	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
384	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
637	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
383	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
635	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
634	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping,Severe_Corrosion_(Holes__Pitting)	NULL	None	NULL	Normal	Normal	NULL
276	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
277	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
278	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
280	NULL	green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
281	0None	NULL	NULL	0Clear	1SlightCloudy	NULL	NULL	0NoneFloatables	NULL	NULL	NULL	NULL	NULL	NULL	NULL
282	NULL	NULL	NULL	0Clear	0ClearTurbidi	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
310	0None	NULL	NULL	0Clear	0ClearTurbidi	NULL	NULL	0NoneFloatables	NULL	NULL	NULL	NULL	NULL	NULL	NULL
559	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
720	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
343	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
729	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
342	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Inhibited	Normal	NULL
726	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
340	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
731	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
341	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
730	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
322	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
727	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
565	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
728	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
407	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
405	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
406	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
309	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
736	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
323	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
732	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
596	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
408	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
688	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
534	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
716	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
542	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
546	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
721	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
543	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
623	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
630	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
535	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
717	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
538	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
532	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
533	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None,Other	half full of dirt and debris	None	NULL	Normal	Normal	NULL
592	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
591	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
590	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
594	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
595	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
519	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
704	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
586	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
585	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
555	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
552	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
554	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
557	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
558	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
556	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
523	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
514	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
633	0None	Clear	NULL	0Clear	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
522	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
521	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
524	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
525	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
520	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
513	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
536	1Faint	Clear,Gray	NULL	1Faint_color	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
537	1Faint	Clear,Gray	NULL	1Faint_color	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
718	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
344	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
733	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
619	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
515	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
516	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
530	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
517	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
528	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
529	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
584	0None	Clear	NULL	0Clear	2Cloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
283	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
279	0None	Green	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
579	0None	Brown	NULL	3ClearlyVisibleOutfall	1SlightCloudy	None,Petroleu	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Oil_Sheen,Colors	NULL
527	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
544	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
526	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
618	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
550	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
553	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
562	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None,Other	tree causing damage to outfall	None	NULL	Normal	Normal	NULL
563	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
547	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
722	0None	Brown,Orange	NULL	NULL	2Cloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
404	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
348	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
324	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Colors,Normal	NULL
311	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
622	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
621	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
620	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
549	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
581	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
545	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
345	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
576	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
582	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
577	0None	Brown	NULL	3ClearlyVisibleOutfall	1SlightCloudy	Petroleum_(Oil	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Oil_Sheen	NULL
548	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
719	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
617	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
615	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessiv	Normal	NULL
616	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
575	1Faint	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
587	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
578	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
580	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
593	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
588	0None	Clear	NULL	0Clear	0ClearTurbidi	Suds	NULL	1Few_NotObvious	None	NULL	None	NULL	Normal	Normal,Suds	NULL
589	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
770	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
551	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
583	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
518	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
403	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
347	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
574	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
753	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
354	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
760	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
610	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
757	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
609	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
758	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
611	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
756	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
573	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
752	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
564	0None	Brown,Gray,Gr	NULL	3ClearlyVisibleOutfall	3Opaque	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
632	0None	Clear	NULL	0Clear	0ClearTurbidi	None,Other	Pet waste bags	0NoneFloatables	None	NULL	None	NULL	Normal	Normal,Excessive_	NULL
566	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
714	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
571	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
708	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
572	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
723	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
567	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
715	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
568	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
712	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
569	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
713	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
570	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
709	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
467	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
346	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
666	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Severe_Corrosion_(Holes__Pitting),Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
460	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
453	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
459	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessiv	Normal	NULL
429	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping,Other	trees growing on side of outfall	None	NULL	Normal	Normal	NULL
428	0None	Brown	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Floatables	NULL
425	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
427	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
422	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
423	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
424	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
426	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessiv	Normal	NULL
313	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
725	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
308	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
737	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
307	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
739	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
321	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
700	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
540	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
312	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
724	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
420	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
415	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
416	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
417	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
464	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
463	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
462	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
461	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
456	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
457	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
458	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
454	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
455	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
541	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
319	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
320	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
705	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
392	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
646	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
539	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
656	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None,Severe_Corrosion_(Holes__Pitting)	NULL	None	NULL	Normal	Normal	NULL
400	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
657	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
401	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
658	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
339	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
697	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
316	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
702	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
315	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
703	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
317	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
695	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
337	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
699	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
336	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
696	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
353	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
350	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
351	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
352	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
349	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
287	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
784	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
379	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
650	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
380	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
649	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
378	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
651	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
288	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
655	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
335	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
683	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
314	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
624	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
734	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
372	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
690	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
373	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
689	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
368	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
694	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
326	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
769	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
325	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
768	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
327	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
767	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
328	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
681	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
371	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
691	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
374	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
692	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
329	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
676	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Excessive_Algae	NULL
680	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Excessive_Algae	NULL
330	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
685	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
318	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
701	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
613	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
706	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
442	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
443	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
495	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
496	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
497	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
627	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
409	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
413	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
411	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
412	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
626	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
410	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
414	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
625	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
291	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
659	0None	Clear	NULL	0Clear	0ClearTurbidi	Suds	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Suds	NULL
397	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
654	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
395	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
660	0None	Clear	NULL	0Clear	0ClearTurbidi	Suds	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Suds,Excessive_Al	NULL
398	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
652	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
396	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
653	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
399	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Other	outfall is filled with dirt and rocks	None	NULL	Normal	Normal	NULL
662	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
334	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
665	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
331	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
678	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
333	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
684	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
332	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
679	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
433	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
431	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
434	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
435	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
436	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
437	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
432	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
438	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
439	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
421	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
430	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
444	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
445	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
446	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal,Excessiv	Normal	NULL
440	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
441	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
387	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
639	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL
388	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
640	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
386	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
642	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
389	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other
648	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
390	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
643	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
391	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
647	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
393	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
645	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
394	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
644	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
306	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
738	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
290	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
663	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
289	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
664	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
402	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
661	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
303	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
740	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
302	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
741	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
304	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
735	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
305	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
742	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping,Other	Head wall is falling apart	None	NULL	Normal	Normal	NULL
419	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
338	0None	Clear	NULL	0Clear	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
698	0None	Brown	NULL	0Clear	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
385	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
641	0None	Clear	NULL	0Clear	2Cloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Excessive_Algae	NULL
449	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
451	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
450	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
452	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
447	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
448	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive,Norm	Normal	NULL
418	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
273	0None	NULL	NULL	NULL	NULL	NULL	NULL	0NoneFloatables	NULL	NULL	NULL	NULL	NULL	NULL	NULL
300	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL
711	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
272	0None	NULL	NULL	NULL	NULL	None	NULL	0NoneFloatables	NULL	NULL	NULL	NULL	Average	NULL	NULL
301	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
710	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
667	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
668	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL
677	0None	Clear	NULL	0Clear	0ClearTurbidi	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
597	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found, may leach into the ground	NULL
598	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found , may leach into the ground	NULL
599	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found, may leach into the ground	NULL
600	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found, may leach into ground.	NULL
480	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
475	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
474	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
479	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
477	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
473	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
472	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
471	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
476	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
478	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
468	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
469	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
491	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
488	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
482	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
483	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
487	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
484	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
470	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot locate needs to be brush hog.	NULL
631	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to Dredged out Water is not flowing.	NULL
505	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
489	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
490	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found, may not exist or buried	NULL
498	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
502	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be cleaned out	NULL
501	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
503	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
493	Brown	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
494	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
508	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
759	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
511	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
761	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
509	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is submerged under water	NULL
762	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is under water	NULL
504	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
507	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
506	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
492	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
481	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found, may be in the wrong spot on GIS. may come out on the rail trail.	NULL
466	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
465	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
486	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
485	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
512	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
755	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No Flow	NULL
510	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
763	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
561	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
560	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
499	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
500	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
531	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
275	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
614	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
603	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
672	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Need to cut brush around outfall.	NULL
602	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
675	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be brush cut	NULL
604	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned out.	NULL
670	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
606	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
607	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
671	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
286	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
780	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
285	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
781	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
375	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
744	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
376	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall is almost full to top of pipe , needs to be dread all the way out	NULL
687	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is submerged needs to be dredge back.	NULL
359	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
773	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
355	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
777	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
271	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned out from head wall to porter rd	NULL
274	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
779	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Still needs to be dredge from outfall to porter road. Water is just pooling up at outfall	NULL
296	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned up. pipe may need to be jet.	NULL
748	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
608	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
747	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
298	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
750	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No Flow	NULL
297	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
707	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back. A lot if brush on outfall outlet.	NULL
284	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
751	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No flow	NULL
364	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
764	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
366	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Cannot locate, Might connect to culvert it under Road.	NULL
766	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	May not exist or goes underneath into culvert	NULL
365	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
765	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
299	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
686	Green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
294	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
745	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
295	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
743	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
293	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
749	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Slow flowing	NULL
292	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
746	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No flow	NULL
356	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
778	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
612	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
754	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back. Outfall wall is collapsing.	NULL
367	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
693	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
377	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot locate outfall very overgrown.	NULL
629	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Can not locate outfall need to camera and trace drain line.	NULL
370	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
673	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be Brush cut and dredge back	NULL
369	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
682	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back to allow flow.	NULL
363	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot find	NULL
772	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Not found. May go to a honey cone. Structure	NULL
362	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot locate outfall. may connect to catch basin #1500	NULL
771	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Not found . May connect to basin	NULL
361	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	to over grown to get access to outfall	NULL
628	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is full of water. Water is not flowing properly.	NULL
357	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
776	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
358	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
775	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
360	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
774	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
601	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
674	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
605	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
669	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
783	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
782	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall need to be repaired and extend out farther.	NULL
381	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
638	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Pet waste bags at end of outfall.	NULL
382	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
636	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is under water needs to be dredged out to allow flow .	NULL
384	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
637	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
383	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
635	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
634	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall needs to dredged. Property owner believes pipe is broken and would like us to look at it .	NULL
276	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
277	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
278	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
280	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
281	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
282	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
310	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
559	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
720	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
343	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall is inside culvert	NULL
729	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Out fall goes into culvert .	NULL
342	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
726	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Can't locate outfall heavy brush .	NULL
340	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
731	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is outlet for culvert.	NULL
341	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
730	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No flow	NULL
322	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
727	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
565	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
728	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No flow ACP	NULL
407	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
405	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
406	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	buried under pile of asphalt,	NULL
309	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
736	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
323	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
732	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No flow	NULL
596	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
408	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
688	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be cut back	NULL
534	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
716	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
542	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	under water	NULL
546	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
721	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is Completely submerged underwater needs to be dredged back .	NULL
543	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
623	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found. may not exist. only found the 15in steel pipe.	NULL
630	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Walked the Stream And couldn't not fine the outfall . It may not exist or is buried deep.	NULL
535	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall looks to go Into culvert under Roadway	NULL
717	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Looks like outfall dumps in to the culvert under roadway.	NULL
538	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
532	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Full of water debris no good flow coming out needs to be dread	NULL
533	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
592	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
591	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	pipe is buried needs to be dug out	NULL
590	None	NULL	NULL	NULL	NULL	NULL	NULL	12.00000000	NULL	Cannot locate either buried under ground need to camera	NULL
594	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
595	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
519	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
704	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back . Pipe. Is under water .	NULL
586	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
585	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
555	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
552	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	head wall needs repair and outfall needs to be cleaned back	NULL
554	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	head wall needs repair and outfall needs to be cleaned back	NULL
557	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
558	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
556	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
523	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
514	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Has about 3 to 4 in a sediment in the pipe	NULL
633	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
522	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	head wall is falling apart	NULL
521	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot locate may go further into the golf course then shows on GIS	NULL
524	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found it appears to be a drain manhole. that drains out to the golf course.	NULL
525	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	not found. it appears to be a drain manhole that goes out to the golf course	NULL
520	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
513	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall	NULL
536	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	very large wasp nest above outfall	NULL
537	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	very large wasp nest above outfall	NULL
718	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall/culvert needs to be dredge back	NULL
344	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
733	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Sink hole behind catch basin still.	NULL
619	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
515	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
516	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
530	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
517	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	head wall is falling apart.	NULL
528	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Cannot locate	NULL
529	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Cannot get to outfall from 48 Holy Cross Circle very Steep Hill also can I get to it from 5 Garland Ave overgrown	NULL
584	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be dredged back	NULL
283	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
279	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
579	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
527	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
544	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
526	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
618	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	pipe is half way buried. needs to be dredged access for back of house #1	NULL
550	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned back to allow flow	NULL
553	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall is completely buried underground.	NULL
562	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	tree is growing next to outfall causing the pipe collapse	NULL
563	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
547	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	I'll fall needs to be dread back	NULL
722	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back water is dark looking.	NULL
404	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
348	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
324	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
311	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
622	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
621	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
620	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredged.	NULL
549	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be cleaned back.	NULL
581	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	headwall cracked needs repair	NULL
545	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
345	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
576	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
582	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be cleaned	NULL
577	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
548	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
719	Green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Good flow	NULL
617	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
615	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	has a 24 inches steel pipe with flow below it 12 inches depth and 24 inches wide	NULL
616	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
575	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	pipe is crumbling and needs to be repaired	NULL
587	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Pipe is buried under logs and brush needs to be cleaned	NULL
578	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be cleaned out at end of the outfall	NULL
580	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
593	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
588	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
589	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
770	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
551	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Is a leaching basin.	NULL
583	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be jetted	NULL
518	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
403	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
347	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
574	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Filter to the top with debris, drain manhole to left of it needs repair has 4 inch hole on the side of it	NULL
753	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is a catch basin needs to to cleaned and fix to be a out fall .	NULL
354	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
760	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
610	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	It appears to connect into culvert	NULL
757	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall dumps into culvert	NULL
609	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Appears to connect into culvert	NULL
758	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	It appears to dump into the culvert	NULL
611	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Appears that connects into culvert	NULL
756	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall dumps into culvert	NULL
573	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
752	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
564	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be opened up a lot clean back 40 feet for water to Flow	NULL
632	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Need to drudged back to allow flow. Basin #1046 is full to top with water. Water is moving very slow	NULL
566	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	there are two 30 inche outfalls	NULL
714	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge and trees cut down	NULL
571	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	the back of the catch basin above outfall is washing away	NULL
708	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Catch basin above outfall has a sink hole to the left of it .	NULL
572	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
723	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
567	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	needs to be cleaned out around outfall	NULL
715	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
568	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
712	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	House 11 built a garage on top of the outfall/ on the drain pipe.	NULL
569	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
713	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
570	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
709	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Flow is good .	NULL
467	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
346	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
666	Orange	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Need to cut brush to outfall to have better access and cut brush around outfall	NULL
460	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	pipe is half full of dirt	NULL
453	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
459	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
429	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
428	Brown	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
425	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
427	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
422	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
423	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
424	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
426	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
313	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
725	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back pipe half way under water	NULL
308	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
737	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Metal around outfall is rotting away.	NULL
307	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
739	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
321	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	pipe is broken off	NULL
700	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Pipe broken / needs to be dredge back around tree or need to extend pipeline	NULL
540	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
312	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
724	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
420	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
415	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
416	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
417	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
464	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Not found maybe buried or doesn't exist	NULL
463	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Not found may be buried or doesn't exist	NULL
462	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
461	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
456	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
457	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
458	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
454	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
455	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
541	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
319	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	8 inch reinforced concrete pipe. 4 inch PVC pipe coming from house 99 and 4 inch hdpe coming from house 95.	NULL
320	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	8 inch reinforced concrete pipe. 4 inch PVC pipe coming from house 99 and 4 inch hdpe coming from house 95.	NULL
705	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back/ no damage from water break om 5/12/20.	NULL
392	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
646	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is under water and needs to dredged back	NULL
539	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
656	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
400	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
657	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
401	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
658	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back to allow flow	NULL
339	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
697	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
316	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
702	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
315	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
703	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back and brush cut	NULL
317	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
695	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
337	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	may have found it could be buried under rocks. doesn't look active.	NULL
699	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Buried under rocks needs to be cleaned up .	NULL
336	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
696	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back and trees need to be cut down in front of outlet.	NULL
353	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
350	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot get close enough to outfall big pine tree fell over outfall.	NULL
351	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
352	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
349	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
287	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
784	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
379	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
650	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
380	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
649	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	There is about 100 feet to 4 inch HDPE pipe with a 8in to 4in reducer. Outfall needs to be cleaned up	NULL
378	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
651	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
288	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
655	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Headwall for Culvert is falling apart.	NULL
335	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
683	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
314	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	can not locate outfall. needs to be brush hog to get access.	NULL
624	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cleaned back as much as possible. trial marked with pink tape . needs to be dredged back .	NULL
734	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
372	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned out.	NULL
690	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back pipe is filling up	NULL
373	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
689	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back. Outfall is filling up sand	NULL
368	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
694	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
326	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Cannot locate buried or does not exist	NULL
769	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Not found buried or doesn't exist	NULL
325	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Cannot locate buried or does not exist	NULL
768	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Buried or doesn't exist not found	NULL
327	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	can not locate buried or doesn't exist	NULL
767	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Not found maybe buried or does not exist	NULL
328	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
681	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
371	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned out/ dread back	NULL
691	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
374	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
692	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back.	NULL
329	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
676	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
680	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
330	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
685	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back 20 feet	NULL
318	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
701	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
613	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	there are two outfalls	NULL
706	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Two 12" outfall pipes	NULL
442	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	I'll fall is buried needs to be dug out	NULL
443	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
495	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
496	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
497	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
627	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
409	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	it looks like it doesn't exist. no basin in the area of where it's supposed to be	NULL
413	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	it looks like it doesn't exist. no basin in the area of where it's supposed to be	NULL
411	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
412	Brown	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
626	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
410	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
414	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
625	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
291	Green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
659	Green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
397	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
654	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
395	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
660	Green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
398	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
652	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
396	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned out	NULL
653	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall needs to be dredged back to allow flow	NULL
399	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall needs to be cleaned and Dread	NULL
662	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall is under water needs to dredge out	NULL
334	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	very over grown.	NULL
665	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to dredge back to allow flow and brush needs to be cut to get better Access.	NULL
331	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
678	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
333	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
684	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
332	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
679	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back and remove logs that are on top,side of pipe	NULL
433	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
431	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot locate may not exist.	NULL
434	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
435	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
436	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
437	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
432	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	cannot locate.	NULL
438	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
439	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
421	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
430	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
444	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
445	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
446	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
440	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
441	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
387	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
639	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
388	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
640	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
386	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
642	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
389	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt
648	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be cleaned up at end of outfall	NULL
390	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
643	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredged back	NULL
391	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
647	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
393	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
645	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfall needs to be dredged back.	NULL
394	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
644	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
306	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
738	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
290	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
663	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Need to cut brush around outfall.	NULL
289	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
664	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Need to cut brush hanging over outfall	NULL
402	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
661	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Outfallneeds to be dredge and jet.	NULL
303	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall is not flowing holding water at the outlet	NULL
740	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge and jet	NULL
302	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall has sand/dirt built up in pipe	NULL
741	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge and jet	NULL
304	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
735	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL
305	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
742	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Head wall is falling apart	NULL
419	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
338	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
698	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
385	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
641	Green	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
449	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
451	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
450	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
452	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
447	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
448	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
418	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	outfall doesn't exist. Opened drain manhole 232 has 3 inlets one Outlet outlet goes to drain manhole 1005.	NULL
273	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
300	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
711	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
272	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
301	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
710	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
667	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
668	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
677	None	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL

Outfall Inventory as of June 2020

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
340	DRD-001	INTERCONNECTION-SPRINGFIELD	37	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060911	SCANNED	Tufts-1	20040701
339	DRD-002	INTERCONNECTION-SPRINGFIELD	37	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060911	SCANNED	Tufts-1	20040701
338	DRD-003	NULL	37	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060911	SCANNED	Tufts-1	20040701
337	DRD-004	NULL	37	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060911	SCANNED	Tufts-1	20040701
1989	DRD-005	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1990	DRD-006	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1991	DRD-007	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1992	DRD-008	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1993	DRD-009	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1994	DRD-010	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1995	DRD-011	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1996	DRD-012	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1997	DRD-013	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
1998	DRD-014	INTERCONNECTION-SPRINGFIELD	NULL	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20190125	GPS	JOSH	20190109
261	FB-001	NULL	28	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060418	PHOTOG	SD-246	20070425
260	FB-002	NULL	28	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060418	PHOTOG	SD-246	20070425
259	FB-003	NULL	28	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
257	FB-005	NULL	28	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	GPS	fieldwork_2(	20070425
256	FB-006	NULL	21	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060818	GPS	fieldwork_2(	20070425
255	FB-007	NULL	28	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070430	GPS	fieldwork_2(	20070425
254	FB-008	NULL	28	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060818	GPS	tb_fieldwork	20070425
253	FB-009	NULL	28	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
252	FB-010	NULL	28	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060818	GPS	fieldwork_2(	20070425
251	FB-011	NULL	28	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060818	GPS	tb_fieldwork	20070425
216	FB-012	NULL	41	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20060310	SCANNED	fieldwork_2(	20070425
352	FB-013	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	PHOTOG	fieldwork_2(	20070425
324	FB-014	NULL	28	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
303	FB-015	NULL	35	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
279	FB-016	NULL	41	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070430	GPS	fieldwork_2(	20070425
278	FB-017	NULL	41	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070430	GPS	fieldwork_2(	20070425
364	FB-018	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
365	FB-019	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
367	FB-022	NULL	28	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070502	SCANNED	WindsorLn1	20050505
380	FB-023	NULL	29	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20060622	SCANNED	phase7_topc	20040517
384	FB-024	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060629	SCANNED	HalonEstate:	20040105
385	FB-025	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060629	SCANNED	HalonEstate:	20040105
281	JB-001	NULL	40	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20060601	SCANNED	SD-128	19651201
280	JB-002	NULL	40	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060601	SCANNED	SD-062	19581126
227	JB-003	NULL	29	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
226	JB-004	NULL	29	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
225	JB-005	NULL	29	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20060330	SCANNED	SD-192	19780601
222	JB-006	NULL	41	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060316	UNKNOWN	Sd-223B	20070425
221	JB-007	NULL	41	NULL	NULL	78.00000000	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
215	JB-008	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
213	JB-009	NULL	23	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
212	JB-010	NULL	23	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
202	JB-011	NULL	25	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
333	JB-012	NULL	30	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060821	GPS	tb_fieldwork	20060816
332	JB-013	NULL	29	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060818	GPS	tb_fieldwork	20060816
283	JB-015	NULL	39	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070430	GPS	fieldwork_2(	20070425
379	JB-016	NULL	28	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060327	SCANNED	SD-062	19581126
382	JB-017	NULL	27	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060622	SCANNED	phase6_3	20051008
383	JB-018	NULL	27	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060622	SCANNED	phase6_3	20051008
366	JB-019	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
370	JB-020	NULL	41	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
788	JB-021	NULL	23	GOOD	NULL	18.00000000	ACTIVE	NULL	NULL	20070507	GPS	Interns	20180611
387	JB-022	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
2801	JB-023	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	20190911	FIELD	MRAY	20190911
2802	JB-024	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	20190911	FIELD	MRAY	20190911
299	L-001	NULL	39	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
298	L-002	NULL	39	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
297	L-003	NULL	39	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
294	L-004	NULL	39	NULL	NULL	21.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
363	L-005	NULL	39	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
27	MR-001	NULL	04	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
26	MR-002	NULL	04	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
24	MR-003	NULL	04	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
23	MR-004	NULL	04	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
20	MR-005	NULL	04	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
19	MR-006	NULL	04	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
18	MR-007	NULL	04	NULL	NULL	21.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
17	MR-008	NULL	04	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
44	MR-009	NULL	06	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
43	MR-010	NULL	06	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
42	MR-011	NULL	06	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
41	MR-012	NULL	05	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
40	MR-013	NULL	05	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
39	MR-014	NULL	05	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
38	MR-015	NULL	05	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
37	MR-016	NULL	05	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
36	MR-017	NULL	05	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
35	MR-018	NULL	05	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20050908	SCANNED	SD-204A	NULL
34	MR-019	NULL	05	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20050908	SCANNED	SD-204A	20070509
33	MR-020	NULL	05	NULL	NULL	21.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
32	MR-021	NULL	05	NULL	NULL	27.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
31	MR-022	NULL	05	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
29	MR-023	NULL	05	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
28	MR-024	NULL	05	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
307	MR-025	NULL	6	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060713	GPS	tb_fieldwork	20060712
138	MR-026	NULL	07	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
137	MR-027	NULL	08	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
90	MR-028	NULL	10	NULL	NULL	8.00000000	ABANDONI	NULL	NULL	20051122	SCANNED	E-9	NULL

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
83	MR-031	NULL	09	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
82	MR-032	NULL	09	NULL	NULL	42.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
70	MR-033	NULL	06	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20051104	SCANNED	W-379	NULL
52	MR-034	NULL	06	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20051007	SCANNED	SD-216	NULL
48	MR-035	NULL	06	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
47	MR-036	NULL	06	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
46	MR-037	NULL	06	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	W-446C	20070523
45	MR-038	NULL	06	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
376	MR-039	NULL	10	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20050830	SCANNED	W-494	NULL
381	MR-040	NULL	04	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
4403	MR-041	NULL	06	NULL	NULL	NULL	ACTIVE	NULL	NULL	20200611	GPS	JOSH CROCH	20200302
4404	MR-042	NULL	06	NULL	NULL	NULL	ACTIVE	NULL	NULL	20200611	GPS	JOSH CROCH	20200302
8	MRD-001	NULL	01	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20050722	SCANNED	W-325	20070411
7	MRD-002	NULL	01	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
302	MRD-003	NULL	1	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
9	MRD-004	NULL	01	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
1999	MRD-005	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	20190125	GPS	TC	20190109
170	PB-001	NULL	21	NULL	NULL	42.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
162	PB-002	NULL	19	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
160	PB-003	NULL	19	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060120	SCANNED	SD-106	NULL
159	PB-004	NULL	19	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
158	PB-005	NULL	19	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
157	PB-006	NULL	19	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
156	PB-007	NULL	19	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
155	PB-008	NULL	17	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
154	PB-009	NULL	17	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
153	PB-010	NULL	17	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20060112	SCANNED	W-014	19540801
151	PB-011	NULL	18	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
150	PB-012	NULL	18	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
146	PB-013	NULL	22	NULL	NULL	54.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
132	PB-014	NULL	16	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
201	PB-015	NULL	38	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070521	GPS	fieldwork_0!	20070518
198	PB-016	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	GPS	tb_fieldwork	20061004
197	PB-017	NULL	21	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
195	PB-018	NULL	22	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
194	PB-019	NULL	22	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
193	PB-020	NULL	38	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070521	GPS	fieldwork_0!	20070518
189	PB-022	NULL	22	NULL	NULL	10.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
186	PB-023	NULL	22	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
185	PB-024	NULL	22	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
182	PB-026	NULL	22	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
181	PB-027	NULL	22	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
180	PB-028	NULL	22	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060222	SCANNED	SD-177	NULL
179	PB-029	NULL	22	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
177	PB-030	NULL	22	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
267	PB-031	NULL	32	NULL	NULL	20.00000000	ACTIVE	NULL	NULL	20060907	GPS	tb_fieldwork	20070425

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
266	PB-032	NULL	32	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060425	SCANNED	SD-125C	19810101
265	PB-033	NULL	32	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060425	SCANNED	SD-125C	19810101
241	PB-034	NULL	31	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
240	PB-035	NULL	31	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060417	FIELD	SS-334	19751201
239	PB-036	NULL	31	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
238	PB-037	NULL	31	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
236	PB-038	NULL	31	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
235	PB-039	NULL	31	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
234	PB-040	NULL	31	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
233	PB-041	NULL	31	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
232	PB-042	NULL	30	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20060410	SCANNED	W-501C	20000601
231	PB-043	NULL	30	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060410	SCANNED	W-490	20000818
230	PB-044	NULL	30	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060410	SCANNED	W-490	20000818
229	PB-045	NULL	30	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
228	PB-046	NULL	30	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20060410	SCANNED	SD-007	NULL
312	PB-047	NULL	38	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070521	GPS	fieldwork_0!	20070518
310	PB-049	NULL	19	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
296	PB-050	NULL	39	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
292	PB-051	NULL	38	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
291	PB-052	NULL	38	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
289	PB-053	NULL	38	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
288	PB-054	NULL	37	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
286	PB-055	NULL	37	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
285	PB-056	NULL	37	NULL	NULL	21.00000000	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
277	PB-057	NULL	35	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060519	SCANNED	SD-004	20070403
276	PB-058	NULL	35	NULL	NULL	60.00000000	ACTIVE	NULL	NULL	20061010	GPS	fieldwork_2(	20070425
275	PB-059	NULL	33	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060503	SCANNED	W-240B	19640301
274	PB-060	NULL	35	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060515	SCANNED	Sd-174B	20070403
273	PB-061	NULL	37	NULL	NULL	18.00000000	ACTIVE	1970	NULL	20070507	GPS	fieldwork_2(	20070425
272	PB-062	NULL	32	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060504	SCANNED	W-501E	20020501
342	PB-063	NULL	37	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
341	PB-064	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
336	PB-065	NULL	34	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060907	GPS	tb_fieldwork	20060906
335	PB-066	NULL	31	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060824	GPS	tb_fieldwork	20060823
334	PB-067	NULL	31	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060824	GPS	tb_fieldwork	20070425
331	PB-068	NULL	21	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060818	GPS	tb_fieldwork	20060816
330	PB-069	NULL	21	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060818	FIELD	tb_fieldwork	20060816
329	PB-070	NULL	21	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
323	PB-071	NULL	25	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060727	GPS	tb_fieldwork	20060726
322	PB-072	NULL	25	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
319	PB-073	NULL	18	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060721	GPS	tb_fieldwork	20060719
317	PB-074	NULL	18	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070503
316	PB-075	NULL	17	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060721	GPS	tb_fieldwork	20060719
315	PB-076	NULL	17	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060721	GPS	tb_fieldwork	20060719
314	PB-077	NULL	17	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060721	GPS	tb_fieldwork	20060719
313	PB-078	NULL	34	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060907	GPS	tb_fieldwork	20060906

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
360	PB-079	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070405	GPS	fieldwork_2(	20070403
359	PB-080	NULL	32	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061208	GPS	tb_fieldwork	20061206
357	PB-081	NULL	22	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
356	PB-082	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
355	PB-083	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061013	GPS	tb_fieldwork	20070403
354	PB-084	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061013	GPS	tb_fieldwork	20070403
351	PB-086	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	FIELD	TB-23-22	20061005
350	PB-087	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	FIELD	TB-23-16	20061004
349	PB-088	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	GPS	tb_fieldwork	20061004
348	PB-089	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	GPS	tb_fieldwork	20061004
347	PB-090	NULL	23	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061006	GPS	tb_fieldwork	20061004
346	PB-091	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070507	GPS	UTILPT_MAF	20070425
345	PB-092	NULL	35	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070405	GPS	fieldwork_2(	20070425
344	PB-093	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060925	SCANNED	low pressure	20070425
343	PB-094	NULL	35	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061013	GPS	tb_fieldwork	20070425
361	PB-095	NULL	22	NULL	NULL	40.00000000	ACTIVE	NULL	NULL	20070412	GPS	tb_fieldwork	20070411
368	PB-096	NULL	22	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
369	PB-097	NULL	22	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
371	PB-098	NULL	32	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070509	SCANNED	BirchAve2	20060622
374	PB-099	NULL	35	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060515	SCANNED	SS-153	19400601
1188	PB-100	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
2000	PB-101	NULL	NULL	GOOD	NULL	NULL	ACTIVE	NULL	NULL	20190301	FIELD	MRAY	20190301
2400	PB-102	NULL	21	NULL	NULL	NULL	ACTIVE	NULL	NULL	20190624	INFERRED	MRAY	20190624
4003	PB-103	NULL	NULL	NULL	NULL	NULL	ACTIVE	1976	NULL	20200323	GPS	ROY ESPOSIT	20181018
4004	PB-104	NULL	NULL	NULL	NULL	NULL	ACTIVE	1976	NULL	20200323	GPS	ROY ESPOSIT	20181018
4803	PB-105	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	20200616	GPS	JOSH CROCH	20200504
309	PRD-001	NULL	7	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060713	GPS	tb_fieldwork	20060712
51	PRD-002	NULL	06	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
50	PRD-003	NULL	06	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
49	PRD-004	NULL	06	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
373	PRD-005	NULL	06	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
386	PRD-006	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
328	SB-001	NULL	19	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060814	GPS	tb_fieldwork	20060811
271	SB-002	NULL	20	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20060428	SCANNED	TP-254B	19890501
169	SB-003	NULL	20	NULL	NULL	44.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
167	SB-004	NULL	20	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
166	SB-005	NULL	20	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
165	SB-006	NULL	20	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
164	SB-007	NULL	20	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
163	SB-008	NULL	20	NULL	NULL	40.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
224	WB-001	NULL	26	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
223	WB-002	NULL	26	NULL	NULL	21.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
219	WB-003	NULL	27	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
218	WB-004	NULL	27	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
217	WB-005	NULL	27	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
211	WB-006	NULL	26	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
210	WB-007	NULL	26	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
209	WB-008	NULL	26	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
208	WB-009	NULL	26	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
207	WB-010	NULL	26	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
206	WB-011	NULL	26	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
205	WB-012	NULL	26	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070430	PHOTOG	UTILPT_MAF	20070425
203	WB-013	NULL	26	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
161	WB-014	NULL	19	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
149	WB-015	NULL	18	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
148	WB-016	NULL	18	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
326	WB-017	NULL	19	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060814	GPS	tb_fieldwork	20060811
325	WB-018	NULL	12	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060814	GPS	tb_fieldwork	20060811
320	WB-019	NULL	19	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060721	GPS	tb_fieldwork	20060719
304	WB-020	NULL	15	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
270	WB-021	NULL	15	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
269	WB-022	NULL	15	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060426	MANUAL	fieldwork_2(	20070411
268	WB-023	NULL	15	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
250	WB-024	NULL	27	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20060418	SCANNED	SD-244	19970701
249	WB-025	NULL	27	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060418	SCANNED	W-478A	19970701
248	WB-026	NULL	27	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
247	WB-027	NULL	27	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060418	SCANNED	SD-244	20070425
246	WB-028	NULL	27	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
245	WB-029	NULL	27	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
244	WB-030	NULL	27	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
243	WB-031	NULL	27	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
242	WB-032	NULL	27	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
358	WB-033	NULL	12	NULL	NULL	NULL	ACTIVE	NULL	NULL	20061116	GPS	tb_fieldwork	20061115
327	WB-034	NULL	19	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060814	GPS	tb_fieldwork	20060811
10	WB-035	NULL	01	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
3	WB-036	NULL	11	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
2	WB-037	NULL	11	NULL	NULL	12.00000000	NULL	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
1	WB-038	NULL	11	NULL	NULL	12.00000000	NULL	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
65	WB-039	NULL	08	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
63	WB-040	NULL	08	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
62	WB-041	NULL	08	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
61	WB-042	NULL	08	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
60	WB-043	NULL	08	NULL	NULL	NULL	ACTIVE	NULL	NULL	20051026	SCANNED	W-438	NULL
59	WB-044	NULL	08	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
57	WB-045	NULL	07	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
56	WB-046	NULL	07	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
55	WB-047	NULL	07	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
54	WB-048	NULL	07	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
53	WB-049	NULL	07	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
22	WB-050	NULL	04	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
16	WB-051	NULL	02	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
15	WB-052	NULL	02	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
14	WB-053	NULL	02	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
13	WB-054	NULL	03	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
91	WB-055	NULL	10	NULL	NULL	21.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
89	WB-056	NULL	19	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20051118	GPS	tb_fieldwork	20051117
88	WB-057	NULL	09	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
87	WB-058	NULL	09	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
86	WB-059	NULL	09	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20051109	FIELD	SD-164	NULL
81	WB-060	NULL	09	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20051109	SCANNED	SS-308-3	NULL
80	WB-061	NULL	09	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20051109	SCANNED	SS-308-3	NULL
79	WB-062	NULL	09	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20051109	SCANNED	SS-308-3	NULL
77	WB-063	NULL	09	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20051109	GPS	SS-308-3	NULL
76	WB-064	NULL	09	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
75	WB-065	NULL	09	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
74	WB-066	NULL	09	NULL	NULL	10.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
73	WB-067	NULL	09	NULL	NULL	10.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
68	WB-069	NULL	08	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
66	WB-070	NULL	08	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
107	WB-071	NULL	14	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
106	WB-072	NULL	14	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20051207	SCANNED	W-414	20070425
105	WB-073	NULL	12	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
103	WB-075	NULL	12	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
102	WB-076	NULL	12	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070412	PHOTOG	fieldwork_2(	20070411
101	WB-077	NULL	12	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070524	FIELD	UTILPT_MAF	20070523
100	WB-078	NULL	12	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
99	WB-079	NULL	12	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
98	WB-080	NULL	12	NULL	NULL	42.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
97	WB-081	NULL	12	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	PHOTOG	fieldwork_2(	20070411
96	WB-082	NULL	12	NULL	NULL	NULL	ACTIVE	NULL	NULL	20051201	SCANNED	SD-067	NULL
95	WB-083	NULL	10	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
94	WB-084	NULL	10	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
93	WB-085	NULL	10	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20051122	SCANNED	SS-308-4	NULL
92	WB-086	NULL	10	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
125	WB-087	NULL	14	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20060713	GPS	fieldwork_2(	20070425
124	WB-088	NULL	15	NULL	NULL	NULL	DNE	NULL	NULL	20051212	SCANNED	SD-235A	19870401
123	WB-089	NULL	15	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
122	WB-090	NULL	15	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
121	WB-091	NULL	15	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
120	WB-092	NULL	15	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
119	WB-093	NULL	15	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
118	WB-094	NULL	15	NULL	NULL	4.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
117	WB-095	NULL	15	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
116	WB-096	NULL	15	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
115	WB-097	NULL	15	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
114	WB-098	NULL	26	NULL	NULL	36.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
111	WB-099	NULL	14	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
110	WB-100	NULL	14	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425

OBJECTID	Outfall_ID	OutfallDescription	LocationDescription	Condition	ReceivingWater	PipeSize	Status	YearInst	DateLastInsp	metaDatecreate	metaEntryMethod	metaSrc	metaSrcDate
109	WB-101	NULL	14	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
108	WB-102	NULL	14	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070430	GPS	UTILPT_MAF	20070425
145	WB-103	NULL	13	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
144	WB-104	NULL	13	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
143	WB-105	NULL	13	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
142	WB-106	NULL	13	NULL	NULL	18.00000000	ACTIVE	NULL	NULL	20070412	PHOTOG	fieldwork_2(	20070411
141	WB-107	NULL	13	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
140	WB-108	NULL	01	NULL	NULL	30.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
139	WB-109	NULL	01	NULL	NULL	8.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
136	WB-110	NULL	01	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
135	WB-111	NULL	16	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
134	WB-112	NULL	16	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20051220	PHOTOG	SS-373	19810529
133	WB-113	NULL	16	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070510	GPS	UTILPT_MAF	20070509
131	WB-114	NULL	16	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MA_	20070523
130	WB-115	NULL	16	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
129	WB-116	NULL	16	NULL	NULL	24.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
128	WB-117	NULL	16	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
127	WB-118	NULL	16	NULL	NULL	12.00000000	ACTIVE	NULL	NULL	20070524	GPS	UTILPT_MAF	20070523
362	WB-119	NULL	15	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070412	GPS	fieldwork_2(	20070411
372	WB-120	NULL	08	NULL	NULL	NULL	ACTIVE	NULL	NULL	20070511	GPS	UTILPT_MAF	20070509
375	WB-121	NULL	13	NULL	NULL	NULL	ACTIVE	NULL	NULL	20060103	SCANNED	Elms-II-2	19981001
377	WB-122	NULL	14	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060629	SCANNED	Ruffino-5	20051103
378	WB-123	NULL	14	NULL	NULL	15.00000000	ACTIVE	NULL	NULL	20060629	SCANNED	Ruffino-5	20051103
1189	WB-124	NULL	NULL	GOOD	NULL	NULL	ACTIVE	2017	NULL	20180724	FIELD	mray	20180724
1190	WB-125	NULL	NULL	NULL	NULL	NULL	ACTIVE	NULL	NULL	NULL	NULL	NULL	NULL
2401	WB-127	NULL	NULL	GOOD	NULL	24.00000000	ACTIVE	2010	NULL	20190802	FIELD	MRAY	20190726
2402	WB-128	NULL	NULL	GOOD	NULL	4.00000000	ACTIVE	2010	NULL	20190802	FIELD	MRAY	20190726
3201	WB-129	NULL	14	FAIR	NULL	15.00000000	ACTIVE	NULL	20191030	20191031	GPS	JOSH CROCH	20191030
3601	WB-130	NULL	NULL	GOOD	NULL	18.00000000	ACTIVE	NULL	NULL	20200310	FIELD	JOSH CROCH	20200309
3602	WB-131	NULL	NULL	GOOD	NULL	18.00000000	ACTIVE	NULL	NULL	20200310	FIELD	JOSH CROCH	20200309
3603	WB-132	NULL	NULL	NULL	NULL	NULL	ACTIVE	2013	NULL	20200311	FIELD	JOSH C	20200220

OBJECTID	Outfall_ID	metaSrcTtl	metaReliability	metaCreator	Owner	Subbasin_Abbr	InventoryStatus	PictureID	SHAPE	created_user
340	DRD-001	PROPOSED ROA	EXCELLENT	TIGHE & BOND	MUNICIPAL	DRD	MISSING	NULL	0xC9080000010C00295C8FC5D71641E051B81E14C54541	NULL
339	DRD-002	PROPOSED ROA	EXCELLENT	TIGHE & BOND	MUNICIPAL	DRD	MISSING	NULL	0xC9080000010C009A9999D6D71641C01E85AB27C54541	NULL
338	DRD-003	PROPOSED ROA	EXCELLENT	TIGHE & BOND	MUNICIPAL	DRD	MISSING	NULL	0xC9080000010C0066666653DA164100295C2F21C54541	NULL
337	DRD-004	PROPOSED ROA	EXCELLENT	TIGHE & BOND	MUNICIPAL	DRD	MISSING	NULL	0xC9080000010C00E17A14EDD9164160B81E2532C54541	NULL
1989	DRD-005	SURVEY123	EXCELLENT	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C00B81E85C5D4164100295C4FAAC84541	MICHAEL.RAY
1990	DRD-006	SURVEY123	FAIR	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C00EC51B8E1E31641C0F5281C84CB4541	MICHAEL.RAY
1991	DRD-007	SURVEY123	EXCELLENT	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C0033333303D41641A0999939CECA4541	MICHAEL.RAY
1992	DRD-008	SURVEY123	EXCELLENT	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C005C8FC2F6D5164140E17A3468C74541	MICHAEL.RAY
1993	DRD-009	SURVEY123	ESTIMATED	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C00EC51B82AD61641A0999999E8C64541	MICHAEL.RAY
1994	DRD-010	SURVEY123	ESTIMATED	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C000AD73362D61641400AD7B5E4C64541	MICHAEL.RAY
1995	DRD-011	SURVEY123	GOOD	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C0033335341D7164180C2F5B69BC54541	MICHAEL.RAY
1996	DRD-012	SURVEY123	FAIR	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C0052B81E61D71641803D0AF798C44541	MICHAEL.RAY
1997	DRD-013	SURVEY123	FAIR	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C0048E17A8CD8164160B81E459EC44541	MICHAEL.RAY
1998	DRD-014	SURVEY123	EXCELLENT	EL-DPW	MUNICIPAL	DRD	COMPLETED	NULL	0xC9080000010C00713D0A75D9164140333333A7C34541	MICHAEL.RAY
261	FB-001	DETAIL SHEET Y	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-001	0xC9080000010C0052B81E3428174100D7A3F059B44541	NULL
260	FB-002	DETAIL SHEET Y	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-002	0xC9080000010C00E17A14D72A1741E07A142E67B44541	NULL
259	FB-003	DETAIL SHEET Y	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-003	0xC9080000010C007B14AECA29174100D7A3B087B44541	NULL
257	FB-005	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-005	0xC9080000010C00666666202D17418014AE4706B34541	NULL
256	FB-006	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-006	0xC9080000010C005C8FC2342E1741E07A14EE6BB24541	NULL
255	FB-007	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-007	0xC9080000010C00E17A140C2F1741403333B3CCB14541	NULL
254	FB-008	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-008	0xC9080000010C0052B81E9E2D1741608FC2D5EAB14541	NULL
253	FB-009	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-009	0xC9080000010C003D0AD76C2D17418014AE8728B24541	NULL
252	FB-010	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-010	0xC9080000010C00A4703D1A2D1741A047E13A80B24541	NULL
251	FB-011	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-011	0xC9080000010C009A9999B52C174100D7A350CFB24541	NULL
216	FB-012	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-012	0xC9080000010C003D0AD79B2D1741C0CCCC8C31AE4541	NULL
352	FB-013	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-013	0xC9080000010C00EC51B88D2D174100D7A3D031AE4541	NULL
324	FB-014	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-014	0xC9080000010C0014AE47A9271741E07A146E7FB24541	NULL
303	FB-015	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-015	0xC9080000010C0048E17A1E33174160B81EA5C5AC4541	NULL
279	FB-016	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-016	0xC9080000010C008FC2F5CB21174120AE472128AC4541	NULL
278	FB-017	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-017	0xC9080000010C003D0AD720221741803D0A7726AC4541	NULL
364	FB-018	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-018	0xC9080000010C00D7A370801F1741E07A148E4FAA4541	NULL
365	FB-019	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	FB-019	0xC9080000010C00AE47E18C11174180C2F5682FAB4541	NULL
367	FB-022	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	INCOMPLETE	NULL	0xC9080000010C00D7A3704A321741403333F378B04541	NULL
380	FB-023	TOPOGRAPHY &	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	COMPLETED	FB-023	0xC9080000010C009A9999A2291741E07A142EC9B54541	NULL
384	FB-024	GRADING & DR	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	COMPLETED	FB-024	0xC9080000010C00295C8F192E1741803D0A17E0AC4541	NULL
385	FB-025	GRADING & DR	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	MISSING	NULL	0xC9080000010C0014AE47152E174160B81E65E3AC4541	NULL
281	JB-001	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	MISSING	NULL	0xC9080000010C000000007115 1741C0CCCC8CDBB04541	NULL
280	JB-002	PLAN &PROFILE	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	MISSING	NULL	0xC9080000010C00295C8F7E151741C01E850BE1B04541	NULL
227	JB-003	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-003	0xC9080000010C009A9999630F1741C01E852BEFB64541	NULL
226	JB-004	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-004	0xC9080000010C00CDCCCC4A0F1741C01E85CBF6B64541	NULL
225	JB-005	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	INCOMPLETE	NULL	0xC9080000010C000AD7A3170E174100D7A390C2B64541	NULL
222	JB-006	BENTON DRIVE	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-006	0xC9080000010C00EC51B8200B1741C0CCCCEC0BAE4541	NULL
221	JB-007	BENTON DRIVE	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-007	0xC9080000010C008FC2F53B0B174160B81EE511AE4541	NULL
215	JB-008	PLAN AND PRO	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-008	0xC9080000010C00D7A37022391741000000 4095BC4541	NULL
213	JB-009	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-009	0xC9080000010C0085EB51293B174100D7A350DABC4541	NULL
212	JB-010	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-010	0xC9080000010C000AD7A39D3C1741A047E17A50BD4541	NULL

OBJECTID	Outfall_ID	metaSrcTtl	metaReliability	metaCreator	Owner	Subbasin_Abbr	InventoryStatus	PictureID	SHAPE	created_user
202	JB-011	PLAN OF EXISTI	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-011	0xC9080000010C00E17A14233617418014AE4753B74541	NULL
333	JB-012	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-012	0xC9080000010C0014AE478D28174100295CEFCDBA4541	NULL
332	JB-013	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-013	0xC9080000010C00A4703DF22D17412085EB316ABA4541	NULL
283	JB-015	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	REVIEWED	JB-015	0xC9080000010C00666666980B1741E051B81ECFB24541	NULL
379	JB-016	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	MISSING	NULL	0xC9080000010C009A99997524174100D7A310F4B14541	NULL
382	JB-017	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	INCOMPLETE	NULL	0xC9080000010C0085EB51994B1741608FC235CFB34541	NULL
383	JB-018	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	JB	INCOMPLETE	NULL	0xC9080000010C00333333134B1741205C8F0215B44541	NULL
366	JB-019	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	JB-019	0xC9080000010C005C8FC29C0D1741403333B3AFAB4541	NULL
370	JB-020	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	FB	REVIEWED	JB-020	0xC9080000010C00CDCCCC860D174160B81EC5B7AB4541	NULL
788	JB-021	GPS	EXCELLENT	mray	MUNICIPAL	JB	REVIEWED	NULL	0xC9080000010C00AE4771473A174100D7A37092BC4541	MICHAEL.RAY
387	JB-022	NULL	NULL	NULL	MUNICIPAL	JB	NULL	NULL	0xC9080000010C00295C4FDF3B1741803D0A955CBD4541	RYAN.DALEY
2801	JB-023	FIELD WORK	EXCELLENT	EL-DPW	MUNICIPAL	JB	COMPLETED	NULL	0xC9080000010C00B81EC5201C17418014AE1109BA4541	MICHAEL.RAY
2802	JB-024	FIELD WORK	EXCELLENT	EL-DPW	MUNICIPAL	JB	COMPLETED	NULL	0xC9080000010C00B81EA514201741E0A370BB17BA4541	MICHAEL.RAY
299	L-001	BENTON DRIVE	EXCELLENT	TIGHE & BOND	MUNICIPAL	L	REVIEWED	L-001	0xC9080000010C00A4703D24E51641E07A14CE4CB94541	NULL
298	L-002	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	L	REVIEWED	L-002	0xC9080000010C00A4703D9EEA1641608FC2F550B94541	NULL
297	L-003	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	L	REVIEWED	L-003	0xC9080000010C00295C8F45F31641C01E850BFCBA4541	NULL
294	L-004	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	L	REVIEWED	L-004	0xC9080000010C007B14AEB7F5164120AE4761F6B94541	NULL
363	L-005	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	L	REVIEWED	L-005	0xC9080000010C000AD7A319E7164140333373D8B84541	NULL
27	MR-001	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-001	0xC9080000010C001F85EB26E8174140E17AD46FBF4541	NULL
26	MR-002	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-002	0xC9080000010C0014AE47DEE71741400AD763EABE4541	NULL
24	MR-003	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-003	0xC9080000010C00000000D2F3174160B81E0532C04541	NULL
23	MR-004	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	COMPLETED	MR-004	0xC9080000010C00A4703D01F4174100295CCF90C04541	NULL
20	MR-005	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-005	0xC9080000010C001F85EB2FFE1741000000A02ABF4541	NULL
19	MR-006	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-006	0xC9080000010C00295C8F6000184140E17AD458C14541	NULL
18	MR-007	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-007	0xC9080000010C00AE47E10EEE174100295CAFC0C14541	NULL
17	MR-008	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-008	0xC9080000010C00C3F528D9F21741A047E15A1CC44541	NULL
44	MR-009	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-009	0xC9080000010C0014AE470DF2174140E17AD47ECD4541	NULL
43	MR-010	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-010	0xC9080000010C00E17A14F6EC1741E07A146E96CA4541	NULL
42	MR-011	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-011	0xC9080000010C00713D0A4BD517418014AEA7F9CC4541	NULL
41	MR-012	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-012	0xC9080000010C0014AE4758E41741E051B89EAFC74541	NULL
40	MR-013	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-013	0xC9080000010C00B81E8536E41741C0F5289C86C74541	NULL
39	MR-014	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-014	0xC9080000010C0033333301E517418014AEA7F6C64541	NULL
38	MR-015	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-015	0xC9080000010C00E17A14B5ED1741E07A144E1DC64541	NULL
37	MR-016	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-016	0xC9080000010C00A4703DE1EB174180EB51B845C74541	NULL
36	MR-017	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-017	0xC9080000010C0014AE47B7D71741205C8F22EAC94541	NULL
35	MR-018	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	INCOMPLETE	NULL	0xC9080000010C00CDCCCC3AD81741E0A3703DF7C94541	NULL
34	MR-019	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-019	0xC9080000010C003D0AD728D817418014AE87FCC94541	NULL
33	MR-020	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-020	0xC9080000010C00EC51B8F8F4174180C2F5282BC64541	NULL
32	MR-021	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-021	0xC9080000010C008FC2F518E71741000000A01EC54541	NULL
31	MR-022	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-022	0xC9080000010C00D7A370F3E61741C01E850B20C54541	NULL
29	MR-023	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-023	0xC9080000010C00C3F528EBDD1741C0CCCCEC76C74541	NULL
28	MR-024	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-024	0xC9080000010C0048E17A05DE174100295C2F82C74541	NULL
307	MR-025	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-025	0xC9080000010C003D0AD79DDE174160B81EE5BECA4541	NULL
138	MR-026	GRADING & UT	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-026	0xC9080000010C00A4703DF3B0174180EB5178B1CC4541	NULL
137	MR-027	ELEMENTARY S	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-027	0xC9080000010C001F85EBE1C117416066664604C84541	NULL
90	MR-028	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	MISSING	NULL	0xC9080000010C001F85EB3FDB1741A09999D949BE4541	NULL

OBJECTID	Outfall_ID	metaSrcTtl	metaReliability	metaCreator	Owner	Subbasin_Abbr	InventoryStatus	PictureID	SHAPE	created_user
83	MR-031	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-031	0xC9080000010C008FC2F512D4174180EB519869C24541	NULL
82	MR-032	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-032	0xC9080000010C008FC2F595D217418014AE4786C24541	NULL
70	MR-033	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	MISSING	NULL	0xC9080000010C001F85EB40EE174140333373B3CF4541	NULL
52	MR-034	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	MISSING	NULL	0xC9080000010C003D0AD7FBED1741C0F5285CE9CE4541	NULL
48	MR-035	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-035	0xC9080000010C00713D0A1EF71741A0703D6A73CD4541	NULL
47	MR-036	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-036	0xC9080000010C00AE47E1B3F41741E07A14EE09CB4541	NULL
46	MR-037	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-037	0xC9080000010C000AD7A3C1F41741C0CCCC6C34CB4541	NULL
45	MR-038	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	REVIEWED	MR-038	0xC9080000010C00713D0A6CF21741803D0AD758CD4541	NULL
376	MR-039	NULL	NULL	TIGHE & BOND	MUNICIPAL	MR	COMPLETED	MR-039	0xC9080000010C001F85EB5FE51741A047E17A59BE4541	NULL
381	MR-040	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MR	INCOMPLETE	3636	0xC9080000010C009A99991AF4174100D7A3D092C04541	NULL
4403	MR-041	ARC COLLECTOI	GOOD	EL-DPW	MUNICIPAL	NULL	REVIEWED	NULL	0xC9080000010C00AE4721C8F7174100D7A386F1CA4541	MICHAEL.RAY
4404	MR-042	ARC COLLECTOI	GOOD	EL-DPW	MUNICIPAL	NULL	REVIEWED	NULL	0xC9080000010C00CDCC9C4EFA174180C2F5ACE3CA4541	MICHAEL.RAY
8	MRD-001	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MRD	REVIEWED	MRD-001	0xC9080000010C008FC2F5701D1841E0A3703D0BAF4541	NULL
7	MRD-002	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MRD	REVIEWED	MRD-002	0xC9080000010C001F85EB17231841A099999924AE4541	NULL
302	MRD-003	TB-1-4	EXCELLENT	TIGHE & BOND	MUNICIPAL	MRD	REVIEWED	MRD-003	0xC9080000010C00AE47E157141841803D0A97BCAB4541	NULL
9	MRD-004	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	MRD	REVIEWED	MRD-004	0xC9080000010C00C3F528F9251841A099993955AB4541	NULL
1999	MRD-005	SURVEY123	EXCELLENT	EL-DPW	MUNICIPAL	MRD	COMPLETED	NULL	0xC9080000010C005C8F929E23184100D7A3865AA94541	MICHAEL.RAY
170	PB-001	ELM STREET	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-001	0xC9080000010C003D0AD7264F1741C0F5289CC0C34541	NULL
162	PB-002	PEASE ROAD AI	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-002	0xC9080000010C000AD7A3E774174180EB51B849C44541	NULL
160	PB-003	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C009A999927417414033333B344C44541	NULL
159	PB-004	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-004	0xC9080000010C00A4703DEB741741608FC21563C44541	NULL
158	PB-005	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-005	0xC9080000010C000AD7A3FF74174120AE472165C44541	NULL
157	PB-006	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-006	0xC9080000010C00EC51B860761741403333F3B3C54541	NULL
156	PB-007	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-007	0xC9080000010C00B81E856B761741C0CCCCACB4C54541	NULL
155	PB-008	SOMERS ROAD	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-008	0xC9080000010C00D7A3705F6E174100D7A350FDB94541	NULL
154	PB-009	CHESTNUT STRI	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-009	0xC9080000010C008FC2F56570174180C2F54836B84541	NULL
153	PB-010	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	INCOMPLETE	NULL	0xC9080000010C00D7A3705A801741205C8F02EEBA4541	NULL
151	PB-011	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-011	0xC9080000010C008FC2F5D8751741E051B81EC5BD4541	NULL
150	PB-012	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-012	0xC9080000010C009A99995B7E174100D7A3B047C14541	NULL
146	PB-013	PLEASANT STRE	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-013	0xC9080000010C0048E17A975C1741A047E1BA31BF4541	NULL
132	PB-014	SOMERS ROAD	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-014	0xC9080000010C003D0AD7D0801741A0703D0A25B84541	NULL
201	PB-015	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-015	0xC9080000010C007B14AEB8471741000000E0B5C14541	NULL
198	PB-016	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-016	0xC9080000010C007B14AE36391741608FC27583C04541	NULL
197	PB-017	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-017	0xC9080000010C000000001E491741E0A3705DFDC44541	NULL
195	PB-018	PLLAN OF CULV	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-018	0xC9080000010C006666666F2F1741E07A140E2FC34541	NULL
194	PB-019	STORM SEWER	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	COMPLETED	PB-019	0xC9080000010C00E17A14AA561741C0CCCC0CA8C04541	NULL
193	PB-020	RIGHT OF WAY	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-020	0xC9080000010C000000004A47174100D7A39096C14541	NULL
189	PB-022	ELM STREET W/	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-022	0xC9080000010C00C3F528A04717412085EB11F9C04541	NULL
186	PB-023	WATER MAIN II	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-023	0xC9080000010C009A99999E531741400AD7A32FC14541	NULL
185	PB-024	WATER MAIN II	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-024	0xC9080000010C000AD7A39D531741C01E85EB2CC14541	NULL
182	PB-026	GRADING AND	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-026	0xC9080000010C00F6285CA4651741400AD743CCBD4541	NULL
181	PB-027	GRADING AND	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-027	0xC9080000010C00F6285C08611741A047E1DAA1BD4541	NULL
180	PB-028	GRADING AND	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	INCOMPLETE	NULL	0xC9080000010C0014AE47995F1741E051B83ECABD4541	NULL
179	PB-029	GRADING AND	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-029	0xC9080000010C0085EB516B5C1741A0703DCABFBE4541	NULL
177	PB-030	GRADING AND	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-030	0xC9080000010C00000000DC5F1741E051B85E10BF4541	NULL
267	PB-031	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-031	0xC9080000010C00D7A370CF001741A09999F995C44541	NULL

OBJECTID	Outfall_ID	metaSrcTtl	metaReliability	metaCreator	Owner	Subbasin_Abbr	InventoryStatus	PictureID	SHAPE	created_user
266	PB-032	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C007B14AEFAF71641E07A148E89C64541	NULL
265	PB-033	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C00AE47E1F3F71641C0F5285C8FC64541	NULL
241	PB-034	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-034	0xC9080000010C00333333B1081741A09999B9B5C14541	NULL
240	PB-035	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-035	0xC9080000010C0085EB51340C174180C2F54838C24541	NULL
239	PB-036	PLAN SHOWIN(	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-036	0xC9080000010C006666662D201741000000A023C34541	NULL
238	PB-037	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-037	0xC9080000010C000AD7A303161741803D0A3779C14541	NULL
236	PB-038	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-038	0xC9080000010C00C3F528420A17418014AE07D8C04541	NULL
235	PB-039	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-039	0xC9080000010C003D0AD7D0FD1641A047E1DAE5C14541	NULL
234	PB-040	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-040	0xC9080000010C0085EB51EA1017418014AEA74EC14541	NULL
233	PB-041	WESTWOOD A\	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-041	0xC9080000010C00AE47E144011741803D0A7727C04541	NULL
232	PB-042	WESTWOOD A\	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C005C8FC291FA164100000040C1BE4541	NULL
231	PB-043	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C00EC51B8A2F616416066662665BD4541	NULL
230	PB-044	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C00AE47E1C1F51641A0703D0A6EBD4541	NULL
229	PB-045	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-045	0xC9080000010C000AD7A32CF1164140E17A1422BC4541	NULL
228	PB-046	EXISTING STORI	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C00F6285C9623174160B81E2595BE4541	NULL
312	PB-047	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-047	0xC9080000010C000AD7A3514A174180C2F5E86FC24541	NULL
310	PB-049	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-049	0xC9080000010C00C3F528CD731741A0999999C8C44541	NULL
296	PB-050	REVISED PLAN &	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-050	0xC9080000010C00333333B5E9164100D7A35059C34541	NULL
292	PB-051	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-051	0xC9080000010C008FC2F5E0EF1641A047E13A9FC04541	NULL
291	PB-052	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-052	0xC9080000010C00EC51B805F01641A047E11AA2C04541	NULL
289	PB-053	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-053	0xC9080000010C0048E17AF9F91641403333339EC04541	NULL
288	PB-054	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-054	0xC9080000010C00713D0A57EA1641A0703D4A2FC24541	NULL
286	PB-055	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-055	0xC9080000010C00B81E8569ED1641C01E850BDBC44541	NULL
285	PB-056	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-056	0xC9080000010C009A99995DEA164180EB51B8ABC44541	NULL
277	PB-057	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	100_0162	0xC9080000010C00A4703DB8F91641000000C0C1CA4541	NULL
276	PB-058	Heritage Plaza -	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-058	0xC9080000010C00713D0ABB0D1741C0F5287C12C74541	NULL
275	PB-059	PLAN SHOWIN(	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C001F853BAD141741000000249DC74541	NULL
274	PB-060	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-060	0xC9080000010C0048E17A10FC1641A0999979EAC84541	NULL
273	PB-061	PLAN SHOWIN(	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-061	0xC9080000010C0085EB51FEF1164180EB51784EC64541	NULL
272	PB-062	WESTWOOD A\	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-062	0xC9080000010C00AE47E100211741C0F528DC45C44541	NULL
342	PB-063	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-063	0xC9080000010C00C3F528F8E71641E051B83EE5C34541	NULL
341	PB-064	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-064	0xC9080000010C00A4703D0FEE1641E051B83EC4C64541	NULL
336	PB-065	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-065	0xC9080000010C00F6285C8823174180EB51D88AC94541	NULL
335	PB-066	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-066	0xC9080000010C0085EB5122201741606666A625C34541	NULL
334	PB-067	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-067	0xC9080000010C00713D0AA9051741400AD7C374C24541	NULL
331	PB-068	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-068	0xC9080000010C000AD7A3E755174160B81E252BC34541	NULL
330	PB-069	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-069	0xC9080000010C00000000BD551741403333137CC34541	NULL
329	PB-070	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-070	0xC9080000010C0014AE479E54174180EB51B875C54541	NULL
323	PB-071	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-071	0xC9080000010C0052B81E765C1741400AD723E2B74541	NULL
322	PB-072	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-072	0xC9080000010C008FC2F5405C1741C0CCCC8C17B74541	NULL
319	PB-073	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-073	0xC9080000010C00F6285C8475174120AE476110C04541	NULL
317	PB-074	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-074	0xC9080000010C0085EB51D476174100D7A330BABE4541	NULL
316	PB-075	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-075	0xC9080000010C0085EB517C631741803D0AB784BB4541	NULL
315	PB-076	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-076	0xC9080000010C0014AE475A63174140E17AB47FBB4541	NULL
314	PB-077	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-077	0xC9080000010C00A4703D89681741608FC255B2BB4541	NULL
313	PB-078	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-078	0xC9080000010C00E17A14911F174100D7A3701ECB4541	NULL

OBJECTID	Outfall_ID	metaSrcTtl	metaReliability	metaCreator	Owner	Subbasin_Abbr	InventoryStatus	PictureID	SHAPE	created_user
360	PB-079	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-079	0xC9080000010C005C8FC2ACF7164180C2F5086CC94541	NULL
359	PB-080	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-080	0xC9080000010C00295C8FA120174120AE47C144C44541	NULL
357	PB-081	NULL	NULL	NULL	MUNICIPAL	PB	REVIEWED	PB-081	0xC9080000010C00295C8FD65617412085EB11BBC04541	NULL
356	PB-082	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-082	0xC9080000010C005C8FC26004174140333313CDC74541	NULL
355	PB-083	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-083	0xC9080000010C00C3F528E9F61641A0703DAA41CA4541	NULL
354	PB-084	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-084	0xC9080000010C00A4703D20FC1641400AD7A3EBC84541	NULL
351	PB-086	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-086	0xC9080000010C0014AE47C34017410000000007C04541	NULL
350	PB-087	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-087	0xC9080000010C00333333074C174140E17A7409C34541	NULL
349	PB-088	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-088	0xC9080000010C0052B81E94341741A0703DAAE9BF4541	NULL
348	PB-089	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-089	0xC9080000010C000AD7A33C33174140333333E4BF4541	NULL
347	PB-090	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-090	0xC9080000010C0052B81E7D321741E051B85ED8BF4541	NULL
346	PB-091	Heritage Plaza -	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-091	0xC9080000010C00D7A370E3041741205C8FC205C84541	NULL
345	PB-092	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-092	0xC9080000010C000AD7A32FEF164100295CEF37C74541	NULL
344	PB-093	Low Service Are	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	3.24	0xC9080000010C00295C8F29FA1641205C8FE2D3C84541	NULL
343	PB-094	Low Service Are	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-094	0xC9080000010C009A9999D0F9164100295C2F61C84541	NULL
361	PB-095	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	REVIEWED	PB-095	0xC9080000010C0048E17AA55C1741E0A3701D85BD4541	NULL
368	PB-096	NULL	NULL	NULL	MUNICIPAL	PB	COMPLETED	PB-096	0xC9080000010C00713D0A84611741E0A3709DA0BE4541	NULL
369	PB-097	NULL	NULL	NULL	MUNICIPAL	PB	COMPLETED	PB-097	0xC9080000010C007B14AE5761174180C2F5C8A3BE4541	NULL
371	PB-098	ROADWAY EXTI	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C0048E17A5A111741A0703D0A91C54541	NULL
374	PB-099	PLAN SHOWIN(	EXCELLENT	TIGHE & BOND	MUNICIPAL	PB	MISSING	NULL	0xC9080000010C001F85EB56F5164140E17A94AFCA4541	NULL
1188	PB-100	NULL	NULL	NULL	MUNICIPAL	PB	NULL	NULL	0xC9080000010C008FC295B3FF1641A09999F3E4C34541	MICHAEL.RAY
2000	PB-101	direct observat	EXCELLENT	EL-DPW	MUNICIPAL	PB	NULL	NULL	0xC9080000010C009A99B9145217410000006E92B84541	MICHAEL.RAY
2400	PB-102	NULL	TBD	EL-DPW	MUNICIPAL	PB	INCOMPLETE	NULL	0xC9080000010C001F85EB4E5317412085EB5181B54541	MICHAEL.RAY
4003	PB-103	ARC COLLECTOI	GOOD	EL-DPW	MUNICIPAL	PB	NULL	NULL	0xC9080000010C007B14FE5E591741E07A143ED0BA4541	MICHAEL.RAY
4004	PB-104	ARC COLLECTOI	GOOD	EL-DPW	MUNICIPAL	PB	NULL	NULL	0xC9080000010C00000000305C174160B81EE59DBA4541	MICHAEL.RAY
4803	PB-105	ESRI COLLECTO	GOOD	EL-DPW	MUNICIPAL	PB	COMPLETED	NULL	0xC9080000010C003D0A27E11A174180EB51AAECC64541	MICHAEL.RAY
309	PRD-001	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PRD	REVIEWED	PRD-001	0xC9080000010C00713D0ADEB91741E0A3701D25CF4541	NULL
51	PRD-002	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PRD	REVIEWED	PRD-002	0xC9080000010C00A4703D82CD174120AE478118CD4541	NULL
50	PRD-003	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PRD	REVIEWED	PRD-003	0xC9080000010C00B81E8599CF1741A047E19A36CD4541	NULL
49	PRD-004	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PRD	REVIEWED	PRD-004	0xC9080000010C00C3F52834CF1741803D0A3743CD4541	NULL
373	PRD-005	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	PRD	REVIEWED	PRD-005	0xC9080000010C001F85EB9ACF174160B81EC532CD4541	NULL
386	PRD-006	NULL	NULL	NULL	MUNICIPAL	PRD	NULL	NULL	0xC9080000010C008FC21558931741205C8F484CCF4541	RYAN.DALEY
328	SB-001	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-001	0xC9080000010C00B81E8519741741A047E11AEDC94541	NULL
271	SB-002	GRADING PLAN	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	COMPLETED	SB-002	0xC9080000010C00EC51B8064E174160666646DCCC4541	NULL
169	SB-003	ELM STREET - L'	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-003	0xC9080000010C003D0AD7946B174100D7A3708FCD4541	NULL
167	SB-004	THERSA STREET	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-004	0xC9080000010C003D0AD7E9761741A0703D4A75CB4541	NULL
166	SB-005	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-005	0xC9080000010C00666666324F17418014AEC782CC4541	NULL
165	SB-006	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-006	0xC9080000010C001F85EBD0651741E07A148E6DCD4541	NULL
164	SB-007	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-007	0xC9080000010C00E17A14126B174140E17A94D2CB4541	NULL
163	SB-008	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	SB	REVIEWED	SB-008	0xC9080000010C0085EB51AE6C17412085EB310DCD4541	NULL
224	WB-001	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-001	0xC9080000010C005C8FC2E15F1741A0703D0A5CAE4541	NULL
223	WB-002	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-002	0xC9080000010C0014AE47CD641741400AD783B0B34541	NULL
219	WB-003	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-003	0xC9080000010C0014AE470C561741000000C0B1B14541	NULL
218	WB-004	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-004	0xC9080000010C00EC51B8D857174100D7A33045AF4541	NULL
217	WB-005	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-005	0xC9080000010C00C3F52855561741A09999B962B04541	NULL
211	WB-006	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-006	0xC9080000010C00B81E8582751741A0703D0A4DB34541	NULL

OBJECTID	Outfall_ID	metaSrcTtl	metaReliability	metaCreator	Owner	Subbasin_Abbr	InventoryStatus	PictureID	SHAPE	created_user
210	WB-007	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-007	0xC9080000010C0048E17AC471174160666686A6B34541	NULL
209	WB-008	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-008	0xC9080000010C007B14AEB25E1741C0F528FCB7AF4541	NULL
208	WB-009	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-009	0xC9080000010C003D0AD76063174100295C4FDBAF4541	NULL
207	WB-010	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-010	0xC9080000010C0048E17A096D174100D7A3500DAE4541	NULL
206	WB-011	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-011	0xC9080000010C001F85EB966F174180C2F5E821AE4541	NULL
205	WB-012	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-012	0xC9080000010C0014AE47DA5D174160B81E052FB04541	NULL
203	WB-013	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-013	0xC9080000010C00EC51B8A4631741E07A14AE02B04541	NULL
161	WB-014	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-014	0xC9080000010C009A99991A991741803D0AB782C34541	NULL
149	WB-015	PLAN + PROFILE	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-015	0xC9080000010C00CDCCCCBE90174180EB51581DC14541	NULL
148	WB-016	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-016	0xC9080000010C00AE47E1779317412085EBD113BF4541	NULL
326	WB-017	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-017	0xC9080000010C0014AE47708C1741A0999979C0C74541	NULL
325	WB-018	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-018	0xC9080000010C00EC51B82BC817418014AE2728B64541	NULL
320	WB-019	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-019	0xC9080000010C003333332D9717412085EBB16AC24541	NULL
304	WB-020	LEE STREET REC	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-020	0xC9080000010C003D0AD76F9A1741E0A3705DE8B04541	NULL
270	WB-021	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-021	0xC9080000010C00713D0AB39A1741205C8FC2FEAD4541	NULL
269	WB-022	NULL	UNKNOWN	TIGHE & BOND	MUNICIPAL	WB	COMPLETED	WB-022	0xC9080000010C0033333330797174100D7A31033AF4541	NULL
268	WB-023	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-023	0xC9080000010C00CDCC8CA896174180C2F5DEB7AF4541	NULL
250	WB-024	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	MISSING	NULL	0xC9080000010C00B81E85D057174160B81E85B0B14541	NULL
249	WB-025	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	MISSING	NULL	0xC9080000010C00295C8F6157174100D7A330B0B14541	NULL
248	WB-026	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-026	0xC9080000010C00295C8FCC5917418014AE47B6B14541	NULL
247	WB-027	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-027	0xC9080000010C007B14AE7F5A1741E051B87EF0B14541	NULL
246	WB-028	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-028	0xC9080000010C00C3F5284157174100000E00FB04541	NULL
245	WB-029	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-029	0xC9080000010C00B81E853E57174160B81EE535B04541	NULL
244	WB-030	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-030	0xC9080000010C009A99998F571741E0A3701D62B04541	NULL
243	WB-031	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-031	0xC9080000010C00666666DA5A1741A0703DEA3BAF4541	NULL
242	WB-032	DETAIL SHEET F	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-032	0xC9080000010C0085EB51C25A1741A09999F968AF4541	NULL
358	WB-033	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-033	0xC9080000010C000AD7A364C91741C01E85EB1FB54541	NULL
327	WB-034	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-034	0xC9080000010C0048E17A348B1741E051B85EB2C94541	NULL
10	WB-035	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-035	0xC9080000010C00713D0AF600184180EB513862AE4541	NULL
3	WB-036	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-036	0xC9080000010C00F6285CB8C9174140E17AD4E2B64541	NULL
2	WB-037	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-037	0xC9080000010C0085EB519EDA17412085EBD19EB64541	NULL
1	WB-038	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-038	0xC9080000010C0052B81EEED81741E0A370BD66B64541	NULL
65	WB-039	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-039	0xC9080000010C00295C8FA192174100D7A3B0ACC64541	NULL
63	WB-040	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-040	0xC9080000010C00D7A370CC9317418014AE0710C94541	NULL
62	WB-041	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-041	0xC9080000010C001F85EBA1A01741608FC25577C94541	NULL
61	WB-042	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-042	0xC9080000010C0048E17A869317412085EB9193C84541	NULL
60	WB-043	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	MISSING	NULL	0xC9080000010C0066666682931741C0F528BC45C74541	NULL
59	WB-044	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-044	0xC9080000010C008FC2F5C3961741E07A140E47C74541	NULL
57	WB-045	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-045	0xC9080000010C007B14AE97951741A047E13A19CC4541	NULL
56	WB-046	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-046	0xC9080000010C001F85EBB6951741A047E11A55CC4541	NULL
55	WB-047	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-047	0xC9080000010C00EC51B83192174120AE47C18ACC4541	NULL
54	WB-048	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-048	0xC9080000010C0014AE47D493174180C2F54868CC4541	NULL
53	WB-049	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-049	0xC9080000010C0033333347951741002 95C6FA2CC4541	NULL
22	WB-050	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-050	0xC9080000010C00A4703DB410184100D7A3B0F4BD4541	NULL
16	WB-051	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	COMPLETED	WB-051	0xC9080000010C00CDCCCCB9181841606666A63AB24541	NULL
15	WB-052	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-052	0xC9080000010C00AE47E144011841608FC21508B24541	NULL

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13	WB-054	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-054	0xC9080000010C0052B81E8F0E184100295C6F5CB94541	NULL
91	WB-055	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-055	0xC9080000010C005C8FC23EBD1741606666A6E7BD4541	NULL
89	WB-056	W-313	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-056	0xC9080000010C009A99998696174160B81E857AC44541	NULL
88	WB-057	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-057	0xC9080000010C00F6285C4E9E1741E0A3709DE1C34541	NULL
87	WB-058	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-058	0xC9080000010C00EC51B8CE9E174180EB515832C34541	NULL
86	WB-059	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-059	0xC9080000010C000AD7A34EB81741C0F5281C36C54541	NULL
81	WB-060	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C00A4703D58BC1741608FC2B5D1BF4541	NULL
80	WB-061	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C00295C8F54BC174100295CEFD3BF4541	NULL
79	WB-062	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C0033333340BC1741A0999959F3BF4541	NULL
77	WB-063	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-063	0xC9080000010C000000002CBA174180C2F5489BC04541	NULL
76	WB-064	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-064	0xC9080000010C007B14AE5DA0174180C2F5489EC24541	NULL
75	WB-065	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-065	0xC9080000010C00666666329A174100000020AEC44541	NULL
74	WB-066	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-066	0xC9080000010C00B81E8517BA174180EB51D89AC04541	NULL
73	WB-067	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-067	0xC9080000010C00CDCCCC53B717412085EBF148C14541	NULL
68	WB-069	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-069	0xC9080000010C0052B81E9691174140E17AD444C94541	NULL
66	WB-070	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-070	0xC9080000010C000AD7A3369E1741E0A3703DA4C94541	NULL
107	WB-071	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-071	0xC9080000010C00295C8F16AE1741608FC27530AA4541	NULL
106	WB-072	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-072	0xC9080000010C001F85EBFDAD17410000008089AA4541	NULL
105	WB-073	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-073	0xC9080000010C00B81E85EBA61741000000406DB04541	NULL
103	WB-075	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-075	0xC9080000010C008FC2F584A617412085EBF16BB04541	NULL
102	WB-076	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-076	0xC9080000010C007B14AE6BA61741E0A3701D80B04541	NULL
101	WB-077	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-077	0xC9080000010C00A4703D63C7174180EB5118D5B34541	NULL
100	WB-078	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-078	0xC9080000010C00AE47E17AD2174120AE4741F9B04541	NULL
99	WB-079	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-079	0xC9080000010C00B81E855BE0174140E17A14D0B14541	NULL
98	WB-080	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-080	0xC9080000010C0014AE4798DA174180EB51B82CB24541	NULL
97	WB-081	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-081	0xC9080000010C00F6285C4ADE1741C01E850BAFB24541	NULL
96	WB-082	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	MISSING	NULL	0xC9080000010C00CDCCCC6AC51741E051B89E56B34541	NULL
95	WB-083	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-083	0xC9080000010C00C3F5284BDE1741E0A3701DB2BC4541	NULL
94	WB-084	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-084	0xC9080000010C0052B81EEBBC1741C0F5281C70BE4541	NULL
93	WB-085	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C000AD7A347BD174140E17A5492BE4541	NULL
92	WB-086	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-086	0xC9080000010C001F85EBF8BC174160B81E057ABE4541	NULL
125	WB-087	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-087	0xC9080000010C0052B81EAC8D17412085EB7193AB4541	NULL
124	WB-088	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C00D7A3707A911741C0CCCC6CEDB04541	NULL
123	WB-089	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-089	0xC9080000010C0048E17ACD911741E07A144EF3B04541	NULL
122	WB-090	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-090	0xC9080000010C0052B81E69931741205C8FC2FDB04541	NULL
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120	WB-092	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-092	0xC9080000010C006666664D941741A047E15A39B14541	NULL
119	WB-093	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-093	0xC9080000010C00B81E8559931741000000A05BB14541	NULL
118	WB-094	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	COMPLETED	WB-094	0xC9080000010C000AD7A3D9921741608FC2B574B14541	NULL
117	WB-095	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	COMPLETED	WB-095	0xC9080000010C00B81E85C39217414033339372B14541	NULL
116	WB-096	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-096	0xC9080000010C00E17A145F91174100295CEF51B14541	NULL
115	WB-097	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-097	0xC9080000010C00F6285CA68E1741E07A146E70B04541	NULL
114	WB-098	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-098	0xC9080000010C00713D0AD87C17418014AE2704B34541	NULL
111	WB-099	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-099	0xC9080000010C00666666B4B6174140E17A54E0AB4541	NULL
110	WB-100	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-100	0xC9080000010C009A9999D79B174100295C4F64AB4541	NULL

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108	WB-102	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-102	0xC9080000010C00713D0AC0C817418014AE6773AA4541	NULL
145	WB-103	THE ELMS - PHA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-103	0xC9080000010C000AD7A394E21741E051B8BE68AD4541	NULL
144	WB-104	THE ELMS - PHA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-104	0xC9080000010C00D7A37047E2174180EB51B862AD4541	NULL
143	WB-105	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-105	0xC9080000010C0085EB51ADE91741C01E858B72AD4541	NULL
142	WB-106	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-106	0xC9080000010C00B81E85FEF11741205C8F42B9AC4541	NULL
141	WB-107	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-107	0xC9080000010C001F85EB9AF1174180C2F5C8CCAC4541	NULL
140	WB-108	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-108	0xC9080000010C00D7A3707BFD1741400AD7A39AAD4541	NULL
139	WB-109	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-109	0xC9080000010C006666664B011841A047E19A3BAE4541	NULL
136	WB-110	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-110	0xC9080000010C0048E17AD500184100295C6F54AE4541	NULL
135	WB-111	KIBBE ROAD - S	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-111	0xC9080000010C006666666D931741E0A3705D49B94541	NULL
134	WB-112	SOMERS ROAD	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-112	0xC9080000010C008FC2F563A11741E051B87EE7B54541	NULL
133	WB-113	SOMERS ROAD	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-113	0xC9080000010C00295C8F1DA11741E0A3705DEDB54541	NULL
131	WB-114	SOMERS ROAD	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-114	0xC9080000010C00D7A370E19D1741608FC215D0B54541	NULL
130	WB-115	AS BUILT - PLAN	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-115	0xC9080000010C001F85EB3B9B1741403333F348BB4541	NULL
129	WB-116	AS BUILT - PLAN	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-116	0xC9080000010C00F6285C2C9B1741A099993949BB4541	NULL
128	WB-117	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-117	0xC9080000010C00F6285C849A174180C2F548AABB4541	NULL
127	WB-118	PLAN & PROFIL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-118	0xC9080000010C003D0AD74F921741000000E06DBA4541	NULL
362	WB-119	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-119	0xC9080000010C00F6285C709A1741E0A3701DEDB04541	NULL
372	WB-120	NULL	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	REVIEWED	WB-120	0xC9080000010C007B14AE9A92174100D7A310ADC64541	NULL
375	WB-121	THE ELMS - DRA	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	COMPLETED	WB-121	0xC9080000010C0052B81E7FE617418014AE8773AD4541	NULL
377	WB-122	OVERALL SITE P	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C00F6285CAD8E1741E07A14EE96AC4541	NULL
378	WB-123	OVERALL SITE P	EXCELLENT	TIGHE & BOND	MUNICIPAL	WB	INCOMPLETE	NULL	0xC9080000010C0014AE470890174100D7A350A3AC4541	NULL
1189	WB-124	Direct Observat	EXCELLENT	mray	MUNICIPAL	WB	NULL	NULL	0xC9080000010C003D0AE7F07F1741400AD737A9AA4541	michael.ray
1190	WB-125	NULL	NULL	NULL	MUNICIPAL	WB	NULL	NULL	0xC9080000010C000AD72352861741205C8F3AA5AB4541	michael.ray
2401	WB-127	DIRECT OBSERV	EXCELLENT	EL-DPW	MUNICIPAL	WB	COMPLETED	NULL	0xC9080000010C000000506B9B1741C0F528B485BE4541	MICHAEL.RAY
2402	WB-128	DIRECT OBSERV	EXCELLENT	EL-DPW	MUNICIPAL	WB	COMPLETED	NULL	0xC9080000010C003D0A07B89D17418014AE5F85BE4541	MICHAEL.RAY
3201	WB-129	DIRECT OBSERV	EXCELLENT	EL-DPW	MUNICIPAL	WB	COMPLETED	WB-129	0xC9080000010C0048E1FA51AC17410000001262AA4541	MICHAEL.RAY
3601	WB-130	DIRECT OBSERV	EXCELLENT	EL-DPW	MUNICIPAL	WB	COMPLETED	NULL	0xC9080000010C00333333D159174100D7A3F061B24541	MICHAEL.RAY
3602	WB-131	DIRECT OBSERV	EXCELLENT	EL-DPW	MUNICIPAL	WB	COMPLETED	NULL	0xC9080000010C0048E17A3A5B1741803D0A1756B24541	MICHAEL.RAY
3603	WB-132	ARCCOLLECTOF	GOOD	EL-DPW	MUNICIPAL	WB	COMPLETED	NULL	0xC9080000010C0052B87EC0B517412085EB9905C24541	MICHAEL.RAY

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338	DRD-003	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
337	DRD-004	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
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1990	DRD-006	2019-01-25 15:12:40.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	6
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1992	DRD-008	2019-01-25 15:21:05.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
1993	DRD-009	2019-01-25 15:44:43.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
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1997	DRD-013	2019-01-25 15:49:14.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
1998	DRD-014	2019-01-25 15:52:20.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
261	FB-001	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
260	FB-002	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
259	FB-003	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
257	FB-005	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
256	FB-006	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
255	FB-007	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
254	FB-008	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
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252	FB-010	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
251	FB-011	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
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352	FB-013	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
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278	FB-017	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
364	FB-018	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
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281	JB-001	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
280	JB-002	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
227	JB-003	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
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225	JB-005	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
222	JB-006	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
221	JB-007	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
215	JB-008	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
213	JB-009	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
212	JB-010	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98

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332	JB-013	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
283	JB-015	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
379	JB-016	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
382	JB-017	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
383	JB-018	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
366	JB-019	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	8
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788	JB-021	2018-06-11 17:16:25.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
387	JB-022	2015-06-10 19:10:38.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
2801	JB-023	2019-09-11 14:16:35.0000000	MICHAEL.RAY	2019-09-11 14:18:38.0000000	9
2802	JB-024	2019-09-11 14:17:05.0000000	MICHAEL.RAY	2019-09-11 14:18:38.0000000	9
299	L-001	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
298	L-002	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
297	L-003	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
294	L-004	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
363	L-005	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
27	MR-001	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
26	MR-002	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
24	MR-003	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
23	MR-004	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
20	MR-005	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
19	MR-006	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
18	MR-007	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
17	MR-008	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
44	MR-009	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
43	MR-010	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
42	MR-011	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
41	MR-012	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
40	MR-013	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
39	MR-014	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
38	MR-015	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
37	MR-016	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
36	MR-017	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
35	MR-018	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
34	MR-019	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
33	MR-020	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
32	MR-021	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
31	MR-022	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
29	MR-023	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
28	MR-024	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
307	MR-025	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
138	MR-026	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
137	MR-027	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
90	MR-028	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2

OBJECTID	Outfall_ID	created_date	last_edited_user	last_edited_date	Zone
83	MR-031	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
82	MR-032	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
70	MR-033	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
52	MR-034	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
48	MR-035	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
47	MR-036	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
46	MR-037	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
45	MR-038	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
376	MR-039	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
381	MR-040	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
4403	MR-041	2020-06-11 13:16:58.0000000	MICHAEL.RAY	2020-06-11 13:30:36.0000000	2
4404	MR-042	2020-06-11 13:35:05.0000000	MICHAEL.RAY	2020-06-11 13:35:11.0000000	2
8	MRD-001	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
7	MRD-002	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
302	MRD-003	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
9	MRD-004	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
1999	MRD-005	2019-01-25 15:53:36.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
170	PB-001	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	3
162	PB-002	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
160	PB-003	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
159	PB-004	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
158	PB-005	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
157	PB-006	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
156	PB-007	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
155	PB-008	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
154	PB-009	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
153	PB-010	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
151	PB-011	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
150	PB-012	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
146	PB-013	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
132	PB-014	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
201	PB-015	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
198	PB-016	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
197	PB-017	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
195	PB-018	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
194	PB-019	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
193	PB-020	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
189	PB-022	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
186	PB-023	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
185	PB-024	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	4
182	PB-026	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	10
181	PB-027	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	10
180	PB-028	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	10
179	PB-029	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	10
177	PB-030	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	10
267	PB-031	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4

OBJECTID	Outfall_ID	created_date	last_edited_user	last_edited_date	Zone
266	PB-032	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
265	PB-033	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
241	PB-034	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
240	PB-035	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
239	PB-036	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
238	PB-037	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
236	PB-038	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
235	PB-039	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
234	PB-040	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
233	PB-041	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
232	PB-042	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
231	PB-043	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
230	PB-044	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
229	PB-045	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
228	PB-046	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
312	PB-047	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
310	PB-049	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
296	PB-050	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
292	PB-051	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
291	PB-052	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
289	PB-053	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
288	PB-054	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
286	PB-055	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
285	PB-056	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
277	PB-057	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
276	PB-058	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	98
275	PB-059	NULL	MICHAEL.RAY	2019-05-02 19:03:51.0000000	5
274	PB-060	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
273	PB-061	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
272	PB-062	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	5
342	PB-063	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
341	PB-064	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
336	PB-065	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
335	PB-066	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
334	PB-067	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
331	PB-068	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
330	PB-069	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
329	PB-070	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
323	PB-071	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
322	PB-072	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
319	PB-073	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
317	PB-074	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
316	PB-075	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
315	PB-076	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
314	PB-077	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
313	PB-078	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4

OBJECTID	Outfall_ID	created_date	last_edited_user	last_edited_date	Zone
360	PB-079	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
359	PB-080	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	5
357	PB-081	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
356	PB-082	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
355	PB-083	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	6
354	PB-084	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
351	PB-086	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	6
350	PB-087	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
349	PB-088	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
348	PB-089	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
347	PB-090	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
346	PB-091	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	99
345	PB-092	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
344	PB-093	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	6
343	PB-094	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
361	PB-095	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
368	PB-096	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	10
369	PB-097	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	10
371	PB-098	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	7
374	PB-099	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	3
1188	PB-100	2018-07-05 17:21:30.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	4
2000	PB-101	2019-03-01 18:56:08.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
2400	PB-102	2019-06-24 13:36:39.0000000	MICHAEL.RAY	2019-06-24 13:44:32.0000000	1
4003	PB-103	2020-03-23 13:02:03.0000000	MICHAEL.RAY	2020-03-23 13:02:38.0000000	NULL
4004	PB-104	2020-03-23 13:06:22.0000000	MICHAEL.RAY	2020-03-23 13:06:32.0000000	NULL
4803	PB-105	2020-06-16 12:34:00.0000000	MICHAEL.RAY	2020-06-16 12:36:29.0000000	5
309	PRD-001	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
51	PRD-002	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
50	PRD-003	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
49	PRD-004	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
373	PRD-005	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
386	PRD-006	2015-06-10 18:34:41.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
328	SB-001	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
271	SB-002	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
169	SB-003	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
167	SB-004	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
166	SB-005	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
165	SB-006	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
164	SB-007	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
163	SB-008	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
224	WB-001	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
223	WB-002	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
219	WB-003	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
218	WB-004	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
217	WB-005	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
211	WB-006	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1

OBJECTID	Outfall_ID	created_date	last_edited_user	last_edited_date	Zone
210	WB-007	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
209	WB-008	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
208	WB-009	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
207	WB-010	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
206	WB-011	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
205	WB-012	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
203	WB-013	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
161	WB-014	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
149	WB-015	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
148	WB-016	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
326	WB-017	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
325	WB-018	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
320	WB-019	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
304	WB-020	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
270	WB-021	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
269	WB-022	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
268	WB-023	NULL	MICHAEL.RAY	2020-03-11 15:58:19.0000000	1
250	WB-024	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
249	WB-025	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
248	WB-026	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
247	WB-027	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
246	WB-028	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
245	WB-029	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
244	WB-030	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
243	WB-031	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
242	WB-032	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
358	WB-033	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
327	WB-034	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
10	WB-035	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	98
3	WB-036	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
2	WB-037	NULL	MICHAEL.RAY	2019-04-30 14:25:14.0000000	2
1	WB-038	NULL	MICHAEL.RAY	2019-04-30 14:25:14.0000000	2
65	WB-039	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
63	WB-040	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
62	WB-041	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
61	WB-042	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
60	WB-043	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
59	WB-044	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
57	WB-045	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
56	WB-046	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
55	WB-047	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
54	WB-048	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
53	WB-049	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
22	WB-050	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
16	WB-051	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
15	WB-052	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2

OBJECTID	Outfall_ID	created_date	last_edited_user	last_edited_date	Zone
14	WB-053	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
13	WB-054	NULL	MICHAEL.RAY	2019-04-30 14:25:15.0000000	2
91	WB-055	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
89	WB-056	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
88	WB-057	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
87	WB-058	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
86	WB-059	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
81	WB-060	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
80	WB-061	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
79	WB-062	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
77	WB-063	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
76	WB-064	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
75	WB-065	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
74	WB-066	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
73	WB-067	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
68	WB-069	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
66	WB-070	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
107	WB-071	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
106	WB-072	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
105	WB-073	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	98
103	WB-075	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	98
102	WB-076	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
101	WB-077	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
100	WB-078	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
99	WB-079	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
98	WB-080	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
97	WB-081	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
96	WB-082	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
95	WB-083	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	1
94	WB-084	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
93	WB-085	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
92	WB-086	NULL	MICHAEL.RAY	2019-04-30 14:25:16.0000000	2
125	WB-087	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
124	WB-088	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
123	WB-089	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
122	WB-090	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
121	WB-091	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
120	WB-092	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
119	WB-093	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
118	WB-094	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
117	WB-095	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
116	WB-096	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
115	WB-097	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
114	WB-098	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
111	WB-099	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
110	WB-100	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1

OBJECTID	Outfall_ID	created_date	last_edited_user	last_edited_date	Zone
109	WB-101	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	1
108	WB-102	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	11
145	WB-103	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	12
144	WB-104	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	12
143	WB-105	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	12
142	WB-106	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	12
141	WB-107	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	12
140	WB-108	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	12
139	WB-109	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	98
136	WB-110	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	98
135	WB-111	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
134	WB-112	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
133	WB-113	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
131	WB-114	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
130	WB-115	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
129	WB-116	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
128	WB-117	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
127	WB-118	NULL	MICHAEL.RAY	2019-04-30 14:25:17.0000000	2
362	WB-119	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
372	WB-120	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	2
375	WB-121	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	12
377	WB-122	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
378	WB-123	NULL	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
1189	WB-124	2018-07-24 16:23:20.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
1190	WB-125	2018-07-24 16:55:32.0000000	MICHAEL.RAY	2019-04-30 14:25:18.0000000	1
2401	WB-127	2019-08-02 15:17:28.0000000	MICHAEL.RAY	2019-08-02 15:31:32.0000000	NULL
2402	WB-128	2019-08-02 15:43:02.0000000	MICHAEL.RAY	2019-08-02 15:43:15.0000000	NULL
3201	WB-129	2019-10-31 12:42:17.0000000	MICHAEL.RAY	2019-10-31 12:54:02.0000000	1
3601	WB-130	2020-03-10 11:14:03.0000000	MICHAEL.RAY	2020-03-10 11:18:40.0000000	1
3602	WB-131	2020-03-10 11:19:33.0000000	MICHAEL.RAY	2020-03-10 11:19:39.0000000	1
3603	WB-132	2020-03-11 16:09:39.0000000	MICHAEL.RAY	2020-03-11 16:16:30.0000000	NULL

Septic System Data as of June 2020

OBJECTID	Address	AddressNumber	City	Zip	Street	Street_New	AddressNum_New	MetaReliability	UniqID	Parcel_ID	Loc_Addr_Prop	Shape	created_user	created_date	last_edited_user	last_edited_date
4762	10 FAIRWAY LN	10	EAST LONGMEADOW	01028	FAIRWAY LANE	Fairway Lane	010	NULL	2364	6-10-0	10 Fairway Lane	0xC9080000010C00CC0C00C0EC164120B4304E70BC4541	NULL	NULL	MICHAEL.RAY	2020-06-22 11:28:51.0000000
6094	10 VINELAND AV	10	EAST LONGMEADOW	01028	VINELAND AVENUE	Vineland Avenue	010	NULL	4741	2B-88-166	10 Vineland Avenue	0xC9080000010C004F2C642CFB164160DA2A1F74C84541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
5540	106 PARKER ST	106	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	106	NULL	3636	77-1-0	106 Parker Street	0xC9080000010C00732C342CF2174120E7865D4DB64541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4559	110 SOMERSVILLE RD	110	EAST LONGMEADOW	01028	SOMERSVILLE ROAD	Somersville Road	110	NULL	2288	82-3A-F	110 Somersville Road	0xC9080000010C002036A081FB174160CE79B119A94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5841	111 PARKER ST	111	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	111	NULL	4314	77-63-0	111 Parker Street	0xC9080000010C004B4B4E76F51741E01B664D87B64541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5907	118 PARKER ST	118	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	118	NULL	4425	77-3-0	118 Parker Street	0xC9080000010C00D7F81625F2174140B37639B9B64541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6839	125 PARKER ST	125	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	125	NULL	6317	77-61-0	125 Parker Street	0xC9080000010C0072E2BB26F51741E05EE2B114B74541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
4694	132 KIBBE RD	132	EAST LONGMEADOW	01028	KIBBE ROAD	Kibbe Road	132	NULL	1953	51-4-B	132 Kibbe Road	0xC9080000010C0051747FF88E174180BB6DCDF6BB4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6305	137 PLEASANT ST	137	EAST LONGMEADOW	01028	PLEASANT STREET	Pleasant Street	137	NULL	5256	38-15-0	137 Pleasant Street	0xC9080000010C00F82ACBF76B1741409061E1A7C04541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
7101	14 REDSTONE DR	14	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	014	NULL	6586	24-163-0	14 Redstone Drive	0xC9080000010C0031A0E3D6471741A0C7778C6BC94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6422	15 WEDGEWOOD RD	15	EAST LONGMEADOW	01028	WEDGEWOOD ROAD	Wedgewood Road	015	NULL	5489	58-20-0	15 Wedgewood Road	0xC9080000010C006E10BB06B11741C03B122561CE4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6035	16 MEADOWBROOK RD	16	EAST LONGMEADOW	01028	MEADOWBROOK ROAD	Meadowbrook Road	016	NULL	4555	78-1-0	16 Meadowbrook Road	0xC9080000010C00892A2A5CDD1741A09DC13299B34541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6012	16 PURVES ST	16	EAST LONGMEADOW	01028	PURVES STREET	Purves Street	016	NULL	4729	13-2-16	16 Purves Street	0xC9080000010C00F88E6F8D15174100DBCA6525C74541	NULL	NULL	MICHAEL.RAY	2019-11-22 15:42:51.0000000
6735	17 MAYNARD ST	17	EAST LONGMEADOW	01028	MAYNARD STREET	Maynard Street	017	NULL	6099	35-10-0	17 Maynard Street	0xC9080000010C00FA924B3050174120F1742A5EC94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
5128	18 PINEYWOODS DR	18	EAST LONGMEADOW	01028	PINEYWOODS DRIVE	Pineywoods Drive	018	NULL	2922	93-5-7	18 Pineywoods Drive	0xC9080000010C00354198800B1841201304DE5FAF4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4171	180 DENSLOW RD	180	EAST LONGMEADOW	01028	DENSLOW ROAD	Denslow Road	180	NULL	887	10-2-0	180 Denslow Road	0xC9080000010C0093E3C344F4164180AD369FABAD4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6627	2 ALLEN CREST DR	2	EAST LONGMEADOW	01036	ALLEN CREST DRIVE	Allen Crest Drive	002	NULL	5872	85-19-42	2 Allen Crest Drive	0xC9080000010C00B7AD5E77001841002B98057AC74541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6715	2 REDSTONE DR	2	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	002	NULL	6065	24-162-7R	2 Redstone Drive	0xC9080000010C00215E59B148174120C95AB7E5C84541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6218	20 INDIAN SPRING RD	20	EAST LONGMEADOW	01028	INDIAN SPRING ROAD	Indian Spring Road	020	NULL	5044	38-51-0	20 Indian Spring Road	0xC9080000010C00B25EF2D6671741800AAB2538BF4541	NULL	NULL	MICHAEL.RAY	2020-06-25 13:58:17.0000000
6776	20 NORTH CIRCLE DR	20	EAST LONGMEADOW	01028	NORTH CIRCLE DRIVE	North Circle Drive	020	NULL	6151	35-47-41	20 North Circle Drive	0xC9080000010C00E918E264771741A09C879C16CA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6782	20 REDSTONE DR	20	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	020	NULL	6170	23-76-0	20 Redstone Drive	0xC9080000010C00FD3FE7E044174120D3EB6F36CA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6770	21 REDSTONE DR	21	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	021	NULL	6140	23-80-0	21 Redstone Drive	0xC9080000010C004B03E5964C174100ECF5AB27CA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
5782	23 CHADWYCK LN	23	EAST LONGMEADOW	01028	CHADWYCK LANE	Chadwyck Lane	023	NULL	4167	83-11-6	23 Chadwyck Lane	0xC9080000010C00633676B7F4174120E531603FCF4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5145	239 PEASE RD	239	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	239	NULL	2946	43-22-0	239 Pease Road	0xC9080000010C000632047681174140EB2D6A34B04541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5980	243 PEASE RD	243	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	243	NULL	4517	43-20-0	243 Pease Road	0xC9080000010C0059027DB08017418036D07003B14541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4301	25 MAYNARD ST	25	EAST LONGMEADOW	01028	MAYNARD STREET	Maynard Street	025	NULL	1147	24-167-0	25 Maynard Street	0xC9080000010C0061221CDA4D17414018BEAE73C94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5573	250 PEASE RD	250	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	250	NULL	3766	43-30-0	250 Pease Road	0xC9080000010C0050906F7C79174160BC54ED70AF4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6037	26 MEADOWBROOK RD	26	EAST LONGMEADOW	01028	MEADOWBROOK ROAD	Meadowbrook Road	026	NULL	4560	78-2-0	26 Meadowbrook Road	0xC9080000010C00A201ECA1E01741408ECE3927B34541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
5541	27 PINEYWOODS DR	27	EAST LONGMEADOW	01028	PINEYWOODS DRIVE	Pineywoods Drive	027	NULL	3678	93-24-12	27 Pineywoods Drive	0xC9080000010C0041406248101841 20C24FFAECAE4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4263	27 REDSTONE DR	27	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	027	NULL	1048	23-79-0	27 Redstone Drive	0xC9080000010C00844A75894B174140B1894B58CA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5780	29 CHADWYCK LN	29	EAST LONGMEADOW	01028	CHADWYCK LANE	Chadwyck Lane	029	NULL	4161	83-12-7	29 Chadwyck Lane	0xC9080000010C00172643F7F0174180F1F69C10CF4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5088	29 REDSTONE DR	29	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	029	NULL	2862	23-78A-B	29 Redstone Drive	0xC9080000010C00CB8EAE794B1741E0E9A3498CCA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4297	31 MAYNARD ST	31	EAST LONGMEADOW	01028	MAYNARD STREET	Maynard Street	031	NULL	1137	24-166-0	31 Maynard Street	0xC9080000010C00224D35274C174100823CFF47C94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5458	316 SOMERS RD	316	EAST LONGMEADOW	01028	SOMERS ROAD	Somers Road	316	NULL	3483	53-15-15	316 Somers Road	0xC9080000010C00117849809217 41408A452955B74541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6011	33 ATHENS ST	33	EAST LONGMEADOW	01028	ATHENS STREET	Athens Street	033	NULL	4724	2-21-3	33 Athens Street	0xC9080000010C00B0E3381BD81641203B024205C74541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4241	33 MILL RD	33	EAST LONGMEADOW	01028	MILL ROAD	Mill Road	033	NULL	1006	92-1-7	33 Mill Road	0xC9080000010C0032DE06060618412021598FD8B14541	NULL	NULL	MICHAEL.RAY	2020-04-21 13:33:49.0000000
4566	35 PARKER ST	35	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	035	NULL	1707	91-11-9	35 Parker Street	0xC9080000010C002DC7C8D2F81741E06BC80794B34541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4427	35 REDSTONE DR	35	EAST LONGMEADOW	01028	REDSTONE DRIVE	Redstone Drive	035	NULL	1491	23-78-0	35 Redstone Drive	0xC9080000010C008CB2DBD04B1741802396BAC2CA4541	NULL	NULL	MICHAEL.RAY	2020-02-18 19:35:25.0000000
4868	37 BREEZY KNOLL RD	37	EAST LONGMEADOW	01028	BREEZY KNOLL ROAD	Breezy Knoll Road	037	NULL	2211	36-74-6	37 Breezy Knoll Road	0xC9080000010C00AEE38334691741A040880350C44541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4242	39 MILL RD	39	EAST LONGMEADOW	01028	MILL ROAD	Mill Road	039	NULL	1008	92-17-8	39 Mill Road	0xC9080000010C00DB4C1E7A08184180D110AADFB14541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3927	40 SOMERSVILLE RD	40	EAST LONGMEADOW	01028	SOMERSVILLE ROAD	Somersville Road	040	NULL	166	94-59-10	40 Somersville Road	0xC9080000010C0016DC2DEF051841005F092B87AC4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4807	40 SOUTH BEND LN	40	EAST LONGMEADOW	01028	SOUTH BEND LANE	South Bend Lane	040	NULL	2462	53-35-3	40 South Bend Lane	0xC9080000010C00702D0F77AF1741607BB4AAC2B44541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4977	403 PROSPECT ST	403	EAST LONGMEADOW	01028	PROSPECT STREET	Prospect Street	403	NULL	2543	31-6-10R	403 Prospect Street	0xC9080000010C002648909A601741C06CF1055AB24541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3979	411 PROSPECT ST	411	EAST LONGMEADOW	01028	PROSPECT STREET	Prospect Street	411	NULL	286	31-5-9	411 Prospect Street	0xC9080000010C00AC41B414621741C013A5C60DB24541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4176	44 SOUTH BEND LN	44	EAST LONGMEADOW	01028	SOUTH BEND LANE	South Bend Lane	044	NULL	899	66-25-4	44 South Bend Lane	0xC9080000010C004D9C9F86B21741E09E8C78AAB44541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5036	45 PARKER ST	45	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	045	NULL	2749	91-9-7	45 Parker Street	0xC9080000010C00DD50FE0DF8174180F6CEF4F1B34541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3682	45 SOMERSVILLE RD	45	EAST LONGMEADOW	01028	SOMERSVILLE ROAD	Somersville Road	045	NULL	65	81-2-0	45 Somersville Road	0xC9080000010C004067F03003184180F8F78030AC4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3879	5 FIFTH ST	5	EAST LONGMEADOW	01028	FIFTH STREET	Fifth Street	005	MW UPDATE	666	15-83-0	5 Fifth Street	0xC9080000010C000E1F9C6D2A174100766FBD77C04541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5542	519 PROSPECT ST	519	EAST LONGMEADOW	01028	PROSPECT STREET	Prospect Street	519	NULL	3679	43-7-0	519 Prospect Street	0xC9080000010C00C592793975174180118F73E6AE4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4472	53 PEASE RD	53	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	053	NULL	1588	67-8-A	53 Pease Road	0xC9080000010C00A1AE768FC3174160995362FAB14541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5526	54 PEASE RD	54	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	054	NULL	3613	67-2-A	54 Pease Road	0xC9080000010C00F9CE46E5C31741E05D43B8A7B14541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4471	57 PEASE RD	57	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	057	NULL	1586	67-7-C	57 Pease Road	0xC9080000010C006280ED6DC117410000DA2CC9B14541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6521	57 TUFTS ST	57	EAST LONGMEADOW	01028	TUFTS STREET	Tufts Street	057	NULL	5670	3-14-23	57 Tufts Street	0xC9080000010C0016077D77DB1641C06DB6C956C54541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
4702	585 SHAKER RD	585	EAST LONGMEADOW	01028	SHAKER ROAD	Shaker Road	585	NULL	2291	22-1-0	585 Shaker Road	0xC9080000010C007422DA5E2C17418072D3277EA94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5946	6 PEACHTREE RD	6	EAST LONGMEADOW	01028	PEACHTREE ROAD	Peachtree Road	6	NULL	4985	62-24	6 Peachtree Road	0xC9080000010C003D3EFB98CE17410019FC46DAC04541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3968	643 PROSPECT ST	643	EAST LONGMEADOW	01028	PROSPECT STREET	Prospect Street	643	NULL	148	44-5-0	643 Prospect Street	0xC9080000010C0017857C9F8B1741E01302E1D2AA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3704	679 PROSPECT ST	679	EAST LONGMEADOW	01028	PROSPECT STREET	Prospect Street	679	NULL	174	45-3-11	679 Prospect Street	0xC9080000010C0001A4BEE890174160CF62D4CDA94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4611	72 PARKER ST	72	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	072	NULL	1810	78-10-0	72 Parker Street	0xC9080000010C00A1A60F90F41741E0597703E8B44541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
4606	721 PARKER ST	721	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	721	NULL	1798	59-12-0	721 Parker Street	0xC9080000010C00FDB0C2B0AB1741C050FD98A7CB4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6922	74 NELSON ST	74	EAST LONGMEADOW	01028	NELSON STREET	Nelson Street	074	NULL	6464	3-84-0	74 Nelson Street	0xC9080000010C000A4BAB8AEE1641C0ED605588C54541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
6003	75 PARKER ST	75	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	075	NULL	4568	91-3-2	75 Parker Street	0xC9080000010C001DE57060F7174120B75C6613B54541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6036	78 PARKER ST	78	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	078	NULL	4557	78-11-0	78 Parker Street	0xC9080000010C00B3B968DAF3174100912B362BB54541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
3947	788 SOMERS RD	788	EAST LONGMEADOW	01028	SOMERS ROAD	Somers Road	788	NULL	114	94-49-0	788 Somers Road	0xC9080000010C0056C87DC80A184140AF5BC53CAD4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
6442	8 DAWES ST	8	EAST LONGMEADOW	01028	DAWES STREET	Dawes Street	008	NULL	5104	34-1-F	8 Dawes Street	0xC9080000010C0033104A7F5117412076357A4BCA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:02.0000000
3957	80 SOMERSVILLE RD	80	EAST LONGMEADOW	01028	SOMERSVILLE ROAD	Somersville Road	080	NULL	129	82-1-A	80 Somersville Road	0xC9080000010C0073972AB507184140DC6E409FAA4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3937	840 SOMERS RD	840	EAST LONGMEADOW	01028	SOMERS ROAD	Somers Road	840	NULL	98	94-56-B	840 Somers Road	0xC9080000010C002BE4218B1318410016BB777DAB4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3650	854 SOMERS RD	854	EAST LONGMEADOW	01028	SOMERS ROAD	Somers Road	854	NULL	12	95-6-0	854 Somers Road	0xC9080000010C008EA58DC81518418007943E1FAB4541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
3703	887 SOMERS RD	887	EAST LONGMEADOW	01028	SOMERS ROAD	Somers Road	887	NULL	173	95-39-3	887 Somers Road	0xC9080000010C00D50ED43D191841E03A2695CCA94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5196	9 PARKER ST	9	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	009	NULL	2660	79-20-B	9 Parker Street	0xC9080000010C006352DCE6F81741A0D06E24A2B24541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5943	907 SOMERS RD	907	EAST LONGMEADOW	01028	SOMERS ROAD	Somers Road	907	NULL	4966	95-37	907 Somers Road	0xC9080000010C001025AA541D1841C06E56A725A94541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5550	94 PARKER ST	94	EAST LONGMEADOW	01028	PARKER STREET	Parker Street	094	NULL	3702	78-14-0	94 Parker Street	0xC9080000010C00CC285E79F317416042A970CCB54541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000
5904	94 PEASE RD	94	EAST LONGMEADOW	01028	PEASE ROAD	Pease Road	094	NULL	4499	55-1-0	94 Pease Road	0xC9080000010C00DE7B177FB41741E055D23260B04541	NULL	NULL	MICHAEL.RAY	2019-08-08 12:23:01.0000000

Catch Basin Inspection and Cleaning Data
July 1, 2019 to June 30, 2020

OBJECTID	CreationDate	Creator	EditDate	Editor	inspect_date	inspector	CB_ID	Label	CBtype	BasinMaterial	BasinCond	SumpDim	InletDia	OutletDia	OutletLoc	DepthInvrt	DepthSed	TotDepth	Cleaned	SedimentRemoved_CuYds	PercentFull	InspectCount
411	2019-07-09 13:59:13.000000	elmadpw	2019-07-09 14:19:15.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	3627	NULL	Iron2by2	ConcBlk	Fair	48.00000000	NULL	12.00000000	NULL	50.00000000	48.00000000	70.00000000	Yes	0.852839	31.43	3
412	2019-07-09 14:14:03.000000	elmadpw	2019-07-09 14:14:03.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	598	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	12.00000000	NW	70.00000000	78.00000000	78.00000000	Yes	0.000000	0.00	2
413	2019-07-09 14:19:15.000000	elmadpw	2019-07-09 14:27:34.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	3628	NULL	Iron2by2	ConcBlk	Fair	48.00000000	NULL	12.00000000	N	50.00000000	48.00000000	70.00000000	Yes	0.852839	31.43	1
414	2019-07-09 14:22:12.000000	elmadpw	2019-07-09 14:27:00.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	3627	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	16.00000000	NE	68.00000000	78.00000000	78.00000000	Yes	0.000000	0.00	3
415	2019-07-09 14:52:04.000000	elmadpw	2019-07-09 14:52:04.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	598	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	12.00000000	N	55.00000000	66.00000000	66.00000000	Yes	0.000000	0.00	2
416	2019-07-09 15:26:09.000000	elmadpw	2019-07-09 15:26:09.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	597	NULL	Iron2by2	ConcBlk	Fair	48.00000000	NULL	12.00000000	NE	45.00000000	42.00000000	64.00000000	Yes	0.852839	34.38	1
417	2019-07-09 15:52:03.000000	elmadpw	2019-07-09 17:34:04.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	593	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	16.00000000	E	66.00000000	70.00000000	78.00000000	Yes	0.310123	10.26	1
418	2019-07-09 17:03:46.000000	elmadpw	2019-07-09 17:03:46.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	3624	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	16.00000000	E	91.00000000	104.00000000	108.0000000	Yes	0.155061	3.70	1
419	2019-07-09 17:32:09.000000	elmadpw	2019-07-09 17:32:09.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	3623	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	16.00000000	NE	93.00000000	102.00000000	108.0000000	Yes	0.232592	5.56	1
420	2019-07-09 18:04:11.000000	elmadpw	2019-07-09 18:04:11.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	599	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	16.00000000	NE	70.00000000	81.00000000	90.00000000	Yes	0.348888	10.00	1
421	2019-07-09 18:52:59.000000	elmadpw	2019-07-09 18:52:59.0000000	elmadpw	2019-07-09 04:00:00.0000000	Josh C	709	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NE	45.00000000	49.00000000	66.00000000	Yes	0.659012	25.76	1
422	2019-07-22 14:37:29.000000	elmadpw	2019-07-22 14:37:29.0000000	elmadpw	2019-07-22 04:00:00.0000000	Josh C Luke C	3872	NULL	Iron2by2	NULL	Good	NULL	15.00000000	15.00000000	W	NULL	NULL	NULL	No	0.000000	0.00	1
423	2019-08-21 11:37:35.000000	elmadpw	2019-08-21 11:37:35.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1725	NULL	CT	Precast	Good	48.00000000	8.00000000	10.00000000	NE	50.00000000	69.00000000	82.00000000	Yes	0.503950	15.85	4
424	2019-08-21 11:37:37.000000	elmadpw	2019-08-21 11:37:37.0000000	elmadpw	2018-03-27 04:00:00.0000000	Danny savio	2388	None	CT	ConcBlk	Good	52.00000000	NULL	12.00000000	NE	50.00000000	55.00000000	80.00000000	Yes	1.137388	31.25	1
425	2019-08-21 11:37:38.000000	elmadpw	2019-08-21 11:37:38.0000000	elmadpw	2018-03-27 04:00:00.0000000	Danny savio	2383	None	CT	ConcBlk	Good	52.00000000	NULL	12.00000000	N	54.00000000	57.00000000	86.00000000	Yes	1.319370	33.72	1
426	2019-08-21 11:37:38.000000	elmadpw	2019-08-21 11:37:38.0000000	elmadpw	2018-03-27 04:00:00.0000000	Danny savio	2314	None	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	50.00000000	55.00000000	91.00000000	Yes	1.395555	39.56	1
427	2019-08-21 11:37:39.000000	elmadpw	2019-08-21 11:37:39.0000000	elmadpw	2018-03-27 04:00:00.0000000	Danny savio	2312	None	CT	ConcBlk	Fair	52.00000000	NULL	12.00000000	NE	55.00000000	60.00000000	80.00000000	Yes	0.909910	25.00	1
428	2019-08-21 11:37:39.000000	elmadpw	2019-08-21 11:37:39.0000000	elmadpw	2018-03-27 04:00:00.0000000	Danny savio	2293	None	CT	ConcBlk	Fair	52.00000000	NULL	12.00000000	N	54.00000000	60.00000000	80.00000000	Yes	0.909910	25.00	1
429	2019-08-21 11:37:39.000000	elmadpw	2019-08-21 11:37:39.0000000	elmadpw	2018-03-27 04:00:00.0000000	Danny savio	2295	None	CT	ConcBlk	Fair	52.00000000	NULL	12.00000000	W	60.00000000	60.00000000	84.00000000	Yes	1.091893	28.57	1
430	2019-08-21 11:37:40.000000	elmadpw	2019-08-21 11:37:40.0000000	elmadpw	2019-06-25 04:00:00.0000000	Matt and tanner	703	NULL	CT	ConcBlk	Good	48.00000000	NULL	8.00000000	S	25.00000000	40.00000000	60.00000000	Yes	0.775308	33.33	1
431	2019-08-21 11:50:26.000000	elmadpw	2019-08-21 11:50:26.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1725	NULL	CT	Precast	Good	48.00000000	10.00000000	16.00000000	NE	62.00000000	81.00000000	89.00000000	Yes	0.310123	8.99	4
432	2019-08-21 12:02:48.000000	elmadpw	2019-08-21 12:02:48.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1725	NULL	CT	Precast	Good	48.00000000	24.00000000	16.00000000	NE	48.00000000	92.00000000	100.0000000	Yes	0.310123	8.00	4
433	2019-08-21 12:17:28.000000	elmadpw	2019-08-21 12:17:28.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1725	NULL	CT	Precast	Good	48.00000000	12.00000000	NULL	NE	32.00000000	50.00000000	62.00000000	Yes	0.465185	19.35	4
434	2019-08-21 12:36:09.000000	elmadpw	2019-08-21 12:36:09.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1582	NULL	CT	Precast	Good	48.00000000	36.00000000	48.00000000	NE	48.00000000	153.00000000	156.0000000	Yes	0.116296	1.92	3
435	2019-08-21 13:11:20.000000	elmadpw	2019-08-21 13:11:20.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1582	NULL	CT	Precast	Good	48.00000000	10.00000000	10.00000000	NE	32.00000000	45.00000000	62.00000000	Yes	0.659012	27.42	3
436	2019-08-21 13:48:37.000000	elmadpw	2019-08-21 13:48:37.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1582	NULL	CT	Precast	Good	48.00000000	10.00000000	10.00000000	W	32.00000000	43.00000000	62.00000000	Yes	0.736543	30.65	3
437	2019-08-21 14:57:26.000000	elmadpw	2019-08-21 14:57:26.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1809	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	W	60.00000000	90.00000000	95.00000000	Yes	0.193827	5.26	4
438	2019-08-21 15:07:17.000000	elmadpw	2019-08-21 15:07:17.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1809	NULL	CT	Precast	Good	48.00000000	12.00000000	24.00000000	W	42.00000000	85.00000000	95.00000000	Yes	0.387654	10.53	4
439	2019-08-21 15:20:55.000000	elmadpw	2019-08-21 15:20:55.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1809	NULL	CT	Precast	Good	48.00000000	24.00000000	24.00000000	W	32.00000000	77.00000000	85.00000000	Yes	0.310123	9.41	4
440	2019-08-21 16:45:19.000000	elmadpw	2019-08-21 16:45:19.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1809	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	W	30.00000000	51.00000000	65.00000000	Yes	0.542716	21.54	4
441	2019-08-21 16:57:32.000000	elmadpw	2019-08-21 16:57:32.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1722	NULL	CT	Precast	Good	48.00000000	4.00000000	12.00000000	W	39.00000000	71.00000000	80.00000000	Yes	0.348888	11.25	4
442	2019-08-21 17:10:00.000000	elmadpw	2019-08-21 17:10:00.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1722	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	W	54.00000000	84.00000000	90.00000000	Yes	0.232592	6.67	4
443	2019-08-21 17:24:14.000000	elmadpw	2019-08-21 17:24:14.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1722	NULL	CT	Precast	Good	48.00000000	10.00000000	10.00000000	W	52.00000000	72.00000000	80.00000000	Yes	0.310123	10.00	4
444	2019-08-21 18:15:44.000000	elmadpw	2019-08-21 18:15:44.0000000	elmadpw	2019-08-21 04:00:00.0000000	matt	1722	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	W	48.00000000	72.00000000	90.00000000	Yes	0.697777	20.00	4
445	2019-08-26 12:59:43.000000	elmadpw	2019-08-26 12:59:43.0000000	elmadpw	2019-08-26 04:00:00.0000000	Josh C	2863	NULL	Iron2by2	ConcBlk	Fair	48.00000000	NULL	12.00000000	NE	30.00000000	50.00000000	NULL	No	0.000000	0.00	1
446	2019-09-05 11:59:30.000000	elmadpw	2019-09-05 11:59:30.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh C	1309	NULL	Iron2by2	ConcBlk	Good	48.00000000	12.00000000	12.00000000	SW	76.00000000	88.00000000	96.00000000	Yes	0.310123	8.33	1
447	2019-09-05 12:21:33.000000	elmadpw	2019-09-05 12:24:58.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh C	1310	NULL	Iron2by2	ConcBlk	Good	48.00000000	10.00000000	12.00000000	W	46.00000000	48.00000000	60.00000000	Yes	0.465185	20.00	3
448	2019-09-05 14:24:26.000000	elmadpw	2019-09-05 14:24:26.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh c	2860	NULL	CT	ConcBlk	Fair	48.00000000	24.00000000	24.00000000	E	67.00000000	67.00000000	68.00000000	Yes	0.038765	1.47	1
449	2019-09-05 14:24:27.000000	elmadpw	2019-09-05 14:24:27.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh c	532	NULL	Iron2by2	ConcBlk	Fair	48.00000000	12.00000000	12.00000000	SE	56.00000000	60.00000000	73.00000000	Yes	0.503950	17.81	1
450	2019-09-05 14:58:34.000000	elmadpw	2019-09-05 14:58:34.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh C	2858	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	NE	74.00000000	86.00000000	98.00000000	Yes	0.465185	12.24	1
451	2019-09-05 15:36:34.000000	elmadpw	2019-09-05 15:36:34.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh c	2354	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	NW	54.00000000	67.00000000	80.00000000	Yes	0.503950	16.25	2
452	2019-09-05 17:39:38.000000	elmadpw	2019-09-05 17:39:38.0000000	elmadpw	2019-09-05 16:00:00.0000000	Josh C	180	NULL	CT	Precast	Good	48.00000000	NULL	10.00000000	NE	38.00000000	38.00000000	66.00000000	Yes	1.085432	42.42	1
453	2019-09-05 18:08:23.000000	elmadpw	2019-09-05 18:08:23.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh c	3757	NULL	Iron2by2	Precast	Good	48.00000000	NULL	8.00000000	NE	36.00000000	58.00000000	84.00000000	Yes	1.007901	30.95	1
454	2019-09-05 18:40:19.000000	elmadpw	2019-09-05 18:40:19.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh c	749	NULL	Iron2by2	ConcBlk	Crumbling	36.00000000	12.00000000	12.00000000	NULL	48.00000000	48.00000000	66.00000000	Yes	0.392500	27.27	2
455	2019-09-05 19:01:19.000000	elmadpw	2019-09-05 19:01:19.0000000	elmadpw	2019-09-05 04:00:00.0000000	Josh c	3498	NULL	Iron2by2	ConcBlk	Crumbling	36.00000000	NULL	10.00000000	NE	39.00000000	36.00000000	60.00000000	Yes	0.523333	40.00	2
456	2019-09-10 14:42:04.000000	elmadpw	2019-09-13 11:08:10.0000000	elmadpw	2019-09-10 04:00:00.0000000	Josh c	3101	NULL	FlatTop	ConcBlk	Good	48.00000000	12.00000000	16.00000000	SE	27.00000000	35.00000000	53.00000000	Yes	0.697777	33.96	1
457	2019-09-10 15:33:33.000000	elmadpw	2019-09-10 15:39:55.0000000	elmadpw	2019-09-10 16:00:00.0000000	Josh c	1202	NULL	CT	ConcBlk	Good	48.00000000	4.00000000	12.00000000	E	31.00000000	38.00000000	55.00000000	Yes	0.659012	30.91	1
458	2019-09-12 12:44:38.000000	elmadpw	2019-09-12 12:44:38.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	2441	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	NW	43.00000000	43.00000000	67.00000000	Yes	0.930370	35.82	1
459	2019-09-12 13:47:41.000000	elmadpw	2019-09-12 13:47:41.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1403	NULL	Windsor	Precast	Good	48.00000000	NULL	12.00000000	W	50.00000000	74.00000000	80.00000000	Yes	0.232592	7.50	1
460	2019-09-12 14:56:09.000000	elmadpw	2019-09-12 14:56:09.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	311	NULL	CT	ConcBlk	Poor	48.00000000	16.00000000	24.00000000	W	72.00000000	72.00000000	NULL	No	0.000000	0.00	1
461	2019-09-12 15:22:40.000000	elmadpw	2019-09-12 15:22:40.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1660	NULL	MA	Precast	Good	48.00000000	24.00000000	24.00000000	S	80.00000000	97.00000000	108.0000000	Yes	0.426419	10.19	1
462	2019-09-12 15:32:22.000000	elmadpw	2019-09-12 15:32:22.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1663	NULL	CT	Precast	Good	82.00000000	12.00000000	24.00000000	NULL	50.00000000	70.00000000	76.00000000	Yes	0.678798	7.89	1
463	2019-09-12 15:40:02.000000	elmadpw	2019-09-12 15:40:02.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1662	NULL	CT	Precast	Good	82.00000000	12.00000000	24.00000000	NULL	50.00000000	70.00000000	76.00000000	Yes	0.678798	7.89	1
464	2019-09-12 17:13:13.000000	elmadpw	2019-09-12 17:13:13.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1661	NULL	Windsor	Precast	Good	48.00000000	NULL	12.00000000	NULL	55.00000000	72.00000000	88.00000000	Yes	0.620246	18.18	1
465	2019-09-12 17:45:32.000000	elmadpw	2019-09-12 17:45:32.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1729	NULL	CT	ConcBlk	Good	82.00000000	NULL	12.00000000	N	46.00000000	62.00000000	70.00000000	Yes	0.905065	11.43	1
466	2019-09-12 17:53:40.000000	elmadpw	2019-09-12 17:53:40.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1728	NULL	CT	Precast	Good	82.00000000	NULL	42.00000000	W	46.00000000	66.00000000	72.00000000	Yes	0.678798	8.33	1
467	2019-09-12 18:15:25.000000	elmadpw	2019-09-12 18:15:25.0000000	elmadpw	2019-09-12 04:00:00.0000000	Josh c	1726	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	NE	44.00000000	58.00000000	88.00000000	Yes	1.162962	34.09	1
468	2019-09-25 14:32:34.000000	elmadpw	2019-09-25 14:32:34.0000000	elmadpw	2019-09-25 04:00:00.0000000	Josh c Jason c Joe c	643	NULL	Iron2by2	ConcBlk	Poor	36.00000000	NULL	10.00000000	S	30.00000000	37.00000000	57.00000000	Yes	0.436111	35.09	1
469	2019-09-25 15:43:20.000000	elmadpw	2019-09-25 15:43:20.0000000	elmadpw	2019-09-25 04:00:00.0000000	Josh c Jason c Joe c	620	NULL	Iron2by2	Brick	Poor	24.00000000	NULL	8.00000000	NULL	19.00000000	20.00000000	32.00000000	Yes	0.116296	37.50	1
470	2019-09-25 17:21:01.000000	elmadpw	2019-09-25 17:21:01.0000000	elmadpw	2019-09-25 04:00:00.0000000	Josh c Jason c Joe c	1039	NULL	Iron2by2	ConcBlk	Good	24.00000000	8.00000000	8.00000000	NULL	24.00000000	20.00000000	43.00000000	Yes	0.222901	53.49	1
471	2019-10-08 12:27:04.000000	elmadpw	2019-10-08 12:27:04.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	1733	NULL	CT	Precast	Good	48.00000000	15.00000000	15.00000000	NULL	58.00000000	63.00000000	80.00000000	Yes	0.659012	21.25	1
472	2019-10-08 12:37:59.000000	elmadpw	2019-10-08 12:37:59.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	1734	NULL	CT	Precast	Good	48.00000000	15.00000000	15.00000000	SE	51.00000000	65.00000000	72.00000000	Yes	0.271358	9.72	1
473	2019-10-08 12:57:35.000000	elmadpw	2019-10-08 12:57:35.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	1727	NULL	CT	Precast	Good	48.00000000	NULL	15.00000000	SE	43.00000000	57.00000000	86.00000000	Yes	1.124197	33.72	1
474	2019-10-08 14:00:59.000000	elmadpw	2019-10-08 14:00:59.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	1724	NULL	CT	Precast	Good	48.00000000	NULL	15.00000000	NE	52.00000000	60.00000000	77.00000000	Yes	0.659012	22.08	1
475	2019-10-08 14:36:04.000000	elmadpw	2019-10-08 14:36:04.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	1644	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NULL	36.00000000	41.00000000	60.00000000	Yes	0.736543	31.67	1
476	2019-10-08 15:23:31.000000	elmadpw	2019-10-08 15:23:31.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	622	NULL	Iron2by2	NULL	Crumbling	24.00000000	8.00000000	8.00000000	NULL	36.00000000	36.00000000	57.00000000	Yes	0.203518	36.84	2
477	2019-10-09 11:50:10.000000	elmadpw	2019-10-09 11:50:10.0000000	elmadpw	2019-10-08 04:00:00.0000000	Josh c	371	NULL	CT	ConcBlk	Crumbling	48.00000000	NULL	12.00000000	NULL	50.00000000	50.00000000	72.00000000	Yes	0.852839	30.56	1
478	2019-10-23 18:08:55.000000	elmadpw	2019-10-23 18:08:55.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio f	1363	NULL	CT	ConcBlk	Fair	48.00000000	4.00000000	24.00000000	SW	69.00000000	68.00000000	NULL	Yes	0.000000	0.00	1
479	2019-10-23 18:12:09.000000	elmadpw	2019-10-23 18:12:09.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	1430	NULL	CT	ConcBlk	Fair	48.00000000	12.00000000	24.00000000	SE	78.00000000	80.00000000	102.0000000	Yes	0.852839	21.57	1
480	2019-10-23 18:14:04.000000	elmadpw	2019-10-23 18:14:04.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	2039	NULL	NULL	ConcBlk	Good	48.00000000	10.00000000	12.00000000	S	63.00000000	67.00000000	83.00000000	Yes	0.620246	19.28	1
481	2019-10-23 18:16:41.000000	elmadpw	2019-10-23 18:16:41.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	3302	NULL	CT	ConcBlk	Good	48.00000000	36.00000000	36.00000000	SE	68.00000000	68.00000000	87.00000000	Yes	0.736543	21.84	1
482	2019-10-23 18:21:09.000000	elmadpw	2019-10-23 18:21:09.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c	3300	NULL	Iron2by2	ConcBlk	Fair	48.00000000	24.00000000	24.00000000	SE	83.00000000	78.00000000	97.00000000	Yes	0.736543	19.59	1
483	2019-10-23 18:25:07.000000	elmadpw	2019-10-23 18:25:07.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c	2055	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	15.00000000	SW	78.00000000	87.00000000	87.00000000	Yes	0.000000	0.00	1
484	2019-10-23 18:42:33.000000	elmadpw	2019-10-23 18:42:33.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	2052	NULL	CT	ConcBlk	Good	48.00000000	20.00000000	24.00000000	SE	125.00000000	120.00000000	139.0000000	Yes	0.736543	13.67	1
485	2019-10-23 18:46:14.000000	elmadpw	2019-10-23 18:46:14.0000000	elmadpw	2019-10-23 04:00:00.0000000	Sergio Joe c	2051	NULL	CT	ConcBlk	Good	48.00000000	20.00000000	24.00000000	SE	87.00000000	87.00000000	109.0000000	Yes	0.852839	20.18	1
486	2019-10-23 18:59:01.000000	elmadpw	2019-10-23 18:59:01.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio f	1428	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	SE	43.00000000	48.00000000	60.00000000	Yes	0.465185	20.00	1
487	2019-10-23 19:00:23.000000	elmadpw	2019-10-23 19:00:23.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe Sergio	1364	NULL	NULL	NULL	Good	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No	0.000000	0.00	1
488	2019-10-23 19:03:07.000000	elmadpw	2019-10-23 19:03:07.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	1427	NULL	CT	ConcBlk	Good	48.00000000	10.00000000	12.00000000	SW	45.00000000	47.00000000	72.00000000	Yes	0.969135	34.72	1
489	2019-10-23 19:05:09.000000	elmadpw	2019-10-23 19:05:09.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	1429	NULL	CT	ConcBlk	Good	48.00000000	4.00000000	8.00000000	SW	47.00000000	47.00000000	82.00000000	Yes	1.356790	42.68	2
490	2019-10-23 19:07:16.000000	elmadpw	2019-10-23 19:07:16.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio f	3303	NULL	Iron2by2	ConcBlk	Fair	48.00000000	4.00000000	20.00000000	SW	60.00000000	61.00000000	78.00000000	Yes	0.659012	21.79	1
491	2019-10-23 19:14:45.000000	elmadpw	2019-10-23 19:14:45.0000000	elmadpw	2019-10-23 04:00:00.0000000	Joe c Sergio	3301	NULL	Iron2by2	ConcBlk	Fair	48.00000000	20.00000000	24.00000000	SE	61.00000000	75.00000000	81.00000000	Yes	0.232592	7.41	1
492	2019-10-23 19:16:27.000000	elmadpw	2019-10-23 19:16:27.0000000	elmadpw	2019-10-23 04:00:00.0000000	Sergio f Joe c	2053	NULL	Iron2by2	ConcBlk	Good	48.00000000	NULL	16.00000000	SE	74.00000000	78.00000000	80.00000000	Yes	0.077530	2.50	1

OBJECTID	CreationDate	Creator	EditDate	Editor	inspect_date	inspector	CB_ID	Label	CBtype	BasinMaterial	BasinCond	SumpDim	InletDia	OutletDia	OutletLoc	DepthInvrt	DepthSed	TotDepth	Cleaned	SedimentRemoved_CuYds	PercentFull	InspectCount
493	2019-10-23 19:17:56.0000000	elmadpw	2019-10-23 19:17:56.0000000	elmadpw	2019-10-23 04:00:00.0000000	Sergio f Joe c	2054	NULL	CT	Precast	Good	48.00000000	NULL	12.00000000	SW	70.00000000	71.00000000	97.00000000	Yes	1.007901	26.80	1
494	2019-10-30 14:07:23.0000000	elmadpw	2019-10-30 14:07:23.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	2111	NULL	CT	Precast	Good	NULL	NULL	12.00000000	N	50.00000000	53.00000000	78.00000000	Yes	0.000000	0.00	1
495	2019-10-30 14:39:44.0000000	elmadpw	2019-10-30 14:39:44.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	2110	NULL	CT	Precast	Good	48.00000000	NULL	12.00000000	N	52.00000000	56.00000000	81.00000000	Yes	0.969135	30.86	1
496	2019-10-30 15:05:39.0000000	elmadpw	2019-10-30 15:05:39.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	2116	NULL	CT	Precast	Good	48.00000000	NULL	1248.00000000	NULL	48.00000000	57.00000000	73.00000000	Yes	0.620246	21.92	1
497	2019-10-30 15:19:24.0000000	elmadpw	2019-10-30 15:19:24.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	2117	NULL	CT	Precast	Good	48.00000000	24.00000000	24.00000000	S	62.00000000	80.00000000	88.00000000	Yes	0.310123	9.09	1
498	2019-10-30 17:14:16.0000000	elmadpw	2019-10-30 17:14:16.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	2118	NULL	CT	Precast	Good	48.00000000	12.00000000	24.00000000	NE	54.00000000	80.00000000	90.00000000	Yes	0.387654	11.11	1
499	2019-10-30 17:43:38.0000000	elmadpw	2019-10-30 17:43:38.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	2115	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	S	57.00000000	65.00000000	86.00000000	Yes	0.814074	24.42	1
500	2019-10-30 18:40:39.0000000	elmadpw	2019-10-30 18:40:39.0000000	elmadpw	2019-10-30 04:00:00.0000000	Sergio	1987	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	S	59.00000000	65.00000000	84.00000000	Yes	0.736543	22.62	1
501	2019-12-06 15:27:52.0000000	elmadpw	2019-12-06 15:27:52.0000000	elmadpw	2019-12-06 17:00:00.0000000	Josh c jason c	1876	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NULL	50.00000000	57.00000000	80.00000000	Yes	0.891604	28.75	1
502	2020-01-27 13:43:17.0000000	elmadpw	2020-01-27 14:49:58.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2775	NULL	CT	ConcBlk	Poor	48.00000000	15.00000000	15.00000000	E	44.00000000	68.00000000	76.00000000	Yes	0.310123	10.53	1
503	2020-01-27 14:49:29.0000000	elmadpw	2020-01-27 14:49:29.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2759	NULL	CT	ConcBlk	Good	48.00000000	18.00000000	15.00000000	E	93.00000000	100.0000000	106.0000000(	Yes	0.232592	5.66	1
504	2020-01-27 15:05:01.0000000	elmadpw	2020-01-27 15:05:01.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2849	NULL	CT	ConcBlk	Good	48.00000000	15.00000000	15.00000000	S	94.00000000	100.0000000	108.0000000(	Yes	0.310123	7.41	1
505	2020-01-27 15:24:02.0000000	elmadpw	2020-01-27 15:24:02.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2847	NULL	CT	ConcBlk	Good	48.00000000	15.00000000	15.00000000	W	64.00000000	68.00000000	76.00000000	Yes	0.310123	10.53	1
506	2020-01-27 15:36:16.0000000	elmadpw	2020-01-27 15:36:16.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2845	NULL	CT	ConcBlk	Fair	48.00000000	15.00000000	15.00000000	N	69.00000000	75.00000000	85.00000000	Yes	0.387654	11.76	1
507	2020-01-27 16:12:21.0000000	elmadpw	2020-01-27 16:12:21.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	3557	NULL	CT	ConcBlk	Good	48.00000000	15.00000000	15.00000000	W	80.00000000	86.00000000	90.00000000	Yes	0.155061	4.44	1
508	2020-01-27 16:31:45.0000000	elmadpw	2020-01-27 16:31:45.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2964	NULL	CT	ConcBlk	Fair	48.00000000	15.00000000	15.00000000	W	53.00000000	65.00000000	84.00000000	Yes	0.736543	22.62	1
509	2020-01-27 16:56:43.0000000	elmadpw	2020-01-27 16:56:43.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2963	NULL	CT	ConcBlk	Good	48.00000000	NULL	10.00000000	S	52.00000000	52.00000000	72.00000000	Yes	0.775308	27.78	1
510	2020-01-27 18:13:36.0000000	elmadpw	2020-01-27 18:13:36.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2946	NULL	CT	ConcBlk	Fair	48.00000000	NULL	10.00000000	S	34.00000000	34.00000000	62.00000000	Yes	1.085432	45.16	1
511	2020-01-27 18:30:42.0000000	elmadpw	2020-01-27 18:30:42.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	3088	NULL	CT	ConcBlk	Fair	48.00000000	NULL	12.00000000	S	35.00000000	43.00000000	62.00000000	Yes	0.736543	30.65	1
512	2020-01-27 18:47:31.0000000	elmadpw	2020-01-27 18:47:31.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	3089	NULL	FlatTop	ConcBlk	Crumbling	48.00000000	NULL	12.00000000	S	32.00000000	35.00000000	52.00000000	Yes	0.659012	32.69	1
513	2020-01-27 19:32:28.0000000	elmadpw	2020-01-27 19:32:28.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	3092	NULL	CT	ConcBlk	Fair	48.00000000	10.00000000	12.00000000	E	27.00000000	35.00000000	56.00000000	Yes	0.814074	37.50	1
514	2020-01-27 19:48:19.0000000	elmadpw	2020-01-27 19:48:19.0000000	elmadpw	2020-01-27 17:00:00.0000000	Cruz crochetiere	2945	NULL	CT	ConcBlk	Good	48.00000000	10.00000000	12.00000000	E	33.00000000	45.00000000	58.00000000	Yes	0.503950	22.41	1
515	2020-01-28 13:13:47.0000000	elmadpw	2020-01-28 13:30:06.0000000	elmadpw	2020-01-28 17:00:00.0000000	Cruz crochetiere	2959	NULL	CT	ConcBlk	Poor	48.00000000	12.00000000	12.00000000	S	32.00000000	46.00000000	56.00000000	Yes	0.387654	17.86	1
516	2020-01-28 13:29:42.0000000	elmadpw	2020-01-28 13:29:42.0000000	elmadpw	2020-01-28 17:00:00.0000000	Cruz crochetiere	2958	NULL	FlatTop	ConcBlk	Good	48.00000000	12.00000000	12.00000000	S	43.00000000	56.00000000	64.00000000	Yes	0.310123	12.50	1
517	2020-01-28 13:48:51.0000000	elmadpw	2020-01-28 13:48:51.0000000	elmadpw	2020-01-28 17:00:00.0000000	Cruz crochetiere	2957	NULL	CT	ConcBlk	Fair	48.00000000	12.00000000	12.00000000	S	52.00000000	66.00000000	74.00000000	Yes	0.310123	10.81	1
518	2020-01-28 18:18:16.0000000	elmadpw	2020-01-28 18:18:16.0000000	elmadpw	2020-01-28 17:00:00.0000000	Jason Cruz	2960	GndInset	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NULL	57.00000000	63.00000000	75.00000000	Yes	0.465185	16.00	1
519	2020-01-28 18:48:42.0000000	elmadpw	2020-01-28 18:48:42.0000000	elmadpw	2020-01-28 17:00:00.0000000	Jason Cruz	2961	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	47.00000000	64.00000000	67.00000000	Yes	0.116296	4.48	1
520	2020-01-28 19:42:02.0000000	elmadpw	2020-01-28 19:42:02.0000000	elmadpw	2020-01-28 17:00:00.0000000	Jason Cruz	2846	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	44.00000000	44.00000000	57.00000000	Yes	0.503950	22.81	1
521	2020-01-29 15:35:15.0000000	elmadpw	2020-01-29 15:35:15.0000000	elmadpw	2020-01-29 17:00:00.0000000	Jason Cruz	3556	NULL	CT	ConcBlk	Poor	48.00000000	NULL	NULL	NULL	64.00000000	69.00000000	75.00000000	Yes	0.232592	8.00	1
522	2020-01-29 16:07:47.0000000	elmadpw	2020-01-29 16:07:47.0000000	elmadpw	2020-01-29 17:00:00.0000000	Jason Cruz	2848	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	73.00000000	81.00000000	95.00000000	Yes	0.542716	14.74	1
523	2020-01-29 16:37:32.0000000	elmadpw	2020-01-29 16:37:32.0000000	elmadpw	2020-01-29 17:00:00.0000000	Jason Cruz	2779	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	46.00000000	46.00000000	53.00000000	Yes	0.271358	13.21	1
524	2020-01-29 17:58:23.0000000	elmadpw	2020-01-29 17:58:23.0000000	elmadpw	2020-01-29 17:00:00.0000000	Cruz crochetiere	2776	NULL	CT	ConcBlk	Poor	48.00000000	NULL	12.00000000	N	48.00000000	48.00000000	58.00000000	Yes	0.387654	17.24	1
525	2020-01-31 16:05:08.0000000	elmadpw	2020-01-31 16:05:08.0000000	elmadpw	2020-01-31 17:00:00.0000000	Cruz Crochetiere	3095	NULL	CT	ConcBlk	Good	48.00000000	NULL	15.00000000	W	39.00000000	39.00000000	56.00000000	Yes	0.659012	30.36	1
526	2020-01-31 16:29:31.0000000	elmadpw	2020-01-31 16:29:31.0000000	elmadpw	2020-01-31 17:00:00.0000000	Cruz Crochetiere	3094	NULL	CT	ConcBlk	Good	48.00000000	15.00000000	15.00000000	S	57.00000000	60.00000000	67.00000000	Yes	0.271358	10.45	2
527	2020-01-31 18:06:56.0000000	elmadpw	2020-01-31 18:06:56.0000000	elmadpw	2020-01-31 17:00:00.0000000	Cruz crochetiere	3094	NULL	FlatTop	ConcBlk	Good	48.00000000	10.00000000	15.00000000	SE	50.00000000	51.00000000	58.00000000	Yes	0.271358	12.07	2
528	2020-01-31 20:19:42.0000000	elmadpw	2020-01-31 20:19:42.0000000	elmadpw	2020-01-31 17:00:00.0000000	Cruz crochetiere	383	NULL	Iron2by2	ConcBlk	Fair	NULL	NULL	12.00000000	E	40.00000000	44.00000000	74.00000000	Yes	0.000000	0.00	1
529	2020-02-05 18:19:52.0000000	elmadpw	2020-02-05 18:19:52.0000000	elmadpw	2020-02-05 17:00:00.0000000	Cruz crochetiere	3835	NULL	Iron2by2	ConcBlk	Poor	48.00000000	12.00000000	12.00000000	W	31.00000000	41.00000000	61.00000000	Yes	0.775308	32.79	1
530	2020-02-05 18:56:59.0000000	elmadpw	2020-02-05 18:56:59.0000000	elmadpw	2020-02-05 17:00:00.0000000	Cruz crochetiere	1401	NULL	CT	Precast	Good	48.00000000	18.00000000	18.00000000	S	81.00000000	81.00000000	110.0000000(	Yes	1.124197	26.36	1
531	2020-02-06 13:17:04.0000000	elmadpw	2020-02-06 13:17:04.0000000	elmadpw	2020-02-06 17:00:00.0000000	Cruz crochetiere	1402	NULL	CT	Precast	Good	48.00000000	18.00000000	18.00000000	S	61.00000000	70.00000000	97.00000000	Yes	1.046666	27.84	1
532	2020-02-06 13:52:20.0000000	elmadpw	2020-02-06 13:52:20.0000000	elmadpw	2020-02-06 17:00:00.0000000	Cruz crochetiere	1400	NULL	CT	Precast	Good	48.00000000	NULL	12.00000000	SW	70.00000000	70.00000000	109.00000000				
533	2020-02-06 15:18:30.0000000	elmadpw	2020-02-06 15:18:30.0000000	elmadpw	2020-02-06 17:00:00.0000000	Cruz crochetiere	231	NULL	Iron2by2	Precast	Good	48.00000000	NULL	12.00000000	SW	52.00000000	60.00000000	90.00000000	Yes	1.162962	33.33	1
534	2020-02-06 16:06:25.0000000	elmadpw	2020-02-06 16:06:25.0000000	elmadpw	2020-02-06 17:00:00.0000000	Cruz crochetiere	229	NULL	Iron2by2	Precast	Good	48.00000000	NULL	12.00000000	SW	57.00000000	65.00000000	103.0000000(	Yes	1.473086	36.89	1
535	2020-02-06 16:51:49.0000000	elmadpw	2020-02-06 16:51:49.0000000	elmadpw	2020-02-06 17:00:00.0000000	Cruz crochetiere	228	NULL	Iron2by2	Precast	Good	48.00000000	12.00000000	12.00000000	E	52.00000000	60.00000000	100.0000000(	Yes	1.550617	40.00	1
536	2020-02-06 19:20:46.0000000	elmadpw	2020-02-06 19:20:46.0000000	elmadpw	2020-02-06 17:00:00.0000000	Crochetiere	230	NULL	Iron2by2	Precast	Good	48.00000000	NULL	15.00000000	E	52.00000000	60.00000000	103.0000000(	Yes	1.666913	41.75	1
537	2020-02-10 14:57:00.0000000	elmadpw	2020-02-10 14:57:00.0000000	elmadpw	2020-02-07 05:00:00.0000000	Jason Cruz	1399	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NW	51.00000000	51.00000000	71.00000000	Yes	0.775308	28.17	2
538	2020-02-10 14:57:01.0000000	elmadpw	2020-02-10 14:57:01.0000000	elmadpw	2020-02-07 05:00:00.0000000	Jason Cruz	1405	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	S	50.00000000	50.00000000	68.00000000	Yes	0.697777	26.47	2
539	2020-02-10 14:57:02.0000000	elmadpw	2020-02-10 14:57:02.0000000	elmadpw	2020-02-07 05:00:00.0000000	Jason Cruz	1396	NULL	CT	ConcBlk	Poor	48.00000000	NULL	NULL	W	80.00000000	80.00000000	105.0000000(	Yes	0.969135	23.81	2
540	2020-02-10 15:04:46.0000000	elmadpw	2020-02-10 15:04:46.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	1404	NULL	CT	Precast	Good	48.00000000	12.00000000	12.00000000	N	71.00000000	71.00000000	94.00000000	Yes	0.891604	24.47	1
541	2020-02-10 15:05:46.0000000	elmadpw	2020-02-10 15:05:46.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	1405	NULL	CT	Precast	Good	48.00000000	NULL	12.00000000	E	42.00000000	42.00000000	67.00000000	Yes	0.969135	37.31	2
542	2020-02-10 15:07:59.0000000	elmadpw	2020-02-10 15:07:59.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	1399	NULL	CT	Precast	Good	48.00000000	NULL	12.00000000	E	51.00000000	51.00000000	82.00000000	Yes	1.201728	37.80	2
543	2020-02-10 15:09:29.0000000	elmadpw	2020-02-10 15:09:29.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	1398	NULL	MA	Precast	Good	48.00000000	18.00000000	21.00000000	NULL	50.00000000	50.00000000	54.00000000	Yes	0.155061	7.41	1
544	2020-02-10 15:11:10.0000000	elmadpw	2020-02-10 15:11:10.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz	1396	NULL	NULL	Precast	Good	48.00000000	NULL	12.00000000	S	78.00000000	78.00000000	101.0000000(	Yes	0.891604	22.77	2
545	2020-02-10 15:12:16.0000000	elmadpw	2020-02-10 15:12:16.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	1397	NULL	CT	Precast	Good	48.00000000	21.00000000	21.00000000	NE	90.00000000	90.00000000	105.0000000(	Yes	0.581481	14.29	1
546	2020-02-10 15:13:18.0000000	elmadpw	2020-02-10 15:13:18.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz	1394	NULL	NULL	NULL	Good	NULL	NULL	12.00000000	SE	57.00000000	57.00000000	69.00000000	Yes	0.000000	0.00	1
547	2020-02-10 15:15:01.0000000	elmadpw	2020-02-10 15:15:01.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz	1393	NULL	CT	Precast	Good	47.00000000	21.00000000	21.00000000	NULL	88.00000000	88.00000000	100.0000000(	Yes	0.446004	12.00	2
548	2020-02-10 15:16:51.0000000	elmadpw	2020-02-10 15:16:51.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	1393	NULL	CT	Precast	NULL	48.00000000	12.00000000	NULL	NULL	67.00000000	67.00000000	75.00000000	Yes	0.310123	10.67	2
549	2020-02-10 18:58:37.0000000	elmadpw	2020-03-10 11:25:11.0000000	EastLongmeadowGIS	2020-02-10 17:00:00.0000000	Cruz crochetiere	3836	NULL	Iron2by2	Precast	Good	48.00000000	NULL	12.00000000	S	58.00000000	53.00000000	110.0000000(	Yes	2.209629	51.82	1
550	2020-02-10 19:30:41.0000000	elmadpw	2020-02-10 19:30:41.0000000	elmadpw	2020-02-10 17:00:00.0000000	Cruz crochetiere	235	NULL	Iron2by2	Precast	Good	48.00000000	NULL	15.00000000	W	64.00000000	64.00000000	110.0000000(	Yes	1.783209	41.82	1
551	2020-02-12 13:34:53.0000000	elmadpw	2020-02-12 13:34:53.0000000	elmadpw	2020-02-12 17:00:00.0000000	Crochetiere	3314	NULL	NULL	NULL	Good	NULL	NULL	NULL	NULL	NULL	NULL	NULL	No	0.000000	0.00	1
552	2020-03-20 18:05:05.0000000	elmadpw	2020-03-20 18:05:05.0000000	elmadpw	2020-03-20 04:00:00.0000000	Joe C. Sergio F.	581	NULL	CT	ConcBlk	Fair	48.00000000	12.00000000	43.00000000	N	43.00000000	47.00000000	65.00000000	Yes	0.697777	27.69	2
553	2020-03-20 18:05:07.0000000	elmadpw	2020-03-20 18:05:07.0000000	elmadpw	2020-03-20 04:00:00.0000000	Joe C. Sergio F.	695	NULL	CT	ConcBlk	Fair	48.00000000	12.00000000	18.00000000	NW	38.00000000	40.00000000	63.00000000	Yes	0.891604	36.51	2
554	2020-03-20 18:05:08.0000000	elmadpw	2020-03-20 18:05:08.0000000	elmadpw	2020-03-20 04:00:00.0000000	Joe C. Sergio F.	557	NULL	CT	ConcBlk	Fair	48.00000000	12.00000000	84.00000000	S	55.00000000	60.00000000	76.00000000	Yes	0.620246	21.05	1
555	2020-03-20 18:05:09.0000000	elmadpw	2020-03-20 18:05:09.0000000	elmadpw	2020-03-20 04:00:00.0000000	Joe C. Sergio F.	554	NULL	CT	ConcBlk	Fair	48.00000000	18.00000000	18.00000000	E	60.00000000	62.00000000	81.00000000	Yes	0.736543	23.46	1
556	2020-03-20 18:05:10.0000000	elmadpw	2020-03-20 18:05:10.0000000	elmadpw	2020-03-20 04:00:00.0000000	Joe C. Sergio F.	3647	NULL	CT	ConcBlk	Fair	48.00000000	NULL	12.00000000	NE	46.00000000	60.00000000	70.00000000	Yes	0.387654	14.29	1
557	2020-03-20 18:05:11.0000000	elmadpw	2020-03-20 18:05:11.0000000	elmadpw	2020-03-20 04:00:00.0000000	Sergio, Joe c	556	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	SE	51.00000000	60.00000000	72.00000000	Yes	0.465185	16.67	1
558	2020-03-20 18:05:12.0000000	elmadpw	2020-03-20 18:05:12.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	553	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	70.00000000	76.00000000	Yes	0.232592	7.89	1
559	2020-03-20 18:05:13.0000000	elmadpw	2020-03-20 18:05:13.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	555	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	50.00000000	72.00000000	Yes	0.852839	30.56	1
560	2020-03-20 18:05:13.0000000	elmadpw	2020-03-20 18:05:13.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	562	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	56.00000000	78.00000000	Yes	0.852839	28.21	1
561	2020-03-20 18:05:14.0000000	elmadpw	2020-03-20 18:05:14.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	558	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	49.00000000	75.00000000	Yes	1.007901	34.67	1
562	2020-03-20 18:05:16.0000000	elmadpw	2020-03-20 18:05:16.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	564	NULL	CT	ConcBlk	Good	48.00000000	NULL	50.00000000	NULL	NULL	52.00000000	80.00000000	Yes	1.085432	35.00	1
563	2020-03-20 18:05:17.0000000	elmadpw	2020-03-20 18:05:17.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	545	NULL	CT	ConcBlk	Good	48.00000000	NULL	33.00000000	NULL	NULL	34.00000000	58.00000000	Yes	0.930370	41.38	1
564	2020-03-20 18:05:18.0000000	elmadpw	2020-03-20 18:05:18.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	546	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	55.00000000	70.00000000	Yes	0.581481	21.43	1
565	2020-03-20 18:05:19.0000000	elmadpw	2020-03-20 18:05:19.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	563	NULL	CT	ConcBlk	Good	48.00000000	NULL	61.00000000	NULL	NULL	80.00000000	90.00000000	Yes	0.387654	11.11	1
566	2020-03-20 18:05:20.0000000	elmadpw	2020-03-20 18:05:20.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	559	NULL	CT	ConcBlk	Poor	48.00000000	NULL	54.00000000	NULL	NULL	57.00000000	76.00000000	Yes	0.736543	25.00	1
567	2020-03-20 18:05:21.0000000	elmadpw	2020-03-20 18:05:21.0000000	elmadpw	2020-02-28 05:00:00.0000000	Luke and Henry	560	NULL	CT	ConcBlk	Good	48.00000000	60.00000000	64.00000000	NULL	NULL	74.00000000	86.00000000	Yes	0.465185	13.95	1
568	2020-03-20 18:05:22.0000000	elmadpw	2020-03-20 18:05:22.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	582	NULL	CT	NULL	Good	48.00000000	NULL	NULL	NULL	NULL	72.00000000	79.00000000	Yes	0.271358	8.86	2
569	2020-03-20 18:05:23.0000000	elmadpw	2020-03-20 18:05:23.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	586	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	92.00000000	95.00000000	Yes	0.116296	3.16	2
570	2020-03-20 18:05:24.0000000	elmadpw	2020-03-20 18:05:24.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	585	NULL	CT	ConcBlk	Fair	48.00000000	NULL	NULL	NULL	NULL	65.00000000	70.00000000	Yes	0.193827	7.14	2
571	2020-03-20 18:05:25.0000000	elmadpw	2020-03-20 18:05:25.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	583	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	95.00000000	100.0000000(	Yes	0.193827	5.00	2
572	2020-03-20 18:05:26.0000000	elmadpw	2020-03-20 18:05:26.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	584	NULL	CT	ConcBlk	Good	48.00000000	NULL	NULL	NULL	NULL	60.00000000	78.00000000	Yes	0.697777	23.08	2
573	2020-03-20 18:05:28.0000000	elmadpw	2020-03-20 18:05:28.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	587	NULL	CT	ConcBlk	Fair	48.00000000	NULL	NULL	NULL	NULL	88.00000000	98.00000000	Yes	0.387654	10.20	2
574	2020-03-20 18:05:29.0000000	elmadpw	2020-03-20 18:05:29.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	693	NULL	CT	NULL	Good	48.00000000	NULL	NULL	NULL	NULL	63.00000000	65.00000000	Yes	0.077530	3.08	2

OBJECTID	CreationDate	Creator	EditDate	Editor	inspect_date	inspector	CB_ID	Label	CBtype	BasinMaterial	BasinCond	SumpDim	InletDia	OutletDia	OutletLoc	DepthInvrt	DepthSed	TotDepth	Cleaned	SedimentRemoved_CuYds	PercentFull	InspectCount
575	2020-03-20 18:05:30.0000000	elmadpw	2020-03-20 18:05:30.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	694	NULL	CT	ConcBlk	Poor	48.00000000	NULL	NULL	NULL	NULL	45.00000000	60.00000000	Yes	0.581481	25.00	2
576	2020-03-20 18:05:32.0000000	elmadpw	2020-03-20 18:05:32.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	702	NULL	CT	ConcBlk	Good	48.00000000	NULL	30.00000000	NULL	NULL	12.00000000	70.00000000	Yes	2.248395	82.86	2
577	2020-03-20 18:05:33.0000000	elmadpw	2020-03-20 18:05:33.0000000	elmadpw	2020-02-27 05:00:00.0000000	Luke and Henry	701	NULL	CT	ConcBlk	Fair	48.00000000	NULL	NULL	NULL	56.00000000	3.00000000	77.00000000	Yes	2.868641	96.10	2
578	2020-06-08 11:48:57.0000000	elmadpw	2020-06-08 11:48:57.0000000	elmadpw	2020-06-08 16:00:00.0000000	Otto Sergio	3713	NULL	Iron2by2	ConcBlk	Good	48.00000000	12.00000000	12.00000000	NULL	60.00000000	10.00000000	80.00000000	Yes	2.713580	87.50	1
579	2020-06-08 12:14:38.0000000	elmadpw	2020-06-08 12:14:38.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner , Sergio	2605	NULL	Iron2by2	ConcBlk	Crumbling	48.00000000	NULL	12.00000000	NW	53.00000000	70.00000000	80.00000000	Yes	0.387654	12.50	12
580	2020-06-08 12:39:56.0000000	elmadpw	2020-06-08 12:39:56.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NW	64.00000000	68.00000000	85.00000000	Yes	0.659012	20.00	12
581	2020-06-08 12:54:47.0000000	elmadpw	2020-06-08 12:54:47.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	NW	57.00000000	61.00000000	70.00000000	Yes	0.348888	12.86	12
582	2020-06-08 14:02:25.0000000	elmadpw	2020-06-08 14:02:25.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner,Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	NW	72.00000000	70.00000000	90.00000000	Yes	0.775308	22.22	12
583	2020-06-08 14:24:58.0000000	elmadpw	2020-06-08 14:24:58.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	NW	68.00000000	67.00000000	85.00000000	Yes	0.697777	21.18	12
584	2020-06-08 14:54:04.0000000	elmadpw	2020-06-08 14:54:04.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	W	98.00000000	98.00000000	103.0000000(	Yes	0.193827	4.85	12
585	2020-06-08 15:04:41.0000000	elmadpw	2020-06-08 15:04:41.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	W	98.00000000	100.00000000	103.0000000(	Yes	0.116296	2.91	12
586	2020-06-08 15:07:19.0000000	elmadpw	2020-06-08 15:07:19.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	18.00000000	18.00000000	SW	57.00000000	68.00000000	68.00000000	Yes	0.000000	0.00	12
587	2020-06-08 17:11:22.0000000	elmadpw	2020-06-08 17:11:22.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	ConcBlk	Good	48.00000000	18.00000000	18.00000000	W	43.00000000	46.00000000	72.00000000	Yes	1.007901	36.11	12
588	2020-06-08 17:29:44.0000000	elmadpw	2020-06-08 17:29:44.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	NULL	Good	48.00000000	12.00000000	12.00000000	SE	44.00000000	48.00000000	64.00000000	Yes	0.620246	25.00	12
589	2020-06-08 17:58:01.0000000	elmadpw	2020-06-08 17:58:01.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner,Sergio	2605	NULL	CT	Brick	Good	48.00000000	NULL	12.00000000	NW	40.00000000	52.00000000	62.00000000	Yes	0.387654	16.13	12
590	2020-06-08 18:44:40.0000000	elmadpw	2020-06-08 18:44:40.0000000	elmadpw	2020-06-08 16:00:00.0000000	Tanner, Sergio	2605	NULL	CT	Brick	Good	48.00000000	NULL	12.00000000	W	60.00000000	64.00000000	78.00000000	Yes	0.542716	17.95	12
591	2020-06-10 11:46:51.0000000	elmadpw	2020-06-10 11:46:51.0000000	elmadpw	2020-06-10 16:00:00.0000000	Tanner, Sergio	3035	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	SW	38.00000000	33.00000000	52.00000000	Yes	0.736543	36.54	4
592	2020-06-10 12:00:39.0000000	elmadpw	2020-06-10 12:00:39.0000000	elmadpw	2020-06-10 16:00:00.0000000	Tanner, Sergio	3035	NULL	CT	ConcBlk	Good	NULL	NULL	12.00000000	E	32.00000000	45.00000000	54.00000000	Yes	0.000000	0.00	4
593	2020-06-10 12:16:57.0000000	elmadpw	2020-06-10 12:16:57.0000000	elmadpw	2020-06-10 16:00:00.0000000	Tanner, Sergio	3035	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	E	2432.00000000	32.00000000	39.00000000	Yes	0.271358	17.95	4
594	2020-06-10 12:42:21.0000000	elmadpw	2020-06-10 12:42:21.0000000	elmadpw	2020-06-10 16:00:00.0000000	Tanner, Sergio	3035	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	E	25.00000000	31.00000000	50.00000000	Yes	0.736543	38.00	4
595	2020-06-10 13:50:15.0000000	elmadpw	2020-06-10 13:50:15.0000000	elmadpw	2020-06-10 04:00:00.0000000	tanner,Sergio	3056	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NULL	24.00000000	27.00000000	37.00000000	Yes	0.387654	27.03	2
596	2020-06-10 13:50:16.0000000	elmadpw	2020-06-10 13:50:16.0000000	elmadpw	2020-04-30 04:00:00.0000000	Luke and Henry	713	NULL	CT	ConcBlk	Poor	24.00000000	NULL	10.00000000	NULL	36.00000000	44.00000000	72.00000000	Yes	0.271358	38.89	1
597	2020-06-10 13:50:18.0000000	elmadpw	2020-06-10 13:50:18.0000000	elmadpw	2020-04-30 04:00:00.0000000	Luke and Henry	3635	NULL	CT	ConcBlk	Good	24.00000000	8.00000000	8.00000000	NW	53.00000000	90.00000000	103.0000000(	Yes	0.125987	12.62	1
598	2020-06-10 13:50:19.0000000	elmadpw	2020-06-10 13:50:19.0000000	elmadpw	2020-04-30 04:00:00.0000000	Luke and Henry	718	NULL	CT	ConcBlk	Good	24.00000000	NULL	8.00000000	NULL	NULL	53.00000000	72.00000000	Yes	0.184135	26.39	1
599	2020-06-10 13:50:21.0000000	elmadpw	2020-06-10 13:50:21.0000000	elmadpw	2020-04-30 04:00:00.0000000	Luke and Henry	712	NULL	CT	ConcBlk	Good	24.00000000	8.00000000	8.00000000	NULL	60.00000000	100.00000000	116.0000000(	Yes	0.155061	13.79	1
600	2020-06-10 13:50:21.0000000	elmadpw	2020-06-10 13:50:21.0000000	elmadpw	2020-04-30 04:00:00.0000000	Luke and Henry	711	NULL	CT	Brick	Good	24.00000000	NULL	NULL	NULL	6050.00000000	50.00000000	72.00000000	Yes	0.213209	30.56	1
601	2020-06-10 13:50:22.0000000	elmadpw	2020-06-10 13:50:22.0000000	elmadpw	2020-04-30 04:00:00.0000000	Luke and Henry	705	NULL	CT	ConcBlk	Good	24.00000000	8.00000000	8.00000000	NULL	NULL	72.00000000	84.00000000	Yes	0.116296	14.29	1
602	2020-06-10 14:06:55.0000000	elmadpw	2020-06-10 14:06:55.0000000	elmadpw	2020-06-10 04:00:00.0000000	tanner, Sergio	3056	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	SE	77.00000000	78.00000000	87.00000000	Yes	0.348888	10.34	2
603	2020-06-10 14:22:13.0000000	elmadpw	2020-06-10 14:22:13.0000000	elmadpw	2020-06-10 04:00:00.0000000	Tanner, Sergio	3069	NULL	FlatTop	ConcBlk	Good	48.00000000	24.00000000	24.00000000	W	80.00000000	89.00000000	96.00000000	Yes	0.271358	7.29	1
604	2020-06-11 13:51:25.0000000	elmadpw	2020-06-11 13:51:25.0000000	elmadpw	2020-06-11 04:00:00.0000000	Tanner, Sergio	1961	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	W	76.00000000	81.00000000	105.0000000(	Yes	0.930370	22.86	1
605	2020-06-11 13:51:27.0000000	elmadpw	2020-06-11 13:51:27.0000000	elmadpw	2020-06-11 04:00:00.0000000	Tanner, Sergio	2857	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	W	36.00000000	32.00000000	54.00000000	Yes	0.852839	40.74	1
606	2020-06-11 14:27:19.0000000	elmadpw	2020-06-11 14:27:19.0000000	elmadpw	2020-06-11 04:00:00.0000000	Tanner,Sergio	1937	NULL	CT	NULL	Good	48.00000000	NULL	18.00000000	W	60.00000000	81.00000000	92.00000000	Yes	0.426419	11.96	1
607	2020-06-11 15:11:13.0000000	elmadpw	2020-06-11 15:11:13.0000000	elmadpw	2020-06-11 04:00:00.0000000	tanner, Sergio	1952	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	W	61.00000000	64.00000000	85.00000000	Yes	0.814074	24.71	2
608	2020-06-15 11:13:04.0000000	elmadpw	2020-06-15 11:13:04.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	3195	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	51.00000000	53.00000000	75.00000000	Yes	0.852839	29.33	2
609	2020-06-15 11:13:05.0000000	elmadpw	2020-06-15 11:13:05.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	3097	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	NW	85.00000000	91.00000000	93.00000000	Yes	0.077530	2.15	3
610	2020-06-15 11:13:05.0000000	elmadpw	2020-06-15 11:13:05.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	3097	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	SW	84.00000000	86.00000000	90.00000000	Yes	0.155061	4.44	3
611	2020-06-15 11:13:06.0000000	elmadpw	2020-06-15 11:13:06.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	3096	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	S	43.00000000	46.00000000	53.00000000	Yes	0.271358	13.21	2
612	2020-06-15 11:13:06.0000000	elmadpw	2020-06-15 11:13:06.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	1953	NULL	NULL	ConcBlk	Good	48.00000000	18.00000000	18.00000000	S	64.00000000	64.00000000	95.00000000	Yes	1.201728	32.63	1
613	2020-06-15 11:13:07.0000000	elmadpw	2020-06-15 11:13:07.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	3224	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	E	38.00000000	43.00000000	64.00000000	Yes	0.814074	32.81	1
614	2020-06-15 11:13:07.0000000	elmadpw	2020-06-15 11:13:07.0000000	elmadpw	2020-06-12 04:00:00.0000000	tanner, Sergio	1951	NULL	CT	ConcBlk	Good	NULL	12.00000000	NULL	S	50.00000000	53.00000000	64.00000000	Yes	0.000000	0.00	1
615	2020-06-15 11:13:07.0000000	elmadpw	2020-06-15 11:13:07.0000000	elmadpw	2020-06-11 04:00:00.0000000	tanner, Sergio	1936	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	E	78.00000000	81.00000000	101.0000000(	Yes	0.775308	19.80	2
616	2020-06-15 11:13:08.0000000	elmadpw	2020-06-15 11:13:08.0000000	elmadpw	2020-06-11 04:00:00.0000000	tanner, Sergio	1936	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	W	64.00000000	80.00000000	91.00000000	Yes	0.426419	12.09	2
617	2020-06-15 11:13:08.0000000	elmadpw	2020-06-15 11:13:08.0000000	elmadpw	2020-06-11 04:00:00.0000000	tanner, Sergio	1902	NULL	CT	ConcBlk	Good	48.00000000	18.00000000	24.00000000	S	108.00000000	113.00000000	120.0000000(	Yes	0.271358	5.83	2
618	2020-06-15 11:13:09.0000000	elmadpw	2020-06-15 11:13:09.0000000	elmadpw	2020-06-11 04:00:00.0000000	tanner, Sergio	1902	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	W	62.00000000	66.00000000	86.00000000	Yes	0.775308	23.26	2
619	2020-06-15 11:13:09.0000000	elmadpw	2020-06-15 11:13:09.0000000	elmadpw	2020-06-11 04:00:00.0000000	tanner, Sergio	1952	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	SW	45.00000000	49.00000000	70.00000000	Yes	0.814074	30.00	2
620	2020-06-15 12:17:29.0000000	elmadpw	2020-06-15 12:17:29.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner ,Sergio	3558	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	53.00000000	54.00000000	78.00000000	Yes	0.930370	30.77	2
621	2020-06-15 12:17:30.0000000	elmadpw	2020-06-15 12:17:30.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner,Sergio	3197	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	40.00000000	48.00000000	69.00000000	Yes	0.814074	30.43	2
622	2020-06-15 19:04:41.0000000	elmadpw	2020-06-15 19:04:41.0000000	elmadpw	2020-06-15 16:00:00.0000000	Tanner, Sergio	2157	NULL	CT	ConcBlk	Good	48.00000000	10.00000000	NULL	NULL	44.00000000	24.00000000	67.00000000	Yes	1.666913	64.18	1
623	2020-06-16 11:34:47.0000000	elmadpw	2020-06-16 11:34:47.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner,Sergio	2251	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NE	40.00000000	41.00000000	53.00000000	Yes	0.465185	22.64	1
624	2020-06-16 11:34:49.0000000	elmadpw	2020-06-16 11:34:49.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner,Sergio	2250	NULL	CT	ConcBlk	Good	48.00000000	NULL	18.00000000	N	79.00000000	98.00000000	79.00000000	Yes	0.000000	0.00	1
625	2020-06-16 11:34:49.0000000	elmadpw	2020-06-16 11:34:49.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	2248	NULL	FlatTop	ConcBlk	Good	48.00000000	8.00000000	12.00000000	N	73.00000000	76.00000000	98.00000000	Yes	0.852839	22.45	1
626	2020-06-16 11:34:50.0000000	elmadpw	2020-06-16 11:34:50.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	2372	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	S	88.00000000	91.00000000	94.00000000	Yes	0.116296	3.19	1
627	2020-06-16 11:34:50.0000000	elmadpw	2020-06-16 11:34:50.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	2381	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	30.00000000	S	47.00000000	52.00000000	55.00000000	Yes	0.116296	5.45	1
628	2020-06-16 11:34:51.0000000	elmadpw	2020-06-16 11:34:51.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	2284	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	NULL	35.00000000	49.00000000	63.00000000	Yes	0.542716	22.22	1
629	2020-06-16 11:34:52.0000000	elmadpw	2020-06-16 11:34:52.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	2287	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	49.00000000	51.00000000	61.00000000	Yes	0.387654	16.39	1
630	2020-06-16 11:34:52.0000000	elmadpw	2020-06-16 11:34:52.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	2292	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	47.00000000	50.00000000	67.00000000	Yes	0.659012	25.37	2
631	2020-06-16 11:34:53.0000000	elmadpw	2020-06-16 11:34:53.0000000	elmadpw	2020-06-15 04:00:00.0000000	tanner, Sergio	3200	NULL	CT	ConcBlk	Good	48.00000000	NULL	12.00000000	N	34.00000000	36.00000000	53.00000000	Yes	0.659012	32.08	2
632	2020-06-16 14:58:28.0000000	elmadpw	2020-06-16 14:58:28.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner,Sergio	2137	NULL	CT	ConcBlk	Good	48.00000000	18.00000000	18.00000000	SW	54.00000000	53.00000000	72.00000000	Yes	0.736543	26.39	1
633	2020-06-16 14:58:39.0000000	elmadpw	2020-06-16 14:58:39.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner,Sergio	3312	NULL	MA	ConcBlk	Fair	48.00000000	12.00000000	12.00000000	E	32.00000000	40.00000000	58.00000000	Yes	0.697777	31.03	1
634	2020-06-16 14:58:41.0000000	elmadpw	2020-06-16 14:58:41.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner,Sergio	3316	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	NE	54.00000000	58.00000000	59.00000000	Yes	0.038765	1.69	1
635	2020-06-16 15:08:56.0000000	elmadpw	2020-06-16 15:08:56.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner,Sergio	3309	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	W	80.00000000	84.00000000	90.00000000	Yes	0.232592	6.67	1
636	2020-06-16 17:10:53.0000000	elmadpw	2020-06-16 17:10:53.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner,Sergio	1765	NULL	CT	ConcBlk	Good	48.00000000	24.00000000	24.00000000	NE	87.00000000	87.00000000	111.0000000(	Yes	0.930370	21.62	1
637	2020-06-16 17:28:01.0000000	elmadpw	2020-06-16 17:28:01.0000000	elmadpw	2020-06-16 04:00:00.0000000	tanner, Sergio	1764	NULL	CT	ConcBlk	Good	48.00000000	18.00000000	18.00000000	SW	76.00000000	94.00000000	103.0000000(	Yes	0.348888	8.74	1
638	2020-06-18 15:02:00.0000000	elmadpw	2020-06-18 15:02:00.0000000	elmadpw	2020-06-18 16:00:00.0000000	Tanner,Sergio	1171	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	NULL	NE	41.00000000	50.00000000	64.00000000	Yes	0.542716	21.88	1
639	2020-06-18 15:05:06.0000000	elmadpw	2020-06-18 15:05:06.0000000	elmadpw	2020-06-18 16:00:00.0000000	Otto,Sergio	1167	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	E	55.00000000	58.00000000	74.00000000	Yes	0.620246	21.62	1
640	2020-06-18 15:10:23.0000000	elmadpw	2020-06-18 15:10:23.0000000	elmadpw	2020-06-18 16:00:00.0000000	Savio	552	NULL	CT	ConcBlk	Fair	48.00000000	12.00000000	12.00000000	S	40.00000000	40.00000000	66.00000000	Yes	1.007901	39.39	1
641	2020-06-18 15:11:50.0000000	elmadpw	2020-06-18 15:11:50.0000000	elmadpw	2020-06-18 16:00:00.0000000	Savio	561	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	SE	48.00000000	54.00000000	72.00000000	Yes	0.697777	25.00	1
642	2020-06-18 15:14:34.0000000	elmadpw	2020-06-18 15:14:34.0000000	elmadpw	2020-06-18 16:00:00.0000000	Savio	550	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	SE	90.00000000	100.00000000	105.0000000(	Yes	0.193827	4.76	1
643	2020-06-18 15:16:52.0000000	elmadpw	2020-06-18 16:23:51.0000000	elmadpw	2020-06-18 16:00:00.0000000	Savio	548	NULL	CT	ConcBlk	Good	48.00000000	12.00000000	12.00000000	W	75.00000000	80.00000000	98.00000000	Yes	0.697777	18.37	1
Sump drain	Yes	1.511851		35.779800	1																	

Memorandum: Town of East Longmeadow Catchment Investigation Procedures

Town of East Longmeadow Catchment Investigation Procedures

TO: Town of East Longmeadow Stormwater Management Program Files

DATE: December 2019

Background

Part 2.3.4.8 of the 2016 Small MS4 General Permit requires the Town of East Longmeadow to develop a systematic procedure to investigate each catchment associated with an outfall or interconnection within the Town's MS4. *All* catchments must be investigated during dry weather conditions[1]. Only catchments that have a higher potential for illicit discharges based on maps, historic plans and records, and other sources of data (termed "System Vulnerability Factors" in the 2016 Small MS4 General Permit) must undergo a wet weather investigation process. The source of any illicit discharge identified during dry or wet weather must be isolated, confirmed, and removed.

The procedures presented in this memorandum were developed to address the 2016 Small MS4 General Permit requirements and describe dry and wet weather catchment investigation methodologies to isolate and confirm sources of illicit discharges. These procedures can be modified as needed by the Town to reflect local needs, staffing, and/or changes to the catchment investigation program going forward.

The Town of East Longmeadow developed a preliminary Catchment Investigations procedure described in Section 7 of the Illicit Discharge Detection and Elimination (IDDE) Plan included in the Stormwater Management Program (SWMP) completed in June of 2019. This memorandum is intended to update and expand upon the catchment investigations section of the IDDE Plan as required by the 2016 Small MS4 General Permit.

Identification of System Vulnerability Factors

Per part 2.3.4.8.c.i of the 2016 Small MS4 General Permit, the presence or absence of specific System Vulnerability Factors (SVFs) in East Longmeadow must be documented. SVFs required to be assessed include:

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages
- Common or twin-invert manholes serving storm and sanitary sewer alignments
- Common trench construction serving both storm and sanitary sewer alignments;
- Crossings of storm and sanitary sewer alignments where the sanitary system is shallower than the storm drain system
- Sanitary sewer alignments known or suspected to have been constructed with an underdrain system
- Inadequate sanitary sewer level of service resulting in regular surcharging, customer back-ups, or frequent customer complaints
- Areas formerly served by combined sewer systems

[1] Dry weather screening and sampling shall proceed only when no more than 0.1 inches of rainfall has occurred in the previous 24-hour period and no significant snow melt is occurring.

- Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.

EPA additionally recommends assessment of the presence or absence of the following SVFs:

- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs
- Any sanitary sewer and storm drain infrastructure greater than 40 years old
- Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance)
- History of multiple Board of Health actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance)

A desktop screening inventory was completed in GIS, with input from Town staff to identify the presence or absence of SVFs in outfall catchments. The full SVF inventory is included as Table 7-1. Outfall Catchment SVF Inventory in Section 7.1 of the Town's IDDE Plan.

Where one or more of these SVFs are present, the Town must sample and inspect the catchment area during wet weather conditions to determine whether wet weather-induced high flows in sanitary sewers or high groundwater in areas served by septic systems result in the discharge of sanitary flow to the MS4. The inventory assessed the presence or absence of both the required and recommended SVFs, as summarized in the table below.

SVF	Present?	Source
History of Sanitary Sewer Overflow (SSO) events	Yes	Town staff, Infiltration/Inflow Status Report for East Longmeadow Wastewater Collection System, Tighe & Bond, December 2017
Common or twin-invert manholes serving storm and sanitary sewer	No	Town staff, record drawings
Common trench construction serving both storm and sanitary sewer	No	Town staff, record drawings
Sewer crossings where the sanitary sewer is above the storm drain	No	Town staff, record drawings
Sanitary sewer alignments known or suspected to have been constructed with an underdrain system	No	Town staff, record drawings
Inadequate sanitary sewer level of service	No	Town staff
Areas formerly served by combined sewer systems	No	East Longmeadow has separate sewer and drainage systems
Sanitary sewer infrastructure defects	No	Town staff, Wastewater Collection System Operations & Maintenance Plan, Tighe & Bond, September 2019
SSO potential in the event of system failures	Yes	Town staff, Infiltration/Inflow Status Report for East Longmeadow Wastewater Collection System, Tighe & Bond, December 2017
Sanitary and storm drain infrastructure > 40 years old	Yes	Town staff, Wastewater Collection System Operations & Maintenance Plan, Tighe & Bond, September 2019

SVF	Present?	Source
Widespread code-required septic system upgrades indicative of poor soils or water table separation	No	Town staff – Board of Health records do not indicate widespread upgrades
History of Board of Health actions addressing widespread septic system failures	No	Town staff – Board of Health records do not indicate widespread failures

Manhole Inspection Methodology

Identification of Key Junction Manholes

The Town shall systematically and progressively observe, sample, and evaluate all key junction manholes to locate evidence of illicit discharges. A **junction manhole** is defined as a manhole or manhole structure with two or more inlets accepting flow from two or more MS4 alignments. **Key junction manholes** are defined as junction manholes that can represent one or more junction manholes without compromising adequate implementation of the illicit discharge program.

The following methodology is anticipated to be used to identify East Longmeadow's key junction manholes for each catchment using the Town's existing stormwater GIS mapping:

1. Identify junction manhole(s)
    a. Manholes that have at least two inlets
    b. Do not include inlets from catch basins unless the catch basins are in line
2. Identify key junction manhole(s)
    a. Based on upstream catchment areas, amount of drainage represented by a junction manhole, and implementation of the IDDE Program
    b. Assign primary and secondary key junction manholes if applicable – depending on the size of the catchment, there could be multiple junction and key junction manholes

The figures below demonstrate examples of identifying junction and key junction manholes for different drainage alignments.

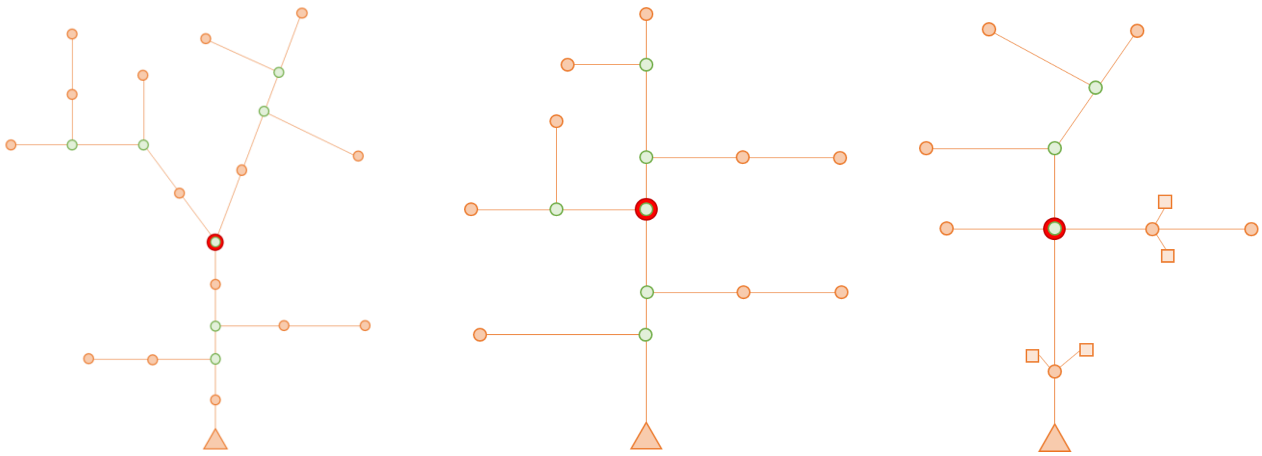

Figure 1. Examples of identification of junction and key junction manholes (adapted from the Center for Watershed Protection's *IDDE Guidance Manual*, Chapter 13: Tracking Discharges to a Source).

This analysis will be completed using East Longmeadow's current stormwater GIS mapping and the initial catchment delineations. For catchments that have insufficient connectivity or inaccurate mapping or flow direction, identification of key junction manholes cannot occur until after the mapping is refined as part of Phase I and Phase II mapping improvements and before completing catchment investigations. Town staff and/or the Town's stormwater consultant should use the best professional judgement during investigations to determine whether additional key junction manholes should be identified and screened in the field and/or to update the Town's GIS mapping to reflect actual conditions.

If a catchment does not include a junction manhole, the dry weather screening completed at the catchment's outfall shall meet the manhole inspection requirement. If the results of the dry weather screening at the outfall indicated the potential presence of an illicit discharge, the catchment shall be further investigated until the source is identified. If the results of the dry weather screening indicated there was no flow and no evidence of illicit discharges at the outfall, and if there is no SVF for the catchment, the catchment is considered complete.

Dry Weather Investigations

All catchments must be investigated during dry weather conditions, even when no evidence of an illicit discharge is observed at the outfall. The following describes a systematic and progressive method to observe, sample, and evaluate drainage manholes during dry weather to determine the approximate location of a suspected illicit discharge or SSO.

During dry weather, key junction manholes shall be opened and inspected for visual and olfactory evidence of illicit connections. The Town shall investigate each key junction manhole within the MS4, even if no evidence of an illicit discharge is present at the outfall. If a catchment does not include a key junction manhole, investigations shall take place at a junction manhole.

The Town will begin at the most downstream key junction manhole (nearest to the outfall) and work upstream. The Town shall open key junction manholes and inspect them for visual and olfactory evidence of illicit connections.

Inspection of key junction manholes will proceed as follows:

1. Manholes will be opened and inspected for visual and olfactory evidence of illicit connections. A sample field inspection form is attached.
2. If flow is observed, a sample will be collected and analyzed at a minimum for ammonia, chlorine, and surfactants. Field kits can be used for these analyses. Additional indicator sampling may assist in determining potential sources (e.g., bacteria for sanitary flows).
3. Where sampling results or visual or olfactory evidence indicate potential illicit discharges or SSOs, the area draining to the junction manhole will be flagged for further upstream manhole investigation and/or isolation and confirmation of sources.
4. Subsequent key junction manhole inspections will proceed until the location of suspected illicit discharges or SSOs can be isolated to a pipe segment between two manholes.
5. If no evidence of an illicit discharge is found, catchment investigations will be considered complete upon completion of key junction manhole sampling.

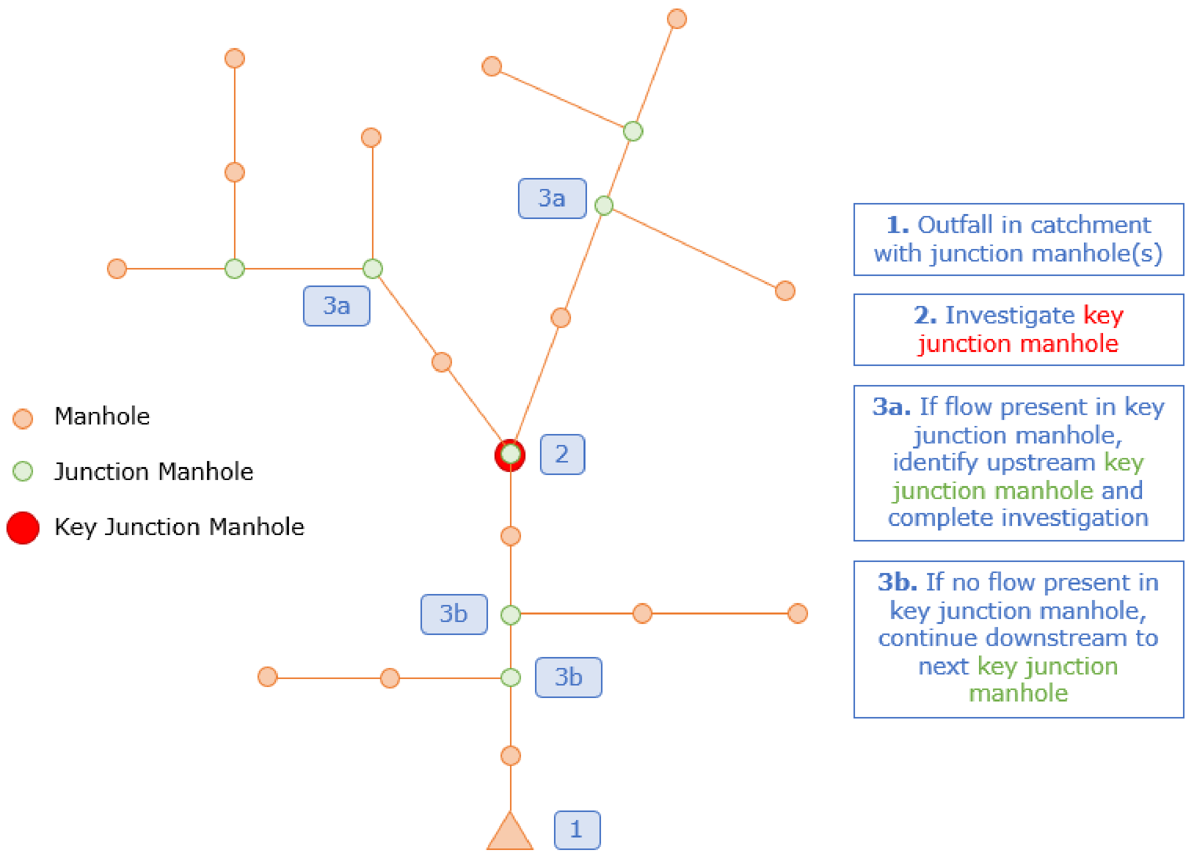

Figure 2. Example procedure for isolating illicit discharge between manholes (adapted from the Center for Watershed Protection's *IDDE Guidance Manual*, Chapter 13: Tracking Discharges to a Source).

Please refer to the attached Dry Weather Manhole Inspection and Sampling Methodology Procedure and Dry Weather Manhole Sampling Collection Field Sheet for East Longmeadow for additional details.

Wet Weather Investigations

When one of more of the SVFs listed in Table 1 are present in a drainage catchment area, the Town must sample and inspect the associated outfall during wet weather conditions to determine whether wet weather-induced high flows in sanitary sewers or high groundwater in areas served by septic systems result in the discharge of sanitary sewer flow to the MS4.

Investigations will be conducted during wet weather for catchments where one or more SVFs have been identified, per Section 2.3.4.8.c.ii.2 of the 2016 Small MS4 General Permit. The schedule to complete catchment investigations depends on the catchment priority ranking as updated after dry weather screening; however, this sampling must be completed before the catchment investigation is marked as complete. The EPA strongly recommends sampling during the spring (March through June) when groundwater levels are relatively high.

To complete wet weather sampling, the Town will follow the attached Wet Weather Outfall Sampling Procedure. The Town shall inspect and sample under wet weather conditions to the extent necessary to determine whether wet weather-induced high flows in sanitary sewers or high groundwater in areas served by septic systems result in discharges of sanitary flows to the MS4.

The 2016 Small MS4 General Permit does not specify wet weather catchment investigation procedures; however, it does require all illicit discharges to be isolated, confirmed, and removed. Investigations of catchments to identify discharges of wastewater to the MS4 can be tailored to the specific catchment, and may consist of:

- Additional visual and olfactory field observations
- Additional review of documents and reports to complete a more detailed evaluation of SVFs for the catchment (e.g., records related to infiltration/inflow programs, field inspection reports, sewer and drainage design or construction plans, institutional knowledge of historic sanitary issues, etc.)
- Additional wet weather sampling at the outfall
- Wet weather manhole inspections and sampling
- Catchment-wide investigation using CCTV/video inspection, smoke testing, and/or flooded dye testing
- Investigation of sewer collection system for evidence of surcharging or SSOs

Where water quality screening, sampling results, and/or visual and olfactory observations indicate a potential illicit discharge, the upstream area will be flagged for additional investigation and/or isolation and confirmation of sources. Refer to the attached Wet Weather Outfall Sampling Procedure and Wet Weather Sample Collection Field Sheet for additional information.

All data collected as part of the dry and wet weather investigations shall be recorded and reported in each annual report.

Procedures to Isolate and Confirm Sources of Illicit Discharges

Once the source of an illicit discharge is approximated between two manholes, more detailed investigation techniques will be used to isolate and confirm the source of the illicit discharge. If an illicit discharge is found in a catchment and investigations to isolate and confirm the source begin, catchment investigations occurring downstream should be stopped. Once the source is confirmed and removed, downstream catchment investigations can be resumed as needed. Public notification is an important aspect of a detailed source investigation program. Prior to smoke testing, dye testing, or TV inspections, the DPW will notify property owners in the affected area.

Section 7.4 of the Town's IDDE Plan, *Source Isolation and Confirmation*, describes methods that may be used in isolating and confirming the source of illicit discharges, including sandbagging, smoke testing, dye testing, video inspections, and optical brightener monitoring.

Section 9 of the Town's IDDE Plan, *Removal and Confirmation*, and Appendix F, *Statement of IDDE Program Responsibilities*, include processes that can be used for addressing and removing illicit discharges once they have been isolated and confirmed, as well as confirmatory screening once they have been removed.

Schedule

Catchment investigations must be completed in accordance with the schedule in the Permit, as summarized below:

- Investigations of catchments associated with Problem Outfalls shall begin in Permit Year 2 (i.e., prior to June 30, 2020) and be completed by the end of Permit Year 7 (i.e., June 30, 2025) – there are no Problem Outfalls currently identified in Town.
- Investigations of catchments associated with High and Low Priority Outfalls shall follow the completion of dry weather screening and re-ranking of outfalls and be completed by the end of Permit Year 10 (i.e., June 30, 2028).
- Where information gathered on an outfall/interconnection during dry weather screening identifies a likely sewer input, investigations of the associated catchment shall be completed by the end of Permit Year 7 (i.e., June 30, 2025).

Attachments

Attachment 1A - Dry Weather Manhole Inspection and Sampling Methodology

Attachment 1B - Dry Weather Manhole Sample Collection Field Sheet

Attachment 2A - Wet Weather Outfall Sampling Procedure

Attachment 2B - Wet Weather Outfall Sample Collection Field Sheet

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Dry Weather Manhole Inspection and Sampling Methodology

The following document establishes procedures for use of field kits and field data collection for dry weather sampling of manholes in the Town of East Longmeadow, MA as part of the Catchment Investigation Procedures developed in accordance with section 2.3.4.8.b. of the EPA NPDES General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (General Permit).

1) Field work shall proceed only under dry weather conditions (when no more than 0.1 inches of rainfall has occurred in the previous 24-hour period). Document the source used to determine dry weather conditions (e.g., www.wunderground.com, www.cocorahs.org) on the attached Dry Weather Sampling Field Sheet.
2) Notify the Town of East Longmeadow of sampling schedule prior to going into the field:
    a. Tom Christensen, DPW Deputy Superintendent: (413) 525-5400, ext. 1203 or tom.christensen@eastlongmeadowma.gov
    b. East Longmeadow Police Department: (413) 525-5440
3) Locate the catchment's key junction manhole[1] (nearest to outfall) and protect the area using traffic cones or a Town vehicle with lights.
4) Open the manhole and inspect it for visual evidence (e.g., waste, toilet paper, gray bacterial growth, or the presence of sanitary products) and olfactory evidence of illicit discharge/connections.
5) If dry weather flow is present, complete in-situ screening of flow from pipe inlet(s) using test kits.
    a. Using a sampling bottle or cup, collect the flow with care to not disturb sediment materials or collect surface debris/scum as best possible. Use sampling pole if needed to safely reach the flow.
    b. The collected water will be poured into **surfactants** test tube, **chlorine** sample cell, and the remainder will be tested for **ammonia** with test strips. Follow the manufacturer instructions for all test kit procedures. All waste from the field test kits should be retained and disposed of according to manufacturer instructions.
6) If dry weather flow is present but there is not enough flow to sample or if dry weather flow is not present but there is visual or olfactory evidence of an illicit discharge, complete one of the following:
    a. Dam the manhole and return within 24 hours to sample the discharge that has built up behind the dam;
    b. Complete an inspection at the next upstream structure to isolate the source; or
    c. Return to and reinspect the manhole within one week and sample if flow is then present.
7) If the manhole is submerged due to downstream water levels or clogged pipes, or is otherwise inaccessible, proceed to the next upstream junction manhole to complete the inspection and screening. Notify the DPW of any maintenance issues requiring attention.

[1] Key junction/junction manholes can also be catch basins. For the purpose of this Methodology, "manhole" includes both drainage structures.

8) Threshold Levels: In-situ readings will be compared to field thresholds as follows:

Parameter	Threshold Level	Source
Surfactants	≥ 0.25 mg/L	EPA New England Bacterial Source Tracking Protocol
Ammonia	≥ 0.5 mg/L	EPA New England Bacterial Source Tracking Protocol
Chlorine	≥ 0.02 mg/L	EPA 2016 General Permit

9) Record Results: Fill in all form fields for sampling data, threshold exceedances, and visual/olfactory observations.

10) If the in-situ readings, visual evidence, or olfactory evidence indicate an illicit discharge, continue upstream to the next key junction manhole and repeat the inspection and screening process. Manhole investigations will proceed at key junction and junction manholes until the location of the suspected illicit discharge or SSO can be isolated to a pipe segment between two manholes.

11) If dry weather flow is not present and there is no visual or olfactory evidence of illicit discharge at all key junction manholes in the catchment, the catchment investigation is considered complete. All key junction manholes in a catchment must be screened in order for the catchment investigation to be considered complete.

12) Equipment/Items Needed

Field Equipment	Paperwork	Personal Gear
❑ Sampling pole/dipper/sampling cage	❑ Log book	❑ Steel-toed boots
❑ GPS receiver	❑ Field sheets	❑ Safety glasses
❑ Samsung Tablet	❑ Key junction manhole locations map	❑ Reflective safety vest
❑ First aid kit	❑ Field maps/sampling plan	❑ Insect repellent
❑ Surfactants test kit and glass container for liquid waste to be disposed of as hazardous waste	❑ Center for Watershed Protection, IDDE Guidance Manual, Chapter 13	❑ Sunscreen
❑ Ammonia test kit and glass container for ampules to be disposed of as hazardous waste		❑ Business cards
❑ Chlorine test kit and glass container for chloride kit liquid waste to be diluted and disposed of down sink		
❑ Flashlight or head lamp with batteries		
❑ Nitrile gloves		
❑ Tape measure		
❑ 1 liter bottle		
❑ Duct tape/zip ties		
❑ Sharpies/Pens/Pencils		
❑ Paper towels		

Field Equipment	Paperwork	Personal Gear
❑ Trash bag		
❑ Pry bar or pick		
❑ Small mallet or hammer		
❑ Utility knife		
❑ Safety cones		
❑ Hand sanitizer		

Town of East Longmeadow, MA

DRY WEATHER MANHOLE SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

CATCHMENT'S OUTFALL ID:	**MANHOLE ID:**	**MANHOLE LOCATION:**
TODAY'S DATE:	**TIME:**	
INVESTIGATORS:		
TEMPERATURE (°F):	**RAINFALL (IN.):** **LAST 72 HOURS:**	**LAST 24 HOURS:**

Section 2: Manhole Description

MAINTENANCE NEEDS	☐ Pipe blockage ☐ Structure damage/corrosion ☐ Yard Waste ☐ Pet Waste ☐ Other:
INVERTS SUBMERGED?	☐ No ☐ Partially ☐ Fully If yes, which pipe?
FLOW PRESENT?	☐ Yes ☐ No
FLOW DESCRIPTION (if present)	☐ Trickle ☐ Moderate ☐ Substantial
FLOW SOURCE (if present)	Description or sketch:
INTERMITTENT FLOW TRAP (E.G., SANDBAG) RECOMMENDED?	☐ Yes ☐ No

Section 3: Quantitative Characterization

FIELD DATA			
PARAMETER (THRESHOLD LEVEL)	**RESULT**	**UNIT**	**EQUIPMENT**
SURFACTANTS ($\geq$ 0.25 mg/L)		mg/L	MBAS Test Kit (CHEMetrics K-9400)
AMMONIA (NH_3) ($\geq$ 0.5 mg/L)		mg/L	Test Strips
CHLORINE ($\geq$ 0.02mg/L)		mg/L	Hach Pocket Colorimeter

Section 4: Physical Indicators in the Flow

INDICATOR	CHECK IF PRESENT	DESCRIPTION
ODOR	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Soap/laundry ☐ Sulfide ☐ Other:
FLOATABLES (DOES NOT INCLUDE TRASH)	☐	☐ Sewage (toilet paper, etc.) ☐ Suds/soap ☐ Gray bacterial growth ☐ Sanitary products ☐ Food ☐ Other:

Section 5: Data Collection

SAMPLE COLLECTED FOR LAB ANALYSIS?	☐ No ☐ Yes – E. coli

Section 6: Notes

Wet Weather Outfall Sampling Procedure

The following document establishes procedures for wet weather outfall sampling in the Town of East Longmeadow, MA as part of the Catchment Investigation Procedures developed in accordance with section 2.3.4.8.b. of the EPA NPDES General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (General Permit).

1) For all catchments with a minimum of one (1) System Vulnerability Factor (SVF) identified, the Town of East Longmeadow shall inspect and sample under wet weather conditions to the extent necessary to determine whether wet weather-induced high groundwater in areas served by septic systems result in discharges of sanitary flow to the MS4.
2) Definition of wet weather: A storm is considered a representative wet weather event if there is a rainfall event sufficient to produce a stormwater discharge and occurs at least 72 hours after the previously measurable (greater than 0.1 inch of rainfall) storm event.
    - Weather Underground (https://www.wunderground.com) or the Community Collaborative Rain, Hail, & Snow Network (https://www.cocorahs.org) can be used to determine the previous rainfall event time and amount.
    - For ease of coordination of personnel and equipment, it is preferable to plan for wet weather sampling when the forecast likelihood of rainfall is 60% or higher.
    - In general, a minimum of 0.25 inches of rain in the previous 24 hour period is preferred.
    - The drain system must be actively flowing at the time of sampling.
    - Sampling during periods of medium to high intensity rainfall/storm drain discharge is preferred.
    - Avoid sampling during the "first flush," or the initial surface runoff from a rainstorm.
3) Review supplies of sampling bottles and test kits on a weekly basis and order as necessary for field sampling activities.
4) Notify the Town of East Longmeadow of sampling schedule prior to going into the field:
    a. Tom Christensen, DPW Deputy Superintendent: (413) 525-5400, ext. 1203 or tom.christensen@eastlongmeadowma.gov
    b. East Longmeadow Police Department: (413) 525-5440
5) The attached Wet Weather Outfall Inspection and Sample Collection Form should be used to document observations related to the quality of stormwater conveyed by the structure.
6) Observations of an **oil sheen**, **discoloration**, and/or **trash and debris** can indicate sources of pollution within the storm drain system.

   For any visual observation of pollution in a stormwater outfall discharge, an investigation into the pollution source should occur, but the following are often true:

    - Foam: indicator of upstream vehicle washing activities, or an illicit discharge.
    - Oil sheen: result of a leak or spill.
    - Cloudiness: indicator of suspended solids such as dust, ash, powdered chemicals and ground up materials.

- Color or odor: Indicator of raw materials, chemicals, or sewage.
- Excessive sediment: indicator of disturbed earth of other unpaved areas lacking adequate erosion control measures.
- Sanitary waste and optical enhancers (fluorescent dyes added to laundry detergent): indicators of illicit discharge.
- Orange staining: indicator of high mineral concentrations.

Many of these observations are indicators of an illicit discharge, but several of these indicators may also occur naturally. Orange staining may be the result of naturally occurring iron, and thus unrelated to pollution.

Foam can be formed when the physical characteristics of water are altered by the presence of organic materials. Foam is typically found in waters with high organic content such as bog lakes, streams that originate from bog lakes, productive lakes, wetlands, or woody areas. To determine the difference between natural foam and foam caused by pollution, consider the following:

- Wind direction or turbulence: often, foam can be found along a shoreline and/or on open waters during windy days. Natural occurrences in rivers can be found downstream of a turbulent site.
- Proximity to a potential pollution source: some entities including the textile industry, paper production facilities, oil industries, and fire fighting activities work with materials that cause foaming in water. If these materials are released to a water body in large quantities, they can cause foaming. Also, the presence of silt in water, such as from a construction site can cause foam.
- Feeling: natural foam is typically persistent, light, not slimy to the touch.
- Presence of decomposing plants or organic material in the water.

Both bacteria and petroleum can create a sheen on the water surface. The source of the sheen can be differentiated by disturbing it, such as with a pole. A sheen caused by oil will remain intact and move in a swirl pattern; a sheen caused by bacteria will separate and appear "blocky". Bacterial or naturally occurring sheens are usually silver or relatively dull in color and will break up into a number of small patches of sheen. The cause may be presence of iron, decomposition of organic material or presence of certain bacteria. Bacterial sheen is not a pollutant but should be noted.

7) The Wet Weather Outfall Inspection and Sample Collection Form includes fields where these and other specific observations can be noted. The inspector shall indicate the presence of a specific water quality indicator or parameter by marking "Yes". If "Yes" is marked, provide additional details in the comments section. If the indictor in question is not present mark "No".

8) In-Situ Screening and Field Parameter Collection:

   - Sample storm drain outfalls as close to the outfall opening as possible, wearing a fresh pair of disposable gloves.
   - If the outfall is submerged, sampling should be completed at the first accessible upstream structure that is not submerged. Note the location on the form.

9) Complete in-situ screening of flow using **test kits**:

   - Using a sampling bottle or cup, collect the flow with care to not disturb sediment materials or collect surface debris/scum as best possible. Use sampling pole if needed to safely reach the flow.

- The collected water will be poured into **surfactants** test tube, **chlorine** sample cell, and the remainder will be tested for **ammonia** with test strips. Follow the manufacturer instructions for all test kit procedures. All waste from the field test kits should be retained and disposed of according to manufacturer instructions.

10) Meters: A properly calibrated meter should be used to record the following parameters directly from the outfall:
    - Conductivity
    - Salinity
    - Temperature
11) Threshold Levels: in-situ readings will be compared to field thresholds as follows:

Parameter	Threshold Level	Source
Surfactants	≥ 0.25 mg/L	EPA New England Bacterial Source Tracking Protocol
Ammonia	≥ 0.5 mg/L	EPA New England Bacterial Source Tracking Protocol
Chlorine	≥ 0.02 mg/L	EPA 2016 General Permit
Conductivity	> 2,000 µS/cm	Center for Watershed Protection
Temperature	> 83 ^{o}F	314 CMR 4.00 for Class B Warm Water
Salinity	> 0.5 ppt Rivers	EPA Voluntary Estuary Monitoring Manual

12) When flow volume or depth is insufficient to immerse the meter probe, a clean sample bottle may be used to collect a sufficient volume of water to immerse the probe. In such instances, meter readings should be taken immediately.
13) Analytical Sample Collection: Sample collection methods shall follow test procedures outlined in 40 CFR 136. A discrete grab sample can classify water at a distinct point in time. These samples are easily collected and used primarily when the water quality of the discharge is expected to be homogeneous, or unchanging, in nature.
14) Protocols for collecting a grab sample shall include the following:
    - Do not eat, drink or smoke during sample collection and processing.
    - Do not collect or process samples near a running vehicle.
    - Do not park vehicles in the immediate sample collection area, including both running and non-running vehicles.
    - Always wear clean, powder-free nitrile gloves when handling sample containers and lids.
    - Never touch the inside surface of a sample container or lid, even with gloved hands.
    - Never allow the inner surface of a sample container or lid to be contacted by any material other than the sample water.
    - Collect samples while facing upstream and so as not to disturb water or sediments in the outfall pipe.
    - Do not overfill sample containers, and do not dump out any liquid in them. Liquids are often added to sample containers intentionally by the analytical laboratory as a preservative or for pH adjustment.
    - Do not allow any object or material to fall into or contact the collected water sample.

- Do not allow rainwater to drip from rain gear or other surfaces into sample containers.
- Replace and tighten sample container lids immediately after sample collection.
- Accurately label the sample with the time and location.

15) Document on the Wet Weather Outfall Inspection and Sample Collection Form that analytical samples were collected, specify parameters, and note the sample time on the Form. This creates a reference point for samples.
16) Water quality samples will be taken for laboratory analysis according to the following table. Each bottle will be marked with time, date, and outfall identifier, and parameter to be analyzed.

All Outfalls	EPA Approved Method for Analysis	Impaired Watersheds in East Longmeadow[1]
E. coli samples should be collected first, in a separate sterile sample bottle.	E. coli: 1603 (preferred); 1103.1; Colilert 12® 16; Colilert-18® 12 15 16; mColiBlue-24® 17	None
Total Nitrogen (Long Island Sound TMDL)	Nitrogen (Total): 351.1/351.2 + 353.2	
[1] Table is based on the most recent approved Massachusetts Integrated List of Waters (2014), and will need to be updated when new Massachusetts Integrated Lists of Waters are finalized.		

17) Results should be recorded, custody forms completed, and samples placed in a cooler on ice. If using an iPad, fill in all form fields for sampling data, check parameter analysis box if a threshold was exceeded, and check outfall completed box when done. **<u>Make note of the first bacteria sample time for determining the hold limit until lab analysis.</u>**
18) Be sure to upload all data entry before leaving the site. If there is any doubt whether data was captured, duplicate information on paper forms.
19) Upon completion of sampling and return to the laboratory, all samples will be turned over to the appropriate sample custodian(s) and accompanied by an appropriate Chain-of-Custody form.

20) Equipment/Items Needed

Field Equipment	Paperwork	Personal Gear
❑ Sample bottles and holding time and storage requirements (from lab)	❑ Log book	❑ Waders or other appropriate footwear (steel-toed boots if opening manholes)
❑ Extra sample bottles in case of contamination, cracking, or loss	❑ Sampling plan and locations	❑ Safety goggles
❑ Coolers with ice	❑ Field sheets	❑ Reflective safety vest
❑ Samsung tablet	❑ Field maps	❑ Insect repellent
❑ Flashlight or head lamp with batteries	❑ Chain of Custody forms, filled out	❑ Sunscreen
❑ Nitrile gloves	❑ Bottle labels in Ziploc bag	❑ Business cards
❑ Tape measure	❑ Center for Watershed Protection, IDDE Guidance Manual, Chapters 11 & 13	❑ Light colored long-sleeved shirts and pants
❑ Sampling pole/dipper/sampling cage		❑ Rain gear
❑ First aid kit		
❑ Tape measure		
❑ Water quality meter(s)		
❑ Watch with a second hand		
❑ Carry caddy		
❑ Surfactants test kit and glass container for liquid waste to be disposed of as hazardous waste		
❑ Ammonia test kit and glass container for ampules to be disposed of as hazardous waste		
❑ Chlorine test kit and glass container for chloride kit liquid waste to be diluted and disposed of down sink		
❑ 1 liter bottle		
❑ Duct tape/zip ties		
❑ Sharpies/pens/pencils		
❑ Paper towels		
❑ Trash bags		
❑ Utility knife		
❑ Pry bar or pick		
❑ Small mallet or hammer		
❑ Safety cones		
❑ Hand sanitizer		

Town of East Longmeadow, MA

WET WEATHER OUTFALL SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

SUBWATERSHED:	**OUTFALL ID:**	**LOCATION:**
TODAY'S DATE:	**TIME:**	
INVESTIGATOR(S):		
TEMPERATURE (°F):	**RAINFALL (IN.) - LAST 72 HOURS:**	**LAST 24 HOURS:**

Section 2: Visual Inspection of Outfall/Pool

VISUAL INSPECTION	PRESENT?	DESCRIPTIONS
MAINTENANCE NEEDS	☐ Yes ☐ No	☐ Cracked ☐ Crushed ☐ Clogged with Debris ☐ Deteriorated (concrete) ☐ Corroded (metal) ☐ Trash ☐ Yard Waste ☐ Other:
SUBMERGED IN WATER	☐ Yes ☐ No	☐ Partially ☐ Fully
SUBMERGED WITH SEDIMENT	☐ Yes ☐ No	☐ Partially ☐ Fully
FLOW	☐ Yes ☐ No	☐ Trickle ☐ Moderate ☐ Substantial
DEPOSITS/STAINS	☐ Yes ☐ No	☐ None ☐ Grease/Oil ☐ Paper/Trash ☐ Foam ☐ Heavy sedimentation deposits ☐ Other:
SURROUNDING VEGETATION	☐ Yes ☐ No	☐ Little to No Distress ☐ Moderate Distress ☐ High Distress
ABNORMAL VEGETATION IN OUTFALL	☐ Yes ☐ No	☐ Excessive ☐ Inhibited
ERODIBILITY	☐ Yes ☐ No	☐ Little or No Erosion ☐ Small Areas of Erosion ☐ Many Eroded Areas
POOR POOL QUALITY	☐ Yes ☐ No	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Algae ☐ Other:
PIPE BENTHIC GROWTH	☐ Yes ☐ No	☐ Brown ☐ Orange ☐ Green ☐ Other:

Section 3: Visual Inspection of Outfall Flow

VISUAL INSPECTION	PRESENT?	DESCRIPTIONS	RELATIVE SEVERITY INDEX
ODOR	☐ Yes ☐ No	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint ☐ 2 – Easily detected ☐ 3 – Noticeable from a distance
COLOR	☐ Yes ☐ No	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Red ☐ Orange ☐ Other:	☐ 1 – Faint colors in sample bottle ☐ 2 – Clearly visible in sample bottle ☐ 3 – Clearly visible in outfall flow
TURBIDITY	☐ Yes ☐ No	See severity	☐ 1 – Slight cloudiness ☐ 2 – Cloudy ☐ 3 – Opaque
FLOATABLES (DOES NOT INCLUDE TRASH)	☐ Yes ☐ No	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious ☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen) ☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, sanitary materials)

Section 4: Field Parameters

PARAMETER	BENCHMARK	EQUIPMENT TO USE	RESULT/NOTES
TEMPERATURE	> 83°F [a]	Water Quality Meter or Thermometer	
CONDUCTIVITY	> 2,000 uS/cm [b]	Water Quality Meter	
SALINITY (PPT)	> 0.50 River [c]	Water Quality Meter	
SURFACTANTS (MG/L)	≥ 0.25 [d]	MBAS Test Kit (CHEMetrics K-9400)	
AMMONIA (NH_3) (MG/L)	≥ 0.50 [d]	Test Strips	
CHLORINE (MG/L)	≥ 0.02 [e]	Hach Pocket Colorimeter	

[a] 314 CMR 4.00, *Massachusetts Surface Water Quality Standards*, Class B Warm Water
[b] Center for Watershed Protection, *Illicit Discharge Detection and Elimination Manual*
[c] EPA, *Voluntary Estuary Monitoring Manual*
[d] EPA, *New England Bacterial Source Tracking Protocol*
[e] EPA NPDES, *General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts*

Section 5: Sample Collection for Laboratory Analysis

SAMPLE FOR LAB	RESPONSE
SAMPLE COLLECTED FOR LABORATORY ANALYSIS	☐ *Escherichia Coli* ☐ Fecal Coliform ☐ Total Nitrogen ☐ Turbidity ☐ Total Suspended Solids ☐ No Samples Collected for Lab
SAMPLE COLLECTION LOCATION	☐ Flow ☐ Pool
INTERMITTENT FLOW TRAP RECOMMENDED?	☐ Yes ☐ No

Section 6: Notes

Town of East Longmeadow, Massachusetts

Municipal Facilities and Activities Inventory and Operations & Maintenance Plan

NPDES Permit # MAR041005

June 2020

Provided under separate cover

Tighe&Bond
Engineers | Environmental Specialists

East Longmeadow DPW Garage and Yard
84 Somers Road, East Longmeadow, MA

Stormwater Pollution Prevention Plan

Town of East Longmeadow, MA

June 2020

Tighe&Bond
Engineers | Environmental Specialists

Provided under separate cover

Knowlton Transfer Station
170 Somers Road, East Longmeadow, MA

Stormwater Pollution Prevention Plan

Town of East Longmeadow, MA

June 2020

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100% Recyclable

PVPC Connecticut River Stormwater Committee
Summary of Public Education and Outreach, PY 2

CONNECTICUT RIVER
Stormwater Committee

DRAFT - 9/2/20

MS4 Permit Annual Report
for Public Education and Outreach

MCM 1 and additional requirements in Appendixes F and H

July 1, 2019 through June 30, 2020

Table of Contents

The Connecticut River Stormwater Committee annual report provides a summary of all the work undertaken during the July 1, 2019 to June 30, 2020 reporting period. All of this work is directly applicable to all member communities' EPA annual reporting requirements.

Content has been formatted in a manner consistent with the format of the EPA annual report template for Year 2. Because the Connecticut River Stormwater Committee is a regional partnership program, these sections are written from a "regional" perspective rather than municipality-by-municipality. Additional details of community-specific efforts are reported in each municipality's annual report.

In communication with PVPC, who facilitates the coalition, EPA has endorsed and encouraged a regional Annual Reporting approach whereby Connecticut River Stormwater Committee member communities can satisfy the Public Education and Outreach reporting requirement (within MCM 1 and Appendixes F and H) by referencing the coalition's annual report with a url link in their own annual report.

Introduction

1. Coalition Purpose and Membership

The Connecticut River Stormwater Committee is an intergovernmental compact of 19 municipalities, the University of Massachusetts-Amherst, and the Pioneer Valley Planning Commission organized to work cooperatively in meeting US EPA Municipal Separate Storm Sewer System Permit ("MS4 Permit") requirements for stormwater education and outreach. Facilitated and staffed by the Pioneer Valley Planning Commission, the Committee also works together to meet other permit compliance activities where appropriate and needed. Work for the group is funded through annual dues paid by each member, including PVPC, and through occasional grants. Member communities are shown in Table 1 below.

Table 1: Connecticut River Stormwater Committee Member Communities

Member Community	Committee Representatives and Departments
Agawam	Tracey DeMaio and Mike Albro, Department of Public Works
Belchertown	Steve Williams, Department of Public Works and Erica Cross, Conservation Department
Chicopee	Quinn Lonczak, Department of Public Works
East Longmeadow	Bruce Fenney and Tom Chistensen, Department of Public Works
Easthampton	Dan Murphy, Department of Public Works
Granby	Dave Derosiers, Highway Department
Hadley	Chris Okafor, Department of Public Works
Holyoke	Michael McManus and Robert Peirent, Department of Public Works
Longmeadow	Craig Markham, Department of Public Works
Ludlow	Jim Goodreau, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Palmer	Angela Panaccione, Conservation Department
South Hadley	Melissa LaBonte, Department of Public Works
Southampton	Randall Kemp and Joesette Picard, Highway Department
Southwick	Randall Brown and Jon Goddard, Department of Public Works
Springfield	Kevin Chaffee, Planning/Conservation Department
West Springfield	Jim Czach and Jesse English, Department of Public Works
Westfield	Casey Berube and Joe Kietner, Department of Public Works
Wilbraham	Tonya Basch and Dean Grochmal, Department of Public Works
University of Massachusetts - Amherst	Neils LaCour and Terri Wolejko

2. Water Quality Considerations in the Region

All Connecticut River Stormwater Committee communities are subject to additional MS4 permit requirements in Appendix F based on waters that are tributaries to the Long Island Sound, which has an approved TMDL for nitrogen.[1] Some member communities are also subject to additional MS4 permit requirements based on the following:

- Lakes and ponds with approved TMDLs for phosphorous (additional requirements within Appendix F of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to phosphorous (additional requirements within Appendix H of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to bacteria or pathogens (additional requirements within Appendix H of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to solids (total suspended solids) (additional requirements within Appendix H of the MS4 permit)

It is important to note that the MS4 permit stipulates that certain additional requirements for public education and outreach messaging in the appendixes can be combined where appropriate. Specifically, Appendix H part I and II as well as Appendix F part A.III, A.IV, A.V, B.I, B.II and B.III.

3. Public Health Connections

While the Covid-19 pandemic presented certain challenges to stormwater messaging, Connecticut River Stormwater Committee members endeavored to align messaging—where appropriate—with heightened public health concerns. This was especially appropriate in two areas: pet waste (#10 below), and the prevalence of Covid-19 associated waste, including gloves and nip bottles #2 below). Key in these messages was connecting waste thrown on the ground or down street drains as polluting waters for summer-time activity. As examples:

With the Channel 22/WWLP WWLP TV segment in April:

> "The bottom line is we want folks to remember that what they ditch on the street or at the park now may be what they're fishing, boating, and swimming in come summer time."

With the pet waste Facebook post in April:

> With stay at home orders in place, you're probably walking your dog more than ever before. The Connecticut River Stormwater Committee wants to remind you that dog waste—even bagged!—left on the ground today may be what you're fishing, boating, and swimming in come summertime. Keep our waters clean of harmful bacteria. Take the Pick up Pet Waste Pledge today!

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[1] TMDL = identifies the Total Maximum Daily Load of nitrogen that can be discharged, in this case to Long Island Sound, without significantly impairing the health of the Sound.

Annual Report Part II: Self-Assessment

1. Education and Outreach on Bacteria/Pathogens

√ Annual Message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
√ Disseminated educational material to dog owners at time of issuance or renewal of dog license, or other appropriate time
√ Provided information to owners of septic systems about proper maintenance

See in sections below numbered: 10, 11, 14, and 15

2. Education and Outreach on Nitrogen and Phosphorous (<u>combined</u>)

√ Distributed an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers
√ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
√ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

See in sections below numbered: 8, 9, 10, 12, 13, and 15

Annual Report Part IV: MCM 1 – Public Education and Outreach

1. Think Blue Connecticut River Website

<u>Message description and distribution method</u>: The Think Blue Connecticut River website is at the core of all regional messaging about stormwater. The website at www.thinkblueconnecticutriver.org does the following:

- Covers major areas of messaging about reducing polluted stormwater flows, including lawn and yard care, pet waste management, car care, controlling soil erosion, soaking up the rain, and septic system care
- Addresses the key 4 audiences plus educators
- Serves as the "landing place" for information on nearly all social media messaging

<u>Targeted audiences</u>: Residents, business/institutional/commercial, developers, and industrial

<u>Responsible Department/Parties</u>: PVPC staff and web site consultant

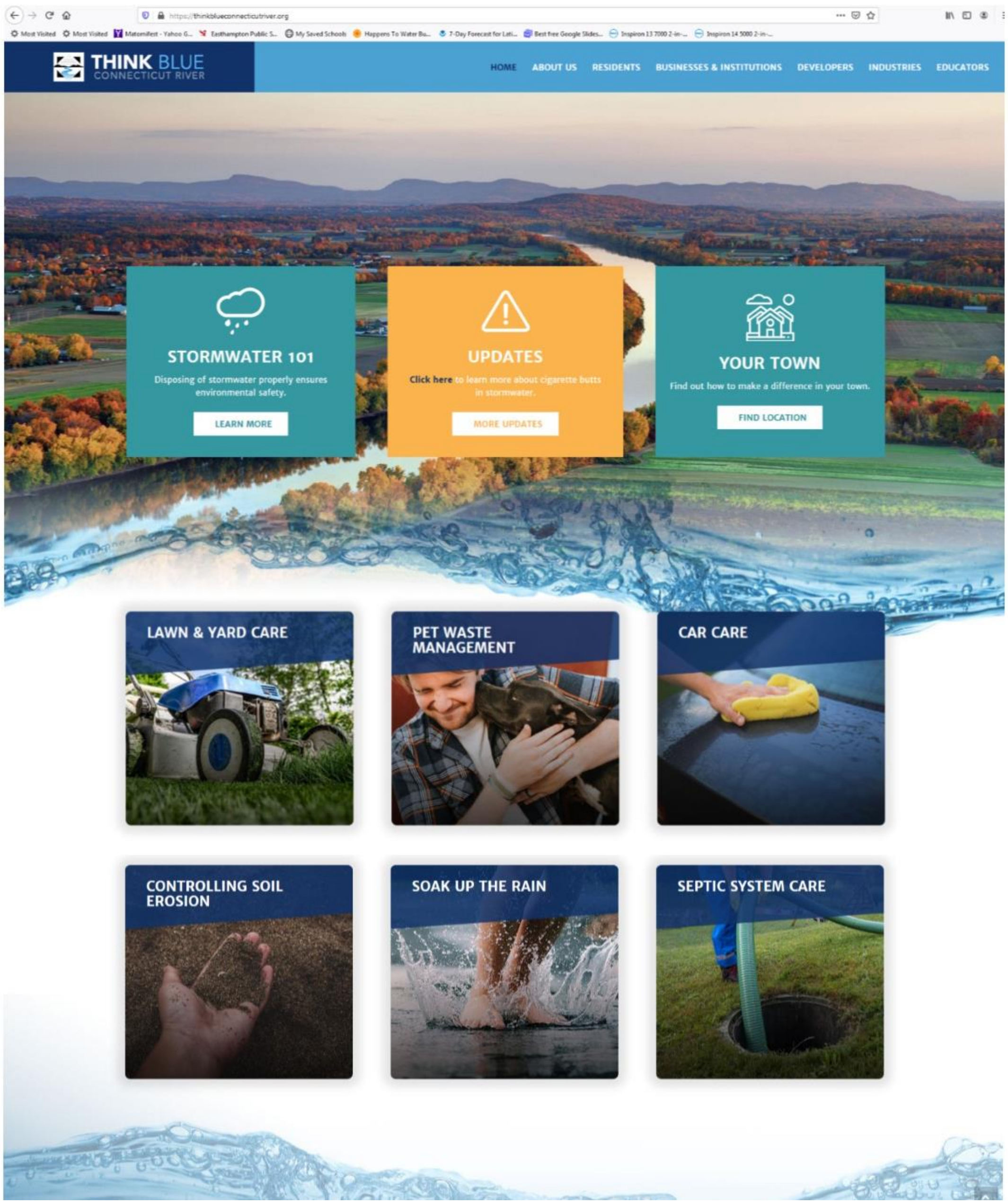
<u>Measurable goal(s):</u> 1,477 people visited the Think Blue Connecticut River website during Year 2 and spent an average of 1 minute, 53 seconds on viewing a total of 3,252 pages on stormwater best practices.

<u>Message dates</u>: July 1, 2019 through June 30, 2020

Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: The website was not mentioned in the NOI and SWMP, but with development now completed is most central to all messaging in the region.



2. Covid-19 litter

Message description and distribution method: Connecticut River Stormwater Committee members noted at the April 6, 2020 meeting that all are seeing a tremendous increase in three types of waste likely attributable to Covid-19 and recent stay at home orders. The waste includes: protective latex gloves and alcohol nip bottles strewn on the ground in many places, and increased pet waste either unbagged, but even bagged and left in place. The heightened concern of disease transmission likely plays a part in the uptick in this type of litter. As such, PVPC staff worked on a press release and boosted Facebook post with the key messaging being, “storm flows carry this waste to the river, and we don’t want to be swimming in it come summer.” The press release yielded a high visibility evening news segment on Channel 22/WWLP, on April 9.

Targeted audiences: Residents, and business/institutional/commercial

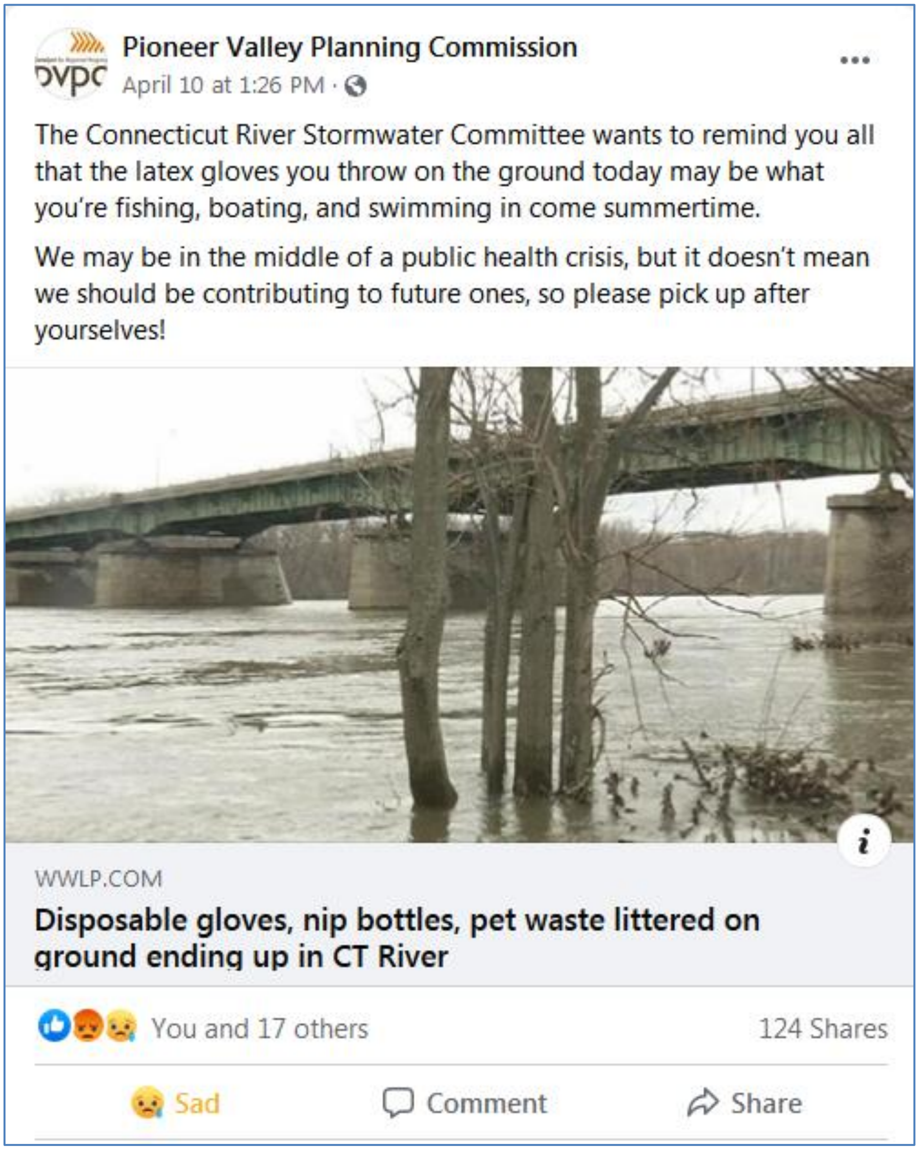
Responsible Department/Parties: PVPC staff

Measurable Goal(s):
PVPC April 10 Facebook post: 3,450 impressions, 1,234 engagements, and 19 likes and 124 shares
WWLP, Channel 22 news story views and blog post views could not be obtained, but these numbers are likely in the thousands or tens of thousands.

Message dates: April 2020

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: This Covid-19 related litter messaging was not mentioned in the NOI and SWMP, but was seen as important addition and completed as part of Year 2 messaging in the region.



3. Cigarette butts - residents

Message description and distribution method: Materials and messaging for this campaign to reduce cigarette butt litter were developed within the reporting period. Due to general sense that messaging would get lost in the mix given far greater public concern with the Covid-19 pandemic, actual launch of campaign messaging was postponed from Year 2 to Year 3. The campaign includes:

- Image of baby bird with cigarette butt in its mouth with message (as shown below)
- Large decals (2x3 feet) for public works vehicles throughout the region
- Web page with additional information on cigarette butt litter and link to informational video from Canadian public broadcasting
- Press release to local media
- Boosted FB post to be shared with MA Audubon and the Connecticut River Conservancy and that links to resources on Think Blue Connecticut River website

Targeted audience: Residents

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): NA for this reporting period – postponed to Year 3

Message dates: NA for this reporting period

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Postponed to Year 3 and rather than messaging through use of PVTA bus panels, decided to message with large decals on public works vehicles throughout the region. Also did more

4. Dumpster waste and avoiding contaminated flows message - businesses

Message description and distribution method: Materials and messaging for this campaign on dumpster waste and avoiding contaminated flows were developed within the reporting period. Due to general sense that messaging would get lost in the mix given far greater public concern with the Covid-19 pandemic, actual launch of campaign messaging was postponed from Year 2 to Year 3. The campaign includes:

- Presentation that was to be given at March 12 Western Mass Health Officers Association/MassDEP annual spring seminar focused on environmental health
- Flyer to inform Boards of Health on proactive regulatory and educational steps to curb stormwater pollution from dumpsters
- Flyer for Boards of Health for use as part of routine interactions with retail complexes, restaurants/food establishments, and apartment complexes
- Check list for Boards of Health (developed by Town of Palmer Conservation Agent) to use when inspecting restaurants and looking at dumpsters and oil storage

Targeted audience: Business, institutions, and commercial facilities

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): NA for this reporting period – postponed to Year 3

Message dates: NA for this reporting period

Was message different than what proposed in your NOI/SWMP? Yes √ No

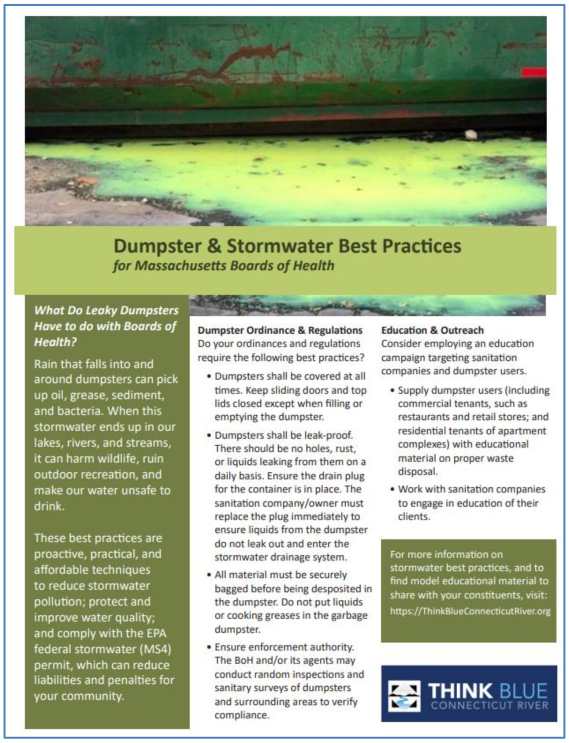
If yes, describe why the change was made: Aside from postponing message from Year 2 to Year 3, we learned in the process of developing the campaign that distribution of flyers directly to dumpster companies to provide to customers was not going to be a fruitful strategy. Better to work with Boards of Health to inform them and then get them to distribute the information to dumpster companies (who are allowed/permitted by boards to operate in the community) and to businesses when health agents they are doing routine inspections. The education and outreach effort became two pronged and now includes an additional flyer specifically for Boards of Health.

Given Covid-19 and the demands on Boards of Health during this time, there is agreement among committee members that the best approach will be two pronged for Year 3:

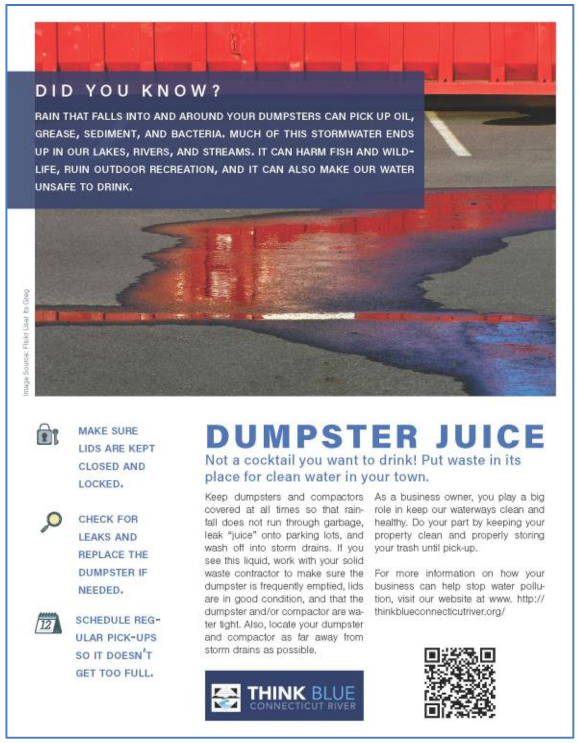
- Post information on Think Blue Connecticut River website with the two PDF documents/flyers on dumpsters, along with a checklist for Boards of Health to use when inspecting restaurants and looking at dumpsters and oil storage.

- Prepare article for MA Health Officers Association Executive Director to announce resources about dumpsters to memberships in the Western MA Public Health Association and the MA Environmental Health Association.

For now, we will put on hold the idea of individual visits with boards of health in each member community to provide brief presentation and stress importance of this work in reducing contaminated stormwater flows.



One flyer is designed to inform Boards of Health on proactive regulatory and educational steps to take to curb stormwater pollution from dumpsters.



Another flyer is designed for Boards of Health use with dumpster users as part of routine interaction with retail complexes, restaurants & food establishments, and apartment complexes.

5. New MS4 development standards and erosion and sediment control - developers

Message description and distribution method: The plan was to conduct a workshop at the regional Western Massachusetts Development Conference. Leading up to the conference—scheduled for May and now postponed to October—conference organizers, however, indicated that a workshop on this topic does not fit with their programming. As an alternative, they offered the ability to have a *Think Blue Connecticut River* table where we could talk with developers and hand out information. The conference is now planned to be held virtually on October 21. Organizers have indicated through communications with PVPC that, "We are using a very cool 3d platform that will provide multiple opportunities for vendors to feature chats, content, videos and other digital material."

Targeted audience: Developers

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): NA for this reporting period – postponed to Year 3

Message dates: NA for this reporting period

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Given the tremendous opportunity provided by this conference, the Connecticut River Stormwater Committee, is moving this messaging to Year 3. Emphasis will likely be on erosion and sediment control and will depend in part on status of ongoing work between MassDEP and EPA to better align MS4 permit and Wetlands Protection Act.

6. Erosion and sediment control - developers

Message description and distribution method: To get some messaging out to developers for Year 2, municipal members agreed that it makes good sense to distribute a letter on municipal letterhead and an EPA brochure on erosion and sediment control to drainlayers operating within their communities. This was a strategy used by Tewksbury Public Works Director Arthur Marcos, kindly shared his draft letter language. PVPC staff developed a contact list for drain layers operating in the region, updated Mr. Marcos' letter and sent those materials along with the EPA brochure on erosion and sediment control for member use.

Some 72 drain layers have been identified in the region. Only East Longmeadow made use of the mailing this year, but other members have indicated they may follow through with this mailing to those operating within their respective jurisdictions in Year 3.

Targeted audience: Developers and drainlayers specifically

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): Letters and brochure sent to nine drainlayers in the region that are operating specifically in East Longmeadow.

Message dates: Letters sent spring of 2020

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: This was an additional message that some communities chose to do, but was not originally part of the Connecticut River Stormwater Committee NOI/SWMP

7. Fleet maintenance to avoid spills and leaks – industrial facilities

Message description and distribution method: This message is aimed at ensuring that industrial operators with vehicle fleets take care to manage vehicles so as to avoid spills and leaks. The press release to be distributed through the region, as well as the flyer to be distributed to industries in the region are based on the Think Blue Massachusetts flyer developed by Water Words that Work. After several attempts to acquire MSGP permittees through various on-line sources, PVPC obtained the list of MSGP permittees in Massachusetts directly from EPA Region 1 staff. The list shows permittees in every Stormwater Committee community except Southampton and Longmeadow.

Targeted audience: Industrial facilities

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): NA for this reporting period – postponed to Year 3

Message dates: NA for this reporting period

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Postponed to Year 3 given likelihood of message getting lost in the mix during all the information around Covid-19 best practices and the struggle for industrial facilities to continue operations during the pandemic.

8. Proper disposal of leaf litter - residents

Message description and distribution method: Messaging for this campaign was adapted from a series of four *Be a Leaf Hero* social media posts developed by the Cape Cod Commission and customized for the Connecticut River Stormwater Committee. The posts provide a series of tips and all tips contained a link to a more in-depth document posted on the Think Blue Connecticut River website. The in-depth document promotes better practices with leaf litter and seeks to build understanding about potential contamination of stormwater with leaf litter.

Targeted audience: Residents

Responsible department/parties: PVPC staff and member municipalities

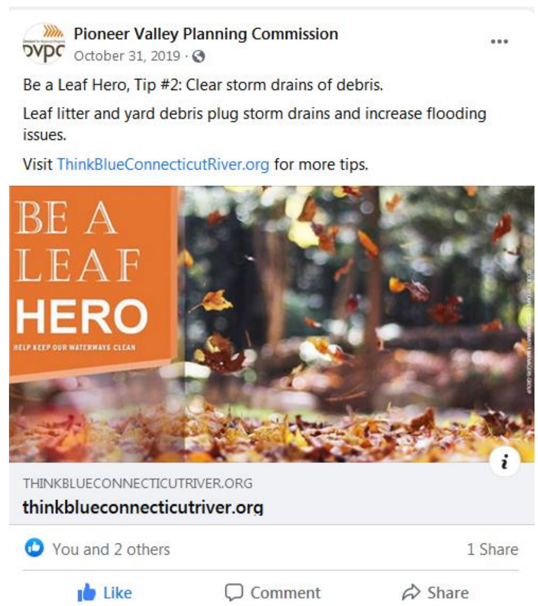
Measurable goal(s): Boosted Facebook posts reached a total of 6,903 people, 353 of whom clicked to the link provided for more information. *It is important to note here that Facebook posts present ongoing challenges. Despite best efforts, the 3rd boosted post in this series was taken down by Facebook part way through and the 4th post blocked* *for boosting by zip code altogether. This led to a month-long verification process for PVPC staff with Facebook.*

<u>Message dates</u>: mid-October through mid-November

<u>Message completed for</u>: Appendix F requirements √ Appendix H requirements √

<u>Was message different than what proposed in your NOI/SWMP</u>? Yes √ No

<u>If yes, describe why the change was made</u>: Proposal had been for one social media post and press release. Given the cohesion of these social media messages as a whole, the Connecticut River Stormwater Committee decided to run the full series and instead of a media release, developed a one-page document on best practices to which all posts could link.



9. Importance of soil test, proper use of fertilizers, disposal of grass clippings - residents

Message description and distribution method: Social media post, using idea of keeping lawns safe for families. The link provided in the social media post connects to the Think Blue Connecticut River web page on lawn and yard care, which lays out important best practices and links to useful resources, including a video by Paul Tukey, organic lawn care celebrity, as well as guides to popular lawn care chemicals and their hazards.

Targeted audience: Residents

Responsible department/parties: PVPC staff and member municipalities

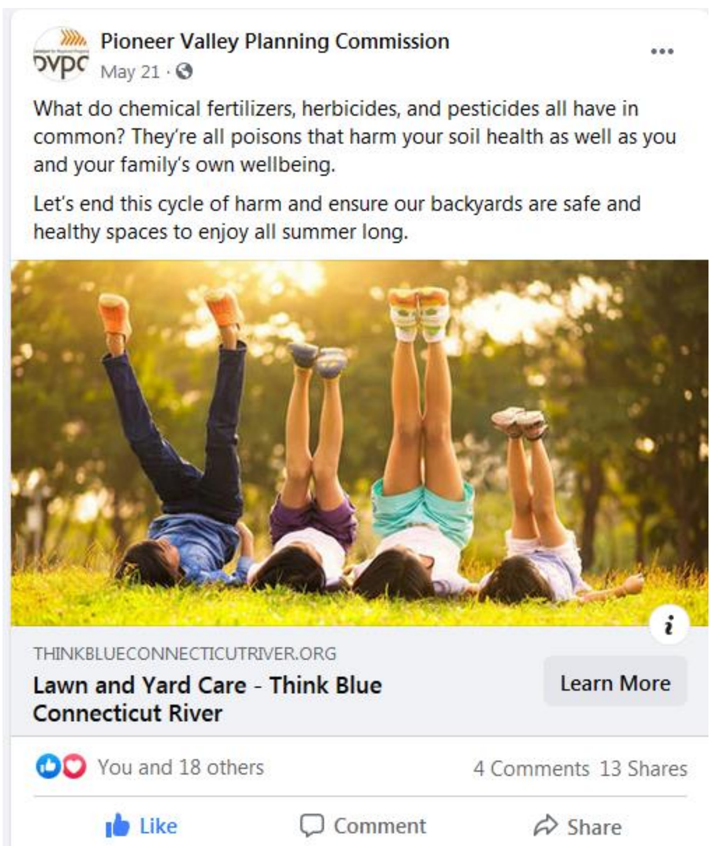
Measurable goal(s): Boosted Facebook posts reached 5,922 people, 110 of whom clicked to the website link for more information. Analytics indicate that the average time spent by visitors on that resource page was nearly 4 minutes.

Message dates: May 21, 2020

Message completed for: Appendix F requirements √ Appendix H Requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Proposed work had included creating a brochure. Instead, work entailed improving the Think Blue Connecticut River web page on lawn care so that information and resources are all more readily available during Covid-19.



10. Proper management of pet waste - residents

Message description and distribution method: A series of messages were issued this year to drive people to the Think Blue Connecticut River website resources on pet waste, particularly a pledge to pick up pet waste. These messages included multiple Facebook posts, pet waste instructions added to the website, and an electronic form to pledge pet waste pick up. Some communities also did electronic and direct mail distribution of post cards to dog owners. An additional Facebook post was added during "stay at home orders" for Covid-19 given the amount of pet waste Connecticut River Stormwater Committee members were seeing at parks, along streets, and in storm drains. All of this effort was further boosted for summer with a banner pet waste message on MassLive targeting dog owners specifically.

Targeted audience: Residents

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): The boosted Facebook posts reached 15,552 people who followed through with 406 clicks.
A MassLive banner provided 175,015 impressions with 296 clicks to more information.
During Year 2, Think Blue Connecticut River pet waste page on the website had 730 page views with the analytics indicating that the average time spent by visitors on that resource page was 1 minute and 33 seconds. Of the 189 visitors who proceeded to the pick up pet waste pledge, 70% or 122 people made the commitment to pick up pet waste.

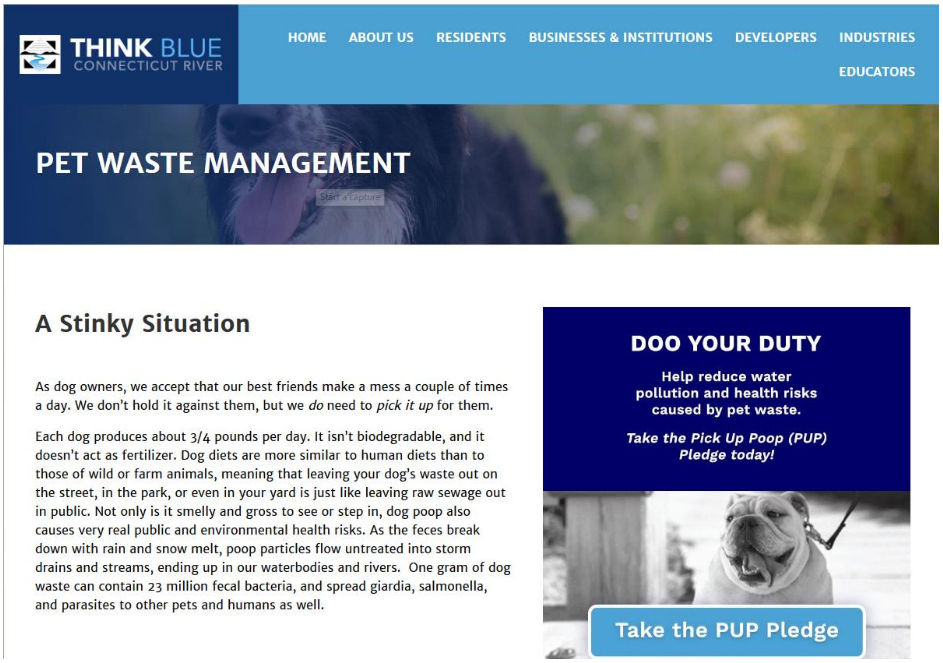
Message dates:

- For summer 2019 message, issued posters and Facebook post on July 30, 2019 (pledge was not yet set up)
- Time of licensing 2020, Facebook posts on January 31, February 3, February 6, and boosted post by zip code on February 10
- Electronic and direct mail distribution of post cards during February and March
- For Covid-19 messaging, Facebook post boosted by zip code on April 8
- For summer 2020 message, MassLive Banner ad from June 25 through July 24

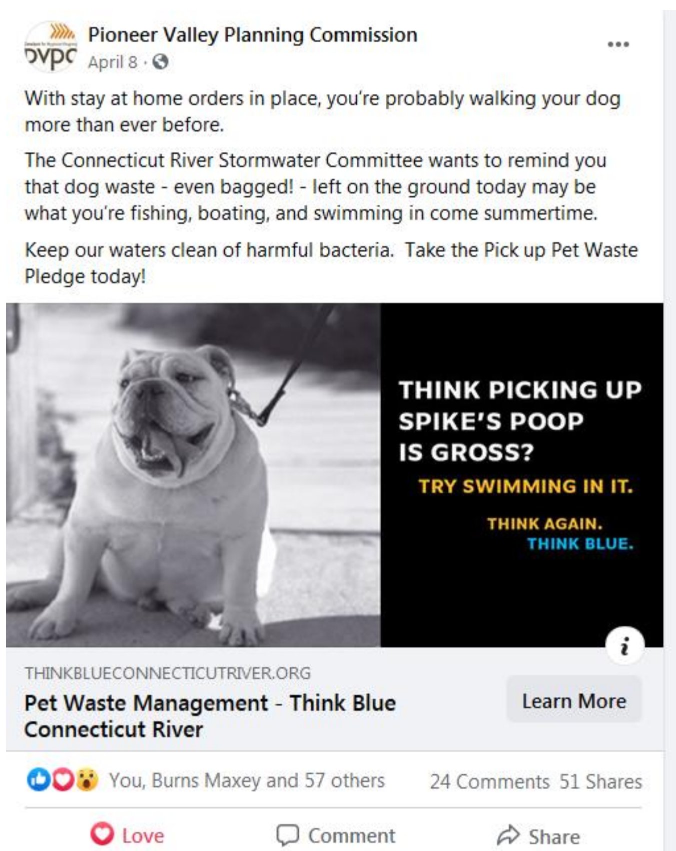
Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No
The NOI/SWMP indicated pet waste messaging only in summer months as PVPC understood that messaging under the Appendixes could be combined. EPA has indicated that additional messaging to dog owners "at time of licensing" is required. Messaging at time of licensing has been added in Year 2, along with additional messaging on pet waste during "stay at home" orders with the pandemic given the increased visibility of associated problems.

If yes, describe why the change was made: To provide additional messaging.



Above: Top of Think Blue Connecticut River Pet Waste Management page with pledge.
Below: Pet waste Facebook post during "stay at home" orders.



11. Proper septic system care - residents

Message description and distribution method: The Think Blue Connecticut River website contains a great resource page on septic system care that includes an infographic on maintenance. To promote the resources on this page for homeowners, the Connecticut River Stormwater Committee did a boosted Facebook post timed to coincide with EPA's Septic Smart Week in September.

PVPC also prepared a draft letter for distribution by Boards of Health to septic system owners. Several communities used this letter in Year 2, while others are planning to use in Year 3. It is important to note that among Connecticut River Stormwater Committee there are several member communities that are highly urbanized with no properties presumed to be using septic systems for sanitary waste disposal.

Targeted audience: Residents

Responsible department/parties: PVPC staff and member municipalities

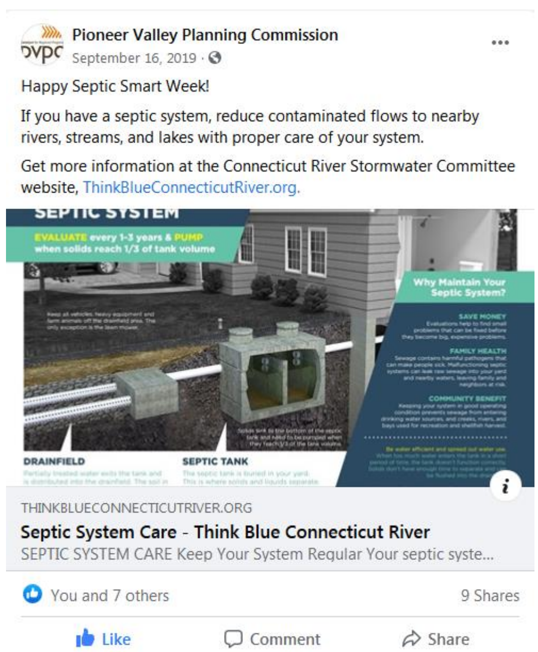
Measurable goal(s): Boosted Facebook posts reached 1,586 people, 176 of whom clicked to the website link for more information. Analytics on the Think Blue Connecticut River web page on septic system care indicate that the average time spent by visitors on that resource page was just over 2 minutes.

Message dates: September 16, 2019

Message completed for: Appendix F requirements Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: The NOI/SWMP indicated septic system messaging would be done in Year 3 only as MS4 permit language in Appendix H was not entirely clear on the timing of this message. EPA has since indicated that septic system messaging must occur each year and the Connecticut River Stormwater Committee has adjusted accordingly.



12. Proper disposal of leaf litter - businesses

Message description and distribution method: Mailing to landscapers in the region that promotes best practices and identifies locations for proper disposal of leaf letter. Best practices noted in letter are:

- Keep leaves off of driveways and roadways where they can easily wash into storm drains and contribute to higher nutrient flows during the fall season.
- Use a mulching mower. By mulching the leaves into the lawn, you avoid having to rake/blow and bag and you offer a way to manage autumn leaves while providing your client with free fertilizer. Mulched leaves put nutrients back into the ground and reduce the overall need for more soluble fertilizer products, which present greater problems for our local waterways.
- Alternatively, if your client has an existing compost pile, you can recommend that they consider allowing you to add leaves to the pile. Leaves provide a critically important element (carbon) to the composting process, making for a more soil enriching product to be used in the next growing season. Be sure compost piles are located away from streams, lakes, or storm drains as these decomposing materials and nutrients could easily leach to these water resources.

Targeted audience: Businesses/institutions/commercial facilities

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): Mailing to 120 professional land care companies operating in Stormwater Committee member municipalities

Message dates: November 4, 2019

Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes No √

13. Importance of soil test, proper use of fertilizers, disposal of grass clippings - businesses

Message description and distribution method: In-person workshop for land care companies in the region on the need for better practices based on water quality considerations, new state regulations on use of nutrients, and best practices. Updated mailing list of professional land care companies operating in Stormwater Committee member municipalities with help from regional professional association.

Targeted audience: Business/institutions/commercial facilities

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): Workshop invitation mailing to 130 professional land care companies operating in Stormwater Committee member municipalities

Message dates: November 4, 2019

Message completed for: Appendix F requirements √ Appendix H Requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: This in-person workshop had been planned for April 1 and an invitation issued to landscapers in the region. With the emergence of Covid-19 the workshop was going to be moved to the Zoom virtual meeting platform, but there was little interest expressed from landscapers. Mary Owen of UMass Extension and Hotze Wijnja of MassDAR recommended cancellation of the event as the industry was in upheaval with the pandemic. Also, the audience here was intended to be large institutions with lawns, but some difficulty in identifying these places in practice. For year 3, plan to conduct workshop and invite both these audiences.

Above is the workshop invitation postcard sent to 130 land care companies in the region.

14. Proper management of goose waste - businesses

Message description and distribution method: Letter to property owners identified as having goose problems, with specific strategies and resources. Chief recommended strategies are signage to discourage people feeding geese and managing “residential” goose populations, by undertaking a program to addle eggs and modify landscapes. Contact information for USDA Wildlife Services in Amherst, was offered as a source of technical assistance and operational management. Also included in the letter were two illustrations of landscaping along water's edge to provide idea of modifications that could help to reduce direct stormwater flows and creates barriers for goose movement from water to foraging area.

Targeted audience: Businesses/institutions/commercial facilities

Responsible department/parties: PVPC staff and member municipalities

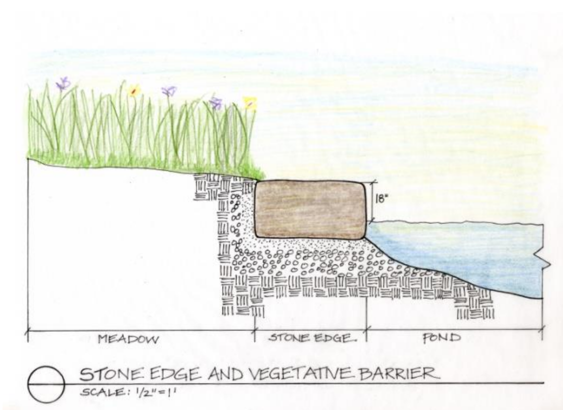
Measurable goal(s): Letters sent to owners of 25 properties with likely ongoing residential goose problems

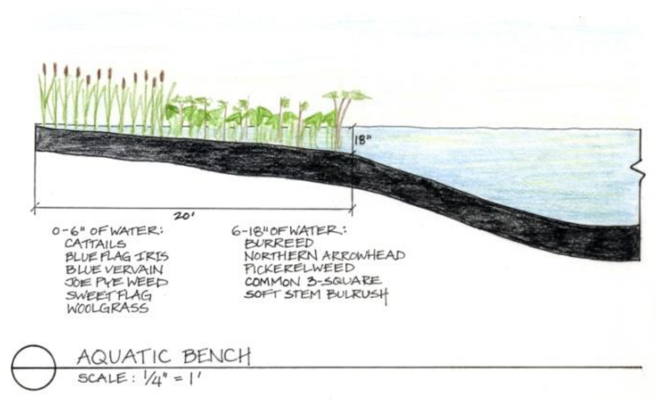
Message dates: October 21, 2019

Message completed for: Appendix F requirements √ Appendix H Requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Message initially planned for Year 1, but there was no existing recommended practice in place for landowners with goose problems. PVPC conferred with both MassWildlife and USDA Wildlife officials to devise a program of effective strategies.





Illustrations included in letter of landscaping along water's edge to reduce direct stormwater flows and creates barriers for goose movement from water to foraging area.

15. Proper management of pet waste - businesses

Message description and distribution method: Development and distribution of resources for businesses to address improper pet waste disposal on their properties. Resources include a designed sign template, cost estimates for sign production from vendors in the region, and social media material for use in posts by businesses. To promote availability of resources, PVPC reached out to the 11 chambers of commerce operating in the region and provided an article to run in member newsletters. All pet waste resources are made available through the businesses page on the Think Blue Connecticut River website.

Targeted audience: Businesses/institutions/commercial facilities

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): Need to get numbers

Message dates: Various through June and July, 2020

Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP?
Yes √ No

If yes, describe why the change was made: Had proposed to send letter describing resources directly to property owners with likely pet waste problems. Identifying these properties, however, was not practicable. Outreach through chambers of commerce seemed a more sound approach when it came time to issuing this message.

16. Fowl Water messaging through state-wide campaign

Message description and distribution method: On behalf of the members of the Connecticut River Stormwater Committee, Think Blue Massachusetts ran two educational advertising campaigns using the 30-second video entitled, "Fowl Water." The "Fowl Water" advertisement helps viewers visualize how stormwater runoff carrying motor oil, pet waste, and trash pollutes local waterways. One campaign ran early in Year 2, from July 1 to July 12, 2019, and the other ran from May 16 to June 5, 2020. Each campaign entailed sponsored video on Facebook and Instagram and pre-roll advertisements on YouTube. See the video at: *http://bit.ly/tbm-fowl-water*

Targeted audience: Residents and businesses/institutions/commercial facilities

Responsible department/parties: Think Blue Massachusetts and Water Words that Work

Measurable goal(s): Water Words that Work reports that within the Connecticut River Stormwater Committee region: 1st campaign resulted in 1,009,224 Facebook and Instagram and 318,970 You Tube ad impressions; 2nd campaign resulted in 708,781 Facebook and Instagram and 619,562 You Tube ad impressions

Message dates: July 1 to July 12, 2019
May 16 to June 5, 2020

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: This message is a welcome addition to our program for Year 2 and will be part of the region's SWMP update.

Connecticut River Stormwater Committee

Fiscal Year 2020 Educational Advertisement Campaign Report

On behalf of the members of the Connecticut River Stormwater Committee, Think Blue Massachusetts ran an educational advertising campaign from May 16th to June 5th, 2020. The "Fowl Water" advertisement helps viewers visualize stormwater pollution from motor oil, pet waste, and trash become stormwater pollution.

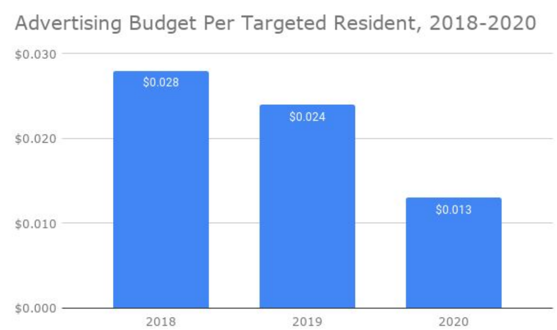
We selected Facebook and Instagram sponsored video and YouTube pre-roll advertisements because these channels offer superior "bang for the buck" to cable and broadcast television. They provide granular reporting that helps demonstrate what was accomplished.

This effort helps coalition members meet their requirements to "document in each annual report the messages for each audience; the method of distribution; the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program."

View the ad at http://bit.ly/tbm-fowl-water

Advertising Budget

Our advertising budget for the campaign worked out to approximately 1.3 cents per resident. Campaign budgets have been falling year over year:



This year's campaign occurred during the COVID-19 lockdowns. The silver lining is that our advertising placement costs were lower and our message was shown to a semi-captive audience.

Post Campaign Survey Highlights

At the close of the advertising campaign, we surveyed Massachusetts residents in the areas where the campaign ran:

- 17% of residents surveyed recalled seeing the ads, up from 15% in 2019 and 8% in 2018.
- Those who recall the ad are more likely to recognize that stormwater goes directly to local waterways (52%) than those who do not recall the ad (32%).
- Those who recall the ad are more likely to describe stormwater has having "major" or "some" impact on waterways (49%) than those who do not recall the ad (31%).

Full survey results are available at www.thinkbluemassachusetts.org

FY 2020 Campaign Performance

Facebook and Google provided us with aggregate information for the region served by the stormwater coalition. We have allocated the impressions among each city on a proportional basis, using U.S. Census estimates of the population of each municipality.

Your municipality can use these numbers as your measurable goal for MCM1 in your Year 2 annual report.

Town	Facebook/Instagram Impressions	YouTube Ad Impressions	Total
Agawam	43,344	37,888	81,231
Chicopee	84,613	73,962	158,575
Easthampton	24,467	21,387	45,854
Granby	9,651	8,436	18,087
Holyoke	61,485	53,746	115,231
Longmeadow	24,179	21,135	45,314
Ludlow	32,772	28,647	61,419
Northampton	43,580	38,094	81,674
South Hadley	27,116	23,703	50,819
Southwick	14,873	13,000	27,873
Springfield	235,873	206,182	442,055
West Springfield	43,272	37,825	81,097
Westfield	63,557	55,556	119,113
	708,781	619,562	1,328,343

Public Outreach & Education Requirements 2019-2020

1. **Public Meeting**
2. **CT River Storm Water**
3. **Leaf Litter Flyer & Landscapers** 2 page with all municipal resources listed for each community. Posted on ELCAT and Social Media Site (Facebook). November 12,2019
4. **Geese Problem Posting-** DPW Website and ELCAT Bulletin board (5000 households). Nov. 13,2019
5. **Leaf Litter Flyer** Single page. Posted in all Town Buildings. Distributed to all Department Heads. November 4, 2019
6. **Lawn Care Posting** – May 21, 2020 facebook posting "Think Blue" PVPC .
7. **Pet Waste**- Posted on: February18, 2020
   East Longmeadow Animal Hospital, 572 N. Main St. (788-9657)
   VCA Shaker Road Animal Hospital, 108 Shaker Road (525-6671)
   PETCO 440 N. Main St. (486-6020)
   A.W. Browns, 144 Shaker Road (525-2115)
   E.L. Board of Health Bulletin Board, Town Hall (525-5400)
   Facebook Posting 1/31/20- reached 1641 residents with 121 engagements.
   Dog Licensing/ Clerks Office -2000 Post Cards printed and distributed 2020; February 11, 2020
   ELCAT Bulletin Board- Posted February 11, 2020(5000 households)
   Posters in BOH, Clerks Office, Rail Trail, Heritage Park; February 26, 2020 (Exposure to 10,000 residences per year)
8. **Construction Industry Posters**– 11/7/2019 DPW Website, ELCAT Interview and Construction site visits. (5000 households)
9. **BMP Video ELCAT** - DPW Website and ELCAT Bulletin board (5000 households). January 27, 2020
10. **BMP's** – Drain Layer Letter to Contractors

Bradway Construction, Inc.	396 West St Ludlow, MA 01056	(413) 583-6533
C. Lemek & Sons Construction	49 Wood Drive Ludlow, MA 01056	(413) 636-8947
Gary Turnberg	135 Parker St East Longmeadow, MA 01028	(413) 525-0271
Kenneth Bousquet Jr. Excavation & Trucking	305 Miller St Ludlow, MA 01056	(413) 237-5523
Kent Brothers Excavating	376 College Hwy, Southampton, MA 01073	(413) 203-2800
Mark's Property Services	15 Hudson Drive, Southwick, MA 01077	(413) 478-0323

Santos Landscaping	Stephen Santos	PO Box 207, Palmer Ave Ludlow, MA 01056	(413) 589-9585
Skinner Excavation		289 Moutain Rd Hampden, MA 01036	(413) 566-5737
Thomas Wilson Enterprises, Inc.		310 Elm St East Longmeadow, MA 01028	(413) 525-6205

11. Septic Tank Letters BOH

East Longmeadow Outfall Inventory and Dry Weather Screening Field Effort Summary

June 2021

East Longmeadow Outfall Inventory and Dry Weather Screening Field Effort Summary – Spring 2021

TO: Town of East Longmeadow Stormwater Program Files

COPY: Bruce Fenney, Town of East Longmeadow DPW Superintendent, and Tom Christensen, Town of East Longmeadow DPW Assistant Superintendent

FROM: Tracy Adamski, Emily Tully, and Michael Palaschak, Tighe & Bond

DATE: June 2021

1. Previous Dry Weather Outfall Screening Efforts

Per *Section 2.3.4.7.b Dry Weather Outfall and Interconnection Screening and Sampling* of the of the United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (referred to herein as "2016 Small MS4 General Permit"), "**all outfalls/interconnections … shall be inspected for the presence of dry weather flow within three (3) years of the permit effective date.**"

Town of East Longmeadow staff have previously completed two rounds of outfall investigations during Permit Year 1 (2019) and Permit Year 2 (2020). Results from those field efforts are summarized in the Permit Year 1 and Permit Year 2 Annual Reports, and included within the Stormwater Management Plan (SWMP).

2. Spring 2021 Field Work Overview

This memorandum presents a summary of Tighe & Bond's outfall investigation field work and findings for East Longmeadow's remaining outfalls. During the spring 2021 field effort, Tighe & Bond and/or East Longmeadow staff completed 231 outfall investigations and sampled at 28 outfalls or upstream drainage structures with dry weather flow[1]. **None of the outfalls investigated met EPA's criteria for a likely sewer input.**

Tighe & Bond participated in outfall investigations over three (3) days in May and June 2021, including gathering outfall inventory[2] data and sampling at outfalls if dry weather flow was present. The *Dry Weather Sampling Procedure,* referenced in Appendix F of the IDDE Plan, was followed for each outfall investigation and may be used for future outfall investigations. Tighe & Bond attempted to visit **49 outfalls**; the Town of East Longmeadow investigated a total of **231 outfalls** over the course of Permit Year 3. To date, all of the known outfalls within the urbanized area have been screened or attempted to be screened. Results from Tighe & Bond's spring 2021 field effort are detailed below.

A summary of the dry weather outfall sampling results from Permit Year 3 are included in **Attachment 1**, and the laboratory-provided sampling results are included in **Attachment 2**. **Attachment 3** provides the details of the Permit Year 3 outfall investigation results, including recommended maintenance notes.

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[1] **Dry Weather Flow**: This term refers to when there is flow present at an outfall/ interconnection and there has been less than 0.10 inches of rainfall in the previous 24 hours and no significant snow melt is occurring.

[2] **Inventory/Inventoried:** This term refers to the General Permit requirement in *Section 2.3.4.7.a* to visually inspect each outfall during dry weather conditions and collect prescribed data such as location, size, and visual and olfactory evidence of an illicit discharge.

The Town of East Longmeadow's stormwater system map, which includes photographs, sampling forms, and associated attribute tables, can be found online at: https://eastlongmeadow.maps.arcgis.com/apps/webappviewer/index.html?id=467578936f214550ab4a5ea59fc7c3f2.

3. Outfall Inventory Summary

3.1 Outfall Investigations Completed from Previous Field Efforts

Below is a summary of the outfall analysis completed prior to spring 2021:

- **250** outfalls were screened in Permit Year 1.
- **335** outfalls were screened in Permit Year 2 and **10** outfalls were added to the inventory.

For more detail on the previous field efforts, refer to the Permit Year 1 and Permit Year 2 Annual Reports and Appendix F of the SWMP.

3.2 Spring 2021 Outfall Investigation Results

At the start of the spring 2021 field effort there were a total of **353 regulated outfalls** in Town. The following summary provides a breakdown of the spring 2021 field work results:

- **231 outfalls** were investigated during the 2021 field effort. Of these:
  - **173** were screened for dry weather flow.
    - **26** of these outfalls had dry weather flow and were sampled.
    - **17** outfalls were newly discovered, mapped in GIS, and investigated during this field effort.
  - **10** were investigated and should be removed from the outfall inventory because they did not exist, are another stormwater asset (i.e., catch basin) or they were determined to be owned by the State.

4. Outfall Investigation Results

Section 4 of this memorandum presents the results of the outfall investigations and dry weather flow sampling in the spring of 2021.

4.1 Dry Weather Flow Sampling Results

Dry weather sampling field work was completed in May and June of 2021. Sampling was completed when flow was present at outfalls which had rainfall totals less than 0.10-inches in the last 24-hours. The **26** outfalls with dry weather flow are listed in the table below.

Table 4-1
Outfalls Where Dry Weather Sampling was Completed (Spring 2021)

Outfall ID	Receiving Water	Date	Illicit Connection Potential[1]
FB-012	Freshwater Brook	5/24/2021	Unlikely
JB-006	Jawbuck Brook	5/24/2021	Unlikely
JB-007	Jawbuck Brook	5/24/2021	Unlikely
MR-023	Mill River	6/1/2021	Potential

Outfall ID	Receiving Water	Date	Illicit Connection Potential[1]
MRD-005	Mill Road Conservation	5/24/2021	Potential
PB-003	Pecousic Brook	5/25/2021	Potential
PB-005	Pecousic Brook	5/25/2021	Potential
PB-006	Pecousic Brook	5/25/2021	Unlikely
PB-014	Pecousic Brook	6/1/2021	Potential
PB-033	Pecousic Brook	5/24/2021	Potential
PB-035	Pecousic Brook	6/8/2021	Potential
PB-042	Pecousic Brook	6/10/2021	Potential
PB-051	Pecousic Brook	6/8/2021	Potential
PB-053	Pecousic Brook	5/24/2021	Unlikely
PB-056	Pecousic Brook	6/10/2021	Potential
PB-057	Pecousic Brook	6/8/2021	Potential
PB-072	Pecousic Brook	6/1/2021	Potential
PB-084	Pecousic Brook	6/8/2021	Potential
PB-096*	Pecousic Brook	5/25/2021	Unlikely
SB-005	Schnelock Brook	6/1/2021	Potential
WB-004	Watchaug Brook	6/1/2021	Unlikely
WB-073	Watchaug Brook	6/1/2021	Potential
WB-111	Watchaug Brook	6/1/2021	Unlikely
WB-121	Watchaug Brook	6/10/2021	Unlikely
WB-127	Watchaug Brook	6/1/2021	Unlikely
WB-135	Watchaug Brook	6/8/2021	Unlikely

[1] An illicit connection ranking of "unlikely", "potential", "suspect" or "obvious" has been given to each outfall with dry weather flow based on the likelihood that an illicit connection exists, based on the preliminary outfall ranking score criteria, observations made in the field, and lab sampling results.

Sampling results for the outfalls listed above are included in the Outfall Sampling Results Summary in **Attachment 1**. The Outfall Sampling Results Summary has a color-coded ranking system for the results of the outfall monitoring, which demonstrates the severity of the sampling results relative to known EPA benchmarks (i.e., a red result denotes a higher, potentially problematic concentration of a stormwater pollutant). This system was used to clearly understand the water quality at each outfall and will be used to determine the follow-up outfall prioritization required by *Section 2.3.4.7.c* of the 2016 Small MS4 General Permit. The table of investigation results is provided in **Attachment 2**. Samples were analyzed by Con-Test laboratory of East Longmeadow, Massachusetts and the laboratory data is available in **Attachment 3**.

An updated priority ranking of "low" or "high" has been given to each outfall depending on sampling results as required by *Section 2.3.4.7.c* of the 2016 Small MS4 General Permit, as this year concluded the dry weather outfall screening in Town (See Section 5.1 and **Attachment 4**).

Per *Section 2.3.4.7.a.ii* of the 2016 Small MS4 General Permit, likely sewer input indicators include any of the following:

- Olfactory or visual evidence of sewage;
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, <u>and</u> bacteria levels greater than the water quality criteria applicable to the receiving water; or
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, <u>and</u> detectable levels of chlorine.

None of the outfalls screened and sampled during the spring 2021 field effort met EPA's criteria for likely sewer input.

E. coli levels in 4 outfalls were above the lower benchmark of 235 CFU/100 mL (MRD-005, PBPB-084, SB-005), and above the medium benchmark of 1,260 CFU/100 mL at 3 outfalls (PB-056, PB-057, and PB-072), which could be from livestock or animal runoff. Total nitrogen levels were above benchmarks in all outfalls, which could be due to decaying organic matter or runoff from residential lawn watering with recent fertilizer applications. In addition, chlorine levels were greater than the EPA benchmark of 0.02 mg/L at most outfalls, which may indicate potable water source inputs. Sources of the chlorine may include water main leaks or breaks, hydrant flushing, or chlorinated pool water discharges to the storm drain. However, no outfalls met the criteria for likely sewer input as levels of ammonia and surfactants were non-detect or below the reporting limit. **All sampled outfalls were ranked as High Priority for catchment investigations and implementation of the IDDE Program.**

4.2 Outfalls Requiring Maintenance

There were 2 outfalls visited during Tighe & Bond's field efforts that were partially or completely full of sediment, leaves, or debris (See Table 4-2). Tighe & Bond recommends that the outfall pipes and discharge areas of all outfalls are maintained on a regular basis for proper function of the drainage system. These outfalls should be evaluated by Town staff and cleaned or repaired, as necessary.

Table 4-2
Outfalls Requiring Maintenance (Spring 2021)

Outfall ID	Receiving Water	Maintenance Required
WB-082	Watchaug Brook	Outfall needs to be dredged
WB-114	Watchaug Brook	Outfall needs to be jetted and dredged

5. Conclusions & Recommendations

This outfall inventory and dry weather monitoring effort was completed as part of the Town's IDDE Program and completes the requirements of 2016 Small MS4 General Permit *Section 2.3.4.7 Outfall/Interconnection Inventory and Initial Ranking and Dry Weather Outfall and Interconnection Screening and Sampling*. The results of this sampling effort indicated that none of the **outfalls and upstream structures had any evidence of a direct or indirect sanitary wastewater connection.** This memorandum will be appended to the Town's written IDDE Plan.

5.1 Updated Outfall Ranking and Prioritization

Per *Section 2.3.4.7.c.ii* of the 2016 Small MS4 General Permit, all outfalls within the MS4 must be reranked based on their illicit discharge potential. Outfalls should be considered top of the high priority list for catchment investigation if there is dry weather flow with pollutant concentrations or visual observations that meet the criteria for a likely sewer input. The 2016 Small MS4 General Permit also requires that discharges that may cause or contribute to an in-stream exceedance of surface water quality standards should be considered a high priority for catchment investigations. Any outfall with dry weather screening results that met these criteria in addition to any dry weather flow parameter excedences were ranked as High Priority for the updated ranking.

Information gathered from all outfall investigations and dry weather screening was used to update the outfall priority ranking, which will advise the catchment investigation prioritization. In East Longmeadow, since none of the MS4 outfalls had any evidence of a direct or indirect illicit discharge connection all will be recategorized as Low Priority **except for outfalls that had parameter exceedances based on EPA benchmarks**. Those outfalls will be categorized as High Priority and included first in catchment investigations. Based on this assessment, the updated outfall ranking includes 84 High Priority and 276 Low Priority outfalls (**Attachment 4**).

5.2 Recommendations

The following are recommendations for the Town, which can be completed by the Town or a Contractor in subsequent Permit Years:

- **Continue to educate the public and perform outreach on proper disposal of yard waste.** It is recommended that targeted public education and outreach pertaining to the proper disposal of yard waste be performed throughout the Town of East Longmeadow. It is recommended that flyers be sent to residents regarding East Longmeadow's efforts.
- **Continue to improve drainage mapping.** While East Longmeadow's drainage system mapping is very good, the Town should continue to improve drainage system mapping during subsequent field investigations. Connectivity between structures and outfalls will be refined and the GIS mapping updated accordingly. Any drainage structure incorrectly labeled as an outfall in GIS should be resolved and updated. As infrastructure is discovered to be privately owned/operated, it may be removed from the Town's asset inventory.
- **Continue to implement the outfall operation and maintenance (O&M) plan.** From this year's sampling effort, it was determined that two outfalls needed maintenance. It is recommended that the Town revisit locations listed in this memorandum, determine maintenance requirements, and record any action(s) taken. Priority should be given to outfalls fully submerged in sediment and completely clogged lines. The Town should continue to implement proper outfall O&M as described in the Town's O&M Plan.

Attachments

Attachment 1: Outfall Sampling Results Summary
Attachment 2: Spring 2021 Inspection Data
Attachment 3: Laboratory Sampling Results
Attachment 4: Updated Outfall Priority Ranking

Attachment 1: Spring 2021 Outfall Sampling Results Summary

Outfall Sampling Results Summary - East Longmeadow, MA

Location				Laboratory Analysis (1)				Water Quality Meter/Test Kit (1)				
Date	Time	Outfall ID	Receiving Water	Ammonia	Surfactants	E. coli	Total Nitrogen	Temperature	Salinity	Conductivity	Chlorine	Ammonia
				mg/L	mg/L	col/100mL	mg/L	°C	ppt	μS/cm (2)	mg/L	mg/L
5/24/2021	12:26	FB-012	Freshwater Brook	ND	<0.05	1.0	2.8	15.3	0.00	665	0.01	0.00
5/24/2021	10:47	JB-006	Jawbuck Brook	ND	<0.05	26	2.6	17.9	0.00	567	0.08	0.00
5/24/2021	11:02	JB-007	Jawbuck Brook	ND	<0.05	ND	1.4	16.9	0.00	666	0.00	0.00
6/1/2021	14:28	MR-023	Mill River	-	<0.05	31	6.5	18.8	0.00	1,305	0.01	0.00
5/24/2021	8:32	MRD-005	Mill Road Conservation	ND	<0.05	690	2.8	13.7	0.00	238	0.06	0.00
5/25/2021	10:17	PB-003	Pecousic Brook	-	<0.05	1.0	2.5	17.2	0.00	256	0.03	0.00
5/25/2021	10:43	PB-005	Pecousic Brook	-	<0.05	35	5.6	18.4	0.00	621	0.02	0.00
5/25/2021	12:15	PB-006	Pecousic Brook	-	<0.05	6.3	3.0	16.4	0.00	288	0.13	0.25
6/1/2021	9:44	PB-014	Pecousic Brook	-	ND	310	3.8	15.2	0.00	896	0.02	0.00
5/24/2021	13:49	PB-033	Pecousic Brook	ND	<0.05	5.2	1.2	19.0	0.00	1,081	0.01	0.00
6/8/2021	10:00	PB-035	Pecousic Brook	-	<0.05	24	4.8	22.5	0.00	730	0.12	0.00
6/10/2021	10:15	PB-042	Pecousic Brook	-	<0.05	63	3.5	15.5	0.00	232	0.06	0.00
6/8/2021	9:30	PB-051	Pecousic Brook	-	<0.05	52	5.3	18.1	0.00	622	0.00	0.25
5/24/2021	14:21	PB-053	Pecousic Brook	ND	<0.05	100	3.0	17.4	0.00	579	0.07	0.00
6/10/2021	9:15	PB-056	Pecousic Brook	-	<0.05	2,000	9.9	16.3	0.00	527	0.00	0.00
6/8/2021	8:45	PB-057	Pecousic Brook	-	0.06	1,300	2.8	19.5	0.00	1,065	0.03	0.25
5/25/2021	8:01	PB-096*	Pecousic Brook	-	<0.10	50	1.9	14.5	0.00	1,112	0.00	0.00
6/1/2021	10:06	PB-072	Pecousic Brook	-	0.15	1,700	1.2	13.6	0.00	128	0.00	0.00
6/8/2021	10:30	PB-084	Pecousic Brook	-	<0.05	430	1.4	-	-	-	-	-
6/1/2021	13:46	SB-005	Schnelock Brook	-	<0.05	650	1.9	13.9	0.00	103	0.02	0.00
6/1/2021	12:06	WB-004	Watchaug Brook	-	<0.05	20	3.5	17.4	0.00	161	0.02	0.00
6/1/2021	11:21	WB-073	Watchaug Brook	-	<0.05	22	2.6	16.0	0.00	456	0.02	0.00
6/1/2021	8:50	WB-111	Watchaug Brook	-	ND	36	1.3	13.9	0.00	103	0.03	0.00
6/10/2021	8:05	WB-121	Watchaug Brook	-	<0.05	150	2.5	18.1	0.36	641	0.00	0.00
6/1/2021	8:12	WB-127	Watchaug Brook	-	ND	7.3	4.5	14.3	0.00	590	0.05	0.00
6/8/2021	8:00	WB-135	Watchaug Brook	-	<0.05	13	3.8	22.3	0.00	552	0.09	0.25

REPORTING LIMITS

Ammonia = 0.075 mg/L
Surfactants = 0.050 mg/L
E. coli = 2.0 col/100mL
Total Coliform = 1.0 MPN/mL
Fecal Coliform = 2.0 col/100mL
Total Nitrogen = 0.20 mg/L
TSS = 1.0 mg/L
Turbidity = 0.20 NTU
"ND" = none detected
"-" = not analyzed

Notes for Results Summary:

(1) "-" means no analysis was completed
(2) μS/cm is equivalent to μmhos/cm
* noted in lab report as PB-069

COLOR KEY (benchmarks are bold)									
	Ammonia	Surfactants	E. coli	Total Nitrogen	Temperature	Salinity	Conductivity	Chlorine	Ammonia
	mg/L	mg/L	CFU/100 mL	mg/L	°C	ppt	μS/cm	mg/L	mg/L
	≥ 6.000	≥ 1.000	≥ 10,000	≥ 2.13		≥ 1.00	**≥ 2,000**	≥ 1.00	≥ 6.0
	≥ 1.000	≥ 0.500	≥ 1,260	≥ 1.35		≥ 0.75	≥ 1,500	≥ 0.30	≥ 1.0
	≥ 0.500	**≥ 0.250**	**≥ 235**	**≥ 0.57**	**≥ 28.3**	**≥ 0.50**	≥ 1,000	**≥ 0.02**	**≥ 0.5**
	< 0.500	< 0.250	< 235	< 0.57	< 28.3	< 0.50	< 1,000	< 0.02	< 0.5

(a) Total Suspended Solids and Turbidity do not have quantitative benchmarks.

Benchmark Sources:

Ammonia, Surfactants, and Chlorine - *EPA General Permit for Stormwater Discharges from Small MS4 in Massachusetts*
E. coli, and Temperature - *314 CMR 4.00: Massachusetts Surface Water Quality Standards*
Total Nitrogen - EPA Ambient Water Quality Criteria Recommendations for Rivers and Streams in Nutrient Ecoregion XIV
Cadmium, Copper and Lead - *National Recommended Water Quality Criteria: 2002*
pH - *314 CMR 4.00: Massachusetts Surface Water Quality Standards* and *Center for Watershed Protection Illicit discharge Detection and Elimination Guidance Manual*
Salinity - *EPA Volunteer Estuary Monitoring: A Methods Manual*
Conductivity - *Center for Watershed Protection Illicit discharge Detection and Elimination Guidance Manual*

Attachment 2: Spring 2021 Outfall Inspection Data

OBJECTID	globalid	CreationDate	CreationTime	Creator	EditDate	EditTime	Editor	Outfall_ID	Subbasin_Abbr	Date1	Time	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
906	4DA77EBD-8E95-490B-90CD-6EF90E8E0DC3	2020-08-17	3:56 PM	elmadpw	8/17/2020	3:56 PM	elmadpw	DRD-001	DRD	8/17/2020	11:53	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Leach field	None	NULL
1056	E2221219-5361-4943-B18F-12B6F1DC2CA0	2021-06-09	3:13 PM	elmadpw	6/9/2021	3:13 PM	elmadpw	DRD-001	DRD	6/9/2021	11:06	Crochetiere, Vachon	0.01000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
907	C92C71F8-436D-46AE-9AFA-12C8768055F3	2020-08-17	3:56 PM	elmadpw	8/17/2020	3:56 PM	elmadpw	DRD-002	DRD	8/17/2020	11:45	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	NULL	NULL	NULL	other	Leach field	None	NULL
1002	B048DE96-DFFD-4F47-A05F-A47D49DB9A9B	2021-04-20	2:40 PM	elmadpw	4/20/2021	2:40 PM	elmadpw	DRD-002	DRD	4/20/2021	10:40	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Leach	None	NULL
905	95B99BCF-7A13-41D2-B1A0-8D06F0809932	2020-08-17	3:41 PM	elmadpw	8/17/2020	3:41 PM	elmadpw	DRD-003	DRD	8/17/2020	11:29	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	NULL	None	NULL
1000	784637C2-1C6B-4A93-81EE-5CDE2A4B439C	2021-04-20	2:10 PM	elmadpw	4/20/2021	2:10 PM	elmadpw	DRD-003	DRD	4/20/2021	10:08	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Unknown maybe leach into ground	None	NULL
1001	945AD755-EE92-4E0F-8628-EF51E695DC2E	2021-04-20	2:11 PM	elmadpw	4/20/2021	2:11 PM	elmadpw	DRD-004	DRD	4/20/2021	10:10	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Unknown may leach into ground	None	NULL
904	C752B0EA-376A-4EFA-865D-FE4F7810B0A3	2020-08-17	3:41 PM	elmadpw	8/17/2020	3:41 PM	elmadpw	DRD-004	DRD	8/17/2020	11:33	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	NULL	NULL	NULL	other	NULL	None	NULL
1051	059C3EEA-FA3B-4202-88C4-DF065A55C6D7	2021-06-09	12:42 PM	elmadpw	6/9/2021	12:42 PM	elmadpw	DRD-005	DRD	6/9/2021	08:38	Crochetiere, Vachon	0.10000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
913	1E50DF5F-6A80-4BF3-849B-324AFF1312C2	2020-08-18	11:38 AM	elmadpw	8/18/2020	11:38 AM	elmadpw	DRD-005	DRD	8/18/2020	07:26	Crochetiere	0.10000000	0.00000000	12.00000000	CMP	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
918	755C7E7F-026B-4E4C-9C43-A9E6098D1DCE	2020-08-18	12:59 PM	elmadpw	8/18/2020	12:59 PM	elmadpw	DRD-006	DRD	8/18/2020	08:53	Crochetiere	0.10000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
916	5467A1C2-6B6C-423A-8492-0292148AF6B7	2020-08-18	12:12 PM	elmadpw	8/18/2020	12:12 PM	elmadpw	DRD-007	DRD	8/18/2020	08:04	Crochetiere	0.10000000	0.07000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
914	70287F0C-9721-457D-86A8-5080C155A6AC	2020-08-18	11:38 AM	elmadpw	8/18/2020	11:38 AM	elmadpw	DRD-008	DRD	8/17/2020	14:58	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
1052	E41E7009-9989-47C9-9FC7-2232DD4F6679	2021-06-09	12:48 PM	elmadpw	6/9/2021	12:48 PM	elmadpw	DRD-008	DRD	6/9/2021	08:45	Crochetiere, Vachon	0.01000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
909	33544C8F-C179-4841-9F60-A0A56C590E9B	2020-08-17	6:04 PM	elmadpw	8/17/2020	6:04 PM	elmadpw	DRD-009	DRD	8/17/2020	13:56	Crochetiere	0.00000000	0.00000000	8.00000000	other	Ac	No_Flow	NULL	NULL	other	Dmh	None	NULL
1053	AD88462D-DAE5-4C4A-9A60-67A6160EC33C	2021-06-09	1:32 PM	elmadpw	6/9/2021	1:32 PM	elmadpw	DRD-009	DRD	6/9/2021	09:28	Crochetiere, Vachon	0.01000000	0.00000000	8.00000000	other	Asbestos Concrete Pipe	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
910	1A6CF401-2A48-4D22-A090-A970BCE2F18D	2020-08-17	6:04 PM	elmadpw	8/17/2020	6:04 PM	elmadpw	DRD-010	DRD	8/17/2020	13:55	crochetiere	0.00000000	0.00000000	8.00000000	other	Ac	No_Flow	NULL	NULL	other	Drain manhole	None	NULL
1054	5B5C32DF-2740-4B31-AB44-76D325BE2E8B	2021-06-09	1:34 PM	elmadpw	6/9/2021	1:34 PM	elmadpw	DRD-010	DRD	6/9/2021	09:32	Crochetiere, Vachon	0.01000000	0.00000000	8.00000000	other	ACP	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
908	6C050DFD-F795-402E-A243-C355C7175929	2020-08-17	4:16 PM	elmadpw	8/17/2020	4:16 PM	elmadpw	DRD-011	DRD	8/17/2020	12:14	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Catch basin	None	NULL
1055	62AB5D93-F493-4521-87B7-B205579E2293	2021-06-09	3:03 PM	elmadpw	6/9/2021	3:03 PM	elmadpw	DRD-011	DRD	6/9/2021	10:59	Crochetiere, Vachon	0.01000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
1058	EF401BC4-8DC5-4547-AADE-2BBB728A554A	2021-06-09	5:19 PM	elmadpw	6/9/2021	5:19 PM	elmadpw	DRD-012	DRD	6/9/2021	13:17	Crochetiere, Vachon	0.01000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
915	C5B81470-49F5-47EB-A029-91788BD60390	2020-08-18	11:55 AM	elmadpw	8/18/2020	11:55 AM	elmadpw	DRD-012	DRD	8/18/2020	07:46	Crochetiere	0.10000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
1057	DBE544F0-4AD4-4F81-8858-7044AA9FB4B6	2021-06-09	5:16 PM	elmadpw	6/9/2021	5:16 PM	elmadpw	DRD-013	DRD	6/9/2021	13:14	Crochetiere, Vachon	0.01000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
911	F59F7829-4C2C-453F-A987-8E8781D0C039	2020-08-17	6:32 PM	elmadpw	8/17/2020	6:32 PM	elmadpw	DRD-013	DRD	8/17/2020	14:31	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
1059	2585D378-20DC-4E5B-95AF-2636CEB659DA	2021-06-09	5:41 PM	elmadpw	6/9/2021	5:41 PM	elmadpw	DRD-014	DRD	6/9/2021	13:34	Crochetiere, Vachon	0.01000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
912	F1D2B72B-F3DB-48C0-96A6-4DC7A45F145D	2020-08-17	6:54 PM	elmadpw	8/17/2020	6:54 PM	elmadpw	DRD-014	DRD	8/17/2020	14:41	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	DMH	None	NULL
1070	314EE84D-7BA4-43F4-A3AE-414FFC3FB611	2021-06-10	5:55 PM	elmadpw	6/10/2021	5:55 PM	elmadpw	FB-001	FB	6/10/2021	13:51	Crochetiere, Vachon	0.00000000	0.10000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
854	B22E4099-6005-48A7-B840-834E6E844977	2020-07-28	7:17 PM	elmadpw	7/28/2020	7:17 PM	elmadpw	FB-001	FB	7/28/2020	15:03	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1069	50201410-493A-4606-9253-38D9D8F3C9B0	2021-06-10	5:49 PM	elmadpw	6/10/2021	5:49 PM	elmadpw	FB-002	FB	6/10/2021	13:44	Crochetiere, Vachon	0.00000000	0.10000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
852	193EB950-39A9-468A-A6FE-BE0B8566CE66	2020-07-28	6:58 PM	elmadpw	7/28/2020	6:58 PM	elmadpw	FB-002	FB	7/28/2020	14:50	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
855	68C8411C-16EA-45BE-8121-B96210E37031	2020-07-28	7:17 PM	elmadpw	7/28/2020	7:17 PM	elmadpw	FB-003	FB	7/28/2020	14:59	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1068	D7AA54B5-C2E7-4395-AD19-1F4E1B6246F1	2021-06-10	5:43 PM	elmadpw	6/10/2021	5:43 PM	elmadpw	FB-003	FB	6/10/2021	13:39	Crochetiere, Vachon	0.00000000	0.10000000	6.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
1071	A5FCC2A5-E13E-4285-842A-E750DA59B04E	2021-06-10	6:20 PM	elmadpw	6/10/2021	6:20 PM	elmadpw	FB-005	FB	6/10/2021	14:15	Crochetiere, Vachon	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
869	31B334A9-DBC7-421B-9FA9-BCEC3C858BB6	2020-07-30	12:47 PM	elmadpw	7/30/2020	12:47 PM	elmadpw	FB-005	FB	7/30/2020	08:30	Crochetiere	0.02000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
866	FDF449BA-9812-4296-88FB-3E422297F800	2020-07-30	12:18 PM	elmadpw	7/30/2020	12:18 PM	elmadpw	FB-006	FB	7/30/2020	08:12	Crochetiere	0.02000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1074	A886BB27-C025-406D-B35E-2A654BBDAEE0	2021-06-10	6:31 PM	elmadpw	6/10/2021	6:31 PM	elmadpw	FB-006	FB	6/10/2021	14:29	Crochetiere, Vachon	0.00000000	0.10000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
1077	658D7D0E-5838-4C72-A6C0-232DB093C132	2021-06-10	6:40 PM	elmadpw	6/10/2021	6:40 PM	elmadpw	FB-007	FB	6/10/2021	14:39	Crochetiere, Vachon	0.00000000	0.10000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
863	9A611330-A0DC-47AA-90E3-BE886DF5EEFA	2020-07-30	11:54 AM	elmadpw	7/30/2020	11:54 AM	elmadpw	FB-007	FB	7/30/2020	07:40	Crochetiere	0.02000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
864	97F23C5C-DF90-4B6E-849D-A1E4AE12A5F5	2020-07-30	12:02 PM	elmadpw	7/30/2020	12:02 PM	elmadpw	FB-008	FB	7/30/2020	07:55	Crochetiere	0.02000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1076	985EDD1C-9587-4CEC-A17D-FC44E360EC79	2021-06-10	6:38 PM	elmadpw	6/10/2021	6:38 PM	elmadpw	FB-008	FB	6/10/2021	14:36	Crochetiere, Vachon	0.00000000	0.10000000	18.00000000	HDPE	NULL	Trickle	0.25000000	NULL	Suburban_Res	NULL	None	NULL
1075	30BE2D39-B652-4D51-87BE-A0D1DDE201FA	2021-06-10	6:35 PM	elmadpw	6/10/2021	6:35 PM	elmadpw	FB-009	FB	6/10/2021	14:33	Crochetiere, Vachon	0.00000000	0.10000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
865	D960C883-6163-4027-BE34-5C1E9B1B61D6	2020-07-30	12:11 PM	elmadpw	7/30/2020	12:11 PM	elmadpw	FB-009	FB	7/30/2020	08:06	Crochetiere	0.02000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1073	8AA9A669-5F7A-4C57-A6A0-9ECD684BE6D3	2021-06-10	6:28 PM	elmadpw	6/10/2021	6:28 PM	elmadpw	FB-010	FB	6/10/2021	14:26	Crochetiere	0.00000000	0.10000000	18.00000000	HDPE	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL
867	3156C9CD-D109-4E33-AE47-C39B3E058B79	2020-07-30	12:23 PM	elmadpw	7/30/2020	12:23 PM	elmadpw	FB-010	FB	7/30/2020	08:19	Crochetiere	0.02000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1072	B519683F-698D-49A2-ADB8-3AF0E672D964	2021-06-10	6:23 PM	elmadpw	6/10/2021	6:23 PM	elmadpw	FB-011	FB	6/10/2021	14:21	Crochetiere, Vachon	0.00000000	0.10000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
868	8F498CD8-A770-4678-9600-446532D8FF5F	2020-07-30	12:46 PM	elmadpw	7/30/2020	12:46 PM	elmadpw	FB-011	FB	7/30/2020	08:36	Crochetiere	0.02000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1022	CEEE0C08-F07C-4957-844E-E8DEE99DAA80	2021-05-24	4:26 PM	elmadpw	5/24/2021	4:26 PM	elmadpw	FB-012	FB	5/24/2021	12:20	Crochetiere	0.00000000	0.00000000	30.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
837	F4377EF5-FE1B-4ECF-818F-347B4538AD93	2020-07-27	4:17 PM	elmadpw	7/27/2020	4:17 PM	elmadpw	FB-012	FB	7/27/2020	12:07	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	12.00000000	24.00000000	other	Stream	None	NULL
836	2E55CEFC-FBF5-4DDD-9C0C-A90403F2CC7B	2020-07-27	4:17 PM	elmadpw	7/27/2020	4:17 PM	elmadpw	FB-013	FB	7/27/2020	12:14	Crochetiere	0.00000000	0.00000000	42.00000000	Steel_Iron	NULL	Trickle	24.00000000	42.00000000	other	Stream	None	NULL
1023	C6EE9633-BF69-4696-8B54-2355DB74E754	2021-05-24	4:28 PM	elmadpw	5/24/2021	4:28 PM	elmadpw	FB-013	FB	5/24/2021	12:26	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
853	8F17EAC7-18E9-45BE-8B5E-4E7387DE7817	2020-07-28	7:17 PM	elmadpw	7/28/2020	7:17 PM	elmadpw	FB-014	FB	7/28/2020	15:11	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
843	4A181668-C530-42D5-8196-D9D329313B16	2020-07-27	6:59 PM	elmadpw	7/27/2020	6:59 PM	elmadpw	FB-015	FB	7/27/2020	14:54	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
841	B5127895-54A2-4E64-BFBC-4B3DCB94D94B	2020-07-27	6:40 PM	elmadpw	7/27/2020	6:40 PM	elmadpw	FB-016	FB	7/27/2020	14:29	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1008	4835ABF0-D40F-4ADB-B417-10DB2B82A8B9	2021-04-20	4:11 PM	elmadpw	4/20/2021	4:11 PM	elmadpw	FB-016	FB	4/20/2021	12:09	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.55000000	10.00000000	other	Stream	None	NULL
842	9089AE56-6008-4727-8009-2DAEEBA7833A	2020-07-27	6:40 PM	elmadpw	7/27/2020	6:40 PM	elmadpw	FB-017	FB	7/27/2020	14:35	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1007	43CC9482-1E0F-4F5B-B265-1698AE84E68C	2021-04-20	4:10 PM	elmadpw	4/20/2021	4:10 PM	elmadpw	FB-017	FB	4/20/2021	12:08	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.06000000	800.00000000	other	Stream	None	NULL
844	C89A9979-CD90-4D7B-938E-ABDB993010FB	2020-07-28	1:03 PM	elmadpw	7/28/2020	1:03 PM	elmadpw	FB-018	FB	7/28/2020	08:52	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
1006	8D9CE7A6-025A-4D06-A081-9B7DBEF638D3	2021-04-20	4:00 PM	elmadpw	4/20/2021	4:00 PM	elmadpw	FB-018	FB	4/20/2021	11:58	Crochetiere	0.00000000	0.00000000	13.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
845	AAD33ACA-7811-4FF8-8D0C-E59784EC176C	2020-07-28	1:28 PM	elmadpw	7/28/2020	1:28 PM	elmadpw	FB-019	FB	7/28/2020	09:20	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1005	F7BCADC5-2C6E-4913-B152-831346B6A5C0	2021-04-20	4:00 PM	elmadpw	4/20/2021	4:00 PM	elmadpw	FB-019	FB	4/20/2021	11:33	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Detention basin	None	NULL
1066	6EC78DE7-EAA6-4941-98E1-4148A5B9407B	2021-06-10	3:46 PM	elmadpw	6/10/2021	3:46 PM	elmadpw	FB-022	FB	6/10/2021	11:44	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	Trickle	0.25000000	2.00000000	OpenSpace	NULL	None	NULL
851	F75C1155-F2B7-477C-889F-DE13A29F0356	2020-07-28	6:43 PM	elmadpw	7/28/2020	6:43 PM	elmadpw	FB-023	FB	7/28/2020	14:39	Crochetiere	0.00000000	0.00000000	30.00000000	HDPE	NULL	Trickle	0.25000000	2.50000000	OpenSpace	NULL	None	NULL
1067	81505E1C-5595-43ED-A3F3-89224778692A	2021-06-10	5:31 PM	elmadpw	6/10/2021	5:31 PM	elmadpw	FB-023	FB	6/10/2021	13:28	Vachon	0.10000000	0.00000000	30.00000000	HDPE	NULL	Trickle	0.75000000	NULL	OpenSpace	NULL	None	NULL
849	C753686A-032B-4070-BF6D-C29EFC16A282	2020-07-28	3:28 PM	elmadpw	7/28/2020	3:28 PM	elmadpw	FB-024	FB	7/28/2020	11:19	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
848	B2B4AAA1-0DF0-4F40-AA6C-FCFB12A478C0	2020-07-28	2:51 PM	elmadpw	7/28/2020	2:51 PM	elmadpw	FB-025	FB	7/28/2020	10:49	Crochetiere	0.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
1065	76630BCC-40B1-45AE-AA36-797EBFD332EE	2021-06-10	3:33 PM	elmadpw	6/10/2021	3:33 PM	elmadpw	JB-001	JB	6/10/2021	11:29	Crochetiere, Vachon	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	Industrial	NULL	None	NULL
976	D6496ED7-B59A-4BF5-B0E8-EFDFD88755AA	2020-09-28	1:45 PM	elmadpw	9/28/2020	1:45 PM	elmadpw	JB-001	JB	9/28/2020	08:32	Crochetiere	0.03000000	0.00000000	30.00000000	RCP	NULL	Trickle	4.00000000	18.00000000	Commercial	NULL	None	NULL
975	533A04EA-06DB-4801-93D6-F368C5A7F048	2020-09-28	1:45 PM	elmadpw	9/28/2020	1:45 PM	elmadpw	JB-002	JB	9/28/2020	08:22	Crochetiere	0.03000000	0.00000000	24.00000000	RCP	NULL	Trickle	2.00000000	12.00000000	Commercial	NULL	None	NULL
873	030E8A8C-33AB-4897-8E7D-EB3B0EC404B9	2020-07-30	2:35 PM	elmadpw	7/30/2020	2:35 PM	elmadpw	JB-003	JB	7/30/2020	10:30	Crochetiere	0.02000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
872	DC07E4FC-4814-4696-8EE8-D10E5A4484C5	2020-07-30	2:28 PM	elmadpw	7/30/2020	2:28 PM	elmadpw	JB-004	JB	7/30/2020	10:17	Crochetiere	0.02000000	0.00000000	18.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	other	Stream		
871	A331126E-3271-47AB-BDF9-F6B36B552B77	2020-07-30	2:11 PM	elmadpw	7/30/2020	2:11 PM	elmadpw	JB-005	JB	7/30/2020	09:53	Crochetiere	0.02000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
840	F0F1BC14-61C2-452D-89B8-DA31A39005B2	2020-07-27	6:04 PM	elmadpw	7/27/2020	6:04 PM	elmadpw	JB-006	JB	7/27/2020	13:59	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	0.50000000	20.00000000	other	Stream	None	NULL
1019	2405DB6A-2B50-4919-B1CA-C2D4940C9840	2021-05-24	2:54 PM	elmadpw	5/24/2021	2:54 PM	elmadpw	JB-006	JB	5/24/2021	10:47	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	4.00000000	20.00000000	other	Stream	None	NULL
1020	50C4D8D6-E7F2-4793-9BA2-EE6B75CF1228	2021-05-24	3:10 PM	elmadpw	5/24/2021	3:10 PM	elmadpw	JB-007	JB	5/24/2021	11:02	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Moderate	4.00000000	12.00000000	other	Culvert	None	NULL
839	96386050-1740-4D92-BC01-F51803435291	2020-07-27	6:04 PM	elmadpw	7/27/2020	6:04 PM	elmadpw	JB-007	JB	7/27/2020	13:56	Crochetiere	0.00000000	0.00000000	78.00000000	Steel_Iron	NULL	Substantial	18.00000000	60.00000000	other	Stream	None	NULL
859	92D00C53-4C2D-4117-885E-39CF3FC46056	2020-07-29	2:20 PM	elmadpw	7/29/2020	2:20 PM	elmadpw	JB-011	JB	7/29/2020	10:10	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
880	147E8CAC-F872-43EE-A4F6-09EE32130094	2020-07-30	6:53 PM	elmadpw	7/31/2020	11:39 AM	elmadpw	JB-012	JB	7/30/2020	14:48	Crochetiere	0.02000000	0.00000000	10.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
870	3DA45C4E-2DCB-4711-8FDB-78D808957C2C	2020-07-30	1:43 PM	elmadpw	7/30/2020	1:43 PM	elmadpw	JB-013	JB	7/30/2020	09:32	Crochetiere	0.02000000	0.00000000	30.00000000	RCP	NULL	Trickle	6.00000000	30.00000000	other	Stream	None	NULL
850	8B7ABEA1-6EEE-4A85-9412-AD413DD2D1E3	2020-07-28	4:08 PM	elmadpw	7/28/2020	4:08 PM	elmadpw	JB-015	JB	7/28/2020	12:03	Crochetiere	0.00000000	0.00000000	36.00000000	Steel_Iron	NULL	Trickle	2.00000000	13.00000000	other	Stream	None	NULL
1021	5AB36FA0-24D5-4B52-8E8A-AA46C30A4288	2021-05-24	3:58 PM	elmadpw	5/24/2021	3:58 PM	elmadpw	JB-015	JB	5/24/2021	11:56	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
838	68519D18-85E2-4DCD-BE78-FBE908325631	2020-07-27	5:42 PM	elmadpw	7/27/2020	5:42 PM	elmadpw	JB-016	JB	7/27/2020	13:33	Crochetiere	0.00000000	0.00000000	24.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
977	DBD93631-60F3-43F7-A376-5A346EE442D9	2020-09-28	3:17 PM	elmadpw	9/28/2020	3:17 PM	elmadpw	JB-016	JB	9/28/2020	11:14	Crochetiere	0.03000000	0.00000000	30.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
816	67B14E95-09DC-43E9-B3E9-5376F6E2E9F4	2020-07-24	12:57 PM	elmadpw	7/24/2020	12:57 PM	elmadpw	JB-017	JB	7/24/2020	08:48	Crochetiere	0.00000000	0.10000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
815	C0029413-CE17-482C-93B6-7D1323D7823D	2020-07-24	12:47 PM	elmadpw	7/24/2020	12:47 PM	elmadpw	JB-018	JB	7/24/2020	08:45	Crochetiere	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1004	4054CCAD-CD13-4458-86EE-BD6EDB79FE8E	2021-04-20	3:30 PM	elmadpw	4/20/2021	3:30 PM	elmadpw	JB-019	FB	4/20/2021	11:27	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Detention basin	None	NULL
847	98E38826-61C5-4BDD-B93F-5E76C5BC02D2	2020-07-28	2:48 PM	elmadpw	7/28/2020	2:48 PM	elmadpw	JB-019	FB	7/28/2020	10:32	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
846	EBBDA212-F722-481C-A011-484E6CCF2373	2020-07-28	2:48 PM	elmadpw	7/28/2020	2:48 PM	elmadpw	JB-020	FB	7/28/2020	10:41	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1003	A788BC6C-63FB-480A-92AE-605944901D9A	2021-04-20	3:30 PM	elmadpw	4/20/2021	3:30 PM	elmadpw	JB-020	FB	4/20/2021	11:22	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Detention basin	None	NULL
882	D73EA56C-7E44-4B9F-94A2-D1B771B1CEBC	2020-07-31	12:03 PM	elmadpw	7/31/2020	12:03 PM	elmadpw	JB-023	JB	7/31/2020	07:55	Crochetiere	0.00000000	0.02000000	20.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Pond	None	NULL
885	4DA38ED0-C699-4B7B-9954-826BBF458566	2020-07-31	2:10 PM	elmadpw	7/31/2020	2:10 PM	elmadpw	JB-024	JB	7/31/2020	09:33	Crochetiere	0.00000000	0.02000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Pond	None	NULL
979	9A3A18C7-030C-4B50-92B8-233232194E07	2020-09-29	3:59 PM	elmadpw	9/29/2020	3:59 PM	elmadpw	JB-025	JB	9/29/2020	11:53	Crochetiere	0.00000000	0.03000000	20.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Brook	None	NULL
875	803D6EBD-A313-4426-A0F5-10A8F26BE7E3	2020-07-30	4:15 PM	elmadpw	7/30/2020	4:15 PM	elmadpw	L-001	L	7/30/2020	12:05	Crochetiere	0.02000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
876	2046A4BF-4B5F-4584-9EC7-19B9900350B4	2020-07-30	5:29 PM	elmadpw	7/30/2020	5:29 PM	elmadpw	L-002	L	7/30/2020	12:18	Crochetiere	0.02000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity
906	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1056	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
907	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1002	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
905	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1000	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1001	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
904	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1051	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
913	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
918	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
916	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
914	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1052	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
909	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1053	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
910	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1054	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
908	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1055	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1058	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
915	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1057	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
911	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1059	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
912	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1070	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
854	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1069	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
852	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
855	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1068	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1071	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
869	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
866	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1074	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1077	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
863	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
864	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1076	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1075	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
865	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	NULL	Normal	NULL	None	NULL	NULL	NULL	NULL
1073	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
867	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1072	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
868	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1022	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.01000000	665.00000000
837	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
836	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1023	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
853	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
843	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
841	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1008	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
842	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1007	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
844	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1006	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
845	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Inhibited,Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
1005	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1066	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.25000000	0.00000000	398.00000000
851	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1067	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.00000000	758.00000000
849	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Inhibited,Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
848	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1065	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.25000000	0.00000000	395.00000000
976	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
975	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
873	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
872		None	NULL	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL
871	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
840	0None	Brown	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Excessive_Algae	NULL	Brown	NULL	NULL	NULL	NULL
1019	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.08000000	567.00000000
1020	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.00000000	666.00000000
839	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
859	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
880	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
870	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
850	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1021	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
838	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
977	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
816	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
815	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1004	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
847	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
846	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1003	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
882	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
885	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
979	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Suds	NULL	None	NULL	NULL	NULL	NULL
875	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
876	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL

OBJECTID	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt	maintenance_required	maintenance_description	submerged_outfall	buried_by_sediment	tested_upstream	upstream_location_description
906	NULL	NULL	NULL	NULL	May be a leach field or goes into basin 3735 to 3753 into drain line 3684	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1056	NULL	NULL	NULL	NULL	Could gain access to manhole. No flow from basin.	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
907	NULL	NULL	NULL	NULL	May be a leach field or goes into catch basin 3753.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1002	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
905	NULL	NULL	NULL	NULL	May be a leach basin or leach into the ground a few feet away from basin.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1001	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
904	NULL	NULL	NULL	NULL	May be a leach basin or leach in to the ground past the basin	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1051	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
913	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
918	NULL	NULL	NULL	NULL	Need to brush cut to get better access.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
916	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
914	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1052	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
909	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1053	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	Partially_bur	No_upstr	NULL
910	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1054	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	Partially_bur	No_upstr	NULL
908	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1055	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1058	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
915	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1057	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
911	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1059	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
912	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1070	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
854	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1069	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
852	NULL	NULL	NULL	NULL	Need to brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
855	NULL	NULL	NULL	NULL	Need to be dredge back pipe is buried	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1068	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	Fully_bur	No_upstr	NULL
1071	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
869	NULL	NULL	NULL	NULL	Need to be brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
866	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1074	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1077	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
863	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
864	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1076	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1075	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
865	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1073	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
867	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1072	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
868	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1022	NULL	NULL	15.30000000	NULL	Sample for basin	NULL	No	NULL	NULL	NULL	NULL	NULL
837	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
836	NULL	NULL	NULL	NULL	Needs to be dredge and run off needs work do to it	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1023	NULL	NULL	NULL	NULL	Submerged no flow	NULL	No	NULL	NULL	NULL	NULL	NULL
853	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
843	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
841	NULL	NULL	NULL	NULL	Brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1008	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
842	NULL	NULL	NULL	NULL	Brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1007	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
844	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1006	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
845	NULL	NULL	NULL	NULL	Needs to be brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1005	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1066	NULL	NULL	19.80000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
851	NULL	NULL	NULL	NULL	Need to brush cut a new path to get access	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1067	NULL	NULL	17.60000000	NULL	NULL	NULL	No	NULL	No_subm	Partially_bur	Yes_upstr	Drain manhole
849	NULL	NULL	NULL	NULL	Need to brush cut very overgrown hard to access	NULL	NULL	NULL	NULL	NULL	NULL	NULL
848	NULL	NULL	NULL	NULL	Can not locate may not exist or buried	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1065	NULL	NULL	20.30000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Basin
976	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
975	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
873	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
872	NULL	NULL	NULL	NULL	NULL	NULL	NULL	Catch basin is full of debris.	NULL	NULL	NULL	NULL
871	NULL	NULL	NULL	NULL	Need to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
840	NULL	NULL	NULL	NULL	Needs to be tested	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1019	NULL	NULL	17.90000000	NULL	NULL	NULL	No	NULL	NULL	NULL	NULL	NULL
1020	NULL	NULL	116.90000000	NULL	NULL	NULL	No	NULL	NULL	NULL	NULL	NULL
839	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
859	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
880	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
870	NULL	NULL	NULL	NULL	Need to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
850	NULL	NULL	NULL	NULL	Not tested	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1021	NULL	NULL	NULL	NULL	Submerged no water flow	NULL	No	NULL	NULL	NULL	NULL	NULL
838	NULL	NULL	NULL	NULL	This may be the outfall . Will have to dig or camera from more information	NULL	NULL	NULL	NULL	NULL	NULL	NULL
977	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
816	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
815	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1004	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
847	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
846	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1003	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
882	NULL	NULL	NULL	NULL	Brush cut around head wall.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
885	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
979	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
875	NULL	NULL	NULL	NULL	Need to be dredge back. Water pools up at end of outfall.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
876	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	globalid	CreationDate	CreationTime	Creator	EditDate	EditTime	Editor	Outfall_ID	Subbasin_Abbr	Date1	Time	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
981	588C498A-9113-466F-8303-CC2601C3011A	2020-09-29	5:39 PM	elmadpw	9/29/2020	5:39 PM	elmadpw	L-003	L	9/29/2020	13:34	crochetiere	0.00000000	0.03000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
881	F6A58C12-7ED9-445C-986B-0C9AB6541E50	2020-07-31	11:36 AM	elmadpw	7/31/2020	11:36 AM	elmadpw	L-004	L	7/31/2020	07:26	Crochetiere	0.00000000	0.02000000	21.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
874	76AFA43E-0A3D-479A-BF12-912DC4E0B31A	2020-07-30	3:49 PM	elmadpw	7/30/2020	3:49 PM	elmadpw	L-005	L	7/30/2020	11:29	Crochetiere	0.02000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	other	STREAM	None	NULL
1044	9AA2A284-C046-4665-9078-42D39DE5570F	2021-06-01	6:27 PM	elmadpw	6/1/2021	6:27 PM	elmadpw	MR-023	MR	6/1/2021	14:24	Crochetiere	0.00000000	1.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1015	70B72A66-449F-4CAE-A35E-D03260DEE6CC	2021-05-24	12:41 PM	elmadpw	5/24/2021	12:41 PM	elmadpw	MRD-005	MRD	5/24/2021	08:13	Crochetiere	0.00000000	0.00000000	NULL	Steel_Iron	NULL	Trickle	1.00000000	12.00000000	other	Stream	None	NULL
1030	CC27EECF-F67E-4329-BBF6-FA7C877E69FC	2021-05-25	2:52 PM	elmadpw	5/25/2021	2:52 PM	elmadpw	PB-003	PB	5/25/2021	10:14	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	1.25000000	NULL	other	Stream	None	NULL
1031	79FD0664-DA77-4FF3-B372-EB1EBDECE65A	2021-05-25	2:53 PM	elmadpw	5/25/2021	2:53 PM	elmadpw	PB-005	PB	5/25/2021	10:33	crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	0.75000000	NULL	other	Stream	None	NULL
1035	11001015-ADB9-4CC5-895D-00EED05C8D55	2021-05-25	4:25 PM	elmadpw	5/25/2021	4:25 PM	elmadpw	PB-006	PB	5/25/2021	12:14	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
962	906346CC-F554-4479-AA8C-E55044883AF4	2020-09-11	6:19 PM	elmadpw	9/11/2020	6:19 PM	elmadpw	PB-008	PB	9/11/2020	14:13	Crochetiere	0.20000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
858	78579B8B-2B0C-4E46-8435-E9B34FE27CA2	2020-07-29	2:09 PM	elmadpw	7/29/2020	2:09 PM	elmadpw	PB-009	PB	7/29/2020	10:03	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
959	88F64535-FDA7-439A-9FBA-77227A316C6F	2020-09-11	3:39 PM	elmadpw	9/11/2020	3:39 PM	elmadpw	PB-010	PB	9/11/2020	11:14	Crochetiere	0.20000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
997	18D417B1-D15B-4FAE-9886-78EDD046F24D	2021-04-15	7:09 PM	elmadpw	4/15/2021	7:09 PM	elmadpw	PB-010	PB	4/15/2021	15:07	Crochetiere	0.10000000	0.00000000	12.00000000	RCP	NULL	Substantial	12.00000000	12.00000000	other	Open channel	None	NULL
944	3ECAB41B-5BE6-4ACB-BED2-57EA102E3174	2020-08-28	6:31 PM	elmadpw	8/28/2020	6:31 PM	elmadpw	PB-013	PB	8/28/2020	14:25	Crochetiere	0.33000000	0.00000000	54.00000000	RCP	NULL	Moderate	5.00000000	38.00000000	other	Stream	None	NULL
1039	25D746BE-2B8B-4293-907D-5685DBFBEC13	2021-06-01	2:15 PM	elmadpw	6/1/2021	2:15 PM	elmadpw	PB-014	PB	6/1/2021	09:45	Crochetiere	0.00000000	1.00000000	18.00000000	RCP	NULL	Trickle	2.00000000	NULL	OpenSpace	NULL	None	NULL
1029	47FE8CA3-DACF-4326-A339-04C95B00A737	2021-05-25	1:41 PM	elmadpw	5/25/2021	1:41 PM	elmadpw	PB-015	PB	5/25/2021	09:40	Crochetiere	0.00000000	0.00000000	18.00000000	NULL	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
965	8BC73C1C-8331-4888-8009-1049D8B6EA4D	2020-09-14	12:35 PM	elmadpw	9/14/2020	12:35 PM	elmadpw	PB-016	PB	9/14/2020	08:17	Crochetiere	0.00000000	0.00000000	20.00000000	RCP	NULL	Trickle	20.00000000	NULL	other	Stream	None	NULL
947	B9E18B60-27DF-4CCD-897D-CC7F26ADD90F	2020-08-31	12:53 PM	elmadpw	8/31/2020	12:53 PM	elmadpw	PB-018	PB	8/31/2020	08:46	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
958	C6528C59-2A87-4F6B-829C-7D080759A53B	2020-09-11	12:36 PM	elmadpw	9/11/2020	12:36 PM	elmadpw	PB-022	PB	9/11/2020	08:29	Crochetiere	0.30000000	0.00000000	10.00000000	other	ACP	No_Flow	NULL	NULL	other	Stream	None	NULL
1034	92E42BB3-5A01-470E-808B-7CE6FF8FCBFD	2021-05-25	3:50 PM	elmadpw	5/25/2021	3:50 PM	elmadpw	PB-023	PB	5/25/2021	11:48	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
951	31660047-755B-43E7-8C9F-7128E1BA3B26	2020-09-01	1:04 PM	elmadpw	9/1/2020	1:04 PM	elmadpw	PB-023	PB	9/1/2020	08:58	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	10.00000000	11.00000000	other	Stream	None	NULL
950	61B4C045-4976-430B-9C44-D971DB61445E	2020-09-01	1:03 PM	elmadpw	9/1/2020	1:03 PM	elmadpw	PB-024	PB	9/1/2020	08:47	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Trickle	16.00000000	17.00000000	other	NULL	None	NULL
1033	9DE4CB26-987F-47EB-843B-51891EDE1B55	2021-05-25	3:48 PM	elmadpw	5/25/2021	3:48 PM	elmadpw	PB-024	PB	5/25/2021	11:45	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
939	9407C22C-5901-46D2-BF68-BBEA26C4CA57	2020-08-20	7:09 PM	elmadpw	8/20/2020	7:09 PM	elmadpw	PB-026	PB	8/20/2020	15:03	Crochetiere	0.20000000	0.00000000	12.00000000	RCP	NULL	NULL	NULL	NULL	other	Quarry	None	NULL
940	FA4AE909-758B-45F4-869E-3C168AB8811C	2020-08-20	7:15 PM	elmadpw	8/20/2020	7:15 PM	elmadpw	PB-027	PB	8/20/2020	15:09	Crochetiere	0.20000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Quarry	None	NULL
943	7DFD600C-12FA-4AE5-982E-1E47254B8D0B	2020-08-28	6:23 PM	elmadpw	8/28/2020	6:23 PM	elmadpw	PB-028	PB	8/28/2020	14:09	Crochetiere	0.33000000	0.00000000	12.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
942	EC9B31D8-04A7-45E5-B776-F5759F400336	2020-08-28	6:22 PM	elmadpw	8/28/2020	6:22 PM	elmadpw	PB-029	PB	8/28/2020	14:17	Crochetiere	0.33000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
937	2C9B4663-085B-4340-A151-F5EBAD00E1D7	2020-08-20	6:48 PM	elmadpw	8/20/2020	6:48 PM	elmadpw	PB-030	PB	8/20/2020	14:41	Crochetiere	0.20000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
923	87CC3CFC-4C30-4B36-A3B2-D80AC03C9BC7	2020-08-18	5:56 PM	elmadpw	8/18/2020	5:56 PM	elmadpw	PB-032	PB	8/18/2020	13:29	Crochetiere	0.10000000	0.00000000	12.00000000	RCP	NULL	Trickle	1.00000000	3.00000000	other	Strfaem	None	NULL
1025	8CAC72D8-55A9-4934-A89A-559A5D10220C	2021-05-24	5:56 PM	elmadpw	5/24/2021	5:56 PM	elmadpw	PB-032	PB	5/24/2021	13:55	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
922	CFFBE69C-9FB6-4366-80D6-D323259F0091	2020-08-18	5:56 PM	elmadpw	8/18/2020	5:56 PM	elmadpw	PB-033	PB	8/18/2020	13:26	Crochetiere	0.10000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1024	DAB5E516-717F-47C6-96FF-76B632DB0436	2021-05-24	5:55 PM	elmadpw	5/24/2021	5:55 PM	elmadpw	PB-033	PB	5/24/2021	13:44	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	1.00000000	2.00000000	other	Stream	None	NULL
887	4C67D22E-BFAC-47D1-A580-D5DF6DE09261	2020-07-31	4:16 PM	elmadpw	7/31/2020	4:16 PM	elmadpw	PB-034	PB	7/31/2020	12:08	Crochetiere	0.00000000	0.02000000	24.00000000	RCP	NULL	Trickle	4.00000000	20.00000000	OpenSpace	NULL	None	NULL
1050	6CCE302F-611C-4944-9A1E-FC11B08E97C0	2021-06-08	2:14 PM	elmadpw	6/8/2021	2:14 PM	elmadpw	PB-035	PB	6/8/2021	10:09	Crochetiere,Vachon	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
900	91990E34-049C-40B3-A457-D8761C497E0A	2020-08-03	7:19 PM	elmadpw	8/3/2020	7:19 PM	elmadpw	PB-035	PB	8/3/2020	15:11	Crochetiere	1.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	7.00000000	15.00000000	NULL	NULL	None	NULL
889	CD6EDD4A-0F37-40A9-9A81-00C5BCEACEB3	2020-08-03	12:45 PM	elmadpw	8/3/2020	12:45 PM	elmadpw	PB-036	PB	8/3/2020	08:34	Crochetiere	1.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	6.00000000	15.00000000	OpenSpace	NULL	None	NULL
897	0C00E5AF-9E32-4D35-A355-A8C6743E3CF5	2020-08-03	5:40 PM	elmadpw	8/3/2020	5:40 PM	elmadpw	PB-037	PB	8/3/2020	13:32	Crochetiere	1.00000000	0.00000000	12.00000000	RCP	NULL	NULL	NULL	NULL	OpenSpace	NULL	None	NULL
886	1CD42B35-20F1-4E2E-9E04-A3C633A3457F	2020-07-31	4:06 PM	elmadpw	7/31/2020	4:06 PM	elmadpw	PB-038	PB	7/31/2020	23:55	Crochetiere	0.00000000	0.02000000	15.00000000	CMP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
902	713887FD-0792-4EB5-BB8A-F2DFBDB03429	2020-08-17	3:16 PM	elmadpw	8/17/2020	3:16 PM	elmadpw	PB-039	PB	8/17/2020	11:09	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	Trickle	0.02500000	3.00000000	OpenSpace	NULL	None	NULL
899	1113539D-F1CA-4FA9-AFDF-52A4BAB802B6	2020-08-03	6:34 PM	elmadpw	8/3/2020	6:34 PM	elmadpw	PB-041	PB	8/3/2020	14:20	Crochetiere	1.00000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
903	9F0E93CF-53EA-40C6-AD6E-32E995CC9C51	2020-08-17	3:16 PM	elmadpw	8/17/2020	3:16 PM	elmadpw	PB-042	PB	8/17/2020	10:19	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	Trickle	9.00000000	18.00000000	OpenSpace	NULL	None	NULL
1064	E2C1C67C-F557-4151-9981-CCEA29C10810	2021-06-10	2:23 PM	elmadpw	6/10/2021	2:23 PM	elmadpw	PB-042	PB	6/10/2021	10:20	Crochetiere, Vachon	0.00000000	0.10000000	18.00000000	RCP	NULL	Trickle	0.25000000	NULL	Suburban_Res	NULL	None	NULL
877	CA97B6A9-1049-4433-AFC1-A547441A9FA3	2020-07-30	5:46 PM	elmadpw	7/30/2020	5:46 PM	elmadpw	PB-043	PB	7/30/2020	13:43	Crochetiere	0.02000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
878	301CCF1A-27F5-454F-A8C9-8DF8B725A2F8	2020-07-30	5:51 PM	elmadpw	7/30/2020	5:51 PM	elmadpw	PB-044	PB	7/30/2020	13:49	Crochetiere	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
986	CA15A351-E503-4F5B-BA4D-ED3E0191A9C1	2021-01-21	3:44 PM	elmadpw	1/21/2021	3:44 PM	elmadpw	PB-045	PB	1/21/2021	10:38	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Detention basin	None	NULL
879	ED217A70-E5FE-49E3-B985-56B44F20BB1B	2020-07-30	6:13 PM	elmadpw	7/30/2020	6:13 PM	elmadpw	PB-045	PB	7/30/2020	14:00	Crochetiere	0.02000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
898	9C557349-A5C3-48CE-BBF8-03E4FBE95091	2020-08-03	5:59 PM	elmadpw	8/3/2020	5:59 PM	elmadpw	PB-046	PB	8/3/2020	13:44	Crochetiere	100.00000000	0.00000000	18.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
896	A887AD20-9CEC-47DA-9AFF-9EF93042F880	2020-08-03	4:18 PM	elmadpw	8/3/2020	4:18 PM	elmadpw	PB-050	PB	8/3/2020	12:06	Crochetiere	1.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1049	13C15241-3BF3-4821-BFCC-02F1A6ACD4FD	2021-06-08	1:41 PM	elmadpw	6/8/2021	1:41 PM	elmadpw	PB-051	PB	6/8/2021	09:26	Crochetiere,Vachon	0.00000000	0.00025000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
893	37A6FF29-6E3F-4CD4-942C-3B37DF9C34E4	2020-08-03	2:07 PM	elmadpw	8/3/2020	2:07 PM	elmadpw	PB-051	PB	8/3/2020	10:00	Crochetiere	1.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
892	E755F744-D283-444E-9181-128F652E7CB1	2020-08-03	2:07 PM	elmadpw	8/3/2020	2:07 PM	elmadpw	PB-052	PB	8/3/2020	09:45	Crochetiere	1.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	4.00000000	12.00000000	other	Stream	None	NULL
1026	A1267AA4-CD69-43F0-B846-520D745B3E5F	2021-05-24	6:20 PM	elmadpw	5/24/2021	6:20 PM	elmadpw	PB-053	PB	5/24/2021	14:16	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	Moderate	2.00000000	10.00000000	NULL	NULL	None	NULL
894	CBD83D6B-D534-4461-8A39-A82A8B5362BB	2020-08-03	2:21 PM	elmadpw	8/3/2020	2:21 PM	elmadpw	PB-053	PB	8/3/2020	10:10	Crochetiere	1.00000000	0.00000000	36.00000000	RCP	NULL	Trickle	0.50000000	4.00000000	other	Stream	None	NULL
895	E2AEA3D4-F018-4824-8897-8204E43866D6	2020-08-03	4:01 PM	elmadpw	8/3/2020	4:01 PM	elmadpw	PB-054	PB	8/3/2020	10:24	Crochetiere	1.00000000	0.00000000	15.00000000	RCP	NULL	NULL	NULL	NULL	OpenSpace	NULL	None	NULL
982	F0D5E17E-B835-4195-B2B1-4760A244F8F5	2021-01-20	4:47 PM	elmadpw	1/20/2021	4:47 PM	elmadpw	PB-055	PB	1/20/2021	11:35	Crochetiere	0.00000000	0.00000000	15.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
971	5CB553C6-AE9E-4BDB-92CE-8E2777DE9E28	2020-09-24	1:23 PM	elmadpw	9/24/2020	1:23 PM	elmadpw	PB-055	PB	9/24/2020	09:16	Crochetiere	0.00000000	0.00000000	15.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
983	B8406B05-3341-4F07-AB57-E8F695BC8F32	2021-01-20	5:10 PM	elmadpw	1/20/2021	5:10 PM	elmadpw	PB-056	PB	1/20/2021	12:02	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	0.24000000	2.00000000	other	Stream	None	NULL
1063	5C38AF6C-0555-47B3-913D-59587BE5578B	2021-06-10	1:21 PM	elmadpw	6/10/2021	1:21 PM	elmadpw	PB-056	PB	6/10/2021	09:18	Crochetiere, Vachon	0.00000000	0.10000000	21.00000000	RCP	NULL	Trickle	0.50000000	NULL	other	Stream	None	NULL
972	C4DB719C-2127-460D-A68A-5E15CD8C6922	2020-09-24	1:35 PM	elmadpw	9/24/2020	1:35 PM	elmadpw	PB-056	PB	9/24/2020	09:26	Crochetiere	0.00000000	0.00000000	21.00000000	RCP	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
996	7FE9B768-0341-459A-9C22-D7C6F08EA92D	2021-04-15	3:55 PM	elmadpw	4/15/2021	3:55 PM	elmadpw	PB-057	PB	4/15/2021	11:54	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Moderate	24.00000000	24.00000000	other	Stream	None	NULL
928	18FC4F7B-A61A-4818-8918-F1B5EB695127	2020-08-20	12:27 PM	elmadpw	8/20/2020	12:27 PM	elmadpw	PB-057	PB	8/20/2020	08:10	Crochetiere	0.20000000	0.00000000	24.00000000	RCP	NULL	Trickle	24.00000000	24.00000000	other	Stream	None	NULL
1048	8109EE7D-90E4-422B-9186-589E2B8CB936	2021-06-08	12:39 PM	elmadpw	6/8/2021	12:39 PM	elmadpw	PB-057	PB	6/8/2021	08:35	Crochetiere, Vachon	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	0.50000000	NULL	OpenSpace	NULL	None	NULL
991	5D121F17-ADFB-48EA-83BF-BC80586F7C76	2021-04-14	2:14 PM	elmadpw	4/14/2021	2:17 PM	elmadpw	PB-058	PB	4/14/2021	10:04	crochetiere	0.00000000	0.00000000	48.00000000	RCP	NULL	Substantial	24.00000000	24.00000000	other	Stream	None	NULL
929	8F587196-9B95-4C2D-99C3-BA05D7FB47F5	2020-08-20	3:33 PM	elmadpw	8/20/2020	3:33 PM	elmadpw	PB-058	PB	8/20/2020	11:17	Crochetiere	0.20000000	0.00000000	60.00000000	RCP	NULL	Moderate	20.00000000	55.00000000	other	Stream	None	NULL
994	651592DD-DE8B-4FDF-AF22-50FBF7665236	2021-04-15	1:38 PM	elmadpw	4/15/2021	1:38 PM	elmadpw	PB-059	PB	4/15/2021	08:57	Crochetiere	0.00000000	0.00000000	42.00000000	Steel_Iron	NULL	NULL	NULL	NULL	other	Stream	None	NULL
936	79AE9DC3-14F4-4211-BFE3-1741420465A5	2020-08-20	6:32 PM	elmadpw	8/20/2020	6:32 PM	elmadpw	PB-059	PB	8/20/2020	14:15	Crochetiere	0.20000000	0.00000000	42.00000000	Steel_Iron	NULL	Trickle	40.00000000	42.00000000	other	Stream	None	NULL
934	6537D27D-9B1F-45E4-A94B-81051E704250	2020-08-20	5:55 PM	elmadpw	8/20/2020	5:55 PM	elmadpw	PB-060	PB	8/20/2020	13:25	Crochetiere	0.20000000	0.00000000	42.00000000	RCP	NULL	Trickle	20.00000000	1.50000000	other	Stream	None	NULL
989	D3F8F7DC-56EC-4EFF-A964-8BF15AC8B62B	2021-04-14	12:41 PM	elmadpw	4/14/2021	12:41 PM	elmadpw	PB-060	PB	4/14/2021	08:31	Crochetiere	0.00000000	0.00000000	42.00000000	NULL	NULL	Moderate	4.00000000	15.00000000	NULL	NULL	None	NULL
926	B5ADBD1D-89B1-41E5-8B94-BB19C68F26FB	2020-08-18	7:12 PM	elmadpw	8/18/2020	7:12 PM	elmadpw	PB-061	PB	8/18/2020	14:34	Crochetiere	0.10000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
949	842B6D0C-D239-41E4-B620-A4DF40A581F6	2020-08-31	5:39 PM	elmadpw	8/31/2020	5:39 PM	elmadpw	PB-062	PB	8/31/2020	13:24	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
917	2D3093B5-F8A7-4EFE-90B6-B4C0C56A707B	2020-08-18	12:36 PM	elmadpw	8/18/2020	12:36 PM	elmadpw	PB-063	PB	8/18/2020	08:18	Crochetiere	0.10000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
924	E7465057-3EDB-49FE-8F2D-083FC95A8790	2020-08-18	6:20 PM	elmadpw	8/18/2020	6:20 PM	elmadpw	PB-064	PB	8/18/2020	14:13	Crochetiere	0.10000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
946	B7EFC47C-2F78-432C-99CD-91E23139B33B	2020-08-31	12:32 PM	elmadpw	8/31/2020	12:32 PM	elmadpw	PB-065	PB	8/31/2020	08:16	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
890	CDFF7A9D-87D6-4BAF-9657-285AE66B073C	2020-08-03	12:49 PM	elmadpw	8/3/2020	12:49 PM	elmadpw	PB-066	PB	8/3/2020	08:32	Crochetiere	1.00000000	0.00000000	12.00000000	Corru_Plastic	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
888	7722A36F-C500-41C8-9A08-19DD6409F3F3	2020-07-31	5:48 PM	elmadpw	7/31/2020	5:48 PM	elmadpw	PB-067	PB	7/31/2020	13:39	crochetiere	0.00000000	0.02000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
884	F89666E8-D5DE-4453-B529-E002D1C532B6	2020-07-31	1:32 PM	elmadpw	7/31/2020	1:32 PM	elmadpw	PB-068	PB	7/31/2020	08:41	Crochetiere	0.00000000	0.02000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	School	None	NULL
883	4830D230-4C96-4C8B-B358-5508F6E61697	2020-07-31	1:32 PM	elmadpw	7/31/2020	1:32 PM	elmadpw	PB-069	PB	7/31/2020	08:47	Crochetiere	0.00000000	0.02000000	NULL	HDPE	NULL	No_Flow	NULL	NULL	other	School	None	NULL
857	71E7F450-2951-4306-A56D-19FB4BE3AD27	2020-07-29	1:58 PM	elmadpw	7/29/2020	1:58 PM	elmadpw	PB-071	PB	7/29/2020	09:48	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1040	D764E31D-4B61-462F-B6E6-DCA57AEB5A4D	2021-06-01	2:15 PM	elmadpw	6/1/2021	2:15 PM	elmadpw	PB-072	PB	6/1/2021	10:05	Crochetiere	0.00000000	1.00000000	15.00000000	RCP	NULL	Trickle	1.50000000	NULL	OpenSpace	NULL	None	NULL
856	0AF72FC8-7B64-49C9-A1A7-772ACEB743F9	2020-07-29	1:37 PM	elmadpw	7/29/2020	1:37 PM	elmadpw	PB-072	PB	7/29/2020	09:31	Crochetiere	0.00000000	0.00000000	24.00000000	RCP	NULL	Trickle	4.00000000	18.00000000	OpenSpace	NULL	None	NULL
973	6F9A3AB8-EBEE-4000-9F05-764B21054199	2020-09-25	5:55 PM	elmadpw	9/25/2020	5:55 PM	elmadpw	PB-073	PB	9/25/2020	13:41	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	Trickle	7.00000000	24.00000000	OpenSpace	NULL	None	NULL
1032	17220597-AA72-4535-B123-65F50DC0A173	2021-05-25	3:38 PM	elmadpw	5/25/2021	3:38 PM	elmadpw	PB-074	PB	5/25/2021	11:34	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
974	851CA1C3-C012-49F9-A49A-78DC89CB1E0C	2020-09-25	6:23 PM	elmadpw	9/25/2020	6:23 PM	elmadpw	PB-074	PB	9/25/2020	13:59	Crochetiere	0.00000000	0.00000000	16.00000000	RCP	NULL	Trickle	4.50000000	12.00000000	OpenSpace	NULL	None	NULL
963	F38C4D64-870B-4885-B5A9-5A0ABF60B138	2020-09-11	6:34 PM	elmadpw	9/11/2020	6:34 PM	elmadpw	PB-075	PB	9/11/2020	14:24	Crochetiere	0.20000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
964	A10394E1-ABE7-4F98-A74D-4B19684A0A25	2020-09-11	6:40 PM	elmadpw	9/11/2020	6:40 PM	elmadpw	PB-076	PB	9/11/2020	14:34	Crochetiere	0.20000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
980	350EEDC2-F53C-4D21-82EF-EC872CEA3B4F	2020-09-29	5:24 PM	elmadpw	9/29/2020	5:24 PM	elmadpw	PB-077	PB	9/29/2020	13:12	Crochetiere	0.00000000	0.03000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
945	E6333B7A-035C-451A-AB26-5F18A28CB4BF	2020-08-31	12:15 PM	elmadpw	8/31/2020	12:15 PM	elmadpw	PB-078	PB	8/31/2020	08:06	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
999	2373DC68-5615-4403-BAB0-1D71A96B94FD	2021-04-20	12:23 PM	elmadpw	4/20/2021	12:23 PM	elmadpw	PB-079	PB	4/20/2021	08:16	Crochetiere	0.00000000	0.00000000	20.00000000	RCP	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
932	E9A4F24A-534D-430E-8FB7-9774E37EB184	2020-08-20	5:55 PM	elmadpw	8/20/2020	5:55 PM	elmadpw	PB-079	PB	8/20/2020	13:47	Crochetiere	0.20000000	0.00000000	20.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
948	4E733277-5A1A-477E-8BE0-8D054F07F631	2020-08-31	5:39 PM	elmadpw	8/31/2020	5:39 PM	elmadpw	PB-080	PB	8/31/2020	13:32	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1078	3E4D92FC-8C8F-4326-88CE-E48E50A4C06F	2021-06-14	1:42 PM	EastLongmeadowGIS	6/14/2021	1:42 PM	EastLongmeadowGIS	PB-081	PB	6/14/2021	09:39	Mike Ray	1.00000000	1.00000000	10.00000000	Steel_Iron	NULL	Moderate	NULL	NULL	NULL	NULL	None	NULL
933	560CA31B-2A3A-4902-B4A3-79E754DCB704	2020-08-20	5:55 PM	elmadpw	8/20/2020	5:55 PM	elmadpw	PB-081	PB	8/20/2020	13:42	Crochetiere	0.00000000	0.00000000	15.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
993	B4DE890E-225A-441C-8517-35B3FAB571EF	2021-04-15	12:21 PM	elmadpw	4/15/2021	12:21 PM	elmadpw	PB-082	PB	4/15/2021	08:06	Crochetiere	0.00000000	0.00000000	15.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
931	ED020E8A-33D8-4EB1-8E2C-6FC9BDED23D9	2020-08-20	4:05 PM	elmadpw	8/20/2020	4:05 PM	elmadpw	PB-082	PB	8/20/2020	11:56	Crochetiere	0.20000000	0.00000000	15.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity
981	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
881	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
874	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1044	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.01000000	1305.00000000
1015	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.06000000	238.00000000
1030	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.03000000	256.00000000
1031	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.02000000	621.00000000
1035	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.25000000	0.13000000	288.00000000
962	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
858	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
959	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
997	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
944	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1039	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.02000000	896.00000000
1029	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
965	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
947	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
958	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1034	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
951	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
950	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1033	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
939	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
940	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Inhibited,Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
943	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
942	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
937	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
923	0None	Brown	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1025	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
922	0None	Clear,Brown	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	Brown	NULL	NULL	NULL	NULL
1024	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None,Oil_Stains	NULL	Normal	Normal	NULL	Brown	NULL	0.00000000	0.01000000	1081.00000000
887	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1050	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.12000000	730.00000000
900	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
889	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
897	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
886	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
902	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
899	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
903	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1064	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.06000000	232.00000000
877	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
878	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
986	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
879	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
898	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
896	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1049	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.25000000	0.00000000	622.00000000
893	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
892	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1026	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.07000000	579.00000000
894	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	Green	NULL	NULL	NULL	NULL
895	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
982	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None,Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
971	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Inhibited	Normal	NULL	None	NULL	NULL	NULL	NULL
983	0None	Clear,Green	NULL	0Clear	2Cloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1063	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.00000000	527.00000000
972	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
996	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
928	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1048	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.25000000	0.03000000	1065.00000000
991	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
929	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
994	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
936	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
934	0None	Gray	NULL	3ClearlyVisibleOutfall	1SlightCloudy	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	Brown	NULL	NULL	NULL	NULL
989	0None	Clear,Brown	NULL	2ClearlyVisibleBottle	1SlightCloudy	None,Suds	NULL	2Some_Indications	None	NULL	None,Flowline_Stains	NULL	Normal	Normal,Suds,Colors	NULL	Brown	NULL	NULL	NULL	NULL
926	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
949	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
917	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
924	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
946	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
890	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
888	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
884	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
883	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive,Inhibited	Normal	NULL	None	NULL	NULL	NULL	NULL
857	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1040	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.00000000	128.10000000
856	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
973	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1032	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
974	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
963	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
964	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
980	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
945	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
999	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
932	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
948	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1078	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
933	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
993	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
931	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL

OBJECTID	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt	maintenance_required	maintenance_description	submerged_outfall	buried_by_sediment	tested_upstream	upstream_location_description
981	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
881	NULL	NULL	NULL	NULL	Need to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
874	NULL	NULL	NULL	NULL	Needs to be repaired	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1044	NULL	NULL	18.80000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1015	NULL	NULL	13.70000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1030	NULL	NULL	17.20000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1031	NULL	NULL	18.40000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	Yes_upstr	Drain manhole
1035	NULL	NULL	16.40000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Catch basin
962	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
858	NULL	NULL	NULL	NULL	Two 15 inch pipes	NULL	NULL	NULL	NULL	NULL	NULL	NULL
959	NULL	NULL	NULL	NULL	Outfall is buried under black top / need to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
997	NULL	NULL	NULL	NULL	Completely submerged underwater	NULL	NULL	NULL	NULL	NULL	NULL	NULL
944	NULL	NULL	NULL	NULL	Need to test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1039	NULL	NULL	15.20000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1029	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
965	NULL	NULL	NULL	NULL	Need to test and dredge back pipe is under water	NULL	NULL	NULL	NULL	NULL	NULL	NULL
947	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
958	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1034	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Fully_subm	No_bur	No_upstr	NULL
951	NULL	NULL	NULL	NULL	Need to test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
950	NULL	NULL	NULL	NULL	Need to test/dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1033	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
939	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
940	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
943	NULL	NULL	NULL	NULL	Can not locate pipe . Pipe is buried need to dig out or doesn't exist.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
942	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
937	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
923	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1025	NULL	NULL	NULL	NULL	Submerged can not test	NULL	No	NULL	NULL	NULL	NULL	NULL
922	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1024	NULL	NULL	19.00000000	NULL	NULL	NULL	No	NULL	NULL	NULL	NULL	NULL
887	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1050	NULL	NULL	22.50000000	NULL	NULL	NULL	No	NULL	Fully_subm	No_bur	Yes_upstr	Catch basin
900	NULL	NULL	NULL	NULL	Head wall needs to be repaired/ dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
889	NULL	NULL	NULL	NULL	Needs to be dredge / brush cut.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
897	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
886	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
902	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
899	NULL	NULL	NULL	NULL	Head wall needs to be repaired/ brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
903	NULL	NULL	NULL	NULL	Not tested	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1064	NULL	NULL	15.50000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	Yes_upstr	Catch Basin
877	NULL	NULL	NULL	NULL	Not found buried or does not exist.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
878	NULL	NULL	NULL	NULL	Not found meh be a catch basin with a honey well	NULL	NULL	NULL	NULL	NULL	NULL	NULL
986	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
879	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
898	NULL	NULL	NULL	NULL	Outfall is a basin	NULL	NULL	NULL	NULL	NULL	NULL	NULL
896	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1049	NULL	NULL	18.10000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Catch basin
893	NULL	NULL	NULL	NULL	No Flow	NULL	NULL	NULL	NULL	NULL	NULL	NULL
892	NULL	NULL	NULL	NULL	Need to test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1026	NULL	NULL	17.40000000	NULL	NULL	NULL	No	NULL	NULL	NULL	NULL	NULL
894	NULL	NULL	NULL	NULL	Need to test / need to remove tree that fell on head wall .	NULL	NULL	NULL	NULL	NULL	NULL	NULL
895	NULL	NULL	NULL	NULL	Head wall is falling apart in need for Immediate repair	NULL	NULL	NULL	NULL	NULL	NULL	NULL
982	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
971	NULL	NULL	NULL	NULL	Can not locate outfall. Very over grown and needs to be brush cut . Residents are throwing yard waste over/ around outfall.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
983	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1063	NULL	NULL	16.30000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
972	NULL	NULL	NULL	NULL	Can not get to. Outfall very steep hill . Can not get access from garland very over grown .	NULL	NULL	NULL	NULL	NULL	NULL	NULL
996	NULL	NULL	NULL	NULL	Completely smirch is underwater needs to be dredged	NULL	NULL	NULL	NULL	NULL	NULL	NULL
928	NULL	NULL	NULL	NULL	Need to be dredge/ test outfall is full	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1048	NULL	NULL	19.50000000	NULL	NULL	NULL	No	NULL	Fully_subm	No_bur	Yes_upstr	Catch basin
991	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
929	NULL	NULL	NULL	NULL	Need to test / remove log blocking flow	NULL	NULL	NULL	NULL	NULL	NULL	NULL
994	NULL	NULL	NULL	NULL	completely submerged underwater and needs to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
936	NULL	NULL	NULL	NULL	Pipe is full need to be dredge and tested	NULL	NULL	NULL	NULL	NULL	NULL	NULL
934	NULL	NULL	NULL	NULL	Need to test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
989	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
926	NULL	NULL	NULL	NULL	No flow / need to remove log out of the way of outfall .	NULL	NULL	NULL	NULL	NULL	NULL	NULL
949	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
917	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
924	NULL	NULL	NULL	NULL	Dredge back pipe is Buried	NULL	NULL	NULL	NULL	NULL	NULL	NULL
946	NULL	NULL	NULL	NULL	Need to be dredge back . Looks like Resident are dumping yard waste need to put a no dumping sign upon if possible.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
890	NULL	NULL	NULL	NULL	Needs to be dredge back/ jet pipe is filling up with debris.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
888	NULL	NULL	NULL	NULL	Needs to dug up and dredge back.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
884	NULL	NULL	NULL	NULL	Need to cut down tree	NULL	NULL	NULL	NULL	NULL	NULL	NULL
883	NULL	NULL	NULL	NULL	Need to brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
857	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1040	NULL	NULL	13.60000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Basin. 2355
856	NULL	NULL	NULL	NULL	Need to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
973	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1032	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
974	NULL	NULL	NULL	NULL	Needs to be dredge back and test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
963	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
964	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
980	NULL	NULL	NULL	NULL	No flow	NULL	NULL	NULL	NULL	NULL	NULL	NULL
945	NULL	NULL	NULL	NULL	Outfall is buried need to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
999	NULL	NULL	NULL	NULL	Need to mortar head wall.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
932	NULL	NULL	NULL	NULL	Head wall need to be repaired	NULL	NULL	NULL	NULL	NULL	NULL	NULL
948	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1078	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	NULL	NULL	No_upstr	NULL
933	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
993	NULL	NULL	NULL	NULL	Needs to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
931	NULL	NULL	NULL	NULL	Dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	globalid	CreationDate	CreationTime	Creator	EditDate	EditTime	Editor	Outfall_ID	Subbasin_Abbr	Date1	Time	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
925	97A9F68D-CD01-4AD1-9ED7-9B63659687BF	2020-08-18	7:11 PM	elmadpw	8/18/2020	7:11 PM	elmadpw	PB-083	PB	8/18/2020	14:51	Crochetiere	0.10000000	0.00000000	42.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
995	DC097A0B-C688-4630-99F1-B45D07A592D9	2021-04-15	2:45 PM	elmadpw	4/15/2021	2:45 PM	elmadpw	PB-083	PB	4/15/2021	09:40	Crochetiere	0.00000000	0.00000000	42.00000000	Steel_Iron	NULL	Trickle	5.00000000	19.00000000	Urban_Res	NULL	None	NULL
990	48BD80B2-1165-4C89-9D6E-69429FABEB4F	2021-04-14	12:42 PM	elmadpw	4/14/2021	12:42 PM	elmadpw	PB-084	PB	4/14/2021	08:32	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	Moderate	3.00000000	12.00000000	other	Stream	None	NULL
935	145F6261-A5C7-405F-B393-7ADB6D82DDC5	2020-08-20	5:55 PM	elmadpw	8/20/2020	5:55 PM	elmadpw	PB-084	PB	8/20/2020	13:22	crochetiere	0.20000000	0.00000000	18.00000000	RCP	NULL	Trickle	10.00000000	2.00000000	other	Stream	None	NULL
1060	C9B04C21-CEEA-4A81-BCD1-F58222D569BA	2021-06-09	6:47 PM	elmadpw	6/9/2021	6:47 PM	elmadpw	PB-084	PB	6/9/2021	14:43	Crochetiere,Vachon	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.25000000	NULL	other	Stream	None	NULL
966	7A067144-9010-4F5C-B06D-CC41759DE183	2020-09-14	12:50 PM	elmadpw	9/14/2020	12:50 PM	elmadpw	PB-086	PB	9/14/2020	08:42	Crochetiere	0.00000000	0.00000000	24.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1010	83F99DE2-075A-4358-B47F-581FFD27C453	2021-04-20	6:18 PM	elmadpw	4/20/2021	6:18 PM	elmadpw	PB-086	PB	4/20/2021	14:09	Crochetiere	0.00000000	0.00000000	24.00000000	Steel_Iron	NULL	Trickle	0.50000000	18.00000000	other	Stream	None	NULL
970	4CA4211C-C438-4471-BAD5-AE7873006FC0	2020-09-24	12:31 PM	elmadpw	9/24/2020	12:31 PM	elmadpw	PB-088	PB	9/24/2020	08:26	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
968	3E38FBDE-2EDC-4055-82AA-23891CAD2B24	2020-09-24	12:22 PM	elmadpw	9/24/2020	12:22 PM	elmadpw	PB-089	PB	9/24/2020	08:10	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Commercial	NULL	None	NULL
969	A5580BFA-35A4-4322-B004-AAFCCFA1FCB2	2020-09-24	12:22 PM	elmadpw	9/24/2020	12:22 PM	elmadpw	PB-090	PB	9/24/2020	08:03	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	Commercial	NULL	None	NULL
992	CB72F554-4820-49E0-9DC8-C1905B921084	2021-04-15	12:21 PM	elmadpw	4/15/2021	12:21 PM	elmadpw	PB-091	PB	4/15/2021	07:56	Crochetiere	0.00000000	0.00000000	15.00000000	PVC	NULL	No_Flow	NULL	NULL	Commercial	NULL	None	NULL
930	19D05AA1-B630-4521-B48F-7B30F1ED0022	2020-08-20	3:55 PM	elmadpw	8/20/2020	3:55 PM	elmadpw	PB-091	PB	8/20/2020	11:37	Crochetiere	0.20000000	0.00000000	15.00000000	PVC	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
921	04592596-5E9D-476E-B13C-D01312FBF636	2020-08-18	4:22 PM	elmadpw	8/18/2020	4:22 PM	elmadpw	PB-092	PB	8/18/2020	11:24	crochetiere	0.10000000	0.00000000	12.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
988	4412057F-8269-4E5F-8507-739EFC11BE3E	2021-04-14	12:41 PM	elmadpw	4/14/2021	12:41 PM	elmadpw	PB-093	PB	4/14/2021	08:11	crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
919	173FF563-80A5-4362-9230-973A446797FD	2020-08-18	2:23 PM	elmadpw	8/18/2020	2:23 PM	elmadpw	PB-093	PB	8/18/2020	10:10	Crochetiere	0.10000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
920	D81CBEF8-38B1-4C2A-A96E-FF94EF0B3543	2020-08-18	2:35 PM	elmadpw	8/18/2020	2:35 PM	elmadpw	PB-094	PB	8/18/2020	10:28	Crochetiere	0.10000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
987	0019F707-B3F6-462E-89C9-0D3BA6F2F278	2021-04-14	12:41 PM	elmadpw	4/14/2021	12:41 PM	elmadpw	PB-094	PB	4/14/2021	08:01	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
941	540B7754-6355-465E-B4EF-700193E960B0	2020-08-28	6:09 PM	elmadpw	8/28/2020	6:09 PM	elmadpw	PB-095	PB	8/28/2020	14:04	Crochetiere	0.33000000	0.00000000	40.00000000	RCP	NULL	Moderate	2.00000000	24.00000000	other	Stream	None	NULL
1027	191DA4C9-BF91-4912-9CFD-97F28EE6B8DB	2021-05-25	12:24 PM	elmadpw	5/25/2021	12:24 PM	elmadpw	PB-096	PB	5/25/2021	08:14	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	Moderate	1.50000000	12.00000000	other	Stream	None	NULL
938	889006E6-DACF-4949-A3C3-5BB7E2F5600C	2020-08-20	6:57 PM	elmadpw	8/20/2020	6:57 PM	elmadpw	PB-096	PB	8/20/2020	14:50	Crochetiere	0.20000000	0.00000000	36.00000000	RCP	NULL	Trickle	3.00000000	0.50000000	other	Stream	None	NULL
1028	83DB3D29-CE20-4ACD-8656-0DC499A80BC6	2021-05-25	12:26 PM	elmadpw	5/25/2021	12:26 PM	elmadpw	PB-097	PB	5/25/2021	08:25	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
891	D25A75D5-8CC2-4432-95AA-BD346EE8BA7C	2020-08-03	1:30 PM	elmadpw	8/3/2020	1:30 PM	elmadpw	PB-098	PB	8/3/2020	09:23	Crochetiere	1.00000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
998	A7E48A40-3F10-4D32-A7D5-C9C587580B00	2021-04-20	11:44 AM	elmadpw	4/20/2021	11:44 AM	elmadpw	PB-099	PB	4/20/2021	07:42	Crochetiere	0.00000000	0.00000000	15.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
927	0BAB339E-1F84-49C6-8682-2195005BE5C4	2020-08-20	12:09 PM	elmadpw	8/20/2020	12:09 PM	elmadpw	PB-099	PB	8/20/2020	08:00	Crochetiere	0.20000000	0.00000000	15.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
901	B2AE860E-B681-4080-924B-368895CC7DFC	2020-08-17	12:44 PM	elmadpw	8/17/2020	12:44 PM	elmadpw	PB-100	PB	8/17/2020	08:34	Crochetiere	0.00000000	0.00000000	10.00000000	HDPE	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
803	E5363C3C-E39C-41AD-8E82-02B8E3894726	2020-07-23	5:39 PM	elmadpw	7/23/2020	5:39 PM	elmadpw	PB-101	PB	7/23/2020	13:32	Crochetiere	0.10000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
957	9225A22A-103F-4F57-B51B-3981FCCC8940	2020-09-01	4:25 PM	elmadpw	9/1/2020	4:25 PM	elmadpw	PB-102	PB	9/1/2020	12:19	Joe C, crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
961	4872E46E-01BC-49F5-83CD-BD72E6AE61D0	2020-09-11	5:30 PM	elmadpw	9/11/2020	5:30 PM	elmadpw	PB-103	PB	9/11/2020	13:24	Crochetiere	0.20000000	0.00000000	18.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
960	528277CA-E659-44D3-B799-75634B916A6E	2020-09-11	4:11 PM	elmadpw	9/11/2020	4:11 PM	elmadpw	PB-104	PB	9/11/2020	11:56	Crochetiere	0.20000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
978	D90674CF-886C-42CE-AE71-7CA47635BC2A	2020-09-28	3:57 PM	elmadpw	9/28/2020	3:57 PM	elmadpw	PB-105	PB	9/28/2020	11:31	crochetiere	0.03000000	0.00000000	8.00000000	other	AC	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
967	E3142E72-779A-4E7A-AC5D-90A17ED0407D	2020-09-14	12:57 PM	elmadpw	9/14/2020	12:57 PM	elmadpw	PB-106	PB	9/14/2020	08:54	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1009	19E765B4-366E-4A20-8D18-DFFB98CCEC55	2021-04-20	6:09 PM	elmadpw	4/20/2021	6:09 PM	elmadpw	PB-107	PB	4/20/2021	13:58	Crochetiere	0.00000000	0.00000000	16.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
1014	605D9196-AF04-408B-AF83-DFC15FA60218	2021-04-20	6:46 PM	elmadpw	4/20/2021	6:46 PM	elmadpw	PB-108	PB	4/20/2021	14:45	Crochetiere	0.00000000	0.00000000	48.00000000	RCP	NULL	Substantial	72.00000000	24.00000000	other	Culvert	None	NULL
985	2A7867AD-B5A3-4A23-8920-C5764628B972	2021-01-21	3:14 PM	elmadpw	1/21/2021	3:14 PM	elmadpw	PB-109	PB	1/21/2021	10:09	Crochetiere	0.00000000	0.00000000	10.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
984	9D34C6C9-F0E4-49C7-A605-BEAE3F70D842	2021-01-21	3:14 PM	elmadpw	1/21/2021	3:14 PM	elmadpw	PB-110	PB	1/21/2021	09:56	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Detention basin	None	NULL
1012	0FB6370B-E831-42AD-ADD9-1488083FAC56	2021-04-20	6:35 PM	elmadpw	4/20/2021	6:35 PM	elmadpw	PB-111	PB	4/20/2021	14:33	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	4.00000000	20.00000000	other	Detention basin	None	NULL
1011	7B54ADC1-E8F2-4826-952F-37A71FF3EF94	2021-04-20	6:33 PM	elmadpw	4/20/2021	6:33 PM	elmadpw	PB-112	PB	4/20/2021	14:32	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Detention basin	None	NULL
1013	2DFC9BDC-F944-4563-852C-25113A2481AD	2021-04-20	6:43 PM	elmadpw	4/20/2021	6:43 PM	elmadpw	PB-113	NULL	4/20/2021	14:35	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	Trickle	0.25000000	3.00000000	other	Stream	None	NULL
1043	9E77F282-5B2B-4404-8C32-9C8CC341B9F9	2021-06-01	5:52 PM	elmadpw	6/1/2021	5:52 PM	elmadpw	SB-005	SB	6/1/2021	13:47	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
835	C8D89C05-55D4-4293-8F4E-BFF5FEC8F99C	2020-07-27	3:58 PM	elmadpw	7/27/2020	3:58 PM	elmadpw	WB-001	WB	7/27/2020	11:40	Crochetiere	0.00000000	0.00000000	30.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
806	082B5C2F-3869-40B3-8D3B-65713D6E749E	2020-07-23	6:14 PM	elmadpw	7/23/2020	6:15 PM	elmadpw	WB-003	WB	7/23/2020	14:07	Crochetiere	0.10000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
809	505E4CF6-AE49-4196-9218-759B49D05114	2020-07-24	11:55 AM	elmadpw	7/24/2020	11:55 AM	elmadpw	WB-004	WB	7/24/2020	07:43	Crochetiere	0.00000000	0.10000000	24.00000000	HDPE	NULL	Trickle	12.00000000	18.00000000	OpenSpace	NULL	None	NULL
1042	7B745F44-AC37-4C45-AA10-8BC41904F796	2021-06-01	4:13 PM	elmadpw	6/1/2021	4:13 PM	elmadpw	WB-004	WB	6/1/2021	12:05	Crochetiere	0.00000000	1.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
814	2CA684DA-0629-4E36-BA4F-F796C040EE83	2020-07-24	12:37 PM	elmadpw	7/24/2020	12:37 PM	elmadpw	WB-005	WB	7/24/2020	08:25	Crochetiere	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
818	A6D819B5-2CDA-434E-936A-10AD7220E653	2020-07-24	2:09 PM	elmadpw	7/24/2020	2:09 PM	elmadpw	WB-006	WB	7/24/2020	10:04	Crochetiere	0.00000000	0.10000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
860	E5880EC7-DF47-46D5-A889-0D314219BD41	2020-07-29	3:40 PM	elmadpw	7/29/2020	3:40 PM	elmadpw	WB-007	WB	7/29/2020	11:28	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.50000000	3.00000000	OpenSpace	NULL	None	NULL
802	F9FF9707-E439-48B3-8D3B-F28A236F7E0F	2020-07-23	3:51 PM	elmadpw	7/23/2020	3:51 PM	elmadpw	WB-008	WB	7/23/2020	11:43	crochetiere	0.10000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
800	BEF92C7B-39C3-473C-8390-1B5FF24002FE	2020-07-23	3:28 PM	elmadpw	7/23/2020	3:28 PM	elmadpw	WB-009	WB	7/23/2020	11:27	Crochetiere	0.10000000	0.00000000	12.00000000	PVC	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
797	F1F922C2-0D97-411C-9638-ED1BE49EA112	2020-07-23	2:50 PM	elmadpw	7/23/2020	2:50 PM	elmadpw	WB-010	WB	7/23/2020	10:40	Crochetiere	0.10000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
798	6E9926D3-221E-44C4-BEEE-73490CE3D076	2020-07-23	3:01 PM	elmadpw	7/23/2020	3:01 PM	elmadpw	WB-011	WB	7/23/2020	10:57	Crochetiere	0.10000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
801	B18E3E03-3DB2-4FCB-BF7C-FBC2F4A24A3B	2020-07-23	3:41 PM	elmadpw	7/23/2020	3:41 PM	elmadpw	WB-012	WB	7/23/2020	11:34	Crochetiere	0.10000000	0.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
799	A5018C91-6D53-415C-80AF-F684FF1518D6	2020-07-23	3:26 PM	elmadpw	7/23/2020	3:26 PM	elmadpw	WB-013	WB	7/23/2020	11:11	Crochetiere	0.10000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
861	C0685434-54D4-4D32-AEC8-B681CDFBA108	2020-07-29	5:57 PM	elmadpw	7/29/2020	5:57 PM	elmadpw	WB-018	WB	7/29/2020	13:48	Crochetiere	0.00000000	0.00000000	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1085	8CC1BE13-46B0-4E39-BB65-AB8DE130B7CE	2021-06-14	5:59 PM	elmadpw	6/14/2021	6:00 PM	elmadpw	WB-020	WB	6/14/2021	13:54	Crochetiere, Vachon	NULL	NULL	12.00000000	RCP	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL
831	2174F15F-DF1D-4FED-92FA-AE48FE5E9BAB	2020-07-27	2:29 PM	elmadpw	7/27/2020	2:29 PM	elmadpw	WB-020	WB	7/27/2020	10:24	crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Culvert	None	NULL
832	B6B8B2D8-5007-4A83-93C7-733D07279F11	2020-07-27	3:11 PM	elmadpw	7/27/2020	3:11 PM	elmadpw	WB-021	WB	7/27/2020	10:51	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	1.00000000	13.00000000	other	Stream.	None	NULL
833	3B9670F2-4AB4-43EA-9D92-64A3D5ACA36A	2020-07-27	3:22 PM	elmadpw	7/27/2020	3:22 PM	elmadpw	WB-022	WB	7/27/2020	11:13	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	Trickle	3.00000000	5.00000000	other	Stream	None	NULL
834	82D1DDC8-FC9B-4457-9A0F-BD75CF7489F1	2020-07-27	3:30 PM	elmadpw	7/27/2020	3:30 PM	elmadpw	WB-023	WB	7/27/2020	11:22	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
805	A1FE8E19-81BC-422E-9F2C-6ADDD6B4F5EC	2020-07-23	5:56 PM	elmadpw	7/23/2020	5:56 PM	elmadpw	WB-024	WB	7/23/2020	13:55	Crochetiere	0.10000000	0.00000000	12.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
804	1750D311-652A-45E0-B830-2B67FAB16297	2020-07-23	5:54 PM	elmadpw	7/23/2020	5:54 PM	elmadpw	WB-025	WB	7/23/2020	13:53	Crochetiere	0.10000000	0.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
808	EE114659-19B3-4D97-82BA-752A9E4F3A4D	2020-07-23	6:24 PM	elmadpw	7/23/2020	6:24 PM	elmadpw	WB-026	WB	7/23/2020	14:19	Crochetiere	0.10000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
807	DCD92152-6960-4010-83E0-AF99F4554A1A	2020-07-23	6:24 PM	elmadpw	7/23/2020	6:24 PM	elmadpw	WB-027	WB	7/23/2020	14:20	Crochetiere	0.10000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
813	A9E7E706-6274-48F9-8E3E-58F37F323ADC	2020-07-24	12:37 PM	elmadpw	7/24/2020	12:48 PM	elmadpw	WB-028	WB	7/24/2020	08:35	Crochetiere	0.00000000	0.10000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
812	1A001647-A0A5-48A8-9C92-A2960AEB3A68	2020-07-24	12:37 PM	elmadpw	7/24/2020	12:48 PM	elmadpw	WB-029	WB	7/24/2020	08:30	Crochetiere	0.00000000	0.10000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
811	200E3079-0278-47D1-A7E5-D744377E5728	2020-07-24	12:37 PM	elmadpw	7/24/2020	12:37 PM	elmadpw	WB-030	WB	7/24/2020	08:28	Crochetiere	0.00000000	0.10000000	8.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
817	614B0B02-A476-46A4-B897-E057FA40B59A	2020-07-24	12:57 PM	elmadpw	7/24/2020	12:57 PM	elmadpw	WB-031	WB	7/24/2020	08:06	Crochetiere	0.00000000	0.10000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
810	1FA350BE-8633-4E6A-9B30-2D37ED98B1F4	2020-07-24	12:04 PM	elmadpw	7/24/2020	12:04 PM	elmadpw	WB-032	WB	7/24/2020	07:57	Crochetiere	0.00000000	0.10000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
862	AF6EFFFD-04C0-4900-9A82-243744B1E49F	2020-07-29	6:46 PM	elmadpw	7/29/2020	6:46 PM	elmadpw	WB-033	WB	7/29/2020	14:24	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1089	1D83081B-33BC-43C7-87E4-144DAD0ACE58	2021-06-14	6:55 PM	elmadpw	6/14/2021	6:55 PM	elmadpw	WB-036	WB	6/14/2021	14:48	Crochetiere, Vachon	NULL	NULL	24.00000000	Steel_Iron	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
956	0ED2D09A-3D3B-4830-8848-6C11D0D7BCE5	2020-09-01	3:47 PM	elmadpw	9/1/2020	3:47 PM	elmadpw	WB-045	WB	9/1/2020	11:43	J.commisso , crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Pond	None	NULL
955	597FF877-3DDA-4CC8-9C1C-C61F1A6563D0	2020-09-01	3:37 PM	elmadpw	9/1/2020	3:37 PM	elmadpw	WB-046	WB	9/1/2020	11:34	J.commisso - crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Urban_Res	NULL	None	NULL
953	F101D248-FF2F-4A4E-9F19-7A4FC50179C9	2020-09-01	3:19 PM	elmadpw	9/1/2020	3:19 PM	elmadpw	WB-047	WB	9/1/2020	11:08	J. Commisso- crochetiere	0.00000000	0.00000000	36.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
954	F737A2B8-2648-435B-A432-9FEACD0D9230	2020-09-01	3:28 PM	elmadpw	9/1/2020	3:28 PM	elmadpw	WB-048	WB	9/1/2020	11:24	J. Commisso- crochetiere	0.00000000	0.00000000	36.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
952	40449D96-91E6-4503-84BA-437E7387901C	2020-09-01	3:08 PM	elmadpw	9/1/2020	3:08 PM	elmadpw	WB-049	WB	9/1/2020	11:03	J. Commisso - crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
786	7905A355-913F-40A3-8CC5-BB36B136C21D	2020-07-22	3:03 PM	elmadpw	7/22/2020	3:03 PM	elmadpw	WB-071	WB	7/22/2020	11:01	Crochetiere	0.00000000	0.00000000	12.00000000	NULL	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
788	8375B0E5-AFE2-4540-843C-C11827DCBDF1	2020-07-22	6:27 PM	elmadpw	7/22/2020	6:27 PM	elmadpw	WB-072	WB	7/22/2020	14:16	Crochetiere	0.00000000	0.00000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1083	F11D898B-4393-4829-8AEB-ED39D68FB507	2021-06-14	5:45 PM	elmadpw	6/14/2021	5:45 PM	elmadpw	WB-073	WB	6/14/2021	13:40	Crochetiere, Vachon	NULL	NULL	15.00000000	RCP	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL
1041	C3A0A1A1-925B-49A8-92AC-C230B32EE9E9	2021-06-01	3:32 PM	elmadpw	6/1/2021	3:32 PM	elmadpw	WB-073	WB	6/1/2021	11:22	Crochetiere	0.00000000	1.00000000	12.00000000	RCP	NULL	Trickle	1.50000000	NULL	other	Stream	None	NULL
1084	704A18E8-7FAF-4C4C-962A-6441859B7813	2021-06-14	5:53 PM	elmadpw	6/14/2021	5:53 PM	elmadpw	WB-075	WB	6/14/2021	13:45	Crochetiere, Vachon	NULL	NULL	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1082	003B1BC5-79AA-44FA-91A4-09EBA36C2080	2021-06-14	5:40 PM	elmadpw	6/14/2021	5:40 PM	elmadpw	WB-076	WB	6/14/2021	13:36	Crochetiere, Vachon	NULL	NULL	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1080	9E459A82-B046-4F7D-A279-929FD70BC5FA	2021-06-14	5:21 PM	elmadpw	6/14/2021	5:21 PM	elmadpw	WB-077	WB	6/14/2021	13:14	Crochetiere, Vachon	NULL	NULL	18.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1081	AC1BE974-241E-4A45-8FF9-E547EF216641	2021-06-14	5:32 PM	elmadpw	6/14/2021	5:32 PM	elmadpw	WB-078	WB	6/14/2021	13:30	Crochetiere, Vachon	NULL	NULL	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1018	8834ADE4-20C0-4F4C-AF25-623DCCF07B15	2021-05-24	2:54 PM	elmadpw	5/24/2021	2:54 PM	elmadpw	WB-081	WB	5/24/2021	09:51	crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1017	5AA4C231-6CCB-4C31-9DC8-E8483F98BD59	2021-05-24	1:50 PM	elmadpw	5/24/2021	1:50 PM	elmadpw	WB-081	WB	5/24/2021	09:46	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1016	EE7E9587-0CF9-42BD-9B4F-063214709877	2021-05-24	1:49 PM	elmadpw	5/24/2021	1:49 PM	elmadpw	WB-081	WB	5/24/2021	09:39	Crochetiere	0.00000000	0.00000000	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1079	B4724581-894A-4E53-BED0-77E0DE31D44E	2021-06-14	5:02 PM	elmadpw	6/14/2021	5:02 PM	elmadpw	WB-082	WB	6/14/2021	13:00	Crochetiere, Vachon	NULL	NULL	12.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1062	FD307399-F697-46CF-ADB1-45BEDFE4FC58	2021-06-10	12:32 PM	elmadpw	6/10/2021	12:32 PM	elmadpw	WB-086	WB	6/10/2021	08:29	Crochetiere, Vachon	0.00000000	0.10000000	12.00000000	RCP	NULL	No_Flow	NULL	NULL	Suburban_Res	NULL	None	NULL
796	9F2DC730-2D93-4E35-A985-080370241EB4	2020-07-23	12:52 PM	elmadpw	7/23/2020	12:52 PM	elmadpw	WB-087	WB	7/23/2020	08:50	Crochetiere	0.10000000	0.00000000	24.00000000	HDPE	NULL	Moderate	1.50000000	4.00000000	Urban_Res	NULL	None	NULL
826	9E74A510-885E-4825-B741-EAC0247FF9E2	2020-07-24	4:11 PM	elmadpw	7/24/2020	4:11 PM	elmadpw	WB-088	WB	7/24/2020	11:41	Crochetiere	0.00000000	0.10000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
827	309B1DF3-C914-4CCB-97A2-29B4FEA8365D	2020-07-24	4:11 PM	elmadpw	7/24/2020	4:11 PM	elmadpw	WB-089	WB	7/24/2020	11:35	crochetiere	0.00000000	0.10000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
825	8C59A1B2-3B49-46F8-A218-EDE090B0413A	2020-07-24	4:09 PM	elmadpw	7/24/2020	4:09 PM	elmadpw	WB-090	WB	7/24/2020	11:43	Crochetiere	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
824	8F58CB82-068D-4BE5-B796-702792E9EA0C	2020-07-24	4:08 PM	elmadpw	7/24/2020	4:08 PM	elmadpw	WB-091	WB	7/24/2020	11:44	Crochetiere	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
823	1011134F-9871-4AC3-9342-098F15C19DE0	2020-07-24	4:07 PM	elmadpw	7/24/2020	4:07 PM	elmadpw	WB-092	WB	7/24/2020	11:48	Crochetiere	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity
925	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
995	0None	NULL	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	Peeling_Paint,Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL	Brown	NULL	NULL	NULL	NULL
990	0None	Clear,Brown	NULL	0Clear	1SlightCloudy	None,Suds	NULL	2Some_Indications	None	NULL	None,Flowline_Stains	NULL	Normal	Normal,Colors,Floatables,Oil_Sheen	NULL	Brown	NULL	NULL	NULL	NULL
935	0None	Clear,Gray	NULL	3ClearlyVisibleOutfall	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None,Flowline_Stains	NULL	Normal	Colors	NULL	None	NULL	NULL	NULL	NULL
1060	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	Oil_Stains	NULL	Normal	Colors,Oil_Sheen,Floatables	NULL	Brown	NULL	NULL	NULL	NULL
966	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1010	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
970	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
968	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
969	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
992	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
930	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
921	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
988	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
919	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
920	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
987	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
941	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1027	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.00000000	1112.00000000
938	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1028	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
891	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
998	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
927	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
901	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
803	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
957	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
961	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
960	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
978	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Excessive	Normal	NULL	None	NULL	NULL	NULL	NULL
967	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1009	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1014	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
985	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
984	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1012	0None	Brown,Orange	NULL	0Clear	2Cloudy	Suds	NULL	2Some_Indications	None	NULL	None	NULL	Normal	NULL	NULL	Brown	NULL	NULL	NULL	NULL
1011	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1013	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1043	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.02000000	102.70000000
835	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
806	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
809	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1042	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.02000000	161.30000000
814	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
818	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	Spalling__Cracking__or_Chipping	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
860	0None	Clear	NULL	0Clear	0ClearTurbidity	Suds	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
802	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
800	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
797	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
798	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
801	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
799	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
861	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1085	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
831	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
832	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
833	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
834	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
805	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
804	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
808	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
807	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
813	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
812	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
811	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
817	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
810	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
862	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1089	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
956	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
955	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
953	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
954	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
952	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
786	0None	Clear	NULL	NULL	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
788	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1083	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1041	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.02000000	456.00000000
1084	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1082	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1080	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1081	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1018	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1017	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1016	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1079	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1062	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
796	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
826	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
827	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
825	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
824	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
823	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL

OBJECTID	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt	maintenance_required	maintenance_description	submerged_outfall	buried_by_sediment	tested_upstream	upstream_location_description
925	NULL	NULL	NULL	NULL	Needs to be dredge/ need to test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
995	NULL	NULL	NULL	NULL	Needs to be dredge and need to test water	NULL	NULL	NULL	NULL	NULL	NULL	NULL
990	NULL	NULL	NULL	NULL	Need to test water. Water color looks worse every year.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
935	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1060	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
966	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1010	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
970	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
968	NULL	NULL	NULL	NULL	There is 24 inch steel pipe under outfall.	NULL	NULL	NULL	NULL	NULL	NULL	NULL
969	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
992	NULL	NULL	NULL	NULL	Needs to be cleaned out	NULL	NULL	NULL	NULL	NULL	NULL	NULL
930	NULL	NULL	NULL	NULL	Pipe is broken ,	NULL	NULL	NULL	NULL	NULL	NULL	NULL
921	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
988	NULL	NULL	NULL	NULL	Needs to be dredge and cleaned up	NULL	NULL	NULL	NULL	NULL	NULL	NULL
919	NULL	NULL	NULL	NULL	Outfall needs to be cleaned / brush cut . No Flow	NULL	NULL	NULL	NULL	NULL	NULL	NULL
920	NULL	NULL	NULL	NULL	Needs to dredge back / brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
987	NULL	NULL	NULL	NULL	Needs to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
941	NULL	NULL	NULL	NULL	Need to test	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1027	NULL	NULL	14.50000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
938	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1028	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
891	NULL	NULL	NULL	NULL	Leach basin	NULL	NULL	NULL	NULL	NULL	NULL	NULL
998	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
927	NULL	NULL	NULL	NULL	Needs to dredge/ No Flow	NULL	NULL	NULL	NULL	NULL	NULL	NULL
901	NULL	NULL	NULL	NULL	No Flow	NULL	NULL	NULL	NULL	NULL	NULL	NULL
803	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
957	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
961	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
960	NULL	NULL	NULL	NULL	There are two outfalls one 18 inch RCP other 18 inch HDPE .	NULL	NULL	NULL	NULL	NULL	NULL	NULL
978	NULL	NULL	NULL	NULL	Need to cut back and clean up outfall	NULL	NULL	NULL	NULL	NULL	NULL	NULL
967	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1009	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1014	NULL	NULL	NULL	NULL	This is a culvert	NULL	NULL	NULL	NULL	NULL	NULL	NULL
985	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
984	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1012	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1011	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1013	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1043	NULL	NULL	18.30000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Catch basin
835	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
806	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
809	NULL	NULL	NULL	NULL	Needs to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1042	NULL	NULL	17.40000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Catch basin
814	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
818	NULL	NULL	NULL	NULL	Need to repair outfall/remove tree growing into outfall .	NULL	NULL	NULL	NULL	NULL	NULL	NULL
860	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
802	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
800	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
797	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
798	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
801	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
799	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
861	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1085	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
831	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
832	NULL	NULL	NULL	NULL	Needs to be dredge back and brush cut	NULL	NULL	NULL	NULL	NULL	NULL	NULL
833	NULL	NULL	NULL	NULL	Needs to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
834	NULL	NULL	NULL	NULL	No Flow outfall pipe is higher then inlet pipe in manhole #232	NULL	NULL	NULL	NULL	NULL	NULL	NULL
805	NULL	NULL	NULL	NULL	Not found / may not exist	NULL	NULL	NULL	NULL	NULL	NULL	NULL
804	NULL	NULL	NULL	NULL	Not found/may not exist	NULL	NULL	NULL	NULL	NULL	NULL	NULL
808	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
807	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
813	NULL	NULL	NULL	NULL	Need to clean back some brush	NULL	NULL	NULL	NULL	NULL	NULL	NULL
812	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
811	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
817	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
810	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
862	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1089	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
956	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
955	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
953	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
954	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
952	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
786	NULL	NULL	NULL	NULL	Outfall is buried needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
788	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1083	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1041	NULL	NULL	16.00000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Catch basin
1084	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1082	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1080	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1081	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	No_upstr	NULL
1018	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	NULL	NULL	NULL	NULL
1017	NULL	NULL	NULL	NULL	Submerged cannot test checked drain manhole and next storm drain no flow	NULL	No	NULL	NULL	NULL	NULL	NULL
1016	NULL	NULL	NULL	NULL	Np flow s	NULL	No	NULL	NULL	NULL	NULL	NULL
1079	NULL	NULL	NULL	NULL	NULL	NULL	Yes	Dredge	Fully_subm	No_bur	No_upstr	NULL
1062	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	Partially_subm	Partially_bur	No_upstr	NULL
796	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
826	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
827	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
825	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
824	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
823	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

OBJECTID	globalid	CreationDate	CreationTime	Creator	EditDate	EditTime	Editor	Outfall_ID	Subbasin_Abbr	Date1	Time	Inspector	Rainfall24	Rainfall48	PipeSize	PipeMaterial	Pipe_Other	Flow_Desc	FlowDepth	FlowWidth	LandUse	LandUse_Other	Odor_Desc	Odor_Other
822	BE4F5557-2AE7-4AC1-A8FA-86D6C970B1C8	2020-07-24	4:06 PM	elmadpw	7/24/2020	4:06 PM	elmadpw	WB-093	WB	7/24/2020	11:49	Crochetiere	0.00000000	0.10000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
820	ECF139E8-C52B-4316-A8E4-E01CE5CCB5C1	2020-07-24	3:10 PM	elmadpw	7/24/2020	3:10 PM	elmadpw	WB-094	WB	7/24/2020	11:09	Crochetiere	0.00000000	0.10000000	4.00000000	NULL	NULL	NULL	NULL	NULL	NULL	NULL	None	NULL
821	7229CE62-336B-4A72-BB81-C41F927EA445	2020-07-24	3:27 PM	elmadpw	7/24/2020	3:27 PM	elmadpw	WB-095	WB	7/24/2020	11:23	Crochetiere	0.00000000	0.12000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
828	FCA6BFD5-904A-4557-BE1C-E5D6DAB0DBB2	2020-07-24	5:40 PM	elmadpw	7/24/2020	5:40 PM	elmadpw	WB-096	WB	7/24/2020	13:29	Crochetiere	0.10000000	0.00000000	24.00000000	HDPE	NULL	Trickle	12.00000000	24.00000000	OpenSpace	NULL	None	NULL
829	10EF10BB-68AD-4AE5-9AF6-0BA3801DF561	2020-07-27	12:37 PM	elmadpw	7/27/2020	12:37 PM	elmadpw	WB-097	WB	7/27/2020	08:13	Crochetiere	0.00000000	0.00000000	12.00000000	RCP	NULL	Trickle	4.00000000	12.00000000	Suburban_Res	NULL	None	NULL
819	DD625848-7365-417F-9069-1BBE658A52F4	2020-07-24	2:25 PM	elmadpw	7/24/2020	2:25 PM	elmadpw	WB-098	WB	7/24/2020	10:23	Crochetiere	0.00000000	0.10000000	36.00000000	RCP	NULL	No_Flow	NULL	NULL	other	Stream	None	NULL
789	26D3B68F-937C-487A-BC7B-A434ADEAB146	2020-07-22	6:37 PM	elmadpw	7/22/2020	6:37 PM	elmadpw	WB-099	WB	7/22/2020	14:35	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	2.00000000	8.00000000	OpenSpace	NULL	None	NULL
790	9A7ABA96-283B-45C1-8397-2465A8234501	2020-07-22	6:45 PM	elmadpw	7/22/2020	6:45 PM	elmadpw	WB-100	WB	7/22/2020	14:41	Crochetiere	0.00000000	0.00000000	18.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
791	80CF7EBE-D399-44E5-B3F7-4E956588C808	2020-07-22	6:52 PM	elmadpw	7/22/2020	6:52 PM	elmadpw	WB-101	WB	7/22/2020	14:47	Crochetiere	0.00000000	0.00000000	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
785	3B9923C4-C77F-4489-92B9-9916F96307F2	2020-07-22	2:59 PM	elmadpw	7/22/2020	2:59 PM	elmadpw	WB-102	WB	7/22/2020	10:42	Crochetiere	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.05000000	4.00000000	OpenSpace	NULL	None	NULL
1038	DADAEE36-5F4D-4534-B0BD-FABD22894737	2021-06-01	12:59 PM	elmadpw	6/1/2021	12:59 PM	elmadpw	WB-111	WB	6/1/2021	08:52	Crochetiere	0.00000000	1.00000000	15.00000000	RCP	NULL	Moderate	2.00000000	10.00000000	OpenSpace	NULL	None	NULL
1087	847DE5FE-A81E-40EB-BD4F-DF3A4A510ADA	2021-06-14	6:42 PM	elmadpw	6/14/2021	6:42 PM	elmadpw	WB-112	WB	6/14/2021	14:35	Crochetiere, Vachon	NULL	NULL	24.00000000	RCP	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL
1088	A9019902-4AF6-42F7-AFF9-FCD4944B8B92	2021-06-14	6:44 PM	elmadpw	6/14/2021	6:44 PM	elmadpw	WB-113	WB	6/14/2021	14:42	Crochetiere, Vachon	NULL	NULL	15.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1086	304E9548-55EF-44F5-90D8-1D18F1B2A9A5	2021-06-14	6:23 PM	elmadpw	6/14/2021	6:23 PM	elmadpw	WB-114	WB	6/14/2021	14:01	Crochetiere, Vachon	NULL	NULL	12.00000000	HDPE	NULL	No_Flow	NULL	NULL	NULL	NULL	None	NULL
830	35A6A0E3-2285-4AA6-ADF6-29F28A4C7798	2020-07-27	2:29 PM	elmadpw	7/27/2020	2:29 PM	elmadpw	WB-119	WB	7/27/2020	10:25	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	other	Culvert	None	NULL
1061	BCFEC879-97EA-4CD1-9409-CBEAFB975313	2021-06-10	12:11 PM	elmadpw	6/10/2021	12:11 PM	elmadpw	WB-121	WB	6/10/2021	08:07	Crochetiere, Vachon	0.00000000	0.10000000	24.00000000	RCP	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL
792	CE5F9010-718A-450D-975A-58C31E52C467	2020-07-22	7:11 PM	elmadpw	7/22/2020	7:11 PM	elmadpw	WB-122	WB	7/22/2020	15:05	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
793	5252992D-03FF-4EC4-BC55-262F2A1EF641	2020-07-22	7:19 PM	elmadpw	7/22/2020	7:19 PM	elmadpw	WB-123	WB	7/22/2020	15:09	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
794	731595B3-0AA8-4DC3-B325-40134B269A7A	2020-07-23	11:44 AM	elmadpw	7/23/2020	11:44 AM	elmadpw	WB-124	WB	7/23/2020	07:41	Crochetiere	0.10000000	0.00000000	24.00000000	RCP	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
795	9E717AE8-B299-4CBE-B803-8A2719EF08E5	2020-07-23	12:11 PM	elmadpw	7/23/2020	12:11 PM	elmadpw	WB-125	WB	7/23/2020	08:07	Crochetiere	0.10000000	0.00000000	18.00000000	RCP	NULL	Trickle	1.00000000	15.00000000	OpenSpace	NULL	None	NULL
1036	F22DDD9F-FDE1-43EE-99E8-796935FF6A06	2021-06-01	12:26 PM	elmadpw	6/1/2021	12:26 PM	elmadpw	WB-127	WB	6/1/2021	08:18	Crochetiere	0.00000000	1.00000000	24.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1037	45EE6937-31BC-4D7C-AE43-E2157F37DAA7	2021-06-01	12:28 PM	elmadpw	6/1/2021	12:28 PM	elmadpw	WB-128	WB	6/1/2021	08:27	Crochetiere	0.00000000	1.00000000	4.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
787	384814C2-3B7F-4002-AD0F-FA3AF4941C98	2020-07-22	5:51 PM	elmadpw	7/22/2020	5:51 PM	elmadpw	WB-129	WB	7/22/2020	13:48	Crochetiere	0.00000000	0.00000000	15.00000000	HDPE	NULL	No_Flow	NULL	NULL	OpenSpace	NULL	None	NULL
1045	95F73F22-8E32-40A4-8008-53603DCE66F0	2021-06-07	12:44 PM	elmadpw	6/7/2021	12:44 PM	elmadpw	WB-135	WB	6/7/2021	08:36	Crochetiere, Vachon	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL
1047	84DB76B8-D45D-4D4F-8027-D993F96AF21C	2021-06-08	12:11 PM	elmadpw	6/8/2021	12:11 PM	elmadpw	WB-135	WB	6/8/2021	07:54	Crochetiere,Vachon	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	1.00000000	NULL	OpenSpace	NULL	None	NULL
1046	51D7C0FC-47EF-4398-8A65-7FFEA749C407	2021-06-07	12:51 PM	elmadpw	6/7/2021	12:51 PM	elmadpw	WB-136	WB	6/7/2021	08:47	Crochetiere, Vachon	0.00000000	0.00000000	24.00000000	HDPE	NULL	Trickle	0.25000000	NULL	OpenSpace	NULL	None	NULL

OBJECTID	Odor_Severity	FlowColor	FlowColor_Other	FlowColorIntensity	Turbidity	Floatables	Floatables_Other	FloatablesSeverity	OutfallDamage	OutfallDamage_Other	OutfallDepositStain	DepositStain_Other	Vegetation	Pool_Quality	PoolQual_Other	PipeHenthicGrowth	Henthic_Other	Ammonia	Chlorine	Conductivity
822	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
820	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
821	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
828	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
829	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
819	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
789	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
790	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
791	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
785	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1038	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.03000000	102.70000000
1087	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1088	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1086	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
830	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1061	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	NULL	641.00000000
792	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
793	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
794	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
795	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1036	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.00000000	0.05000000	590.00000000
1037	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
787	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1045	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL
1047	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	0.25000000	0.09000000	552.00000000
1046	0None	Clear	NULL	0Clear	0ClearTurbidity	None	NULL	0NoneFloatables	None	NULL	None	NULL	Normal	Normal	NULL	None	NULL	NULL	NULL	NULL

OBJECTID	Salinity	Surfactants	Temperature	EColi	Notes	ECol_itxt	maintenance_required	maintenance_description	submerged_outfall	buried_by_sediment	tested_upstream	upstream_location_description
822	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
820	NULL	NULL	NULL	NULL	Can not locate may not exist	NULL	NULL	NULL	NULL	NULL	NULL	NULL
821	NULL	NULL	NULL	NULL	Washing away under outfall	NULL	NULL	NULL	NULL	NULL	NULL	NULL
828	NULL	NULL	NULL	NULL	Needs to be dredge	NULL	NULL	NULL	NULL	NULL	NULL	NULL
829	NULL	NULL	NULL	NULL	Needs to be dredge back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
819	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
789	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
790	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
791	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
785	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1038	NULL	NULL	13.90000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Catch basin
1087	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1088	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1086	NULL	NULL	NULL	NULL	NULL	NULL	Yes	Outfall needs to be jetted and dredged	No_subm	Partially_bur	No_upstr	NULL
830	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1061	0.36000000	NULL	18.10000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
792	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
793	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
794	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
795	NULL	NULL	NULL	NULL	Needs to be cleared back	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1036	NULL	NULL	14.30000000	NULL	NULL	NULL	No	NULL	Partially_subm	No_bur	Yes_upstr	Drain manhole
1037	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	NULL	NULL	No_upstr	NULL
787	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
1045	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1047	NULL	NULL	22.30000000	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL
1046	NULL	NULL	NULL	NULL	NULL	NULL	No	NULL	No_subm	No_bur	No_upstr	NULL

Attachment 3: Spring 2021 Outfall Sampling - Laboratory Reports

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 3, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: East Longmeadow, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21E1321

Enclosed are results of analyses for samples received by the laboratory on May 24, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/3/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21E1321

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: East Longmeadow, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MRD-005	21E1321-01	Storm Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500 NH3 C	
				SM19-22 4500-N Org B,C-NH3 C	
JB-006	21E1321-02	Storm Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500 NH3 C	
				SM19-22 4500-N Org B,C-NH3 C	
JB-007	21E1321-03	Storm Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500 NH3 C	
				SM19-22 4500-N Org B,C-NH3 C	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1321

Date Received: 5/24/2021

Field Sample #: MRD-005   Sampled: 5/24/2021 08:32

Sample ID: 21E1321-01

Sample Matrix: Storm Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	5/25/21	5/26/21 8:45	AYK
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 14:35	CB2
Nitrate as N	1.7	0.10	mg/L	1		EPA 300.0	5/24/21	5/24/21 20:15	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/24/21	5/24/21 20:15	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/27/21	5/30/21 7:59	YR
Total Nitrogen	2.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 7:11	LL
E. Coli	690	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 14:35	CB2

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Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1321

Date Received: 5/24/2021

Field Sample #: MRD-005   Sampled: 5/24/2021 08:32

Sample ID: 21E1321-01

Sample Matrix: Storm Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:15	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA Sample Description: Work Order: 21E1321

Date Received: 5/24/2021

Field Sample #: JB-006 Sampled: 5/24/2021 10:47

Sample ID: 21E1321-02

Sample Matrix: Storm Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	5/25/21	5/26/21 8:45	AYK
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 14:35	CB2
Nitrate as N	0.45	0.10	mg/L	1		EPA 300.0	5/24/21	5/24/21 20:37	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/24/21	5/24/21 20:37	CB2
Total Kjeldahl Nitrogen	2.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/25/21	5/26/21 9:30	EC
Total Nitrogen	2.6	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 7:11	LL
E. Coli	26	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 14:35	CB2

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1321

Date Received: 5/24/2021

Field Sample #: JB-006   Sampled: 5/24/2021 10:47

Sample ID: 21E1321-02

Sample Matrix: Storm Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:16	PEL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA | Sample Description: | Work Order: 21E1321

Date Received: 5/24/2021

Field Sample #: JB-007 | Sampled: 5/24/2021 11:02

Sample ID: 21E1321-03

Sample Matrix: Storm Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	5/25/21	5/26/21 8:45	AYK
Coliform, Total	400	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 14:35	CB2
Nitrate as N	1.4	0.10	mg/L	1		EPA 300.0	5/24/21	5/24/21 20:59	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/24/21	5/24/21 20:59	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/25/21	5/26/21 9:30	EC
Total Nitrogen	1.4	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 14:34	LL
E. Coli	ND	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 14:35	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1321

Date Received: 5/24/2021

Field Sample #: JB-007   Sampled: 5/24/2021 11:02

Sample ID: 21E1321-03

Sample Matrix: Storm Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:17	PEL

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-01 [MRD-005]	B282688	10.0	10.0	05/24/21
21E1321-02 [JB-006]	B282688	10.0	10.0	05/24/21
21E1321-03 [JB-007]	B282688	10.0	10.0	05/24/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-01 [MRD-005]	B282679	100	100	05/24/21
21E1321-02 [JB-006]	B282679	100	100	05/24/21
21E1321-03 [JB-007]	B282679	100	100	05/24/21

SM19-22 4500 NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-01 [MRD-005]	B282732	100	100	05/25/21
21E1321-02 [JB-006]	B282732	100	100	05/25/21
21E1321-03 [JB-007]	B282732	100	100	05/25/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-02 [JB-006]	B282751	25.0	25.0	05/25/21
21E1321-03 [JB-007]	B282751	25.0	25.0	05/25/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-01 [MRD-005]	B282919	25.0	25.0	05/27/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-01 [MRD-005]	B283171	50.0	50.0	06/02/21
21E1321-02 [JB-006]	B283171	50.0	50.0	06/02/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1321-03 [JB-007]	B283220	50.0	50.0	06/02/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B282679 - SM 9223B - COLILERT										
Blank (B282679-BLK1)				Prepared & Analyzed: 05/24/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Batch B282688 - EPA 300.0										
Blank (B282688-BLK1)				Prepared & Analyzed: 05/24/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B282688-BS1)				Prepared & Analyzed: 05/24/21						
Nitrate as N	0.98	0.10	mg/L	1.00		97.6	90-110			
Nitrite as N	1.02	0.100	mg/L	1.00		102	90-110			
LCS Dup (B282688-BSD1)				Prepared & Analyzed: 05/24/21						
Nitrate as N	0.97	0.10	mg/L	1.00		96.5	90-110	1.15	20	
Nitrite as N	0.993	0.100	mg/L	1.00		99.3	90-110	2.29	20	
Batch B282732 - SM19-22 4500 NH3 C										
Blank (B282732-BLK1)				Prepared: 05/25/21 Analyzed: 05/26/21						
Ammonia as N	ND	0.30	mg/L							
LCS (B282732-BS1)				Prepared: 05/25/21 Analyzed: 05/26/21						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	86.2-110			
LCS Dup (B282732-BSD1)				Prepared: 05/25/21 Analyzed: 05/26/21						
Ammonia as N	5.0	0.30	mg/L	5.00		101	86.2-110	5.28	10	
Batch B282751 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B282751-BLK1)				Prepared: 05/25/21 Analyzed: 05/26/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B282751-BS1)				Prepared: 05/25/21 Analyzed: 05/26/21						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		101	86.9-114			
Batch B282919 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B282919-BLK1)				Prepared: 05/27/21 Analyzed: 05/30/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B282919 - SM19-22 4500-N Org B,C-NH3 C										
LCS (B282919-BS1)				Prepared: 05/27/21 Analyzed: 05/30/21						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		101	86.9-114			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

con-test ANALYTICAL LABORATORY

21E1321

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name: Town of East Longmeadow
Address: 60 Center Square
Phone: (413) 525-5400 Ext 1203
Project Name: Outfalls
Project Location: East Longmeadow
Project Number:
Project Manager:
Con-Test Quote Name/Number:
Invoice Recipient: Tom Christenson
Sampled By: Josh Crochetiere

Requested Turnaround Time
7-Day ☒ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	Surfactants	Ammonia	Total Nitrogen	Colilert-18
01	MRD-005	5/24/21	832		X	H_2O	U	X	X	X	X
02	JB-006	↓	1047		X	↓	U	X	X	X	X
03	JB-007	↓	1102		X	↓	U	X	X	X	X

# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Comments:
Email to:
Tom.Christenson@EastLongmeadowMA.gov
Joshua.Crochetiere@EastLongmeadowMA.gov

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) Michael Polasehek	Date/Time: 5/24/21
Received by: (signature) [signature] 5.1 C	Date/Time: 5/24/21 1139
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

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www.contestlabs.com

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP, LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples______________

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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Town of East Longmeadow

Received By RLF Date 5/24/21 Time 1139

How were the samples received? In Cooler T No Cooler ____ On Ice T No Ice ____
Direct from Sampling ____ Ambient ____ Melted Ice ____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 5.1 C
By Blank # ____ Actual Temp - ____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? ____
Are there Rushes? F Who was notified? ____
Are there Short Holds? T Who was notified? Frank
Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? ~~F~~ T
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid T Base NA

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic	3	16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	3	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria	6	2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 3, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: East Longmeadow, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21E1344

Enclosed are results of analyses for samples received by the laboratory on May 24, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/3/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21E1344

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: East Longmeadow, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
FB-012	21E1344-01	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500 NH3 C	
				SM19-22 4500-N Org B,C-NH3 C	
PB-033	21E1344-02	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500 NH3 C	
				SM19-22 4500-N Org B,C-NH3 C	
PB-053	21E1344-03	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500 NH3 C	
				SM19-22 4500-N Org B,C-NH3 C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA 300.0

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Nitrate as N
21E1344-03[PB-053], B282688-MS1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa Worthington

Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1344

Date Received: 5/24/2021

Field Sample #: FB-012   Sampled: 5/24/2021 12:26

Sample ID: 21E1344-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	5/25/21	5/26/21 8:45	AYK
Coliform, Total	2000	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 19:00	CB2
Nitrate as N	2.8	0.10	mg/L	1		EPA 300.0	5/24/21	5/24/21 21:21	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/24/21	5/24/21 21:21	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/25/21	5/26/21 9:30	EC
Total Nitrogen	2.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 7:11	LL
E. Coli	1.0	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 19:00	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1344

Date Received: 5/24/2021

Field Sample #: FB-012   Sampled: 5/24/2021 12:26

Sample ID: 21E1344-01

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:19	PEL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA | Sample Description: | Work Order: 21E1344

Date Received: 5/24/2021

Field Sample #: PB-033 | Sampled: 5/24/2021 13:49

Sample ID: 21E1344-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	5/25/21	5/26/21 8:45	AYK
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 19:00	CB2
Nitrate as N	1.2	0.10	mg/L	1		EPA 300.0	5/24/21	5/24/21 21:43	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/24/21	5/24/21 21:43	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/25/21	5/26/21 9:30	EC
Total Nitrogen	1.2	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 7:11	LL
E. Coli	5.2	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 19:00	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA
Sample Description:
Work Order: 21E1344

Date Received: 5/24/2021

Field Sample #: PB-033
Sampled: 5/24/2021 13:49

Sample ID: 21E1344-02

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:19	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA   Sample Description: Work Order: 21E1344

Date Received: 5/24/2021

Field Sample #: PB-053   Sampled: 5/24/2021 14:21

Sample ID: 21E1344-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	5/25/21	5/26/21 8:45	AYK
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 19:00	CB2
Nitrate as N	3.0	0.10	mg/L	1	MS-07	EPA 300.0	5/24/21	5/24/21 22:06	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/24/21	5/24/21 22:06	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/25/21	5/26/21 9:30	EC
Total Nitrogen	3.0	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 7:11	LL
E. Coli	100	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/24/21	5/24/21 19:00	CB2

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: East Longmeadow, MA | Sample Description: | Work Order: 21E1344

Date Received: 5/24/2021

Field Sample #: PB-053 | Sampled: 5/24/2021 14:21

Sample ID: 21E1344-03

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:20	PEL

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1344-01 [FB-012]	B282688	10.0	10.0	05/24/21
21E1344-02 [PB-033]	B282688	10.0	10.0	05/24/21
21E1344-03 [PB-053]	B282688	10.0	10.0	05/24/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1344-01 [FB-012]	B282693	100	100	05/24/21
21E1344-02 [PB-033]	B282693	100	100	05/24/21
21E1344-03 [PB-053]	B282693	100	100	05/24/21

SM19-22 4500 NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1344-01 [FB-012]	B282732	100	100	05/25/21
21E1344-02 [PB-033]	B282732	100	100	05/25/21
21E1344-03 [PB-053]	B282732	100	100	05/25/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1344-01 [FB-012]	B282751	25.0	25.0	05/25/21
21E1344-02 [PB-033]	B282751	25.0	25.0	05/25/21
21E1344-03 [PB-053]	B282751	25.0	25.0	05/25/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1344-01 [FB-012]	B283171	50.0	50.0	06/02/21
21E1344-02 [PB-033]	B283171	50.0	50.0	06/02/21
21E1344-03 [PB-053]	B283171	50.0	50.0	06/02/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B282688 - EPA 300.0											
Blank (B282688-BLK1)				Prepared & Analyzed: 05/24/21							
Nitrate as N	ND	0.10	mg/L								
Nitrite as N	ND	0.100	mg/L								
LCS (B282688-BS1)				Prepared & Analyzed: 05/24/21							
Nitrate as N	0.98	0.10	mg/L	1.00		97.6		90-110			
Nitrite as N	1.02	0.100	mg/L	1.00		102		90-110			
LCS Dup (B282688-BSD1)				Prepared & Analyzed: 05/24/21							
Nitrate as N	0.97	0.10	mg/L	1.00		96.5		90-110	1.15	20	
Nitrite as N	0.993	0.100	mg/L	1.00		99.3		90-110	2.29	20	
Duplicate (B282688-DUP1)	**Source: 21E1344-03**			Prepared & Analyzed: 05/24/21							
Nitrate as N	3.0	0.10	mg/L		3.0				0.161	20	
Nitrite as N	ND	0.100	mg/L		ND				NC	20	
Matrix Spike (B282688-MS1)	**Source: 21E1344-03**			Prepared & Analyzed: 05/24/21							
Nitrate as N	3.7	0.10	mg/L	1.00	3.0	**68.5**	*	80-120			MS-07
Nitrite as N	1.00	0.100	mg/L	1.00	ND	100		80-120			
Batch B282693 - SM 9223B - COLILERT											
Blank (B282693-BLK1)				Prepared & Analyzed: 05/24/21							
Coliform, Total	ND	1.0	MPN/100 mL								
E. Coli	ND	1.0	MPN/100 mL								
Batch B282732 - SM19-22 4500 NH3 C											
Blank (B282732-BLK1)				Prepared: 05/25/21 Analyzed: 05/26/21							
Ammonia as N	ND	0.30	mg/L								
LCS (B282732-BS1)				Prepared: 05/25/21 Analyzed: 05/26/21							
Ammonia as N	4.8	0.30	mg/L	5.00		95.8		86.2-110			
LCS Dup (B282732-BSD1)				Prepared: 05/25/21 Analyzed: 05/26/21							
Ammonia as N	5.0	0.30	mg/L	5.00		101		86.2-110	5.28	10	
Matrix Spike (B282732-MS2)	**Source: 21E1344-02**			Prepared: 05/25/21 Analyzed: 05/26/21							
Ammonia as N	2.1	0.30	mg/L	2.00	ND	106		56.2-136			
Batch B282751 - SM19-22 4500-N Org B,C-NH3 C											
Blank (B282751-BLK1)				Prepared: 05/25/21 Analyzed: 05/26/21							
Total Kjeldahl Nitrogen	ND	1.0	mg/L								

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B282751 - SM19-22 4500-N Org B,C-NH3 C										
LCS (B282751-BS1)				Prepared: 05/25/21 Analyzed: 05/26/21						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		101	86.9-114			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

21EB44

Company Name:	Town of East Longmeadow
Address:	60 Center Square
Phone:	413-525-5400 Ext 1203
Project Name:	Outfalls
Project Location:	
Project Number:	
Project Manager:	
Con-Test Quote Name/Number:	
Invoice Recipient:	Tom Christensen
Sampled By:	Josh Crochetiere

Requested Turnaround Time
7-Day ☒ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1] Matrix Code	Conc Code	Surfactants	Ammonia	Total Nitrogen	Colilert-18
1	FB-012	5/24/21	1226		x	GW	U	✓	✓	✓	✓
2	PB-033	↓	149		x	GW	U	✓	✓	✓	✓
3	PB-053	↓	221		x	GW	U	✓	✓	✓	✓

\# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Comments:
Email= Tom.christensen@EastLongmeadowMA.gov
Joshua.Crochetiere@EastLongmeadowMA.gov

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) Michael Paloszkatz	Date/Time: 5/24/21 1440
Received by: (signature) [signature]	Date/Time: 4.6 5/24/21 1440
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

con-test ANALYTICAL LABORATORY
www.contestlabs.com

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP, LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples______

con-test ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Town of East Longmeadow

Received By [illegible] Date 5/24/21 Time 1440

How were the samples received? In Cooler T No Cooler ___ On Ice T No Ice ___
Direct from Sampling ___ Ambient ___ Melted Ice ___

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.6
By Blank # ___ Actual Temp - ___

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? ___
Are there Rushes? F Who was notified? ___
Are there Short Holds? T Who was notified? Cassie
Is there enough Volume? T
Is there Headspace where applicable? n/a MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid T Base n/a

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic	3	16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	3	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria	6	2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 4, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: Outfalls
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21E1388

Enclosed are results of analyses for samples received by the laboratory on May 25, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/4/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21E1388

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Outfalls

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PB-096	21E1388-01	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB-003	21E1388-02	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB-005	21E1388-03	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa Worthington

Lisa A. Worthington
Technical Representative

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21E1388

Date Received: 5/25/2021

Field Sample #: PB-096 | Sampled: 5/25/2021 08:01

Sample ID: 21E1388-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2
Nitrate as N	0.80	0.10	mg/L	1		EPA 300.0	5/25/21	5/25/21 18:21	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/25/21	5/25/21 18:21	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/27/21	5/30/21 7:59	YR
Total Nitrogen	1.9	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 14:34	LL
E. Coli	50	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2

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Project Location: Outfalls | Sample Description: | Work Order: 21E1388

Date Received: 5/25/2021

Field Sample #: PB-096 | Sampled: 5/25/2021 08:01

Sample ID: 21E1388-01

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.10	0.10	mg/L	2		SM5540 C-11	5/26/21	5/26/21 1:28	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21E1388

Date Received: 5/25/2021

Field Sample #: PB-003 | Sampled: 5/25/2021 10:17

Sample ID: 21E1388-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2
Nitrate as N	1.4	0.10	mg/L	1		EPA 300.0	5/25/21	5/25/21 18:44	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/25/21	5/25/21 18:44	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/27/21	5/30/21 7:59	YR
Total Nitrogen	2.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 14:34	LL
E. Coli	1.0	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2

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A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21E1388

Date Received: 5/25/2021

Field Sample #: PB-003 | Sampled: 5/25/2021 10:17

Sample ID: 21E1388-02

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/26/21	5/26/21 1:28	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21E1388

Date Received: 5/25/2021

Field Sample #: PB-005 | Sampled: 5/25/2021 10:43

Sample ID: 21E1388-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2
Nitrate as N	4.5	0.10	mg/L	1		EPA 300.0	5/25/21	5/25/21 19:06	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/25/21	5/25/21 19:06	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/27/21	5/30/21 7:59	YR
Total Nitrogen	5.6	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 14:34	LL
E. Coli	35	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls Sample Description: Work Order: 21E1388

Date Received: 5/25/2021

Field Sample #: PB-005 Sampled: 5/25/2021 10:43

Sample ID: 21E1388-03

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/26/21	5/26/21 1:29	PEL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1388-01 [PB-096]	B282791	10.0	10.0	05/25/21
21E1388-02 [PB-003]	B282791	10.0	10.0	05/25/21
21E1388-03 [PB-005]	B282791	10.0	10.0	05/25/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1388-01 [PB-096]	B282784	100	100	05/25/21
21E1388-02 [PB-003]	B282784	100	100	05/25/21
21E1388-03 [PB-005]	B282784	100	100	05/25/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1388-01 [PB-096]	B282919	25.0	25.0	05/27/21
21E1388-02 [PB-003]	B282919	25.0	25.0	05/27/21
21E1388-03 [PB-005]	B282919	25.0	25.0	05/27/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1388-01 [PB-096]	B283220	50.0	50.0	06/02/21
21E1388-02 [PB-003]	B283220	50.0	50.0	06/02/21
21E1388-03 [PB-005]	B283220	50.0	50.0	06/02/21

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B282784 - SM 9223B - COLILERT										
Blank (B282784-BLK1)				Prepared & Analyzed: 05/25/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Batch B282791 - EPA 300.0										
Blank (B282791-BLK1)				Prepared & Analyzed: 05/25/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B282791-BS1)				Prepared & Analyzed: 05/25/21						
Nitrate as N	0.97	0.10	mg/L	1.00		96.9	90-110			
Nitrite as N	1.04	0.100	mg/L	1.00		104	90-110			
LCS Dup (B282791-BSD1)				Prepared & Analyzed: 05/25/21						
Nitrate as N	0.97	0.10	mg/L	1.00		96.9	90-110	0.00	20	
Nitrite as N	1.03	0.100	mg/L	1.00		103	90-110	0.377	20	
Batch B282919 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B282919-BLK1)				Prepared: 05/27/21 Analyzed: 05/30/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B282919-BS1)				Prepared: 05/27/21 Analyzed: 05/30/21						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		101	86.9-114			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21F1388

ALL SHADED AREAS are for LAB USE ONLY

Company: Town of East Longmeadow

Address: 60 Center Square

Billing Information: Tom Christesen

Report To: Tom Christensen

Email To: Tom.christensen@EastLongmeadowMA.gov

Copy To: Josh Crochetiere

Site Collection Info/Address: Outfalls

Customer Project Name/Number: Outfalls

State: MA / County/City: E Longmeadow / Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 413-525-5400 Ext. 1203

Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Josh Crochetiere

Purchase Order #:

Quote #:

DW PWS ID #:

DW Location Code:

Collected By (signature):

Turnaround Date Required: 7Day TAT

Immediately Packed on Ice: [✓] Yes [ ] No

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: ____

Container Preservative Type **: U, 2

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Project Manager:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Surfactants	Total Nitrogen	Colilert-18
1 PB-096	GW	Grab	5/25/21	8:09	—	—		4	X	X	X
2 PB-003	GW	Grab	↓	10:17	—	—		4	X	X	X
3 PB-005	GW	Grab	↓	10:43	—	—		4	X	X	X

Lab Profile/Line:

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA
- Custody Signatures Present Y N NA
- Collector Signature Present Y N NA
- Bottles Intact Y N NA
- Correct Bottles Y N NA
- Sufficient Volume Y N NA
- Samples Received on Ice Y N NA
- VOA - Headspace Acceptable Y N NA
- USDA Regulated Soils Y N NA
- Samples in Holding Time Y N NA
- Residual Chlorine Present Y N NA
- Cl Strips: ____
- Sample pH Acceptable Y N NA
- pH Strips: ____
- Sulfide Present Y N NA
- Lead Acetate Strips: ____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
- 7 day TAT
- EMAIL
Joshua.crochetiere@EastLongmeadowMA.gov

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2674075

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Michael Pelczarski	5/25/21	3.8	5/25 1104

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples__________

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Town of E.L

Received By RAP Date 5/25/21 Time 1104

How were the samples received? In Cooler T No Cooler ___ On Ice T No Ice ___

Direct from Sampling ___ Ambient ___ Melted Ice ___

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 3.8

By Blank # ___ Actual Temp - ___

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? ___

Are there Rushes? F Who was notified? ___

Are there Short Holds? T Who was notified? Lucy

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? Acid pH<2 Base ___

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic	3	16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	3	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	3	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria	3	2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

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A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 4, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: Outfalls
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21E1415

Enclosed are results of analyses for samples received by the laboratory on May 25, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/4/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21E1415

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Outfalls

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PB 006	21E1415-01	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington

Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21E1415

Date Received: 5/25/2021

Field Sample #: PB 006 | Sampled: 5/25/2021 12:15

Sample ID: 21E1415-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	830	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2
Nitrate as N	1.9	0.10	mg/L	1		EPA 300.0	5/25/21	5/25/21 19:28	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	5/25/21	5/25/21 19:28	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	5/27/21	5/30/21 7:59	YR
Total Nitrogen	3.0	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/2/21 14:34	LL
E. Coli	6.3	1.0	MPN/100 mL	1		SM 9223B - COLILERT	5/25/21	5/25/21 15:00	CB2

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Project Location: Outfalls   Sample Description: Work Order: 21E1415

Date Received: 5/25/2021

Field Sample #: PB 006   Sampled: 5/25/2021 12:15

Sample ID: 21E1415-01

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	5/25/21	5/26/21 1:29	PEL

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1415-01 [PB 006]	B282791	10.0	10.0	05/25/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1415-01 [PB 006]	B282784	100	100	05/25/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1415-01 [PB 006]	B282919	25.0	25.0	05/27/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1415-01 [PB 006]	B283220	50.0	50.0	06/02/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B282784 - SM 9223B - COLILERT										
Blank (B282784-BLK1)				Prepared & Analyzed: 05/25/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Batch B282791 - EPA 300.0										
Blank (B282791-BLK1)				Prepared & Analyzed: 05/25/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B282791-BS1)				Prepared & Analyzed: 05/25/21						
Nitrate as N	0.97	0.10	mg/L	1.00		96.9	90-110			
Nitrite as N	1.04	0.100	mg/L	1.00		104	90-110			
LCS Dup (B282791-BSD1)				Prepared & Analyzed: 05/25/21						
Nitrate as N	0.97	0.10	mg/L	1.00		96.9	90-110	0.00	20	
Nitrite as N	1.03	0.100	mg/L	1.00		103	90-110	0.377	20	
Batch B282919 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B282919-BLK1)				Prepared: 05/27/21 Analyzed: 05/30/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B282919-BS1)				Prepared: 05/27/21 Analyzed: 05/30/21						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		101	86.9-114			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

Company: Town of East Longmeadow
Address: 60 Center Square

Billing Information: ~~Tom~~ Tom Christesen

Report To: Tom Christensen

Email To: tom.christensen@EastLongmeadowMA.gov

Copy To: Josh Crochetiere

Site Collection Info/Address: Outfalls

Customer Project Name/Number: Outfalls

State: MA County/City: E. Longmeadow Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 413-525-5400 Ext 1203
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Josh Crochetiere

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): [signature]

Turnaround Date Required: 7 Day TAT

Immediately Packed on Ice: [✓] Yes [ ] No

Sample Disposal:
[x] Dispose as appropriate [ ] Return
[ ] Archive: ____
[ ] Hold: ____

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21E1415

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Surfactants	Total Nitrogen	Colilert - 18	Lab Sample # / Comments
PB 006	GW	Grab	5/25	12:15				4	X	X	X	1

Lab Profile/Line:
Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: ____
Sample pH Acceptable Y N NA
pH Strips: ____
Sulfide Present Y N NA
Lead Acetate Strips: ____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
7 day TAT
-EMAIL
Joshua.Crochetiere@EastLongmeadowMA.gov

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2674171

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: ____ oC
Cooler 1 Therm Corr. Factor: ____ oC
Cooler 1 Corrected Temp: ____ oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY
[signature]	5/25/21	[signature] 2.0	5/25/21 1455	Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum: / Template: / Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: / PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples______________

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Town of East Longmeadow

Received By [signature] Date 5/25/21 Time 1455

How were the samples received? In Cooler T No Cooler ___ On Ice T No Ice ___
Direct from Sampling ___ Ambient ___ Melted Ice ___

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 2.0
By Blank # ___ Actual Temp - ___

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? ___
Are there Rushes? F Who was notified? ___
Are there Short Holds? T Who was notified? ___
Is there enough Volume? T
Is there Headspace where applicable? n/a MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid T Base n/a

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic	1	16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	1	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	1	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria	1	2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 8, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: Outfalls
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21F0025

Enclosed are results of analyses for samples received by the laboratory on June 1, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/8/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21F0025

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Outfalls

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WB-073	21F0025-01	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
WB-004	21F0025-02	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
SB-005	21F0025-03	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
MR-023	21F0025-04	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls　　Sample Description:　　Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: WB-073　　Sampled: 6/1/2021 11:21

Sample ID: 21F0025-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2
Nitrate as N	2.6	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 20:58	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 20:58	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/3/21 10:00	EC
Total Nitrogen	2.6	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/8/21	6/8/21 7:00	LL
E. Coli	22	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2

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Project Location: Outfalls | Sample Description: | Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: WB-073 | Sampled: 6/1/2021 11:21

Sample ID: 21F0025-01

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/2/21	6/3/21 6:14	PEL

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Project Location: Outfalls | Sample Description: | Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: WB-004 | Sampled: 6/1/2021 12:06

Sample ID: 21F0025-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	1700	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2
Nitrate as N	3.5	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 21:21	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 21:21	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/3/21 10:00	EC
Total Nitrogen	3.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/8/21	6/8/21 7:00	LL
E. Coli	20	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: WB-004 | Sampled: 6/1/2021 12:06

Sample ID: 21F0025-02

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/2/21	6/3/21 6:15	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls
Sample Description:
Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: SB-005
Sampled: 6/1/2021 13:46

Sample ID: 21F0025-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2
Nitrate as N	1.9	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 22:28	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 22:28	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/3/21 10:00	EC
Total Nitrogen	1.9	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/8/21	6/8/21 7:00	LL
E. Coli	650	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: SB-005 | Sampled: 6/1/2021 13:46

Sample ID: 21F0025-03

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/2/21	6/3/21 6:15	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls   Sample Description: Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: MR-023   Sampled: 6/1/2021 14:28

Sample ID: 21F0025-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2
Nitrate as N	6.5	0.50	mg/L	5		EPA 300.0	6/2/21	6/2/21 15:38	EC
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 22:50	CB2
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/2/21	6/3/21 10:00	EC
Total Nitrogen	6.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/8/21	6/8/21 7:00	LL
E. Coli	31	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 18:30	CB2

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Project Location: Outfalls   Sample Description: Work Order: 21F0025

Date Received: 6/1/2021

Field Sample #: MR-023   Sampled: 6/1/2021 14:28

Sample ID: 21F0025-04

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/2/21	6/3/21 6:16	PEL

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Sample Extraction Data

Prep Method: EPA 300.0 Analytical Method: EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0025-01 [WB-073]	B283149	10.0	10.0	06/01/21
21F0025-02 [WB-004]	B283149	10.0	10.0	06/01/21
21F0025-03 [SB-005]	B283149	10.0	10.0	06/01/21

Prep Method: EPA 300.0 Analytical Method: EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0025-04 [MR-023]	B283211	10.0	10.0	06/02/21

Prep Method: EPA 300.0 Analytical Method: EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0025-04 [MR-023]	B283219	10.0	10.0	06/01/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0025-01 [WB-073]	B283160	100	100	06/01/21
21F0025-02 [WB-004]	B283160	100	100	06/01/21
21F0025-03 [SB-005]	B283160	100	100	06/01/21
21F0025-04 [MR-023]	B283160	100	100	06/01/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0025-01 [WB-073]	B283204	25.0	25.0	06/02/21
21F0025-02 [WB-004]	B283204	25.0	25.0	06/02/21
21F0025-03 [SB-005]	B283204	25.0	25.0	06/02/21
21F0025-04 [MR-023]	B283204	25.0	25.0	06/02/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0025-01 [WB-073]	B283504	50.0	50.0	06/08/21
21F0025-02 [WB-004]	B283504	50.0	50.0	06/08/21
21F0025-03 [SB-005]	B283504	50.0	50.0	06/08/21
21F0025-04 [MR-023]	B283504	50.0	50.0	06/08/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B283149 - EPA 300.0										
Blank (B283149-BLK1)				Prepared & Analyzed: 06/01/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B283149-BS1)				Prepared & Analyzed: 06/01/21						
Nitrate as N	1.1	0.10	mg/L	1.00		107	90-110			
Nitrite as N	1.09	0.100	mg/L	1.00		109	90-110			
LCS Dup (B283149-BSD1)				Prepared & Analyzed: 06/01/21						
Nitrate as N	1.1	0.10	mg/L	1.00		107	90-110	0.504	20	
Nitrite as N	1.08	0.100	mg/L	1.00		108	90-110	0.101	20	
Batch B283160 - SM 9223B - COLILERT										
Blank (B283160-BLK1)				Prepared & Analyzed: 06/01/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Batch B283204 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B283204-BLK1)				Prepared: 06/02/21 Analyzed: 06/03/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B283204-BS1)				Prepared: 06/02/21 Analyzed: 06/03/21						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0		95.8	86.9-114			
Duplicate (B283204-DUP1)	**Source: 21F0025-04**			Prepared: 06/02/21 Analyzed: 06/03/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L		ND			NC	27.9	
Matrix Spike (B283204-MS1)	**Source: 21F0025-04**			Prepared: 06/02/21 Analyzed: 06/03/21						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0	ND	95.8	74.9-128			
Batch B283211 - EPA 300.0										
Blank (B283211-BLK1)				Prepared & Analyzed: 06/02/21						
Nitrate as N	ND	0.10	mg/L							
LCS (B283211-BS1)				Prepared & Analyzed: 06/02/21						
Nitrate as N	0.95	0.10	mg/L	1.00		95.1	90-110			
LCS Dup (B283211-BSD1)				Prepared & Analyzed: 06/02/21						
Nitrate as N	0.96	0.10	mg/L	1.00		96.0	90-110	0.952	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B283211 - EPA 300.0										
Duplicate (B283211-DUP1)	**Source: 21F0025-04**			Prepared & Analyzed: 06/02/21						
Nitrate as N	6.5	0.50	mg/L		6.5			0.0385	20	
Matrix Spike (B283211-MS1)	**Source: 21F0025-04**			Prepared & Analyzed: 06/02/21						
Nitrate as N	11	0.50	mg/L	5.00	6.5	81.0	80-120			
Batch B283219 - EPA 300.0										
Blank (B283219-BLK1)				Prepared & Analyzed: 06/01/21						
Nitrite as N	ND	0.100	mg/L							
LCS (B283219-BS1)				Prepared & Analyzed: 06/01/21						
Nitrite as N	1.09	0.100	mg/L	1.00		109	90-110			
LCS Dup (B283219-BSD1)				Prepared & Analyzed: 06/01/21						
Nitrite as N	1.08	0.100	mg/L	1.00		108	90-110	0.101	20	
Duplicate (B283219-DUP1)	**Source: 21F0025-04**			Prepared & Analyzed: 06/01/21						
Nitrite as N	ND	0.100	mg/L		ND			NC	20	
Matrix Spike (B283219-MS1)	**Source: 21F0025-04**			Prepared & Analyzed: 06/01/21						
Nitrite as N	1.03	0.100	mg/L	1.00	ND	103	80-120			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21F0025

ALL SHADED AREAS are for LAB USE ONLY

Company: Town of East Longmeadow

Address: 60 Center Square

Billing Information:

Report To: Tom Christensen

Email To: Tom.Christensen@ElongmeadowMA.gov

Copy To: Josh Crochetiere

Site Collection Info/Address:

Customer Project Name/Number: Outfalls

State: MA County/City: E Longmeadow Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: (413)525 5400 Email:

~~Site/Facility ID #:~~ Ext 1203

Compliance Monitoring? [X] Yes [ ] No

Collected By (print): Josh Crochetiere

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature):

Turnaround Date Required: June 8

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: ______ [ ] Hold: ______

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: ______

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U | 2 | O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ______

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected Date	Collected Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Surfactants	Total Nitrogen	Colilert-18	Lab Sample # / Comments
WB-073	GW	Grab	6-1-21	1121	—	—		4	x	x	x	1
WB-004	GW	Grab	↓	1206	—	—		4	x	x	x	2
SB-005	GW	Grab	↓	1346	—	—		4	x	x	x	3
MR-023	GW	Grab	↓	1423	—	—		4	x	x	x	4

Lab Profile/Line:

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA (NA circled)
- Custody Signatures Present Y N NA (NA circled)
- Collector Signature Present Y N NA (Y circled)
- Bottles Intact Y N NA (Y circled)
- Correct Bottles Y N NA (Y circled)
- Sufficient Volume Y N NA (Y circled)
- Samples Received on Ice Y N NA (Y circled)
- VOA - Headspace Acceptable Y N NA (NA circled)
- USDA Regulated Soils Y N NA (NA circled)
- Samples in Holding Time Y N NA (Y circled)
- Residual Chlorine Present Y N NA (NA circled)
- Cl Strips:
- Sample pH Acceptable Y N NA (NA circled)
- pH Strips:
- Sulfide Present Y N NA (NA circled)
- Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: Email Joshua.Crochetiere@ElongmeadowMA.gov

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2674389

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments: 2.6°

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Michael Palasebatz	6-1-21 1443	[signature] 2.6°	6/1/21 1443

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 10, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: Outfalls
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21F0007

Enclosed are results of analyses for samples received by the laboratory on June 1, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/10/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21F0007

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Outfalls

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WB-127	21F0007-01	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
WB-111	21F0007-02	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB-014	21F0007-03	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB-072	21F0007-04	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington

Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: WB-127 | Sampled: 6/1/2021 08:12

Sample ID: 21F0007-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2
Nitrate as N	3.4	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 19:29	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 19:29	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/6/21	6/7/21 7:56	YR
Total Nitrogen	4.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/9/21	6/9/21 13:44	LL
E. Coli	7.3	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2

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Project Location: Outfalls

Sample Description:

Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: WB-127

Sampled: 6/1/2021 08:12

Sample ID: 21F0007-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surfactants as MBAS	ND	0.05	mg/L	1		SM 5540C		6/3/21 6:16	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: WB-111 | Sampled: 6/1/2021 08:50

Sample ID: 21F0007-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	790	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2
Nitrate as N	0.23	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 19:52	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 19:52	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/6/21	6/7/21 7:56	YR
Total Nitrogen	1.3	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/9/21	6/9/21 13:44	LL
E. Coli	36	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls   Sample Description: Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: WB-111   Sampled: 6/1/2021 08:50

Sample ID: 21F0007-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surfactants as MBAS	ND	0.05	mg/L	1		SM 5540C		6/3/21 6:17	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: PB-014 | Sampled: 6/1/2021 09:44

Sample ID: 21F0007-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2
Nitrate as N	2.7	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 20:14	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 20:14	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/6/21	6/7/21 7:56	YR
Total Nitrogen	3.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/9/21	6/9/21 13:44	LL
E. Coli	310	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls   Sample Description: Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: PB-014   Sampled: 6/1/2021 09:44

Sample ID: 21F0007-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surfactants as MBAS	ND	0.05	mg/L	1		SM 5540C		6/3/21 6:18	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: PB-072 | Sampled: 6/1/2021 10:06

Sample ID: 21F0007-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2
Nitrate as N	0.13	0.10	mg/L	1		EPA 300.0	6/1/21	6/1/21 20:36	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/1/21	6/1/21 20:36	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/6/21	6/7/21 7:56	YR
Total Nitrogen	1.2	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/9/21	6/9/21 13:44	LL
E. Coli	1700	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/1/21	6/1/21 14:15	CB2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls

Sample Description:

Work Order: 21F0007

Date Received: 6/1/2021

Field Sample #: PB-072

Sampled: 6/1/2021 10:06

Sample ID: 21F0007-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surfactants as MBAS	0.15	0.05	mg/L	1		SM 5540C		6/3/21 6:19	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0007-01 [WB-127]	B283149	10.0	10.0	06/01/21
21F0007-02 [WB-111]	B283149	10.0	10.0	06/01/21
21F0007-03 [PB-014]	B283149	10.0	10.0	06/01/21
21F0007-04 [PB-072]	B283149	10.0	10.0	06/01/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0007-01 [WB-127]	B283140	100	100	06/01/21
21F0007-02 [WB-111]	B283140	100	100	06/01/21
21F0007-03 [PB-014]	B283140	100	100	06/01/21
21F0007-04 [PB-072]	B283140	100	100	06/01/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0007-01 [WB-127]	B283425	25.0	25.0	06/06/21
21F0007-02 [WB-111]	B283425	25.0	25.0	06/06/21
21F0007-03 [PB-014]	B283425	25.0	25.0	06/06/21
21F0007-04 [PB-072]	B283425	25.0	25.0	06/06/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0007-01 [WB-127]	B283642	50.0	50.0	06/09/21
21F0007-02 [WB-111]	B283642	50.0	50.0	06/09/21
21F0007-03 [PB-014]	B283642	50.0	50.0	06/09/21
21F0007-04 [PB-072]	B283642	50.0	50.0	06/09/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B283140 - SM 9223B - COLILERT										
Blank (B283140-BLK1)				Prepared & Analyzed: 06/01/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Batch B283149 - EPA 300.0										
Blank (B283149-BLK1)				Prepared & Analyzed: 06/01/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B283149-BS1)				Prepared & Analyzed: 06/01/21						
Nitrate as N	1.1	0.10	mg/L	1.00		107	90-110			
Nitrite as N	1.09	0.100	mg/L	1.00		109	90-110			
LCS Dup (B283149-BSD1)				Prepared & Analyzed: 06/01/21						
Nitrate as N	1.1	0.10	mg/L	1.00		107	90-110	0.504	20	
Nitrite as N	1.08	0.100	mg/L	1.00		108	90-110	0.101	20	
Batch B283425 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B283425-BLK1)				Prepared: 06/06/21 Analyzed: 06/07/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B283425-BS1)				Prepared: 06/06/21 Analyzed: 06/07/21						
Total Kjeldahl Nitrogen	21	1.0	mg/L	20.0		106	86.9-114			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 5540C in Water	
Surfactants as MBAS	ME
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

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21F0007

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name: Town of East Longmeadow
Address: 60 Center Square
Phone: 413-525-5400 Ext 1203
Project Name: Outfalls
Project Location: East Longmeadow
Project Number:
Project Manager:
Con-Test Quote Name/Number:
Invoice Recipient: Tom Christesen
Sampled By: Josh Crochetiere

Requested Turnaround Time
7-Day ☒ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1] Matrix Code	Conc Code	Surfactants	Total Nitrogen	Colilert-18
1	WB-127	6-1-21	8:12		X	GW	U	X	X	X
2	WB-111	6-1-21	8:50		X	GW	U	X	X	X
3	PB-014	6-1-21	9:44		X	GW	U	X	X	X
4	PB-072	6-1-21	10:06		X	GW	U	X	X	X

# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Comments:
Email to:
Tom.Christesen@EastLongmeadowMA.gov
Joshua.Crochetiere@EastLongmeadowMA.gov

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Signature	Date/Time
Relinquished by: (signature) Michael [illegible]	6-1-21 10:35
Received by: (signature) 2.9 [illegible] 1035	6-1-21
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP, LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples ______

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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Town of EL

Received By LL Date 6-1-21 Time 1035

How were the samples received? In Cooler T No Cooler ___ On Ice T No Ice ___
Direct from Sampling ___ Ambient ___ Melted Ice ___

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.9
By Blank # ___ Actual Temp - ___

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? ___
Are there Rushes? F Who was notified? ___
Are there Short Holds? T Who was notified? Lucy
Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid T Base ___

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic	4	16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	4	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	4	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria	4	2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 15, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: Outfalls
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21F0416

Enclosed are results of analyses for samples received by the laboratory on June 8, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/15/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21F0416

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Outfalls

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WB 135	21F0416-01	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB 057	21F0416-02	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB 051	21F0416-03	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB 035	21F0416-04	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB 084	21F0416-05	Ground Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa Worthington

Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls

Sample Description:

Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: WB 135

Sampled: 6/8/2021 08:00

Sample ID: 21F0416-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	1700	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2
Nitrate as N	2.7	0.10	mg/L	1		EPA 300.0	6/8/21	6/8/21 19:48	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/8/21	6/8/21 19:48	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/10/21	6/13/21 7:50	YR
Total Nitrogen	3.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/14/21	6/14/21 13:41	LL
E. Coli	13	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2

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Project Location: Outfalls   Sample Description: Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: WB 135   Sampled: 6/8/2021 08:00

Sample ID: 21F0416-01

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 5:51	PEL

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Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 057 | Sampled: 6/8/2021 08:45

Sample ID: 21F0416-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2
Nitrate as N	1.7	0.10	mg/L	1		EPA 300.0	6/8/21	6/8/21 20:10	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/8/21	6/8/21 20:10	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/10/21	6/13/21 7:50	YR
Total Nitrogen	2.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/14/21	6/14/21 13:41	LL
E. Coli	1300	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2

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Project Location: Outfalls   Sample Description: Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 057   Sampled: 6/8/2021 08:45

Sample ID: 21F0416-02

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	0.06	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 5:51	PEL

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Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 051 | Sampled: 6/8/2021 09:30

Sample ID: 21F0416-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	24000	10	MPN/100 mL	10		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2
Nitrate as N	4.2	0.10	mg/L	1		EPA 300.0	6/8/21	6/8/21 20:32	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/8/21	6/8/21 20:32	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/10/21	6/13/21 7:50	YR
Total Nitrogen	5.3	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/14/21	6/14/21 13:41	LL
E. Coli	52	10	MPN/100 mL	10		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2

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Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 051 | Sampled: 6/8/2021 09:30

Sample ID: 21F0416-03

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 5:51	PEL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 035 | Sampled: 6/8/2021 10:00

Sample ID: 21F0416-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2
Nitrate as N	3.7	0.10	mg/L	1		EPA 300.0	6/8/21	6/8/21 20:55	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/8/21	6/8/21 20:55	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/10/21	6/13/21 7:50	YR
Total Nitrogen	4.8	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/14/21	6/14/21 13:41	LL
E. Coli	24	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2

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Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 035 | Sampled: 6/8/2021 10:00

Sample ID: 21F0416-04

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 5:51	PEL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 084 | Sampled: 6/8/2021 10:30

Sample ID: 21F0416-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	16000	10	MPN/100 mL	10		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2
Nitrate as N	0.26	0.10	mg/L	1		EPA 300.0	6/8/21	6/8/21 21:17	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/8/21	6/8/21 21:17	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/10/21	6/13/21 7:50	YR
Total Nitrogen	1.4	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/14/21	6/14/21 13:41	LL
E. Coli	430	10	MPN/100 mL	10		SM 9223B - COLILERT	6/8/21	6/8/21 14:40	CB2

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Project Location: Outfalls | Sample Description: | Work Order: 21F0416

Date Received: 6/8/2021

Field Sample #: PB 084 | Sampled: 6/8/2021 10:30

Sample ID: 21F0416-05

Sample Matrix: Ground Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 10:00	PEL

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0416-01 [WB 135]	B283568	10.0	10.0	06/08/21
21F0416-02 [PB 057]	B283568	10.0	10.0	06/08/21
21F0416-03 [PB 051]	B283568	10.0	10.0	06/08/21
21F0416-04 [PB 035]	B283568	10.0	10.0	06/08/21
21F0416-05 [PB 084]	B283568	10.0	10.0	06/08/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0416-01 [WB 135]	B283566	100	100	06/08/21
21F0416-02 [PB 057]	B283566	100	100	06/08/21
21F0416-03 [PB 051]	B283566	100	100	06/08/21
21F0416-04 [PB 035]	B283566	100	100	06/08/21
21F0416-05 [PB 084]	B283566	100	100	06/08/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0416-01 [WB 135]	B283699	25.0	25.0	06/10/21
21F0416-02 [PB 057]	B283699	25.0	25.0	06/10/21
21F0416-03 [PB 051]	B283699	25.0	25.0	06/10/21
21F0416-04 [PB 035]	B283699	25.0	25.0	06/10/21
21F0416-05 [PB 084]	B283699	25.0	25.0	06/10/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0416-01 [WB 135]	B283890	50.0	50.0	06/14/21
21F0416-02 [PB 057]	B283890	50.0	50.0	06/14/21
21F0416-03 [PB 051]	B283890	50.0	50.0	06/14/21
21F0416-04 [PB 035]	B283890	50.0	50.0	06/14/21
21F0416-05 [PB 084]	B283890	50.0	50.0	06/14/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B283566 - SM 9223B - COLILERT										
Blank (B283566-BLK1)				Prepared & Analyzed: 06/08/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Batch B283568 - EPA 300.0										
Blank (B283568-BLK1)				Prepared & Analyzed: 06/08/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B283568-BS1)				Prepared & Analyzed: 06/08/21						
Nitrate as N	0.93	0.10	mg/L	1.00		92.9	90-110			
Nitrite as N	1.04	0.100	mg/L	1.00		104	90-110			
LCS Dup (B283568-BSD1)				Prepared & Analyzed: 06/08/21						
Nitrate as N	0.93	0.10	mg/L	1.00		93.2	90-110	0.269	20	
Nitrite as N	1.04	0.100	mg/L	1.00		104	90-110	0.231	20	
Batch B283699 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B283699-BLK1)				Prepared: 06/10/21 Analyzed: 06/13/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B283699-BS1)				Prepared: 06/10/21 Analyzed: 06/13/21						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0		95.8	86.9-114			
Duplicate (B283699-DUP1)	**Source: 21F0416-01**			Prepared: 06/10/21 Analyzed: 06/13/21						
Total Kjeldahl Nitrogen	1.1	1.0	mg/L		1.1			0.00	27.9	
Matrix Spike (B283699-MS1)	**Source: 21F0416-01**			Prepared: 06/10/21 Analyzed: 06/13/21						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0	1.1	95.8	74.9-128			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21F0419

ALL SHADED AREAS are for LAB USE ONLY

Company: Town of East Longmeadow

Address: 60 Center Square

Report To: Tom Christensen

Copy To: Josh Crochetiere

Customer Project Name/Number: Outfalls

Billing Information:

Email To: Tom.Christensen@ElongmeadowMA.gov

Site Collection Info/Address:

State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 413 525 5400 Email:

Site/Facility ID #: Ext 1203

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Josh Crochetiere

Purchase Order #: Quote #:

DW PWS ID #: DW Location Code:

Collected By (signature):

Turnaround Date Required: 6/15

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: V | 2 | 0

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	Surfactants	Total Nitrogen	Coliert-18	Lab Sample # / Comments
WB 138	GW	Grab	6/8	8:00				4	X	X	X	01
PB 057	GW	Grab	6/8	8:45				4	X	X	X	02
PB 051	GW	Grab	6/8	9:30				4	X	X	X	03
PB 035	GW	Grab	6/8	10:00				4	X	X	X	04
PB 084	GW	Grab	6/8	10:30				4	X	X	X	05

Lab Profile/Line:

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA — NA
- Custody Signatures Present Y N NA — Y
- Collector Signature Present Y N NA — Y
- Bottles Intact Y N NA — Y
- Correct Bottles Y N NA — Y
- Sufficient Volume Y N NA — Y
- Samples Received on Ice Y N NA — Y
- VOA - Headspace Acceptable Y N NA — NA
- USDA Regulated Soils Y N NA — NA
- Samples in Holding Time Y N NA — Y
- Residual Chlorine Present Y N NA — NA
- Cl Strips:
- Sample pH Acceptable Y N NA — Y
- pH Strips:
- Sulfide Present Y N NA — NA
- Lead Acetate Strips:

LAB USE ONLY: Lab Sample # / Comments: Irma notified of Shortholds RLB

Customer Remarks / Special Conditions / Possible Hazards: Email Joshua.Crochetiere@Elongmeadow MA.gov

Type of Ice Used: Wet Blue Dry None — Wet

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used:

Lab Tracking #: 2674387

Radchem sample(s) screened (<500 cpm): Y N NA — NA

Samples received via: FEDEX UPS Client Courier Pace Courier — Client

Lab Sample Temperature Info:
Temp Blank Received: Y N NA — NA
Therm ID#: 5
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments: direct from sampling 10.6 C

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY
[signature]		[signature] 10.6 C J.C	6/8/21 1115	Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

Trip Blank Received: Y N NA — N
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

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June 21, 2021

Tom Christensen
Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028

Project Location: Outfalls
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 21F0595

Enclosed are results of analyses for samples received by the laboratory on June 10, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kaitlyn A. Feliciano
Project Manager

Table of Contents

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Town of East Longmeadow DPW
60 Center Square
East Longmeadow, MA 01028
ATTN: Tom Christensen

REPORT DATE: 6/21/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21F0595

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Outfalls

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WB 121	21F0595-01	Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB 056	21F0595-02	Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	
PB 042	21F0595-03	Water		EPA 300.0	
				SM 5540C	MA M-CT007/CT PH-0618/NY11301
				SM 9223B - COLILERT	
				SM19-22 4500-N Org B,C-NH3 C	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod E. Kopyscinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls | Sample Description: | Work Order: 21F0595

Date Received: 6/10/2021

Field Sample #: WB 121 | Sampled: 6/10/2021 08:05

Sample ID: 21F0595-01

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/10/21	6/10/21 15:50	DJM
Nitrate as N	1.4	0.10	mg/L	1		EPA 300.0	6/10/21	6/10/21 17:51	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/10/21	6/10/21 17:51	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/15/21	6/16/21 7:53	YR
Total Nitrogen	2.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/17/21	6/17/21 13:33	LL
E. Coli	150	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/10/21	6/10/21 15:50	DJM

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Project Location: Outfalls   Sample Description: Work Order: 21F0595

Date Received: 6/10/2021

Field Sample #: WB 121   Sampled: 6/10/2021 08:05

Sample ID: 21F0595-01

Sample Matrix: Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 23:13	PEL

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Project Location: Outfalls Sample Description: Work Order: 21F0595

Date Received: 6/10/2021

Field Sample #: PB 056 Sampled: 6/10/2021 09:15

Sample ID: 21F0595-02

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/10/21	6/10/21 15:50	DJM
Nitrate as N	2.5	0.10	mg/L	1		EPA 300.0	6/10/21	6/10/21 18:13	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/10/21	6/10/21 18:13	CB2
Total Kjeldahl Nitrogen	7.4	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/15/21	6/16/21 7:53	YR
Total Nitrogen	9.9	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/17/21	6/17/21 13:33	LL
E. Coli	2000	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/10/21	6/10/21 15:50	DJM

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Project Location: Outfalls | Sample Description: | Work Order: 21F0595

Date Received: 6/10/2021

Field Sample #: PB 056 | Sampled: 6/10/2021 09:15

Sample ID: 21F0595-02

Sample Matrix: Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 23:13	PEL

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Project Location: Outfalls
Sample Description:
Work Order: 21F0595

Date Received: 6/10/2021

Field Sample #: PB 042
Sampled: 6/10/2021 10:15

Sample ID: 21F0595-03

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Coliform, Total	>2419.6	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/10/21	6/10/21 15:50	DJM
Nitrate as N	2.4	0.10	mg/L	1		EPA 300.0	6/10/21	6/10/21 18:35	CB2
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	6/10/21	6/10/21 18:35	CB2
Total Kjeldahl Nitrogen	1.1	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/15/21	6/16/21 7:53	YR
Total Nitrogen	3.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	6/17/21	6/17/21 13:33	LL
E. Coli	63	1.0	MPN/100 mL	1		SM 9223B - COLILERT	6/10/21	6/10/21 15:50	DJM

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Outfalls
Sample Description:
Work Order: 21F0595

Date Received: 6/10/2021

Field Sample #: PB 042
Sampled: 6/10/2021 10:15

Sample ID: 21F0595-03

Sample Matrix: Water

SM5540 C-11

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
MBAS	< 0.05	0.05	mg/L	1		SM5540 C-11	6/10/21	6/10/21 23:14	PEL

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0595-01 [WB 121]	B283751	10.0	10.0	06/10/21
21F0595-02 [PB 056]	B283751	10.0	10.0	06/10/21
21F0595-03 [PB 042]	B283751	10.0	10.0	06/10/21

SM 9223B - COLILERT

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0595-01 [WB 121]	B283763	100	100	06/10/21
21F0595-02 [PB 056]	B283763	100	100	06/10/21
21F0595-03 [PB 042]	B283763	100	100	06/10/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0595-01 [WB 121]	B284006	25.0	25.0	06/15/21
21F0595-02 [PB 056]	B284006	25.0	25.0	06/15/21
21F0595-03 [PB 042]	B284006	25.0	25.0	06/15/21

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21F0595-01 [WB 121]	B284160	50.0	50.0	06/17/21
21F0595-02 [PB 056]	B284160	50.0	50.0	06/17/21
21F0595-03 [PB 042]	B284160	50.0	50.0	06/17/21

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B283751 - EPA 300.0										
Blank (B283751-BLK1)				Prepared & Analyzed: 06/10/21						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
LCS (B283751-BS1)				Prepared & Analyzed: 06/10/21						
Nitrate as N	0.93	0.10	mg/L	1.00		93.1	90-110			
Nitrite as N	1.01	0.100	mg/L	1.00		101	90-110			
LCS Dup (B283751-BSD1)				Prepared & Analyzed: 06/10/21						
Nitrate as N	0.94	0.10	mg/L	1.00		93.6	90-110	0.514	20	
Nitrite as N	1.01	0.100	mg/L	1.00		101	90-110	0.0496	20	
Batch B283763 - SM 9223B - COLILERT										
Blank (B283763-BLK1)				Prepared & Analyzed: 06/10/21						
Coliform, Total	ND	1.0	MPN/100 mL							
E. Coli	ND	1.0	MPN/100 mL							
Duplicate (B283763-DUP1)	**Source: 21F0595-01**			Prepared & Analyzed: 06/10/21						
Coliform, Total	ND	1.0	MPN/100 mL		ND			NC	191	
E. Coli	220	1.0	MPN/100 mL		150			39.9	244	
Duplicate (B283763-DUP2)	**Source: 21F0595-02**			Prepared & Analyzed: 06/10/21						
Coliform, Total	ND	1.0	MPN/100 mL		ND			NC	191	
E. Coli	980	1.0	MPN/100 mL		2000			67.8	244	
Duplicate (B283763-DUP3)	**Source: 21F0595-03**			Prepared & Analyzed: 06/10/21						
Coliform, Total	ND	1.0	MPN/100 mL		ND			NC	191	
E. Coli	56	1.0	MPN/100 mL		63			11.4	244	
Batch B284006 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B284006-BLK1)				Prepared: 06/15/21 Analyzed: 06/16/21						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B284006-BS1)				Prepared: 06/15/21 Analyzed: 06/16/21						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0		95.8	86.9-114			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
SM 9223B - COLILERT in Water	
E. Coli	MA,CT,RI
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21F0595

ALL SHADED AREAS are for LAB USE ONLY

Company: Town of East Longmeadow

Address: 60 Center Square

Report To: Tom Christensen

Copy To: Josh Crochetiere

Customer Project Name/Number: Outfalls

Billing Information: Tom Christensen

Email To: tom.christensen@Elongmeadow MA.gov

Site Collection Info/Address: Outfalls

State: MA / County/City: E. Longmeadow / Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ______

Phone: 413 525 5400 Ext 1203

Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Josh Crochetiere

Purchase Order #:

Quote #: ~~7 day TA~~

DW PWS ID #:

DW Location Code:

Collected By (signature):

Turnaround Date Required: 7 day TAT

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ______ [ ] Hold: ______

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: ______

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Surfactants	Total Nitrogen	Colilert-18	Lab Sample # / Comments
												1 Irma notified
WB 121	GW	Grab	6/10	8:05				4	X	X	X	2 in Wet Chem!
PB 056	GW	Grab	6/10	9:15				4	X	X	X	3
PB 042	GW	Grab	6/10	10:15				4	X	X	X	4

Lab Profile/Line:

Lab Sample Receipt Checklist:

- Custody Seals Present/Intact Y N NA
- Custody Signatures Present Y N NA
- Collector Signature Present Y N NA
- Bottles Intact Y N NA
- Correct Bottles Y N NA
- Sufficient Volume Y N NA
- Samples Received on Ice Y N NA
- VOA - Headspace Acceptable Y N NA
- USDA Regulated Soils Y N NA
- Samples in Holding Time Y N NA
- Residual Chlorine Present Y N NA
- Cl Strips: ______
- Sample pH Acceptable Y N NA
- pH Strips: phc2
- Sulfide Present Y N NA
- Lead Acetate Strips: ______

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: 7 day TAT Email to Joshua.crochetiere@EastLongmeadowMA.gov

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2674718

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ______
Cooler 1 Temp Upon Receipt: ______oC
Cooler 1 Therm Corr. Factor: ______oC
Cooler 1 Corrected Temp: ______oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature]		[signature] 5.4	6/10/21 1056
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) 5.C	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ______ of: ______

Attachment 4: Updated Outfall Priority Ranking Summary Table

Outfall ID	Receiving Water	Previous Screening Results Indicate Potential Sewer Input? [1]	Discharging to Area of Concern to Public Health? [2]	Frequency of Past Discharge Complaints	Receiving Water Quality [3]	Density of Generating Sites [4]	Age of Development/ Infrastructure [5]	Historic Combined Sewers or Septic? [6]	Aging Septic? [7]	Culverted Streams? [8]	Additional Characteristics	Score[9]	Preliminary Priority Ranking	Updated Priority Ranking	Notes
DRD-001	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
DRD-005	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-006	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-007	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-008	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-009	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-010	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-011	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-012	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-013	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
DRD-014	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
FB-001	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
FB-002	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
FB-003	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
FB-005	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-006	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-007	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-008	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
FB-009	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-010	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-011	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-012	Freshwater Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
FB-013	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-015	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-016	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
FB-017	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
FB-018	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
FB-019	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
FB-022	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
FB-023	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
FB-024	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
FB-025	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	Not found, may not exist
JB-001	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-002	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-003	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-004	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-005	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-006	Jawbuck Brook	3	0	0	0	3	2	0	0	0	0	8	HIGH	HIGH	Keep as high based on results of dry weather sampling
JB-007	Jawbuck Brook	3	0	0	0	3	2	0	0	0	0	8	HIGH	HIGH	Keep as high based on results of dry weather sampling
JB-008	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH	HIGH	Keep as high based on discharge to area of public health concern
JB-009	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH	HIGH	Keep as high based on discharge to area of public health concern
JB-010	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH	HIGH	Keep as high based on discharge to area of public health concern
JB-011	Jawbuck Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
JB-012	Jawbuck Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
JB-013	Jawbuck Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH	HIGH	Keep as high based on aging septic in area
JB-015	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-016	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	
JB-017	Jawbuck Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
JB-018	Jawbuck Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
JB-019	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-020	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
JB-021	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH	HIGH	Keep as high based on discharge to area of public health concern
JB-022	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH	HIGH	Keep as high based on discharge to area of public health concern
JB-023	Jawbuck Brook	0	0	0	0	2	2	0	0	0	0	4	NR	LOW	
JB-024	Jawbuck Brook	0	0	0	0	2	2	0	0	0	0	4	NR	LOW	
JB-025	Jawbuck Brook	0	0	0	0	2	2	0	0	0	0	4	NR	LOW	
JB-026	Jawbuck Brook	0	0	0	0	2	2	0	0	0	0	4	NR	LOW	
L-001	Town of Longmeadow	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
L-002	Town of Longmeadow	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
L-003	Town of Longmeadow	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
L-004	Town of Longmeadow	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
L-005	Town of Longmeadow	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-001	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-002	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-003	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-004	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-005	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-006	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-007	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-008	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-009	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-010	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-011	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-012	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-013	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-014	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-015	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-016	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-017	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-018	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-019	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-020	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-021	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-022	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-023	Mill River	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
MR-024	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-025	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-026	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-027	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-028	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-031	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-032	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-033	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-034	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MR-035	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-036	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-037	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-038	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-039	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-040	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MR-041	Mill River	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
MR-042	Mill River	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
MRD-001	Mill Road Conservation	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
MRD-002	Mill Road Conservation	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MRD-003	Mill Road Conservation	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MRD-004	Mill Road Conservation	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
MRD-005	Mill Road Conservation	3	0	0	0	1	2	0	3	0	0	9	NR	HIGH	Outfall not in inventory at time of preliminary ranking
PB-001	Pecousic Brook	0	0	0	0	1	2	0	0	3	0	6	HIGH	LOW	
PB-002	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-003	Pecousic Brook	3	0	0	0	1	2	0	3	0	0	9	HIGH	HIGH	Keep as high based on results of dry weather sampling
PB-004	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-005	Pecousic Brook	3	0	0	0	1	2	0	3	0	0	9	HIGH	HIGH	Keep as high based on results of dry weather sampling

Outfall ID	Receiving Water	Previous Screening Results Indicate Potential Sewer Input? [1]	Discharging to Area of Concern to Public Health? [2]	Frequency of Past Discharge Complaints	Receiving Water Quality [3]	Density of Generating Sites [4]	Age of Development/ Infrastructure [5]	Historic Combined Sewers or Septic? [6]	Aging Septic? [7]	Culverted Streams? [8]	Additional Characteristics	Score[9]	Preliminary Priority Ranking	Updated Priority Ranking	Notes
PB-006	Pecousic Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
PB-007	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-008	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-009	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-010	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-011	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-012	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-013	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-014	Pecousic Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
PB-015	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-016	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-017	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-018	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-020	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-022	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-023	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-024	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-026	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-027	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-028	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-029	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-030	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-031	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-032	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-033	Pecousic Brook	3	0	0	0	3	2	0	0	0	0	8	HIGH	HIGH	Keep as high based on results of dry weather sampling
PB-034	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-035	Pecousic Brook	3	0	0	0	1	2	0	3	0	0	9	HIGH	HIGH	Keep as high based on results of dry weather sampling
PB-036	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-037	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-038	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-039	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-040	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-041	Pecousic Brook	0	3	0	0	1	2	0	3	0	0	9	HIGH	HIGH	Keep as high based on aging septic in area
PB-042	Pecousic Brook	3	3	0	0	1	2	0	0	0	0	9	HIGH	HIGH	Keep as high based on results of dry weather sampling
PB-043	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PB-044	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-045	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-046	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-047	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-049	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-050	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-051	Pecousic Brook	3	3	0	0	1	2	0	0	0	0	9	HIGH	HIGH	Keep as high based on results of dry weather sampling
PB-052	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PB-053	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PB-054	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-055	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-056	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-057	Pecousic Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
PB-058	Pecousic Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
PB-059	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-060	Pecousic Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
PB-061	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-062	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-063	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-064	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-065	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PB-066	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-067	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-068	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-069	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-070	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
PB-071	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-072	Pecousic Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
PB-073	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-074	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-075	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-076	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-077	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-078	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-079	Pecousic Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
PB-080	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-081	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-082	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-083	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-084	Pecousic Brook	3	0	0	0	3	2	0	3	0	0	11	HIGH	HIGH	Keep as high based on results of dry weather sampling
PB-086	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	
PB-087	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-088	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-089	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-090	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-091	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-092	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-093	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-094	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-095	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-096	Pecousic Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
PB-097	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-098	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH	LOW	No dry weather flow or signs of illicit connection
PB-099	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-100	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PB-101	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-102	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-103	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-104	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-105	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-106	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-107	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-108	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-109	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-110	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-111	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-112	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-113	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-114	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PB-115	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
PRD-001	Mill River	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PRD-002	Mill River	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PRD-003	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
PRD-004	Mill River	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
PRD-006	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
SB-001	Schnelock Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
SB-002	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	

Outfall ID	Receiving Water	Previous Screening Results Indicate Potential Sewer Input? [1]	Discharging to Area of Concern to Public Health? [2]	Frequency of Past Discharge Complaints	Receiving Water Quality [3]	Density of Generating Sites [4]	Age of Development/ Infrastructure [5]	Historic Combined Sewers or Septic? [6]	Aging Septic? [7]	Culverted Streams? [8]	Additional Characteristics	Score[9]	Preliminary Priority Ranking	Updated Priority Ranking	Notes
SB-003	Schnelock Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
SB-004	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
SB-005	Schnelock Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
SB-006	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
SB-007	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
SB-008	Schnelock Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
SB-009	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
SB-010	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-001	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-002	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-003	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-004	Watchaug Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
WB-005	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-006	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-007	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-008	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-009	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-010	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-011	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-012	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-013	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-014	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-015	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-016	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-017	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-018	Watchaug Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH	HIGH	Keep as high based on discharge to area of public health concern
WB-019	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-020	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-021	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-022	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-023	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-024	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-025	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-026	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-027	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-028	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-029	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-030	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-031	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-032	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-033	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-034	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-035	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH	HIGH	Keep as high based on aging septic in area
WB-036	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-037	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-038	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-039	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-040	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-041	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-042	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-043	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-044	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-045	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-046	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-047	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-048	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-049	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-050	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-051	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-052	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-053	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-054	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-055	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-056	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-057	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-058	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-059	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-063	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-064	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-065	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-066	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-067	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-069	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-070	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-071	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-072	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-073	Watchaug Brook	3	0	0	0	2	2	0	3	0	0	10	HIGH	HIGH	Keep as high based on results of dry weather sampling
WB-075	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH	HIGH	Keep as high based on aging septic in area
WB-076	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-077	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-078	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-079	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-080	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-081	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-082	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-083	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-086	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-087	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-089	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-090	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-091	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-092	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-093	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-094	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-095	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-096	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-097	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-098	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-099	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-100	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-101	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-102	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-103	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-104	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-105	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-106	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-107	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-108	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW	LOW	
WB-109	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH	HIGH	Keep as high based on aging septic in area
WB-110	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH	HIGH	Keep as high based on aging septic in area
WB-111	Watchaug Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
WB-112	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area

Outfall ID	Receiving Water	Previous Screening Results Indicate Potential Sewer Input? [1]	Discharging to Area of Concern to Public Health? [2]	Frequency of Past Discharge Complaints	Receiving Water Quality [3]	Density of Generating Sites [4]	Age of Development/ Infrastructure [5]	Historic Combined Sewers or Septic? [6]	Aging Septic? [7]	Culverted Streams? [8]	Additional Characteristics	Score[9]	Preliminary Priority Ranking	Updated Priority Ranking	Notes
WB-113	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-114	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-115	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-116	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-117	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-118	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-119	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH	HIGH	Keep as high based on aging septic in area
WB-120	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-121	Watchaug Brook	3	0	0	0	1	2	0	0	0	0	6	LOW	HIGH	Change to high based on results of dry weather sampling
WB-122	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-123	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-124	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-125	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW	LOW	
WB-127	Watchaug Brook	3	0	0	0	1	2	0	0	0	0	6	NR	HIGH	Ranked high based on results of dry weather sampling
WB-128	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-129	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-130	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-131	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-132	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-133	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-134	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-135	Watchaug Brook	3	0	0	0	1	2	0	0	0	0	6	NR	HIGH	Ranked high based on results of dry weather sampling
WB-136	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	
WB-137	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	NR	LOW	

Scoring Criteria:

[1] Previous screening results score of 3 given if dry weather outfall screening results exceeded EPA benchmarks for E. coli, nitrogen, and/or chlorine.

[2] Areas of public health concern include public beaches, recreational areas, drinking water supplies, or shellfish beds.

[3] Receiving water quality based on the latest version of MassDEP Integrated List of Waters.

[4] Generating sites are institutional, municipal, commercial, or industrial sites with a potential to contribute to illicit discharges (e.g., car dealers, car washes, garden centers, manufacturing).

[5] Age of development and infrastructure scored as follows:

- 3 Industrial areas greater than 40 years old and areas where the sanitary sewer is more than 40 years old
- 2 Development between 20 and 40 years old
- 1 Development less than 20 years old

[6] Areas once served by combined sewers but have since been separated, or areas once served by septic systems that have been converted to sanitary sewers.

[7] Aging septic systems are septic systems 30 years or older in residential areas.

[8] Any river or stream that is culverted for distance greater than a simple roadway crossing.

[9] Scores of 5 or below were ranked as "Low" and scores of 6 or above were ranked as "High".

NR = Not ranked in preliminary outfall ranking

Low Priority 276
High Priority 84

Preliminary Retrofit Inventory Memorandum

February 2021

Preliminary Analysis of Municipal Properties for Retrofit Inventory, Town of East Longmeadow, Massachusetts

TO: East Longmeadow Stormwater Management Program Files

FROM: Tracy Adamski, AICP and Emily Tully, Tighe & Bond

COPY: Bruce Fenney, Superintendent, Department of Public Works; Tom Christensen, Deputy Superintendent, Department of Public Works

DATE: February 9, 2021

2016 Small MS4 General Permit Requirements

Per Section 2.3.6.d of the 2016 Small MS4 General Permit, within four years from the effective date of the permit, permittees are required to identify a minimum of five permittee-owned properties that could be potentially modified or retrofitted with best management practices (BMPs) designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 through the reduction of impervious area.

The following memorandum summarizes a preliminary desktop screening and ranking of ten municipal properties with potential for stormwater BMP retrofits based on retrofit criteria described in the 2016 Small MS4 General Permit, amount of existing impervious cover, physical site characteristics, and planned capital improvements projects, and provides a summary of retrofit types and considerations, including compliance with the nitrogen-removal requirements associated with the Long Island Sound Total Maximum Daily Load (TMDL).

Desktop Screening and Preliminary Ranking of Town-Owned Sites With Potential for Stormwater BMP Retrofits

Tighe & Bond has performed a desktop analysis using the Town's GIS data to assess municipal properties for potential modification or retrofits with BMPs based on criteria outlined in Section 2.3.6.d of the 2016 Small MS4 General Permit. In accordance with Section 2.3.6.d of the 2016 Small MS4 General Permit, Tighe & Bond considered properties with significant impervious cover (including parking lots, buildings, and maintenance yards) within the urbanized area that could be modified or retrofitted with a stormwater BMP to reduce stormwater quantity and/or improve quality. MS4 infrastructure that could be readily modified or retrofitted (such as outfalls and conventional stormwater conveyances including swales and detention practices) were also considered. Conservation land and land without impervious areas were removed from consideration.

The desktop analysis of the stormwater retrofit potential of municipal properties included consideration of the following factors based on the requirements of Section 2.3.6.d of the 2016 Small MS4 General Permit: ease of access for maintenance purposes, subsurface geology, depth to water table, proximity to aquifers and subsurface infrastructure, and opportunities for public use and education. To confirm the results of the desktop analysis, Tighe & Bond performed site visits to municipal properties on December 5, 2019, and discussed potential future physical capital projects with the Town.

Tighe & Bond further included consideration of schedules for planned capital improvements to storm and sanitary sewer infrastructure and paving projects, current storm sewer level of service, and control of discharges to water quality limited waters, first or second order streams, and/or drinking water supply sources.

To analyze the favorability of implementing BMP designs throughout the Town of East Longmeadow using data in GIS, Tighe & Bond used the following process:

Step 1: A GIS-based, desktop screening and preliminary ranking to identify and prioritize potential locations for BMP retrofits

Step 2: Comprehensive review of results of desktop screening and preliminary ranking, including review of information collected during site visits to further evaluate feasibility, collect information, and identify other site conditions that would impact implementation

Step 3: Finalize a preliminary top 10 list of municipally-owned sites for future retrofit feasibility analysis.

The full Desktop Screening Table is included as Attachment 1 and a figure showing the locations of the top 10 municipally-owned sites to consider for stormwater BMP retrofits is provided as Attachment 2.

Preliminary Retrofit Inventory Results

Based on the results of the desktop analysis, discussions with the Town, and the requirements of the 2016 Small MS4 General Permit, Tighe & Bond has developed a list of the top ten municipally-owned sites for future retrofit feasibility analysis, provided in Table 1 below.

Table 1
Top 10 Municipally-Owned Sites for Future Retrofit Feasibility Analysis

Name	Parcel ID Number	Address
Police Station	39-14-0	160-170 Somers Road
Fire Department	39-12-0	150 Somers Road
East Longmeadow High School	17-33-10	180 Maple Street
DPW Service Building, Sand/Salt Shed	28-21-0	84 Somers Road
DPW Water Division Training Center	38-66-0	Rear Somers Road
Pleasant View Senior Center	13-1A-0	328 North Main Street
Birchland Park School	37-1-0	50 Hanward Hill
Meadowbrook School	60-51-0	607 Parker Street
Mountainview School	65-25-0	77 Hampden Road
Parking Lot behind Library	27-31-0	Maple Street

The Town of East Longmeadow has flagged the Police Station as a location in need of repaving due to the age and condition of the existing impervious area, and should evaluate opportunities for impervious area reduction and stormwater BMP retrofits at that time. There also is an opportunity to improve the treatment train to the East Longmeadow High School stormwater basin. BMP retrofits at the catch basins at the DPW Service Building would improve quality of stormwater discharge in an area of potentially higher pollutant loading in proximity to a stream.

Potential Stormwater BMP Retrofit Options

The following section describes potential stormwater BMP retrofit options. Site-specific considerations such as scale of the project, performance goals, planned physical capital projects, and financing opportunities will need to be taken into account to select specific stormwater retrofits or modifications for each property. Additionally, as the Town of East Longmeadow is located within the Connecticut River subwatershed of the Long Island Sound, the Town is subject to the requirements of Appendix H, which require retrofits to be designed to enhance nitrogen removal.

Retrofits can be classified by the amount of subwatershed area they treat. Storage retrofits treat drainage areas ranging from five to 500 acres. By contrast, on-site, nonresidential retrofits normally treat less than five acres of contributing drainage area, and frequently less than one.[1] Preferred practices per the EPA fact sheet on stormwater retrofits[2] include those that provide for increased infiltration, evapotranspiration, and rainwater harvesting, such as infiltration basins and trenches, bioretention systems, rain gardens, and swales, as well as retrofitting existing BMPs like dry detention basins to maximize pollutant removal.

Storage and on-site retrofits represent two different approaches to attain treatment storage and involve different design and assessment methods (Table 2). Generally, storage retrofits are a more cost-effective approach to meet most subwatershed objectives, although both retrofit approaches may be needed to get the desired level of subwatershed treatment.

TABLE 2
Storage vs On-Site Retrofits

Storage Retrofits	On-Site Retrofits
Serve 5 to 500 acres	Serve 0.1 to 5 acres
Moderate cost per impervious acre treated	High cost per impervious acre treated
Impractical in ultra-urban areas	Practical in ultra-urban areas
Permitting can be extensive	Few permits are needed
Can address all stormwater control targets	Only provide recharge and water quality control
Use extended detention, wet pond, and wetlands	Rely on bioretention, filtering, infiltration, swales and other treatment practices

Storage Retrofit Classification. Potential ways to add storage retrofits based on location are described in detail in Table 3. Most storage retrofits rely on some combination of extended detention, wet pond, constructed wetland or bioretention for stormwater treatment.

TABLE 3
Most Common Storage Retrofit Locations in a Subwatershed

Where to Look	How to Get Storage
Add Storage to Existing Ponds	Add water quality treatment storage to an existing pond that lacks it by excavating new storage on the pond bottom, raising the height of the embankment, modifying riser elevations/dimensions, converting unneeded quantity control storage into water quality treatment storage and/or installing internal design features to improve performance.

[1] Virginia Stormwater Management Handbook, Chapter 7 July 2013 7-19

[2] U.S. EPA, Stormwater Retrofit Techniques for Restoring Urban Drainages in Massachusetts and New Hampshire, Small MS4 Permit Technical Support Document, April 2011

TABLE 3
Most Common Storage Retrofit Locations in a Subwatershed

Where to Look	How to Get Storage
Storage Above Roadway Culverts	Provide water quality storage immediately upstream of an existing road culvert that crosses a low gradient, non-perennial stream without wetlands. Free storage is created by adding wetland and/or extended detention treatment behind a new embankment just upstream of the existing roadway embankment.
New Storage Below Outfalls	Flows are split from an existing storm drain or ditch and are diverted to a stormwater treatment area on public land in the stream corridor. Works best for storm drain outfalls in the 12- to 36- inch diameter range that are located near large open spaces, such as parks and golf courses.
Storage in Conveyance Systems	Investigate the upper portions of the existing stormwater conveyance system to look for opportunities to improve the performance of existing swales, ditches and non-perennial streams. This can be done either by creating in-line storage cells that filter runoff through swales and wetlands or by splitting flows to off-line treatment areas in the stream corridor.
Storage in Road Rights-of-Way	Direct runoff to a depression or excavated stormwater treatment area within the right of way of a road, highway, transport or power line corridor. Prominent examples include highway cloverleaf, median and wide right of way areas.
Storage Near Large Parking Lots	Provide stormwater treatment in open spaces near the down-gradient outfall of large parking lots (5 acres plus).

On-Site Retrofit Classification. On-site retrofits are classified based on the type or location of impervious area they treat, such as individual rooftops, small parking lots, streets, stormwater hotspots and other small impervious areas. Several common potential on-site retrofit locations are described in Table 4. On-site retrofits treat the quality and/or reduce the volume of runoff generated by small urban source areas and rely on bioretention, filtering, infiltration, swales or rooftop treatment. On-site retrofits are an effective strategy in urban subwatersheds that lack space for storage retrofits, and can also provide excellent opportunities to improve public awareness and involvement.

TABLE 4
Common On-Site Retrofit Locations

Where to Look	How to Add Retrofits
Hotspot Operations	Install filtering or bioretention treatment to remove pollutants from confirmed or severe stormwater hotspots discovered during field investigation
Small Parking Lots	Insert stormwater treatment within or on the margins of small parking lots (>5 acres). Often, the parking lot is delineated into smaller treatment units.
Individual Streets	Look for opportunities within the street, its right of way, cul-de-sacs and traffic calming devices to treat stormwater runoff before it gets into the street storm drain network.
Individual Rooftops	Disconnect, store, and treat stormwater runoff generated from residential and commercial rooftops close to the source.
Little Retrofits	Convert or disconnect isolated areas of impervious cover and treat runoff in an adjacent pervious area using low tech approaches such as a filter strip.
Hardscapes / Landscapes	Reconfigure high visibility urban landscapes, plazas and public spaces to treat stormwater runoff with landscaping and other urban design features.
Underground	Provide stormwater treatment in an underground location where no surface land is available for surface treatment.

Nitrogen Removal BMPs. As the Town is located within the Connecticut River watershed and Long Island Sound drainage basin, the Town is subject to the requirements of the Long Island Sound Total Maximum Daily Load (TMDL) for Nitrogen as described in Appendix F, part B.I. of the 2016 Small MS4 General Permit. Per Appendix F, part B.I.1.c., the retrofit inventory shall include consideration of structural BMP installation for nitrogen removal. Attachment 1 to Appendix H describes the method to calculate BMP nitrogen load and nitrogen load reductions for structural BMPs, and also provides a table that classifies structural BMPs in terms of nitrogen reduction and a chart showing total estimated nitrogen removal for those practices, as provided below.

TABLE 5
Classification of BMPs to Determine Nitrogen Reduction (from Attachment 1 to Appendix H)

Structural BMP	Classification
Infiltration Trench	Runoff Reduction (RR)
Infiltration Basin or other Surface Infiltration Practice	Runoff Reduction (RR)
Bioretention Practice	Runoff Reduction (RR)
Gravel Wetland System	Stormwater Treatment (ST)
Porous Pavement	Runoff Reduction (RR)
Wet Pond or Wet Detention Basin	Stormwater Treatment (ST)
Dry Pond or Detention Basin	Runoff Reduction (RR)
Water Quality Swale	Runoff Reduction (RR)

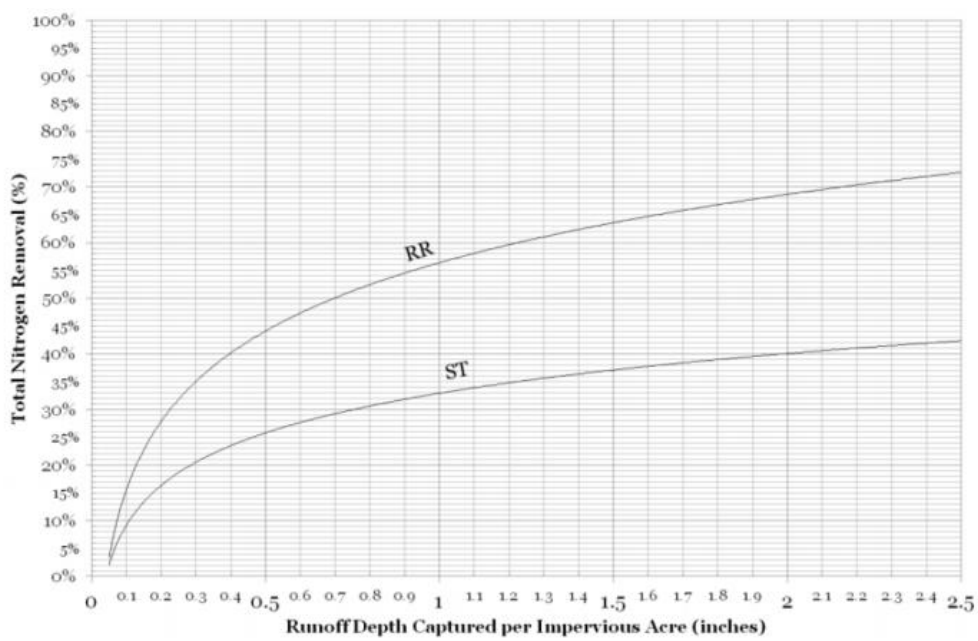


FIGURE 1. Total Nitrogen Removal for RR and ST Practices (from Attachment 1 to Appendix H)

The Town is required to install a minimum of one structural BMP targeting a catchment with high nitrogen load potential as a demonstration project within six years of the permit effective date.

Next Steps

Tighe & Bond has completed retrofit scoping and the desktop retrofit analysis and narrowed the potential retrofit locations down to ten municipally-owned sites. The next steps in the retrofit process involve evaluation and ranking of retrofit BMP design concepts based on ability to disconnect impervious cover on-site, pollutant reduction requirements including targeting catchments with high nitrogen load potential, feasibility and performance, cost including long-term operations and maintenance, opportunities for public use and education, and community support.

More detailed site information will need to be collected to design and site the retrofit BMPs, including site-specific soil and water table conditions and current and future site uses and associated potential pollutant loading. The results of the Nitrogen Source Identification Report to be completed within four years of the permit effective date will inform the identification of potential catchments with high nitrogen loading.

J:\E\E0714 East Longmeadow Engineering Services\18A - MS4 Services - Year 1 Compliance\Report_Evaluation\Retrofit Inventory Desktop Analysis\East Longmeadow Preliminary Retrofit Inventory Memo.docx

Attachment 1

Preliminary Retrofit Inventory Desktop Screening Table

Parcel_ID	Parcel_Address	Name	Type	Existing Impervious Area (Acres)	Access	Subsurface Geology	Wetlands (Acres)	Depth to Water Table	Proximity to Aquifers (distance in miles)	Proximity to Subsurface Infrastructure (sanitary sewers/septic systems)	Opportunities for Public Use and Education	Discharge to WQ Impaired Water
10-4-0	84 DENSLOW RD	Pumping station	Moderate I.A.	0.07	Easy	Coarse Glacial Stratified Deposit	0		0.07	Sewer main through western side of property		N/A
11-4-A	DEER PARK DR	Jawbuck Brook Reservoir & wetland	High I.A.	0.54	Moderate	Coarse Glacial Stratified Deposit	12.18		0	Drain line through very edge of property		N/A
12-9-11	82 HARKNESS AV	Pumping station	Low I.A.	0.01	Easy	Coarse Stratified Deposit	0		0.44	Drain line, water main, sewer lateral throughout entire property		N/A
12A-62-0	COSGROVE ST	Vacant triangle of land between Cosgrove & Indiana Streets - owned by DPW?	Moderate I.A.	0.03	Easy	Coarse Glacial Stratified Deposit	0		0.93	Water main		N/A
12A-69A-0	NORTH ST		No I.A.	0.004	Easy	Coarse Glacial Stratified Deposit	0		1.02	No subsurface infrastructure on property		N/A
12B-23-0	GATES AV	Heritage Park	Conservation	0	Difficult	Coarse Glacial Stratified Deposit, Thin Till	1.59		0.75			N/A
12B-61-203	GATES AV		No I.A.	0	Easy	Thin Till	0		0.92	No subsurface infrastructure on property		N/A
13-18-0	SMITH AV	Unnamed - Pecousic Brook, outbuilding (water treatment?)	High I.A.	0.72	Moderate	Stream-Terrace Deposit	3.13		0.34	Water lateral, water main, sewer main throughout property		N/A
13-1A-0	328 NORTH MAIN ST	Pleasant View Senior Center	High I.A.	1.72	Easy	Coarse Glacial Stratified Deposit, Swamp Deposit	0.67		0.78	Sewer main through center of property, water lateral	Yes	N/A
13-23-0	391 NORTH MAIN ST	Heritage Park	High I.A.	1.32	Moderate	ick Till, Thin Till, Coarse Glacial Stratified Deposit, Swamp Depo	23.17		0.61	Drain line, water main, water lateral at southern end of property	Yes	N/A
15A-29-404	MELROSE AV		No I.A.	0	Difficult	Coarse Glacial Stratified Deposit	0		0.57	No subsurface infrastructure on property		N/A
15A-35-357	MELROSE AV	Note on card: "Caporale frontage on Paper Street"	No I.A.	0	Difficult	Coarse Glacial Stratified Deposit	0		0.59	No subsurface infrastructure on property		N/A
15A-76-640	ARCH ST		Conservation	0	Difficult	Coarse Glacial Stratified Deposit	0	no wetlands	0.7			N/A
15A-77-651	ARCH ST		Conservation	0	Difficult	Coarse Glacial Stratified Deposit	0	no wetlands	0.65			N/A
15A-78-649	LINDENDALE AV		No I.A.	0.001	Easy	Coarse Glacial Stratified Deposit	0		0.66	No subsurface infrastructure on property		N/A
15A-81-641	GASKELL ST		No I.A.	0	Moderate	Coarse Glacial Stratified Deposit	0		0.65	No subsurface infrastructure on property		N/A
15B-31-59	TERRACE AV		Conservation	0	Difficult	Swamp and Marsh Deposit	0.13		0.95	No subsurface infrastructure on property		N/A
15B-33-66	TERRACE AV		Conservation	0	Difficult	Swamp and Marsh Deposit	0.13		0.95	No subsurface infrastructure on property		N/A
15B-7-283	GROVE AV	Unnamed conservation - wetland?	Conservation	0	Easy	Coarse Glacial Stratified Deposit, Swamp and Marsh Deposit	0.53		0.79			N/A
15C-10-420	PATTERSON AV	Part of Vineland-Voyer Conservation Area	Conservation	0	Difficult	Stream-Terrace Deposit, Swamp and Marsh Deposit	0.31		0.39			N/A
15C-5-440	VINELAND AV	Vineland-Voyer Conservation	Conservation	0	Moderate	Stream-Terrace Deposit, Swamp and Marsh Deposit	0.63		0.37			N/A
16-214-2	87 MAPLE ST	East Longmeadow Historical Society	Moderate I.A.	0.23	Easy	Coarse Glacial Stratified Deposit	0		0.58	No subsurface infrastructure on property		N/A
17-33-10	180 MAPLE ST	East Longmeadow High School	High I.A.	11.5	Easy	Coarse Glacial Stratified Deposit	6.89		0.01	Water main, drain line, sewer main throughout entire property	Yes	N/A
18-37-0	CHESTNUT ST		Moderate I.A.	0.03	Easy	Coarse Glacial Stratified Deposit	0		0.08	Water main, drain line, throughout entire property		N/A
18-39-B	REAR CHESTNUT ST		No I.A.	0	Easy	Coarse Glacial Stratified Deposit	0		0.07	No subsurface infrastructure on property		N/A
18-40-0	CHESTNUT ST	Railroad land? Between houses on Rt 220 and American Saw & Manufacturing	High I.A.	0.53	Easy	Coarse Glacial Stratified Deposit	0		0.15	Sewer main through center of property		N/A
19-33-0	INDUSTRIAL DR	Railroad land?	High I.A.	0.61	Easy	Coarse Glacial Stratified Deposit	0		0.07	No subsurface infrastructure on property		N/A
1B-12-642	MELVIN AV		No I.A.	0	Easy	Coarse Glacial Stratified Deposit	0.17		0.44	Drain line through northern end of parcel		N/A
1B-42-PT/G	ODION AV		Moderate I.A.	0.03	Easy	Coarse Glacial Stratified Deposit	0		0.29			N/A
2-1-0	GERRARD AV	Lull Conservation Area 2	Conservation	0	Difficult	Inland Dune Deposit	0	no wetlands	0.16			N/A
23-16A-0	REAR ELM ST	Unnamed - next to Springfield's Tree Top Park / Helen White Conservation Area	Conservation	0	Difficult	Swamp and Marsh Deposit	7.74		0.53			N/A
26-18-0	CALKINS AV	Calkins Avenue Conservation Area	Conservation	0	Moderate	Swamp and Marsh Deposit	2.69		0.81			N/A
26-74A-0	ELM ST	Sewer right-of-way; also looks like unnamed road across from Birchland	Moderate I.A.	0.3	Easy	Coarse Glacial Stratified Deposit	0		1.28	Drain line, sewer main through the center of the property		N/A
26-85-0	ELMCREST ST	Vacant, adjacent to Birchland Park Middle School	Low I.A.	0.007	Easy	Coarse Glacial Stratified Deposit	0		1.37	No subsurface infrastructure on property		N/A
26-86-0	ELMCREST ST	Cable-related building to left of driveway to Birchland Park School	No I.A.	0	Easy	Coarse Glacial Stratified Deposit	0		1.16	Drain line		N/A
27-1-0	SHAKER RD	Veterans Field	High I.A.	0.57	Easy	Coarse Glacial Stratified Deposit	0.66		0.59	Water lateral, drain line through property	Yes	N/A
27-181-0	MAPLE ST	Railroad land near East Longmeadow High School	High I.A.	1.85	Easy	Coarse Glacial Stratified Deposit	0.31		0.26	Sewer main through center of property	Yes	N/A
27-1A-0	SHAKER RD		Moderate I.A.	0.2	Easy	Coarse Glacial Stratified Deposit	0		0.75	No subsurface infrastructure on property		N/A
27-29-0	MAPLE ST		Moderate I.A.	0.16	Easy	Coarse Glacial Stratified Deposit	0		0.75	No subsurface infrastructure on property		N/A
27-30-1	MAPLE ST		Moderate I.A.	0.15	Easy	Coarse Glacial Stratified Deposit	0		0.75	No subsurface infrastructure on property		N/A
27-31-0	MAPLE ST	Parking lot behind the library	High I.A.	0.76	Easy	Coarse Glacial Stratified Deposit	0		0.75	Sewer main, drain line, water main throughout property	Yes	N/A
27-31A-B	REAR NORTH MAIN ST		Moderate I.A.	0.03	Easy	Coarse Glacial Stratified Deposit	0		0.81	Sewer main through center of property		N/A
27-31B-15	REAR NORTH MAIN ST		Moderate I.A.	0.23	Easy	Coarse Glacial Stratified Deposit	0		0.81	Sewer main in northeast corner of property		N/A
28-21-0	84 SOMERS RD	DPW Service Building, Sand/Salt Shed	High I.A.	2.64	Easy	Thin Till	0		0.89	Drain line through center of property, sewer lateral	Yes	N/A
2A-65-82	MORNINGSIDE RD		No I.A.	0	Difficult	Inland Dune Deposit	0		0.14	No subsurface infrastructure on property		N/A
2B-19-450	MERELINE AV	Albert Tranghese Playground	No I.A.	0	Easy	Coarse Glacial Stratified Deposit	0		0.33	No subsurface infrastructure on property		N/A
2B-6-441	EUCLID AV	Albert Tranghese Playground	Low I.A.	0.003	Easy	Coarse Glacial Stratified Deposit	0		0.31	No subsurface infrastructure on property		N/A
2B-7-444	51 LOMBARD AV	Albert Tranghese Playground	Moderate I.A.	0.03	Easy	Stream-Terrace Deposit, Course Glacial Stratified Deposit	0		0.32	Water lateral		N/A
2B-91-159	VINELAND AV		Low I.A.	0.005	Easy	Stream-Terrace Deposit	0.01		0.43	Sewer main		N/A
2C-10-338	LULL ST	Lull Conservation Area 1	Conservation	0	Easy	Stream-Terrace Deposit, Course Glacial Stratified Deposit	0	no wetlands	0.19			N/A
2C-62-202	VINELAND AV	New Sewerage Treatment Facility? Note says "Lot 202-204 Pecowsic Park"	Moderate I.A.	0.07	Easy	Stream-Terrace Deposit	0.08		0.39	No subsurface infrastructure on property		N/A
30-29-0	PROSPECT ST	Water tower	Moderate I.A.	0.25	Moderate	Thin Till, Thick Till	0		0.79	Water main and drain line throughout property		N/A
30-7-0	PROSPECT ST	Water tower and pumping station	Moderate I.A.	0.18	Moderate	Thin Till, Thick Till	0		0.79	Water main and drain line throughout property		N/A
30-7-A	PROSPECT ST		No I.A.	0			0			Water main and drain line throughout property		N/A
30-8-0	REAR PROSPECT ST	Water tank, utility building (water control and police radio), generator	Moderate I.A.	0.14	Moderate	Thin Till	0		0.72	Water main, water lateral through northern part of property		N/A
3-118-B	NELSON ST	Subdivision vacant - wetlands?	No I.A.	0	Difficult	Alluvium	0.42		0.22	No subsurface infrastructure on property		N/A
34-24-0	76 DAWES ST	Detention Pond Area - property card notes say sale includes several lots off Elm	No I.A.	0	Difficult	Coarse Stratified Deposit	0.51		0.39	Drain lines throughout parcel		N/A
35-23-B	ELM ST	Kenmore Conservation Area	Conservation	0	Difficult	Coarse Glacial Stratified Deposit	18.61	no wetlands	0.42			N/A
36-86-0	175 MAPLESHADE AV	Mapleshade School	High I.A.	3.9	Easy	Thin Till, Coarse Glacial Stratified Deposit	0	no wetlands	1.37	Water main, drain line, sewer main throughout entire property	Yes	N/A
37-1-0	50 HANWARD HL	Birchland Park School	High I.A.	6.9	Easy	Coarse Stratified Deposit	0		1.17	Drain line, water main, sewer main throughout northern half of property	Yes	N/A
37-41B-B	PLEASANT ST	Veratti Conservation Area	Conservation	0	Difficult	Coarse Glacial Stratified Deposit	11.44		1.64			N/A
38-66-0	REAR SOMERS RD	DPW Repair Garage	High I.A.	0.68	Easy	Thin Till	0		0.98	Water lateral	Yes	N/A
39-12-0	150 SOMERS RD	Fire Department	High I.A.	5.7	Easy	Thin Till, Bedrock Outcrop	0	no wetlands	0.95	Water and drainage on property	Yes	N/A
39-12A-0	156 REAR SOMERS RD	Cell tower with building, rear of Fire Station			Easy	Thin Till, Bedrock Outcrop	0		0.95	Water and drainage on property		N/A
39-13-0	SOMERS RD	Part of Fire Station	Moderate I.A.	0.38	Easy	Thin Till	0		0.94	Drain line		N/A
39-14-0	160-170 SOMERS RD	Police Station	High I.A.	0.56	Difficult	Thin Till, Artificial Fill, Coarse Glacial Stratified Deposit	2.6		1.1	Sewer main through eastern end of the property	Yes	N/A
39-29-0	REAR INDIAN SPRING RD	Indian Spring Conservation Area	Conservation	0	Difficult	Coarse Glacial Stratified Deposit, Artificial Fill, Thin Till	3		1.11			N/A
3A-10-958	VINELAND AV		Conservation	0	Difficult	Alluvium, Artificial Fill	0.12		0.39	No subsurface infrastructure on property		N/A
3A-14-649	DONALD AV		Conservation	0	Easy	Stream-Terrace	0	no wetlands	0.33			N/A
3A-1-919	NIAGARA ST	Pecowsic Park	No I.A.	0	Difficult	Alluvium	0.38		0.22	No subsurface infrastructure on property		N/A
3B-58-205	SMITH AV		No I.A.	0	Easy	Stream-Terrace Deposit, Thin Till	0		0.5	Drain line		N/A
3B-59-202	SMITH AV		No I.A.	0	Difficult	Stream-Terrace Deposit	0		0.5	No subsurface infrastructure on property		N/A
40-53-0	CHESTNUT ST	Unnamed - wetland?	Conservation	0	Difficult	Thin Till	3.13		0.84			N/A
42-12-0	REAR CHESTNUT ST	Pine Quarry Conservation Area	Conservation	0	Difficult	Abundant Outcrop and Shallow Bedrock, Thin Till	0.84		1.15			N/A
4-50-0	WESTWOOD AV		No I.A.	0	Moderate	Stream-Terrace Deposit	0		0.32	Sewer main, sewer lateral		N/A
46-29-0	PARKER ST	Vacant? Adjacent to Pine Knoll Recreation Area	No I.A.	0	Difficult	Thin Till	0		0.37	No subsurface infrastructure on property		N/A
46-30-0	ALLEN ST	Pine Knoll Recreation Area	High I.A.	0.9	Moderate	Thin Till	0		0.27	Sewer main, water main through center of property	Yes	N/A
48-100-31	PORTER RD	Conservation land - vacant, wetlands and brook?	Conservation	0	Moderate	Thin Till, Swamp and Marsh Deposits	2.22		1.31			N/A
49-108-10A	41 MAYFLOWER LN	Subdivision - "unbuildable", wetlands?	Conservation	0	Moderate	Abundant Outcrop/Shallow Bedrock	0.59		1.22			N/A
49-48A-0	REAR PORTER RD	Unnamed - wetland? Sewer easement	No I.A.	0	Moderate	Thin Till, Bedrock Outcrop	17.6		1.2	Drain line, sewer main through property		N/A
49-99-A	PILGRIM RD		No I.A.	0	Easy	Thin Till	0.02		1.25	No subsurface infrastructure on property		N/A
4A-10-460	VINELAND AV	Part of Vineland-Voyer Conservation Area?	Conservation	0	Easy	Stream-Terrace Deposit	0.02		0.36			N/A
4A-11-450	VINELAND AV	Part of Vineland-Voyer Conservation Area	Conservation	0	Easy	Stream-Terrace Deposit	0.14		0.36			N/A
4A-12-453	VOYER AV	Part of Vineland-Voyer Conservation Area	Conservation	0	Easy	Stream-Terrace Deposit	0.18		0.39			N/A
4A-13-417	PATTERSON AV	Part of Vineland-Voyer Conservation Area	Conservation	0	Difficult	Stream-Terrace Deposit	0.09		0.39			N/A
4A-14-456	VOYER AV	Unnamed conservation - wetland? Part of Vineland-Voyer Conservation Area?	Conservation	0	Difficult	Stream-Terrace Deposit	0.25		0.39			N/A

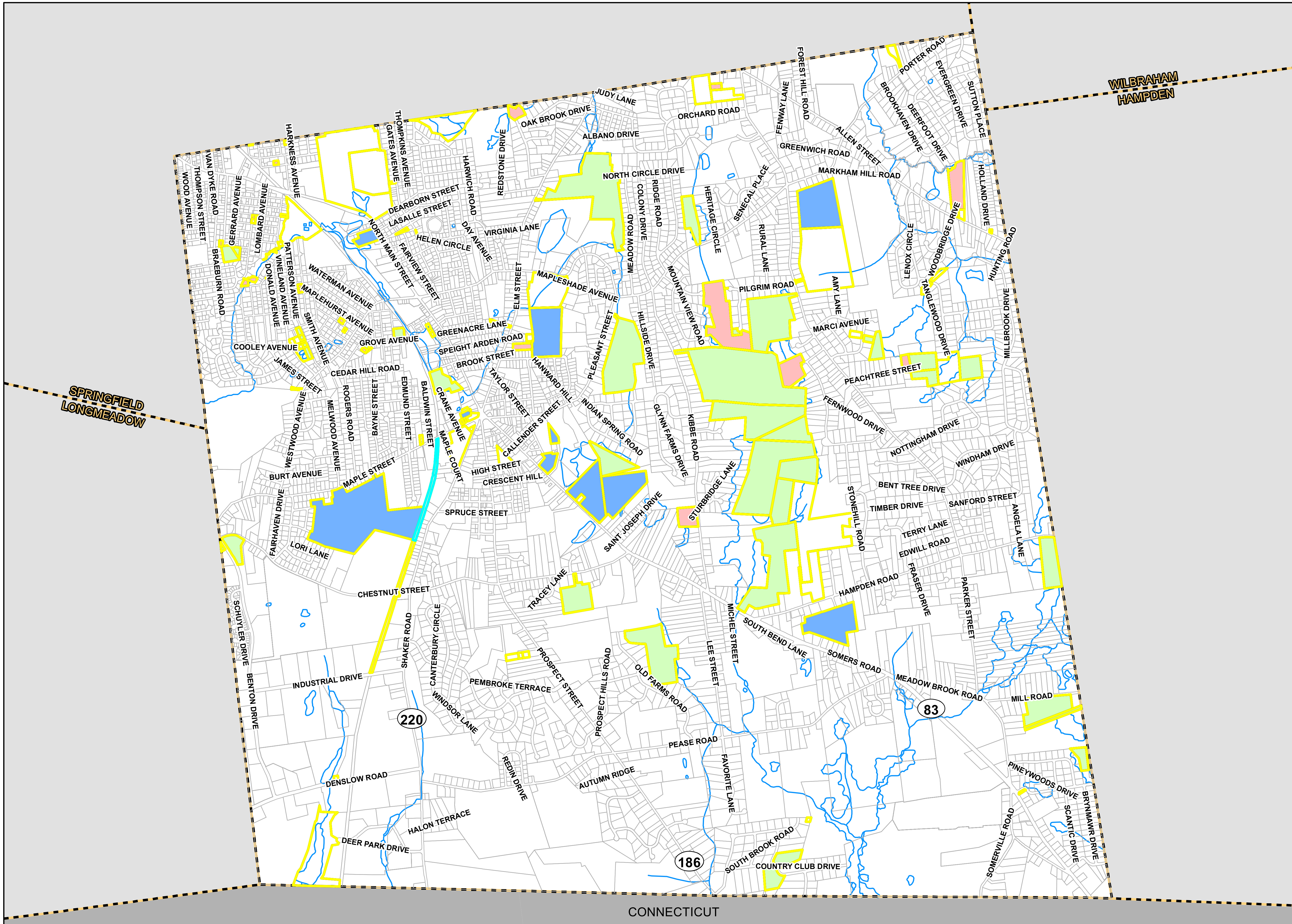
Parcel_ID	Parcel_Address	Name	Type	Existing Impervious Area (Acres)	Access	Subsurface Geology	Wetlands (Acres)	Depth to Water Table	Proximity to Aquifers (distance in miles)	Proximity to Subsurface Infrastructure (sanitary sewers/septic systems)	Opportunities for Public Use and Education	Discharge to WQ Impaired Water
4A-15-416	PATTERSON AV	Part of Vineland-Voyer Conservation Area?	Conservation	0	Difficult	Stream-Terrace Deposit	0.08		0.39			N/A
4A-16-412	PATTERSON AV	Part of Vineland-Voyer Conservation Area?	Conservation	0	Difficult	Stream-Terrace Deposit	0.21		0.39			N/A
4A-17-406	PATTERSON AV	Unnamed conservation - wetland? Part of Vineland-Voyer Conservation Area?	Conservation	0	Difficult	Stream-Terrace Deposit	0.06		0.39			N/A
50-11A-0	KIBBE RD	Hoover Quarry Conservation Area	Conservation	0	Difficult	Abundant Outcrop and Shallow Bedrock, Thin Till	34.7		1.24			N/A
50-48-0	KIBBE RD	Campbell Conservation Area 3	Conservation	0	Difficult	Swamp and Marsh Deposit, Coarse Glacial Stratified Deposit	14.98		1.25			N/A
51-12-0	KIBBE RD	Campbell Conservation Area 2	Conservation	0	Difficult	Swamp and Marsh Deposit	36.49		1.16			N/A
52-18-0	KIBBE RD	Norcross Kibbe Quarry Lot - vacant	No I.A.	0	Moderate	Abundant Outcrop and Shallow Bedrock	0.13		1.39	No subsurface infrastructure on property		N/A
52-22-0	KIBBE RD	Watchaug Meadows Conservation Area	Conservation	0	Difficult	Swamp and Marsh Deposit	10		1.38			N/A
53-25A-0	386 SOMERS RD	Unnamed next to Watchaug - wetlands?	Conservation	0	Difficult	Coarse Glacial Stratified Deposit, Swamp Deposit, Alluvium	15.57		1.14			N/A
56-1-B	124 PEASE RD		Moderate I.A.	0.05	Easy	Stream-Terrace Deposit, Course Glacial Stratified Deposit	0		1.2	Sewer mains on property - one gravity, one forced main		N/A
57-39-57	48 COUNTRY CLUB DR	Subdivision detention pond? Shows "drain easements" to wetland area	Conservation	0	Moderate	Thin Till, Alluvium	0.46		1.46			N/A
57-8-0	5 MEADOWLARK DR	Subdivision Open Space?	Conservation	0	Easy	Thin Till, Alluvium, Goarse Glacial Stratified Deposit	0	no wetlands	1.37			N/A
58-8-0	PARKER ST	Park & Recreation - adjacent to Pine Knoll Recreation Area	Conservation	0	Moderate	Thick Till	0		0.34	No subsurface infrastructure on property		N/A
60-51-0	607 PARKER ST	Meadowbrook School	High I.A.	6.44	Easy	Thin Till	0.84		0.69	Water main, drain line throughout property	Yes	N/A
61-23-0	PARKER ST	Jarvis Nature Sanctuary	Conservation	0	Difficult	Thin Till	0.15		0.67	No subsurface infrastructure on property		N/A
61-46A-35	50 HIGH PINE CR	Vacant, associated with subdivision - open space and/or detention pond?	Moderate I.A.	0.08	Easy	Alluvium	0.14		0.74	No subsurface infrastructure on property		N/A
61-66-0	PARKER ST	Craven Conservation Area	Conservation	0	Difficult	Abundant Outcrop and Shallow Bedrock, Thin Till	16.85		0.94			N/A
62-11-54A	FERNWOOD DR	Unnamed conservation - next to Campbell and Hoover Quarry, wetland?	No I.A.	0	Moderate	Bedrock, Swamp and Marsh Deposit, Coarse Glacial Stratified	4.55		1	Sewer main through small area in northeastern corner		N/A
63-10A-0	KIBBE RD	Unnamed conservation - next to Campbell and Watchaug, wetland?	Conservation	0	Difficult	Swamp and Marsh Deposit	9.34		1.12			N/A
63-10B-0	REAR FERNWOOD DR	Campbell Conservation Area 1	Conservation	0	Difficult	Swamp and Marsh Deposit	9.62		1.16			N/A
6-4A-0	CHESTNUT ST	Benton Drive?	Conservation	0	Moderate	Stream-Terrace Deposit, Swamp and Marsh Deposit	0.19		0			N/A
65-25-0	77 HAMPDEN RD	Mountainview School	High I.A.	4.7	Easy	Thin Till, Thick Till, Coarse Glacial Stratified Deposit	0		0.81	Drain line, sewer main, water main throughout entire property	Yes	N/A
65-2-G	REAR HAMPDEN RD	Unnamed next to Watchaug - stable?	Moderate I.A.	0.38	Difficult	Thin Till, Coarse Glacial Stratified Deposit	5.41		0.83	No subsurface infrastructure on property		N/A
65-9-F-R	64 HAMPDEN RD	Unnamed - vacant	High I.A.	0.61	Moderate	Thin Till	0		0.98	Water lateral, sewer lateral		N/A
70-7-0	430 PORTER RD	House and land destroyed by fire in 1996, currently vacant	Moderate I.A.	0.04	Easy	Coarse Glacial Stratified Deposit	0		0.22	Sewer lateral		N/A
72-13-B	ALLEN ST	Unnamed - vacant	No I.A.	0	Difficult	Coarse Glacial Stratified Deposit, Artificial Fill	0.53		0.11	No subsurface infrastructure on property		N/A
73-42-0	TANGLEWOOD DR	Charles Buckingham Conservation Area	Conservation	0	Moderate	Swamp and Marsh Deposit	3.55		0.28			N/A
74-1A-C	PARKER ST	High Pine Conservation Area	Conservation	0	Difficult	Thin Till, Alluvium	0.86		0.65			N/A
74-25-19	47 HIGH PINE CR	Vacant, associated with subdivision - open space? Sewer drain easement	Conservation	0	Easy	Alluvium, Coarse Glacial Stratified Deposit, Thin Till	0.02		0.69			N/A
74-7-9	22 PEACHTREE RD	Not owned by Town? - Cabot Real Estate										N/A
74-7-9A	PEACHTREE RD	Drain Easement	No I.A.	0	Moderate		0		0.57	Drain line		N/A
74-7A-0	REAR PARKER ST	Adjacent to Charles Buckingham and Peachtree Road Conservation Area	Conservation	0	Difficult	Coarse Glacial Stratified Deposit, Swamp and Marsh Deposit	2.63		0.48	No subsurface infrastructure on property		N/A
74-8-B	REAR PEACHTREE RD	Peachtree Road Conservation Area	Conservation	0	Difficult	Coarse Glacial Stratified Deposit	0.05		0.54			N/A
85-21A-0	286 ALLEN ST	House?	Moderate I.A.	0.02	Easy	Coarse Glacial Stratified Deposit	0		0.01	Sewer mains through center of property - one gravity, one forced main		N/A
85-59-0	252 ALLEN ST	House?	Moderate I.A.	0.07	Easy	Coarse Glacial Stratified Deposit	0		0.13	One sewer lateral		N/A
87-35-0	REAR TANGLEWOOD DR	Tanglewood Conservation Area	Conservation	0	Easy	Coarse Glacial Stratified Deposit, Swamp and Marsh Deposit	1.59		0.38			N/A
90-7-0	HAMPDEN RD	Hampden Rd Conservation Area	Conservation	0	Moderate	Swamp and Marsh Deposit, Alluvium	8.85		0			N/A
92-13-0	MILL RD	Mill Rd Conservation Area	Conservation	0	Moderate	Coarse Glacial Stratified Deposit, Swamp and Marsh Deposit	6.8		0			N/A
92-13A-0	REAR MILL RD	Part of Mill Rd Conservation Area	Conservation	0	Difficult	n Till, Coarse Glacial Stratified Deposit, Swamp and Marsh Dep	1.05		0			N/A
93-1-B-1	PINEYWOODS DR	Unnamed - "for conservation purposes", wetlands?	Conservation	0	Difficult	Alluvium	2.05		0.06			N/A
94-48B-0	GLEN HEATHER LN		No I.A.	0	Easy	Thin Till	0		0.38	No subsurface infrastructure on property		N/A

Legend

- Conservation Properties
- No Existing Impervious Area
- Top 10 Sites

Attachment 2

Map of Preliminary Retrofit Inventory Sites



RETROFIT INVENTORY

Legend

- Town Owned Parcels
- Assessor Parcels
- Town Owned Parcels Top 10 Sites
- Town Owned Parcels No Impervious
- Town Owned Conservation
- Town Boundary
- Streams

LOCUS MAP

N

0 1,000 2,000
Feet
1:25,330

NOTES

1. Based on MassGIS Color Orthophotography (2013)
2. Based onEast Longmeadow Standardized Assessors' Parcels (2019)

MS4 Annual Report
East Longmeadow, MA

January 2021

Tighe&Bond
Engineers | Environmental Specialists

J:\E\E0714 East Longmeadow Engineering Services\18A - MS4 Services - Year 1 Compliance\Report_Evaluation\Retrofit Inventory Desktop Analysis\GIS Analysis\MA_11x17_Retrofit_Inventory_Desktop_Analysis.mxd [Exported By: KDippold, 1/4/2021, 1:37:57 PM]

E-0714-18A

Current Street Design and Parking Lot Guidelines Assessment Memorandum

May 2021

Town of East Longmeadow – Current Street Design and Parking Lot Guidelines Assessment

TO: Town of East Longmeadow Stormwater Program Files

FROM: Emily Tully and Tracy Adamski, Tighe & Bond, Inc.

COPY: Bruce Fenney, Town of East Longmeadow DPW Superintendent, and Tom Christensen, Town of East Longmeadow DPW Assistant Superintendent

DATE: May 26, 2021

1. Small MS4 General Permit Requirements

Section 2.3.6.b. of the United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (referred to herein as "2016 Small MS4 General Permit") requires permittees to develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover.

The following memorandum summarizes the current street design and guidelines contained in the Town of East Longmeadow's Rules and Regulations for the Submission of Petitions and Plans of Subdivision for the Town of East Longmeadow, Massachusetts (as last revised May 22, 2001, herein referred to as Subdivision Rules and Regulations). Proposed red-line revisions to the Subdivision Rules and Regulations are provided as Attachment 1.

The assessment of the Subdivision Rules and Regulations for the Town of East Longmeadow included review of current street design and guidelines that affect the creation of impervious cover and requirements related to stormwater management to allow the Town to determine if changes to design standards for streets can be made to support low impact design options as required by the 2016 Small MS4 General Permit.

Recommended changes to the Town's current Street Layout and Design Standards as outlined in Table 1 of this memo and in red-line revisions to the existing Rules and Regulations should be refined through collaboration with the Town's Planning Board, Department of Public Works, and Fire Department. This assessment was limited to a review of the Subdivision Rules and Regulations; a review of Zoning Bylaws, Conservation Commission Regulations, and other Town regulations that may impact the creation of impervious cover will need to be conducted in the future to complete an assessment of Town regulations relative to creation of impervious cover as per the requirements of the 2016 Small MS4 General Permit.

2. Review of Rules and Regulations for the Submission of Petitions and Plans of Subdivision (2001)

The most recent revision (May 22, 2001) of the Rules and Regulations for the Submission of Petitions and Plans of Subdivision for the Town of East Longmeadow, Massachusetts (Rules and Regulations) contains minimum paved street width, cul-de-sac radius, and sidewalk requirements that affect the creation of impervious cover associated with subdivisions. The design requirements for roadways dictate pavement requirements; therefore, the roadway design criteria were reviewed for opportunities to reduce pavement requirements. The following sections summarize the existing requirements for the roadway and sidewalk construction and stormwater management. Recommendations for updates to these requirements are provided in Section 3.

Street Layout and Design Standards

The Rules and Regulations set forward street layout and design standards that regulate the location, alignment, intersections, drainage, widths, and access of the streets of East Longmeadow. The sections below outline the applicable standards.

Location

1. All streets in the subdivision shall be designed so that, in the opinion of the Planning Board, they will provide safe vehicular travel. Due consideration shall also be given by the subdivider to the attractiveness of the street layout in order to obtain the maximum livability and amenity of the subdivision.
2. If adjoining property is not subdivided but is, in the opinion of the Planning Board, suitable for ultimate development, provision shall be made for proper projection of streets into such property, by continuing appropriate streets within the subdivision to the exterior boundary line thereof.
3. No privately-owned reserve strip which controls access to land dedicated to public use or adjoining property, or which may be so dedicated, will be permitted – except when, in the opinion of the Board, it shall be in the benefit of the public.
4. Streets shall be continuous and in alignment with existing streets, as far as practicable and shall comprise a convenient system, with connections adequate to ensure free circulation of vehicular travel. This section is intended to enable the Board to ensure both adequate access to the subdivision from adjacent streets and continuity of travel within the subdivision itself.
5. Efforts shall be made to provide for safe circulation of pedestrians and non-motorized vehicles.
6. Minor streets shall be so located and designed that their use by through traffic will be discouraged.
7. As far as practicable, roads shall follow natural contours.

Alignment

1. Visibility from the centerline of a street shall never be less than stopping site distance as defined by AASHTO (current edition).
2. The vertical alignment at grade changes or minimum stopping sight distance at three and one half (3.5) feet above the pavement shall be as specified by AASHTO (current edition).

Street Jogs

Streets entering opposite sides of another street shall be laid out either directly opposite each other or with a minimum offset of one hundred (100) feet between their centerlines. This minimum offset shall be observed whenever one or more streets entering opposite sides of another street are existing, whether located within or outside the boundary of the proposed subdivision.

Intersections

Streets and ways shall be laid out so to intersect in accordance with the standards as shown in the following:

1. Except where it is impracticable because of the character of the land, streets shall intersect so that within 75 feet of the intersection, the street lines are at right angles. The grade of intersection streets shall not exceed plus or minus 2%. No structure or planting that will impair corner visibility will be permitted within 25 feet of street intersections. Intersecting streets entering at angles of between 60 and 120 degrees with the intersected street center line may be approved with greater visibility distances. Ninety-degree intersecting streets are encouraged.
2. The vertical grade of either intersecting street shall not exceed a slope of 3 percent for a minimum distance of 100 feet from the intersection.
3. Street signs bearing approved street names shall be provided and installed by the developer at his/her expense at all street intersections. Signs such as Stop, Yield, No Exit etc. shall also apply. Sign style shall be submitted to the Board for their approval.

Storm and Surface Drainage

Adequate disposal of surface water shall be provided for in a manner satisfactory to the Planning Board and Town Engineer and shall address runoff from the proposed subdivision. Such system may include a system of storm drains, culverts, ditches, under drains, detention basins, drywells, and related installations, including catch basins, gutters and manholes, and shall be designed and installed to provide adequate disposal of surface water, including control of erosion, flooding, storm water management and standing water from or in the subdivision and adjacent lands. A catch basin to manhole system of drainage is required.

When, in the opinion of the Town Engineer, Conservation Commission and Department of Environmental Protection development of an area will increase runoff to downstream properties, it shall require that an on-site stormwater management system be constructed. Best management practices shall be observed. Such system will be designed to handle the 50- and 100-year storm events and such size shall be determined by using the flood routing procedure as described in the USDA Soil Conservation Service Technical Release No 55. Storm Water calculations shall be prepared by a Registered Professional Engineer using two methods of calculations. One method shall be as described in USDA Soil Conservation Service Technical Release No. 55. Drainage conveyance systems shall be designed using the larger of two calculation capacities.

Stormwater shall not be permitted to cross any roadway upon the surface but must be piped underground. Stormwater runoff shall not be permitted to flow upon the road surface for a longer distance than 400 feet before it enters the underground system or is diverted off the roadway to ditches or swales. Catch basins shall be located on both sides of the roadway continuous grades at intervals of not more than 300 feet, at all sags in the roadway, and near the corners of the roadway at intersection streets, to prevent surface water from crossing the intersection.

No open water body or pond shall be filled in unless, and no wet or swampy area shall be filled in unless approval has been obtained from the Conservation Commission in accordance with Chapter 131 of the Massachusetts General Laws, as amended.

Where open stream channels exist within a subdivision, adequate provision shall be made for properly protecting and maintaining them. It is the Town's intent to preserve and maintain the natural features of such streams and any development should be planned accordingly. All work shall be done in accordance with Chapter 131 of the Massachusetts General Laws, as amended, and the Massachusetts River Protection Act, as amended.

An adequate system of stormwater drainage shall be provided, and no natural watercourse shall be altered or obstructed in such a way as to reduce or increase the natural run-off capacity, unless substitute means of run-off are provided. The Board or Town Engineer may require culverts and other stormwater drainage installations where it deems necessary. All necessary easements for drainage shall be provided, whether on or off the site. Piping shall be supplied to each house lot for sump pumps and curtain drains.

When development of an area will increase runoff to downstream properties, an on-site stormwater management system shall be constructed. Such system will be designed to handle the 25, 50, and 100-year storms without increasing downstream runoff above pre-construction conditions, and such size shall be determined by using the flood routing procedure as described in the USDA Soil Conservation Service Technical Release No. 55, and discussions with the Planning Board and Town Engineer. Storm Water calculations shall be prepared by a Registered Professional Engineer using two methods of calculations.

All roads shall be properly drained and sufficient culverts and catch basins installed as approved by the Board of Health in consultation with the Town Engineer. No portion of any road shall drain in one direction more than 300 feet without catch basins on both sides on the road. Culverts shall be resized based on carry runoff from existing streams to satisfy requirements of a 100-year storm and street drainage should be designed to satisfy requirements of a 25-year storm.

Adequate disposal of surface water shall be provided for in a manner satisfactory to the Planning Board and shall address runoff from the proposed subdivision. Such system may include a system of storm drains, culverts, ditches, underdrains, on-site management systems, and related installations, including catch basins and gutters and shall be designed and installed to provide adequate disposal of surface water, including control of erosion, flooding, storm water management and standing water from or in each lot of the subdivision and adjacent lands.

Street Widths

The East Longmeadow Street Layout and Design Standards outline the required widths of roads in local streets, as shown in Table 1 below.

Classification	Right-of-Way-Width (ft)	Maximum Grade	Paved Width (ft)	Design Speed (MPH)
Major (Arterial)	80	5	44	40
Secondary (Collector)	60	7	40	40
Minor (Lane)	60	9	30	30
Cul-de-Sac/Dead End*	60	9	30	30

**excluding turnaround*

The following standards apply:

- In establishing streets, due respect shall be paid to the prospective character of different subdivision, whether open residence, dense residence, business or industrial, and the prospective amount of travel upon the various ways therein, and to adjustment of the requirements accordingly.
- Streets designed to serve business and industrial areas shall have 60-foot right of way width and 40-foot paved width.
- Street grades shall be not less than 0.5% to assure proper surface runoff.

- The centerline of the roadway shall coincide with the centerline of the right-of-way unless otherwise requested by the Board.
- The minimum center line radii of curved streets shall be one hundred and fifty (150) feet for minor streets, three hundred (300) feet for collector streets, and five hundred (500) feet for major streets. Greater radii may be required by the Board in order to assure adequate safety for vehicular traffic.
- Reverse curves for minor streets shall have a minimum collecting tangent of fifty (50) feet; for collector streets one hundred (100) feet; and for major streets one hundred and fifty (150) feet. All reverse curves shall be separated by tangents as above specified.
- Cul-de-sac streets shall not be longer than nine hundred (900) feet unless in the opinion of the Planning Board greater length is deemed necessary by virtue of topography or other cirucumstances. Cul-de-sac streets will not be permitted by the Board, if in its opinion, proper safety with regard to vehicular traffic cannot be afforded by the construction of a cul-de-sac street.
- Turnarounds; Cul-de-sac streets shall be provided with a closed-end turnaround having an outside roadway diameter of at least ninety (90) feet and a property line diameter of at least one hundred twenty (120) feet.

Pursuant to M.G.L. c. 41, §81R, the Planning Board may in any particular case where such action is in the public interest and not inconsistent with the intent and purpose of subdivision control law, waive strict compliance with any of these Rules and Regulations.

Adequate Access

Where the physical condition or width of a public way from which a subdivision has its access is considered by the Board to be inadequate to either provide for emergency services or carry the traffic which is expected, in the opinion of the Board, to be generated by such subdivision, the Board may require the subdivider to dedicate a strip of land for the purpose of widening the abutting public way to a width at lease commensurate with that required within the subdivision, and to make physical improvements to and within such public way to the same standards required within the subdivison. Any such dedication of land for purpose of way and any such work performed within such public way shall be made only with permission of the governmental agency having jurisdiction over such way, and all costs of any such widening, consturction, or signaliziation shall be borne by the subdivier.

Shoulders, Berms, and Sidewalks

Shoulders shall not be allowed in place of sidewalks, curbs and grass strips, unless permission is specifically granted by the Planning Board.

Berms as shown in the Typical Street Cross-Section shall be constructed with a berm machine. Immediately prior to placement of the berm, the surface of the road receiving the curb shall be coatedc with an approved bitumen. Berms shall be installed on both sides of the road.

Sidewalks may be placed on one or both sides of the street at a width determined by the Planning Board based on the location and need for safe pedestrian circulation. All sidewalks shall conform to the material and construction methods as specified by the Town Engineer or in Section 701 of the Standard Specificaitons.

The roadway and driveway aprons (edge of road to the right-of-way boundary) shall be paved the entire width, including under the berms, and the surface treatment shall be compacted bituminous concrete placed in two (2) layers.

No paving shall be applied to frozen gravel base, nor shall any pavement be applied when the local air temperature is less than 40 degrees, or when any form of atmospheric precipatation is occurring.

All bituminous concrete shall be spread by an approved mechanical spreader in a uniformly loose layer to the full width required and to such thickness that each course when compacted shall have the required thickness and shall conform to grade and the Typical Street-Cross Section.

3. Recommendations

The Subdivision Rules and Regulations would benefit from modifications designed to promote the use of lower impact site design (LID) and stormwater management techniques. In general such modifications would reduce impervious area, incorporate more LID stormwater practices and better preserve open space.

Proposed Recommendations for Discussion

The tables below provides more specific recommendations on how to further promote LID in the Town of East Longmeadow for discussion and collaboration with the Town's Planning Board, Department of Public Works, and the Fire Department based on recommendations from the Massachusetts Low Impact Development Toolkit[1] and the American Planning Association (APA) guidebook, Sustainable Neighborhood Road Design: A Guidebook for Massachusetts Cities and Towns[2]. These recommendations should be reviewed in conjunction with the red-line recommendations to the Subdivision Rules and Regulations provided in Attachment A.

TABLE 2
Summary of Proposed Recommendations for Revisions to the Subdivision Rules and Regulations for the Town of East Longmeadow

Reference	Topic	Existing Requirement	Recommendations
N/A	Driveways: Width	No minimum width for residential driveways.	Minimum driveway width should be 9 feet or less for one-lane and 18 feet or less for two-lane.
N/A	Driveways: Materials	No current provisions for pervious materials	Pervious materials should be allowed for single-family home driveways.
N/A	Driveways: Shared	No current provisions for shared driveways	Consider allowing shared driveways in residential developments.
Subdivision – Section 6.2.4	Street Design: Stormwater Management	Catch basins, manholes, and piping required for conveyance.	Alternate, open-section drainage methods such as swale should be allowed, as well as residential downspout disconnection (disconnecting downspout from the storm drain system and redirecting it to the lawn, a garden, or a rain barrel).

[1] https://www.mapc.org/resource-library/low-impact-development-toolkit/

[2] https://www.apa-ma.org/wp-content/uploads/2018/12/NRB_Guidebook_2011.pdf

TABLE 2
Summary of Proposed Recommendations for Revisions to the Subdivision Rules and Regulations for the Town of East Longmeadow

Reference	Topic	Existing Requirement	Recommendations
Subdivision - – Section 6.2.5	Street Design: Paved Width	Major streets and streets not in a residential subdivision requirement are 44 feet, Secondary streets are 40 feet wide, and Minor streets are 30 feet wide.	Street width should be correlated to traffic volume, land use, and parking demand. Residential streets with less than 500 trips per day (generally serving less than 50 houses) can be designed at a minimum width so as to accommodate a fire truck (generally as narrow as 18 to 22 feet) Allow narrow widths where there are no houses, buildings, intersections, or where on-street parking is not anticipated.
Subdivision – Section 6.2.6.	Street Design: Cul-de-Sacs	Minimum paved diameter width required is 90 feet.	Minimum diameter should ideally be 70 feet, but up to 90 feet is also acceptable.
Subdivision – Section 6.2.6.	Street Design: Cul-de-Sacs	No current provisions for alternative layouts.	Alternative layouts, such as hammerheads or one-way loop streets, should be allowed on short streets in low-density residential areas as allowed by the Fire Department.
Subdivision – Section 6.4	Stormwater Management	No current provisions for rooftop runoff to vegetated areas	Rooftop runoff should be allowed to discharge to lawn areas and buffers (stormwater disconnection), provided that it ultimately infiltrates.
Subdivision – Section 6.7.1	Open Space	Before approval of a plan, the Board shall in proper cases require the plan to show a park or parks suitably located for playground or recreation purposes, or for providing light and air.	Add language such as "Low impact stormwater management techniques such as bioretention areas, rain gardens, vegetated swales, and filter strips may be located within the open space area and count towards the requirement"
Subdivision – Section 7.2.5	Sidewalks: Width	There is no minimum sidewalk width specified.	Minimum sidewalk width should be 4 feet.
Subdivision – Section 7.2.5	Sidewalks: Layout	Sidewalks shall be required.	Alternate pedestrian networks should be allowed to substitute for sidewalks (e.g., trails). Recommend design standards for sidewalk of paved width of 4 feet, general slope toward vegetated front yards rather than street.

TABLE 2
Summary of Proposed Recommendations for Revisions to the Subdivision Rules and Regulations for the Town of East Longmeadow

Reference	Topic	Existing Requirement	Recommendations
Subdivision – Section 7.2.5	Sidewalks: Materials	No current provisions for permeable sidewalk materials.	Permit use of permeable surfaces for sidewalks.
Subdivision – Section 7.3.4	Stormwater Management	"Runoff calculations should be based on…"	See Attachment A for recommended language for this section referencing design and construction in accordance with an authorized Stormwater Management Permit issued under the Stormwater Management bylaw
Subdivision – Section 7.8.4.	Street Design: Cul-de Sacs	In every cul-de-sac island, low maintenance, weather and salt resistant shrubs shall be planted by the developer.	Consider allowing for vegetated stormwater management within the island.

TABLE 3
Comparison of Current Requirements for Local Streets with Recommendations for Residential Road Design Parameters from Sustainable Neighborhood Road Design: A Guidebook for Massachusetts Cities and Towns

Parameter	Current Requirements for Local Streets	Recommendations for Residential Road Design Parameters Relative to Roadside Width		
		Single Use Residential – Wide	**Single Use Residential – Medium**	**Single Use Residential - Narrow**
Traveled Way				
Typical ADT	Varies	4,999 < 1,500	1,499 < 400	399 < 0
Design Speed	30-40 mph	25-30 mph	20 mph	20 mph
Number of Through Lanes	2	2	2	2
Lane Width	15-20 feet	10-12 feet	10-12 feet	10 feet
Shoulder	Not allowed unless permission is specifically granted by Planning Board	2 feet	2 feet	2 feet
Bike Lanes	Not specified	Shared road or 6 feet wide	Shared road	Shared road
Utility Easement Width	---	---	---	10 feet
Range of ROW Width	60-80 feet	40-50 feet	36-40 feet	33-36 feet

TABLE 3
Comparison of Current Requirements for Local Streets with Recommendations for Residential Road Design Parameters from Sustainable Neighborhood Road Design: A Guidebook for Massachusetts Cities and Towns

Parameter	Current Requirements for Local Streets	Recommendations for Residential Road Design Parameters Relative to Roadside Width		
		Single Use Residential – Wide	Single Use Residential – Medium	Single Use Residential - Narrow
Roadside				
Desirable Roadside Width (Pedestrian, Swale, and Planting Strip)	Not specified	5.5-12 feet	5.5-10 feet	5.5 feet
Grass Plot / Planting Strip	Not specified	0-6 feet	0-6 feet	0-6 feet
Minimum Sidewalk Width	Not specified, sidewalk width determined by the Planning Board	4 feet one side ok	4 feet / shared road	Shared road

Next Steps

Recommended changes to the Town's current Street Layout and Design Standards should be refined through collaboration with the Town's Planning Board, Department of Public Works, and Fire Department, and reviewed for consistency with proposed changes to the Zoning Bylaw and Stormwater Management Bylaw. This assessment was limited to a review of the Subdivision Rules and Regulations. A review of Zoning Bylaws, Conservation Commission Regulations, and other Town regulations that may impact the creation of impervious cover will need to be conducted in the future to complete an assessment of Town regulations relative to creation of impervious cover as per the requirements of the 2016 Small MS4 General Permit.

Per Section 2.3.7 of the Small MS4 General Permit, if the assessment indicates that changes can be made, the assessment shall include proposed schedules to incorporate policies and standards into relevant documents and procedures to minimize impervious cover attributable to parking areas and street designs. After other Town regulations that may impact the creation of impervious cover have been reviewed, a schedule for proposed revisions should be developed in consultation with the Planning Board and Town Council.

J:\E\E0714 East Longmeadow Engineering Services\041 - MS4 Services Year 2 Compliance\Reports\Preliminary Street Design and Parking Lot Guidelines Assessment\East Longmeadow Subdivision Rules and Regulations Impervious Cover Assessment.docx

PVPC Connecticut River Stormwater Committee
Summary of Public Education and Outreach, PY 3

MCM 1: Public Education – YEAR 3

Annual reporting on all Year 3 regional messaging for Connecticut River Stormwater Committee has been prepared by PVPC.

Per EPA instructions in Year 2, you must paste in information provided below into your Annual Report under Part IV, MCM 1: Public Education.

	Paste these words into appropriate lines within MCM 1 Section of your Annual Report
Number of educational messages completed:	13, plus any additional messages you may have done locally
BMP:	#1. Think Blue Connecticut River Website
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Residents, business/institutional/commercial, developers, and industrial
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#2. Cigarette butts
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Residents
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#3. Dumpster waste and avoiding contaminated flows
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Businesses, institutions, and commercial facilities
Responsible Department/Parties:	Connecticut River Stormwater Committee

BMP:	#4. New MS4 development standards and erosion and sediment control
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Developers
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#5. Fleet maintenance to avoid spills and leaks
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Industrial facilities
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#6. Proper disposal of leaf litter
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Residents
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#7. Importance of soil test, proper use of fertilizers, disposal of grass clippings
Message Description and Distribution Method:	See: Add new url to access annual report See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Residents
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#8. Proper management of pet waste
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Residents

Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#9. Proper septic system care
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Residents
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#10. Proper disposal of leaf litter
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Businesses/institutions/commercial facilities
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#11. Importance of soil test, proper use of fertilizers, disposal of grass clippings
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Business/institutions/commercial facilities
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#12. Proper management of pet waste - businesses
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf
Targeted audience:	Businesses/institutions/commercial facilities
Responsible Department/Parties:	Connecticut River Stormwater Committee
BMP:	#13. Fowl Water messaging through state-wide campaign
Message Description and Distribution Method:	See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted audience:	Residents and businesses/institutions/commercial facilities
Responsible Department/Parties:	Think Blue Massachusetts and Water Words that Work

CONNECTICUT RIVER
Stormwater Committee

MS4 Permit Annual Report
for Public Education and Outreach

MCM 1 and additional requirements in Appendixes F and H

July 1, 2020 through June 30, 2021

Table of Contents

The Connecticut River Stormwater Committee annual report provides a summary of all the work undertaken during the July 1, 2020 to June 30, 2021 reporting period. All of this work is directly applicable to all member communities' EPA annual reporting requirements.

Content has been formatted in a manner consistent with the format of the EPA annual report template for Year 3. Because the Connecticut River Stormwater Committee is a regional partnership program, these sections are written from a "regional" perspective rather than municipality-by-municipality. Additional details of community-specific efforts are reported in each municipality's annual report.

In communication with PVPC, who facilitates the coalition, EPA has endorsed and encouraged a regional Annual Reporting approach whereby Connecticut River Stormwater Committee member communities can satisfy the Public Education and Outreach reporting requirement (within MCM 1 and Appendixes F and H) by referencing the coalition's annual report with a url link in their own annual report.

Introduction

1. Coalition Purpose and Membership

The Connecticut River Stormwater Committee is an intergovernmental compact of 19 municipalities, the University of Massachusetts-Amherst, and the Pioneer Valley Planning Commission organized to work cooperatively in meeting US EPA Municipal Separate Storm Sewer System Permit ("MS4 Permit") requirements for stormwater education and outreach. Facilitated and staffed by the Pioneer Valley Planning Commission, the Committee also works together to meet other permit compliance activities where appropriate and needed. Work for the group is funded through annual dues paid by each member, including PVPC, and through occasional grants. Member communities are shown in Table 1 below.

Table 1: Connecticut River Stormwater Committee Member Communities

Member Community	Committee Representatives and Departments
Agawam	Tracy DeMaio and Mike Albro, Department of Public Works
Belchertown	Steve Williams, Department of Public Works and Erica Cross, Conservation Department
Chicopee	Quinn Lonczak, Department of Public Works
East Longmeadow	Bruce Fenney and Tom Christensen, Department of Public Works
Easthampton	Dan Murphy, Department of Public Works
Granby	Dave Derosiers, Highway Department
Hadley	Chris Okafor, Department of Public Works
Holyoke	Michael McManus and Robert Peirent, Department of Public Works
Longmeadow	Craig Markham and Tim Keane, Department of Public Works
Ludlow	Jim Goodreau, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Palmer	Angela Panaccione, Conservation Department
South Hadley	Melissa LaBonte, Department of Public Works
Southampton	Randall Kemp and Joesette Picard, Highway Department
Southwick	Randall Brown and Jon Goddard, Department of Public Works
Springfield	Kevin Chaffee, Planning/Conservation Department
West Springfield	Jim Czach and Jesse English, Department of Public Works
Westfield	Casey Berube and Joe Kietner, Department of Public Works
Wilbraham	Tonya Basch and Dean Grochmal, Department of Public Works
University of Massachusetts - Amherst	Neils LaCour and Terri Wolejko

2. Water Quality Considerations in the Region

All Connecticut River Stormwater Committee communities are subject to additional MS4 permit requirements in Appendix F based on waters that are tributaries to the Long Island Sound, which has an approved TMDL for nitrogen.[1] Some member communities are also subject to additional MS4 permit requirements based on the following:

- Lakes and ponds with approved TMDLs for phosphorous (additional requirements within Appendix F of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to phosphorous (additional requirements within Appendix H of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to bacteria or pathogens (additional requirements within Appendix H of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to solids (total suspended solids) (additional requirements within Appendix H of the MS4 permit)

It is important to note that the MS4 permit stipulates that certain additional requirements for public education and outreach messaging in the appendixes can be combined where appropriate. Specifically, Appendix H part I and II as well as Appendix F part A.III, A.IV, A.V, B.I, B.II and B.III.

3. Social Media Challenges

The Year 3 permit period presented certain challenges on educational messaging through social media that could not have been foreseen. The rampant spread of misinformation and election security concerns translated to far greater restrictions, making if far more difficult to message on social media. Facebook algorithms became so restrictive that PVPC could no longer boost educational posts by zip code. PVPC hired a consultant for help and initially worked with the social media consultant to set up a Facebook business account to place ads. That approach also did not prove workable so social media messaging for the Connecticut River Stormwater Committee moved to Google ads. For the most part, messaging did not rely completely on social media so where efforts were delayed, messages got out to audiences via other pathways as is indicated in the reporting below.

[1] TMDL = identifies the Total Maximum Daily Load of nitrogen that can be discharged, in this case to Long Island Sound, without significantly impairing the health of the Sound.

Annual Report Part II: Self-Assessment

1. Education and Outreach on Bacteria/Pathogens

√ Annual Message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
√ Disseminated educational material to dog owners at time of issuance or renewal of dog license, or other appropriate time
√ Provided information to owners of septic systems about proper maintenance

See in sections below numbered: 9, 10, and 13

2. Education and Outreach on Nitrogen and Phosphorous (<u>combined</u>)

√ Distributed an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers
√ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
√ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

See in sections below numbered: 7, 8, 9, 11, 12, and 13

Annual Report Part IV: MCM 1 – Public Education and Outreach

1. *Think Blue Connecticut River* Website

<u>Message description and distribution method</u>: The *Think Blue Connecticut River* website is at the core of all regional messaging about stormwater. The website at www.thinkblueconnecticutriver.org does the following:

- Covers major areas of messaging about reducing polluted stormwater flows, including lawn and yard care, pet waste management, car care, controlling soil erosion, soaking up the rain, and septic system care
- Addresses the key 4 audiences plus educators
- Serves as the "landing place" for information on nearly all social media messaging

<u>Targeted audiences</u>: Residents, business/institutional/commercial, developers, and industrial

<u>Responsible Department/Parties</u>: PVPC staff and Connecticut River Stormwater Committee members

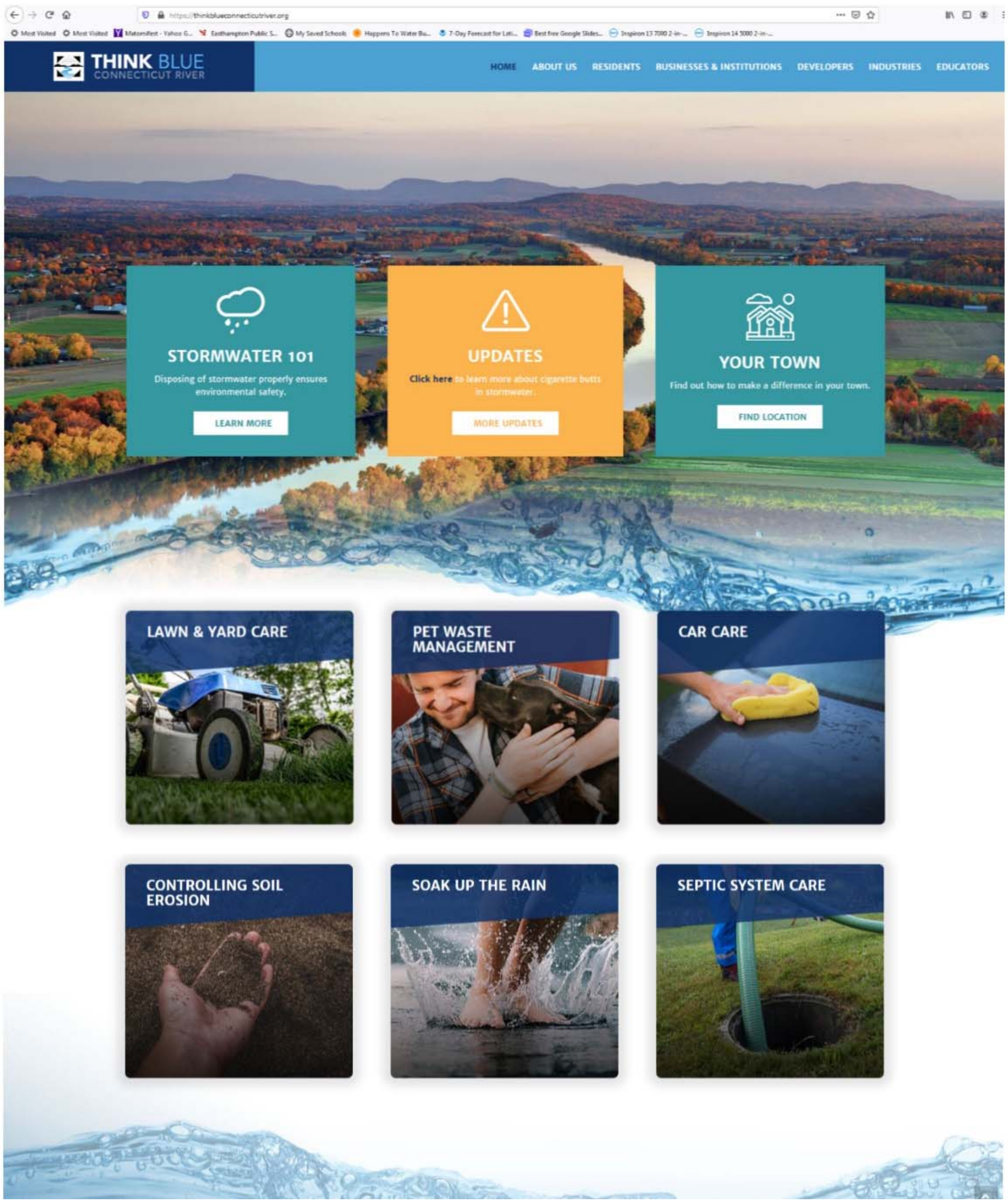
<u>Measurable goal(s):</u> A total of 3,196 people visited the *Think Blue Connecticut River* website during Year 3 and spent an average of 1minute, 38 seconds on viewing a total of 3,940 pages on stormwater best practices.

Message dates: July 1, 2020 through June 30, 2021

Message completed for: Appendix F requirements √   Appendix H requirements √

Was message different than what proposed in your NOI/SWMP?   Yes √   No

If yes, describe why the change was made: As indicated in previous annual reports, the website was not mentioned in the NOI and SWMP, but with development now completed is most central to all messaging in the region.



2. Cigarette butts – residents

Message description and distribution method: Materials and messaging for this campaign to reduce cigarette butt litter were developed in Year 2. Due to a general sense among members that messaging would get lost in the mix given far greater public concern with the Covid-19 pandemic, actual launch of campaign messaging occurred in Year 3. At the heart of the campaign is an image of a baby bird with a cigarette butt in its mouth. PVPC obtained permission for use of this image through a photographer who is associated with the Florida Audubon Society. The campaign includes:

- Image of baby bird with cigarette butt in its mouth with message (as shown below)
- Large decals (2x3 feet) for public works vehicles throughout the region
- Web page with additional information on cigarette butt litter and link to informational video from Canadian Broadcast System
- Press release to local media published and then media followed with editorial
- Facebook advertisement and post shared with MA Audubon and the Connecticut River Conservancy that links to resources on *Think Blue Connecticut River* website

While many communities successfully displayed the DPW truck decals, there were important lessons learned. In some cases, the decals were too large for certain trucks. One idea for the future is to print two sizes of decals. Also, some stormwater committee members found that once they had decals in hand, they did not have support for putting the decals on trucks. Some then used the decals to make banners or signs that got posted in public locations.

The *Think Blue Connecticut River* web location for more information is at: https://thinkblueconnecticutriver.org/wp-content/uploads/2020/07/cigarette-butt-bird.pdf

Targeted audience: Residents, but really all audiences in the Connecticut River Stormwater Committee region

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Business

Butt out! Connecticut River Stormwater Committee wants cigarette butts out of waterways

Updated Aug 03, 2020; Posted Aug 03, 2020

This image urging smokers not to carelessly discard cigarette butts where they might end up in waterways will go on local public works vehicles. (photo provided)

By Jim Kinney | jkinney@repub.com

Cigarette butts — either causally flicked aside or dumped on the ground from a full ashtray — that end up on streets or parking lots eventually wash into storm drains where they flow to streams and rivers where they pose a danger to birds, fish and other animals.

Connecticut River Stormwater — a group made up of 20 local towns and cities along with the University of Massachusetts at Amherst — has launched a public awareness campaign. It will feature decals on municipal trucks bearing an image taken by Florida Audubon member Karen Mason showing a bird feeding cigarette buts to its babies.

"Fish mistake cigarette butts for food. Birds mistake butts for food," said Patty Gambarini, principal environmental planner at Pioneer Valley Planning Commission which convenes and does administrative work for the Watershed Committee.

And of course, all the things that make cigarettes bad for people — nicotine and other substances — make them bad for wildlife, Gambarini said.

"We are still seeing a lot of cigarette butts," she said. " People who still smoke ... just flick it away and don't think of it as litter."

A single butt can contaminate between 500 and 1,000 liters of water with compounds like nicotine and heavy metals, according to the news release. The filter is made of a non-biodegradable form of plastic called cellulose acetate, which deteriorates and disperses as plastic microfibers.

The Source to Sea Clean Up will keep track of the numbers of butts and of e-cigarette and vaping waste said Stacey Lennard of the Connecticut River Conservancy and organizer of the cleanup.

The Springfield Republican newspaper picked up on the Committee's press release with publication of the article shown above on August 3, 2020.

Measurable goal(s):

Decals on Public Works vehicles and public spaces had a roughly estimated 40,000 views per month in each community. Stormwater Committee members counted views of decals using a simple Excel calculator tool that PVPC developed based on methodology from the outdoor advertising sector (see calculator tool in table next page). Several members commented that the calculator seems to yield high numbers.

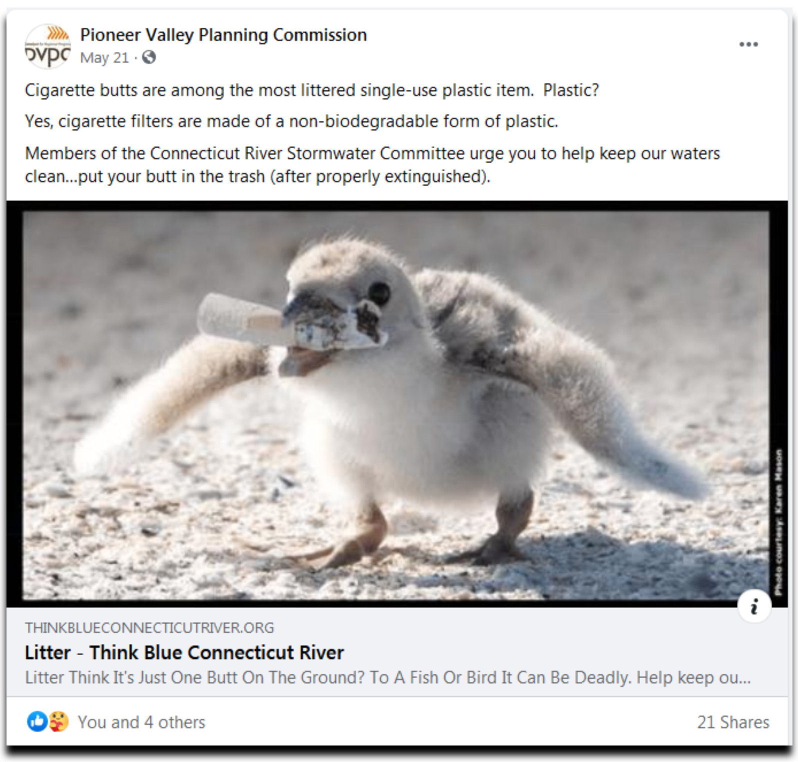
The Facebook advertisement reached 17,720 people identified as "smokers" and was shown 31,937 times; 152 smokers clicked on the link to check out the landing pages and there were 62 reactions. Facebook estimates that 4,330 viewers recall the campaign advertisement.

The posting on PVPC’s Facebook page shows 20 shares that include Stormwater Committee members, the Connecticut River Conservancy, and Massachusetts Audubon Society’s Arcadia Sanctuary.

The Springfield Republican, which printed an article and followed with an editorial estimates its audience at 83,000 readers.

Name of Community	Example Municipality			
Number of Fleet Vehicles with Decals	Example number			
	Total Fleet Hours per Month	Passing Vehicles per hour*	Impressions per Hour**	Monthly Totals
Parked (in public) ***	0	300	450	0
Driving Intertate or US Highway	0	450	675	0
Driving surface street	0	800	1200	0
Total Impressions this Month	—	—	—	0
*	Based on number of cars per mile (15 / highway; 40 / surface street as per ARD White Paper)			
**	Based on vehicle load factor of 1.5 passengers per vehicle (transformative-mobility.org)			
***	Includes pedestrian impressions			
	Monthly totals =	*total fleet hours per month * impressions per hour*		

The table above shows a simple tool created by PVPC for counting impressions. This counter draws on methodology from the outdoor advertising industry.



The posting on PVPC’s Facebook page included 21 shares that included Stormwater Committee members, the Connecticut River Conservancy, and Massachusetts Audubon Society’s Arcadia Sanctuary.

Message dates: The press release to local media was published in the Springfield Republican in their Business Section on August 3, 2020, and then picked up as an editorial in the same paper on August 6, 2020. *See editorial at right.*

Decals were displayed throughout Year 3 in each member municipality.

Facebook ad ran for 9 days, from May 20 to 28, 2021

PVPC's Facebook post went up on May 21, 2021.

<u>Was message different than what proposed in your NOI/SWMP</u>?
Yes √ No

<u>If yes, describe why the change was made</u>: Postponed to Year 3 and rather than messaging through use of PVTA bus panels, decided to message with large decals on public works vehicles throughout the region, which was supplemented with press release, Facebook messaging, and *Think Blue Connecticut River* website information on cigarette butts.

EDITORIAL

Filters from cigarettes destructive

AS WE'RE DRIVING AROUND TOWN ON A balmy summer night enjoying the moonlit sky, listening to the ball game on the radio and smoking a cigarette, how many of us toss the butt out the window when we're finished? According to the Truth Initiative, lots of us. The tobacco awareness group indicates cigarettes top the list of littered things in the U.S. And worldwide, 4.5 trillion cigarettes are discarded each year. While smoking is incredibly bad for our health, the filters are incredibly harmful to the environment.

Nearly 98% of cigarette filters are made of plastic fibers. And the substance, cellulose acetate (it takes 12,000 strands to make one filter), only degrades under certain conditions – like when they collect in sewage. When the filters are tossed on the beach or in the street they can take years to degrade. And, according to the Truth initiative, cigarette butts leach toxic chemicals, like arsenic, that can leak into the environment, damaging fragile eco-systems.

According to some experts, filters don't have any real benefit as they don't block all the bad chemicals in smoke and some states are looking to ban them. In 2014, this space called to ban cigarette filters and we reiterate that position.

The Connecticut River Stormwater Committee consisting of 20 local towns and cities, along with the UMass/Amherst, has launched a public awareness campaign. The campaign will feature decals on municipal trucks with an image taken by a Florida Audubon member showing a bird feeding cigarette butts to its chicks. "Fish mistake cigarette butts for food. Birds mistake butts for food," said Patty Gambarini, principal environmental planner at Pioneer Valley Planning Commission which convenes and does administrative work for the Watershed Committee.

Several New York lawmakers are calling for a ban on filters. State Sen. Liz Krueger and several colleagues recently introduced the Tobacco Product Waste Reduction Act.

"Cigarette butts are everywhere - littering our streets, our parks, and our waterways, and spreading plastic pollution and toxic chemicals into our environment and our food supply," said Krueger. "The evidence is clear that in spite of all the Big Tobacco propaganda, filters do not make cigarettes any safer, and they may in fact make cigarettes even more deadly."

Massachusetts lawmakers should push for a similar ban.

Decals of cigarette butt messaging were placed on DPW vehicles throughout the region.

3. Dumpster waste and avoiding contaminated flows - businesses

Message description and distribution method: Materials and messaging for this campaign on dumpster waste and avoiding contaminated flows were developed in Year 2, but strategy further evolved in Year 3 given constraints presented with messaging to Boards of Health during a pandemic. Rather than try to meet regionally or individually, strategy pivoted to notifying Boards of Health about the issue and availability of flyers through the membership of the Massachusetts Health Officers Association. The campaign included:

- Update to the *Think Blue Connecticut River* Website to include:
  - Flyer to inform Boards of Health on proactive regulatory and educational steps to curb stormwater pollution from dumpsters
  - Flyer for Boards of Health for use as part of routine interactions with retail complexes, restaurants/food establishments, and apartment complexes
  - Check list for Boards of Health (developed by Town of Palmer Conservation Agent) to use when inspecting restaurants and looking at dumpsters and oil storage
- An article prepared for the Massachusetts Health Officers Association (MHOA). Initially planned for publication in MHOA's newsletter, MHOA sent the article as a special e-mail blast to their 650 members. They also sent the information with a request for distribution to members of the Massachusetts Environmental Health Association (MEHA), Massachusetts Association of Health Boards (MAHB), and Western Massachusetts Public Health Association (WMPHA).
- A presentation that was to be given at Western Mass Health Officers Association/MassDEP annual spring seminar focused on environmental health was not used in the end, but remains at the ready once the pandemic subsides.

Targeted audience: Business, institutions, and commercial facilities

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): An e-mail about *Think Blue Connecticut River* resources on dumpsters for Boards of Health went to the full membership of the Massachusetts Health Officers Association, 650 people.

Analytics from the *Think Blue Connecticut River* website show a total of 84 people retrieved PDF resources posted on dumpster waste.

Message dates: The article went to the 650 members of the MHOA on March 24, 2021.

Was message different than what proposed in your NOI/SWMP? Yes √ No

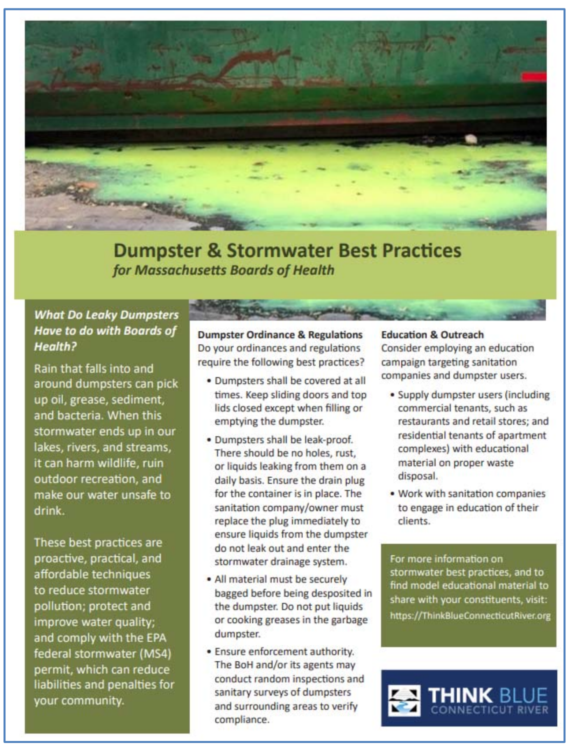
If yes, describe why the change was made: Aside from postponing message to Year 3, we learned in the process of developing the campaign that distribution of flyers directly to dumpster companies to provide to customers was not going to be a fruitful strategy. Better to work with Boards of Health to inform them and then get them to distribute the information to dumpster companies (who are allowed/permitted by boards to operate in the community) and to businesses when health agents are doing routine inspections. The education and outreach effort became two pronged and now includes an additional flyer specifically for Boards of Health.

Given Covid-19 and the demands on Boards of Health during this time, the committee pursued a two pronged approach for Year 3:

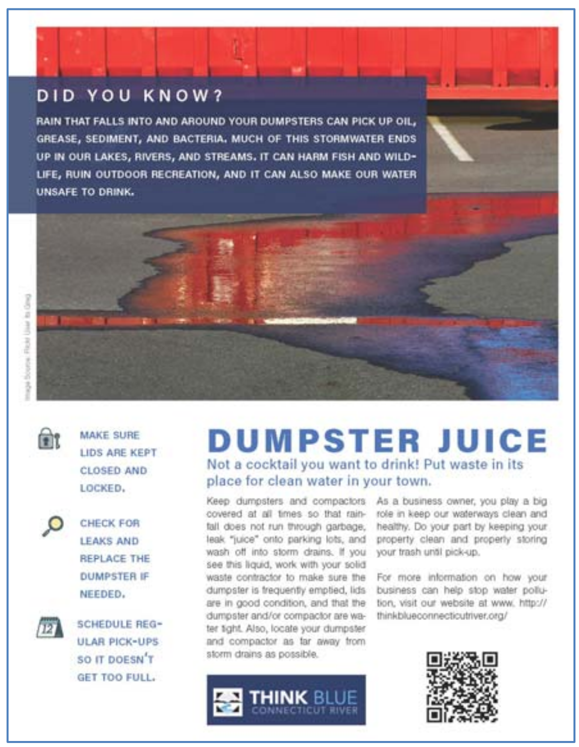
- Post information on *Think Blue Connecticut River* website with the two PDF documents/flyers on dumpsters, along with a checklist for Boards of Health to use when inspecting restaurants and looking at dumpsters and oil storage.

- Prepare article for MA Health Officers Association Executive Director to announce resources about dumpsters to memberships in the Western MA Public Health Association and the MA Environmental Health Association.

With the continuation of the pandemic into Year 3 programming, communities recommending holding off on individual visits with boards of health. It is hoped that visits might occur at a time when the pandemic is not demanding so much attention from local boards of health.



One flyer is designed to inform Boards of Health on proactive regulatory and educational steps to take to curb stormwater pollution from dumpsters.



Another flyer is designed for Boards of Health use with dumpster users as part of routine interaction with retail complexes, restaurants & food establishments, and apartment complexes.

4. New MS4 development standards and erosion and sediment control - developers

Message description and distribution method: PVPC staff hosted a *Think Blue Connecticut River* table at the day-long virtual Western Massachusetts Developers' Conference held on October 21, 2020. The 3-d virtual booth featured hyperlinks to key documents, video, and websites, along with an opportunity for attendees to chat and collect documents for their "swag bags" from booths. The booth was organized as follows with links to resources:

About Us – link to Think Blue CT River https://thinkblueconnecticutriver.org/about-us/

Erosion & Sediment Control Resources
1. Rhode Island Handbook Excerpt on Project Phasing
2. EPA Construction Industry Brochure
3. Site Inspection Checklist for Use by Pioneer Valley Municipalities

New Stormwater Management Standards Resources
4. Construction and Post Construction Requirements Excerpt from MA MS4 Permit and Recent Settlement Agreement
5. Video Presentation on MS4 Permit from Sept. 10, 2020 Valley Development Council Meeting
6. Low Impact Development Checklist for Use by Pioneer Valley Municipalities

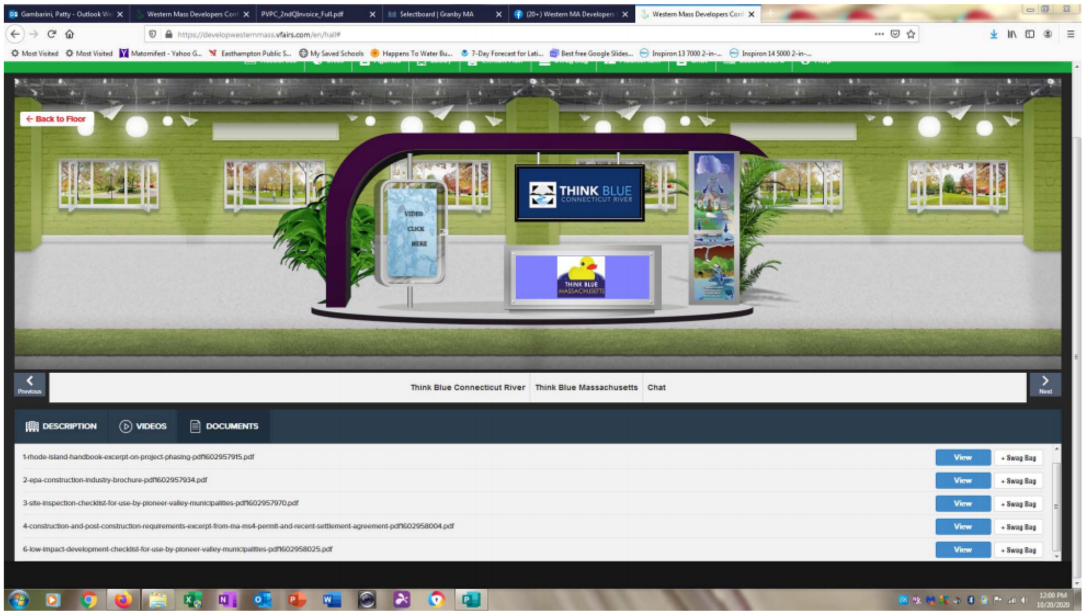
Chat with Us

The *Think Blue Connecticut River* booth was well attended by developers with a total of 71 visiting the virtual booth. Through participation in this conference, PVPC now has a list of the developers who attended the conference, which will prove helpful for future outreach.

Targeted audience: Developers

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Western Massachusetts Developers Conference, October 21, 2020



At the Think Blue Connecticut River virtual booth, developers could enter and chat with PVPC staff. They could also view and collect Think Blue resources for their "swag bag."

Measurable goal(s): Following are statistics from the Western MA Developers Conference.

Think Blue Connecticut River Booth Summary	
Total Visits	71
Documents Viewed	68
Videos Viewed	7
Document	**Views**
1-rhode-island-handbook-excerpt-on-project-phasing-pdf1602957915.pdf	11
2-epa-construction-industry-brochure-pdf1602957934.pdf	14
3-site-inspection-checklist-for-use-by-pioneer-valley-municipalities-pdf1602957970.pdf	16
4-construction-and-post-construction-requirements-excerpt-from-ma-ms4-permit-and-recent-settlement-agreement-pdf1602958004.pdf	13
6-low-impact-development-checklist-for-use-by-pioneer-valley-municipalities-pdf1602958025.pdf	14
Video	**Views**
PVPC MS4 Permit Presentation	7
Tab	**Clicks**
Think Blue Massachusetts	6
Think Blue Connecticut River	5

Message dates: October 21, 2020

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Due to the Covid-19 pandemic, this messaging was moved to Year 3 and done virtually as a booth as offered by the Conference.

5. Fleet maintenance to avoid spills and leaks – industrial facilities

Message description and distribution method: This message is aimed at ensuring that industrial operators with vehicle fleets take care to manage vehicles so as to avoid spills and leaks. PVPC staff adapted the *Think Blue Massachusetts* flyer developed by Water Words that Work for the *Think Blue Connecticut River* region. After several attempts to acquire MSGP permittees through various on-line sources, PVPC obtained the list of MSGP permittees in Massachusetts directly from EPA Region 1 staff. PVPC staff mailed the flyer to all 126 MSGP permittees in the region on April 16. 2021.

Targeted audience: Industrial facilities

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): Mailing to 126 MSGP permittees in the region.

Message dates: April 16, 2021.

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Postponed to Year 3 given likelihood of message getting lost in the mix during all the information around Covid-19 best practices and the struggle for industrial facilities to continue operations during the pandemic.

PVPC staff adapted the Think Blue Massachusetts flyer to serve the communities of Think Blue Connecticut River.

6. Proper disposal of leaf litter - residents

<u>Message description and distribution method</u>: Messaging for this campaign was adapted from a series of four *Be a Leaf Hero* social media posts developed by the Cape Cod Commission, which PVPC customized for the Connecticut River Stormwater Committee. The social media posts provide a series of tips and all tips contain a link to a page on the *Think Blue Connecticut River* website with more in-depth content and links. See website page at: https://thinkblueconnecticutriver.org/be-a-leaf-hero/. The content seeks to promote better practices with leaf litter and build understanding about potential contamination of stormwater with leaf litter.

Initial efforts to run 4 boosted Facebook posts failed, so the Committee's consultant ran one ad on Google instead. PVPC did run the 4 leaf litter posts as part of its regional Facebook page, but these could not be boosted by zip code as had been done previously due to new restrictions. Shares on these posts included stormwater committee member municipalities and the Massachusetts Audubon Society's Arcadia Sanctuary in the region.

PVPC had also prepared a door hanger for member communities to print and distribute in areas where leaf litter is problematic. While most communities did not make use of door hangers in Year 3 given the continuation of the Covid-19 pandemic, one community did hand out the door hangers at their transfer station.

Targeted audience: Residents

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s):
Google ad that had a total of 78,056 impressions and which drew 110 clicks to the website landing page.

There were 244 views of the Leaf Hero landing page with analytics indicating that the average time spent by visitors on that resource page was an average of 3 minutes and 10 seconds. There were a total of 192 clicks to download posted PDF resources.

Message dates: Google ad ran from October 28 to November 4; PVPC Facebook posts began on October 29 and ran through November 4.

Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: The change to this messaging began in Year 2, where initially the plan had been for one social media post and press release. Given the cohesion of these social media messages as a whole, the Connecticut River Stormwater Committee decided to run the full series, instead of a media release, and developed a *Think Blue Connecticut River* web page on best practices to which all posts could link.

Pioneer Valley Planning Commission
October 29, 2020 ·

Leaf litter leaches nutrients into storm runoff and pollutes nearby rivers, streams, lakes, and ponds.

https://thinkblueconnecticutriver.org/be-a-leaf-hero/

You and 7 others

8 Shares

Like Comment Share

7. Importance of soil test, proper use of fertilizers, disposal of grass clippings - residents

Message description and distribution method: Social media ad and post, using idea of keeping lawns safe for families. The link provided in the social media post connects to the *Think Blue Connecticut River* web page on lawn and yard care, which lays out important best practices and links to useful resources, including a video by Paul Tukey, organic lawn care celebrity, as well as guides to popular lawn care chemicals and their hazards. Link to *Think Blue Connecticut River* is: https://thinkblueconnecticutriver.org/lawn-and-yard-care/
PVPC also provided members with a flyer to distribute locally. As they were able, committee members put flyers in Town Hall or Building Inspection Services.

Targeted audience: Residents

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Facebook advertisement that ran for 6 days in June of Year 3.

Measurable goal(s): The Facebook ad reached 38,160 individuals in Stormwater Committee communities who match "gardening," "home improvement," or "do it yourself" identifiers. Of this number, Facebook estimates that 7,200 people will recall the ad. Ninety-nine people clicked on the "Learn More" button to go the *Think Blue Connecticut River* landing page on lawn care.

The Facebook post in the region was shared by several Stormwater Committee communities, helping to drive the number of views on the website landing page to a total of 161 with analytics indicating that the average time spent by visitors on that resource page was 1 minute and 42 seconds. There were a total of 132 downloads on the posted PDF resources.

Message dates: Facebook ad ran for 6 days, from June 25th to June 30th; PVPC posted the regional Facebook message on June 23.

Message completed for: Appendix F requirements √   Appendix H Requirements √

Was message different than what proposed in your NOI/SWMP?   Yes √   No

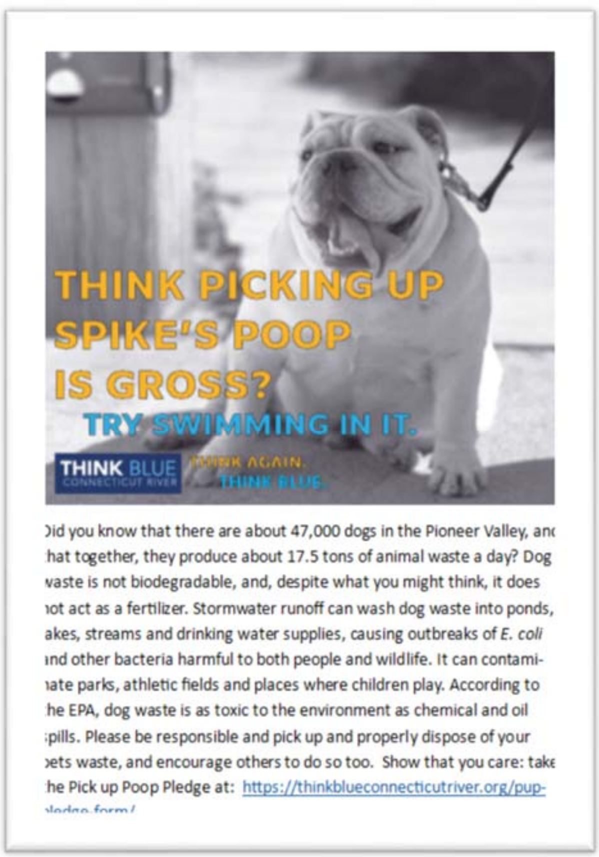
If yes, describe why the change was made: Proposed work had included creating a brochure. Instead, work entailed improving the *Think Blue Connecticut River* web page on lawn care so that information and resources are all more readily available during Covid-19.

8. Proper management of pet waste – residents and businesses

<u>Message description and distribution method</u>: Pet waste messaging in Year 3 was multifaceted at both the time of licensing and summer messaging. All messaging is based on the “Think picking up Spike’s poop is gross? Try swimming in it,” and aimed at driving people to the pet waste pick up pledge on the *Think Blue Connecticut River* website.

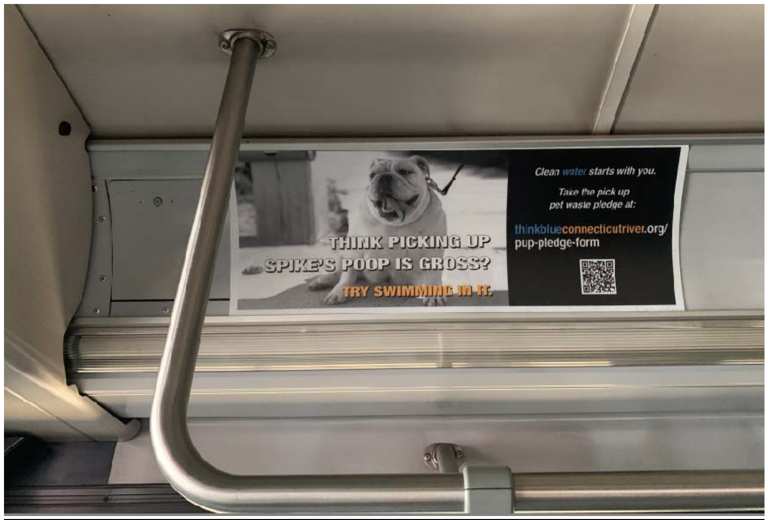
Before time of licensing messaging, PVPC surveyed municipal clerks/dog officers to understand what might be the most effective methods for messaging through their licensing process. Based on the responses, PVPC provided a variety of tools directly to municipal clerks to help them in getting out the pet waste message during time of licensing, including flyers in different sizes based on envelope sizes used in corresponding with dog owners, and an electronic message to be placed on the local licensing web page (something we learned that most municipalities now have). While several communities made use of the flyers, PVPC noted that uptake of the electronic element (shown in image below) on local licensing web pages in Year 3 was limited across member communities. The lesson learned to be advanced in Year 4, will be for committee members to make the push directly with their clerks/dog officers in making better use of this element at time of licensing.

Elements for Year 3 also included a social media ad on Google at time of licensing.



Electronic element created for municipal dog licensing web pages.

For summer messaging, internal and external ads have been running on the PVTA buses in the region. This investment is aimed at covering both the residential and business audience in Year 3. PVTA bus ads ran on buses operating out of three different garages in the region: Springfield Garage, Northampton Garage, and UMass Garage. There were a total of 6 panels run on the outside of buses and 12 panels in the interiors. To supplement the summer messaging on pet waste, a Facebook ad will run just after Labor Day, in early September.



Panels ran on both the interior and exterior of buses for three months in the Pioneer Valley.

<u>Targeted audience</u>: Residents and Businesses (for Year 3)

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): The Google ad placed at time of licensing reached 19,227 people identified as dog owners in targeted communities with 34 people clicking through to the pet waste pick up pledge. It is not clear yet whether this poorer performance in Year 3 compared to Year 2 has to do with the difference between Google and Facebook or advertising versus boosting posts by zip code (with 4 Facebook posts boosted by zip code in Year 2, we reached 15,552 people who followed through with 406 clicks).

PVTA estimates that the bus panels displayed through a three-month period have produced more than 1.5 million impressions.

Numbers from the supplemental Facebook ad are not yet available.

During Year 3, *Think Blue Connecticut River* pet waste page on the website had 700 page views with the analytics indicating that the average time spent by visitors on that resource page was 2 minutes and 3 seconds. Of the total 390 people who clicked on the pet waste pledge, there were about 100 new people who made the commitment to pick up pet waste in Year 3. PVPC's social media consultant has recommended a few adjustments to the pledge form to help increase likelihood of people pledging: better explain why important to pledge, and how data requested will be used. These changes have been made for Year 4.

Message dates:

- Time of licensing, Google ad ran for 11 days, February 8 through 19, 2021
- PVTA bus ads ran late June to September 2021
- Facebook ad ran week of September 13 through 17, 2021

Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

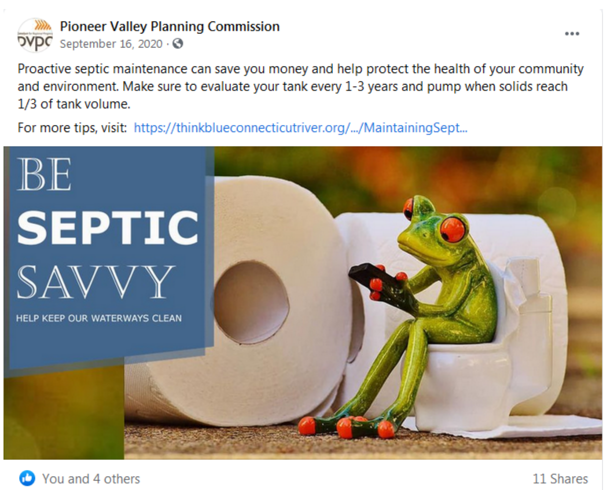
The NOI/SWMP indicated pet waste messaging only in summer months as PVPC understood that messaging under the Appendixes could be combined. EPA has indicated that additional messaging to dog owners "at time of licensing" is required. Messaging at time of licensing was added, starting in Year 2, along with additional messaging on pet waste during "stay at home" orders with the pandemic (given the increased visibility of associated problems).

If yes, describe why the change was made: To provide additional messaging.

9. Proper septic system care - residents

Message description and distribution method: PVPC again timed messaging on septic system care to coincide with EPA's Septic Smart Week with two posts on its Facebook page. These posts provide a link to a great infographic on septic system maintenance developed by Whatcome County Public Works and Health Department. Unfortunately, these posts could not be boosted given the difficulties with Facebook prior to the national election, but member communities with septic system users were encouraged to share posts on their local Facebook sites.

PVPC also reissued a draft letter for distribution by Boards of Health to septic system owners. Several communities used this letter in Year 2, and another community used the letter in Year 3. Others noted that it remains difficult for Boards of Health to help with such messaging give the Covid-19 pandemic. It is important to note too that among the Connecticut River Stormwater Committee, there are several member communities that are highly urbanized with no properties presumed to be using septic systems for sanitary waste disposal.



PVPC developed and distributed two Facebook posts for Year 3 on Septic Systems to coincide with EPA's Septic Smart Week in September.

Targeted audience: Residents

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): Facebook posts drew a total of 20 "shares." There were a total of 42 views of the *Think Blue Connecticut River* website septic system landing page with people spending an average of 50 seconds. Of that total, 32 people clicked to the septic system infographic to learn more.

Message dates: September 16 and September 17, 2020

Message completed for: Appendix F requirements Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: The NOI/SWMP indicated septic system messaging would be done in Year 3 only as MS4 permit language in Appendix H was not entirely clear on the timing of this message. EPA has since indicated that septic system messaging must occur each year and the Connecticut River Stormwater Committee has adjusted accordingly, starting in Year 2.

10. Proper disposal of leaf litter - businesses

Message description and distribution method: Mailing to landscapers in the region that promotes best practices and identifies locations for proper disposal of leaf letter. Best practices noted in letter are:

- Keep leaves off of driveways and roadways where they can easily wash into storm drains and contribute to higher nutrient flows during the fall season.
- Use a mulching mower. By mulching the leaves into the lawn, you avoid having to rake/blow and bag and you offer a way to manage autumn leaves while providing your client with free fertilizer. Mulched leaves put nutrients back into the ground and reduce the overall need for more soluble fertilizer products, which present greater problems for our local waterways.
- Alternatively, if your client has an existing compost pile, you can recommend that they consider allowing you to add leaves to the pile. Leaves provide a critically important element (carbon) to the composting process, making for a more soil enriching product to be used in the next growing season. Be sure compost piles are located away from streams, lakes, or storm drains as these decomposing materials and nutrients could easily leach to these water resources.

Targeted audience: Businesses/institutions/commercial facilities

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): Mailing to 150 professional land care companies operating in Stormwater Committee member municipalities

Message dates: October 30

Message completed for: Appendix F requirements √ Appendix H requirements √

Was message different than what proposed in your NOI/SWMP? Yes No √

11. Importance of soil test, proper use of fertilizers, disposal of grass clippings - businesses

Message description and distribution method: Rather than continue with idea of hosting stand-alone workshop for land care companies in the region (which would likely draw only a few professionals), PVPC staff coordinated with UMass-Amherst Cooperative Extension to “piggyback” by presenting messaging at the "Virtual Spring Kickoff for Landscapers Education Program 2021” on March 26, 2021. The aim was to reach the businesses that are caring for lawns in the Connecticut River region and across Massachusetts. PVPC spoke about the condition of rivers and streams, the ongoing work to reduce stormwater pollutions, the water quality implications of lawn care nutrients, and the importance of better practices. Better practice messaging for landscapers focused on two practices that Cooperative Extension staff advised would be most resonant:

- Test your client’s soil before applying any fertilizers
- Mulch mow grass clippings into the lawn in order to help soil retain moisture and to recycle nutrients, which can help reduce need for future fertilizer applications

Slides from the presentation are shown below.

Targeted audience: Business/institutions/commercial facilities

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): 80 lawn care professionals from across MA attended the session

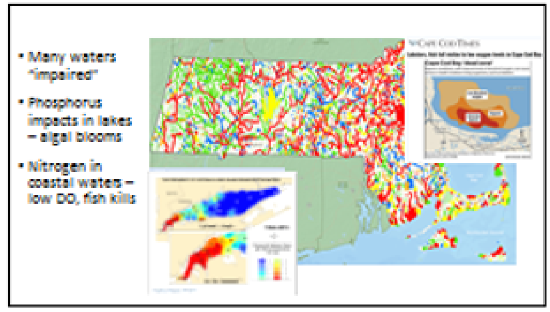
Message dates: March 26

Message completed for: Appendix F requirements √ Appendix H Requirements √

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: Ongoing Covid-19 pandemic required adjusting from in-person workshop to virtual and to obtain access to likely most robust audience, worked with UMass Cooperative Extension to join planned program they were giving.

1



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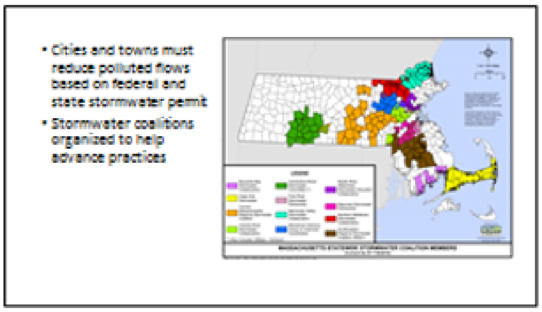

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Slides above were part of presentation made at UMass Cooperative Extension "Virtual Spring Kickoff for Landscapers Education Program 2021."

12. Proper management of pet waste – businesses

See number 8 above. Also, Google analytics from the *Think Blue Connecticut River* website also indicate that businesses and institutions continued to access "There is no Poop Fairy," materials produced in Year 2, with 72 downloads of the template and the quotes provided to produce the sign.

13. Fowl Water messaging through state-wide campaign

Message description and distribution method: On behalf of the members of the Connecticut River Stormwater Committee, *Think Blue Massachusetts* ran an educational advertising campaign using the 30-second video entitled, "Fowl Water." The "Fowl Water" advertisement helps viewers visualize how stormwater runoff carrying motor oil, pet waste, and trash pollutes local waterways. Each campaign entailed sponsored video on Facebook and Instagram and pre-roll advertisements on YouTube. See the video at: *http://bit.ly/tbm-fowl-water*

To measure the effectiveness of this campaign, Water Words that Work conducted an on-line panel survey of residents in areas where advertisements ran. Highlights from that survey include the following:

Post Campaign Survey Highlights
At the close of the advertising campaign, we surveyed Massachusetts residents in the areas where the campaign ran:

- 16% of residents surveyed recalled seeing the ads, down from 17% in 2020, but within the survey margin of error
- Those who recall the ad are more likely to recognize that stormwater goes directly to local waterways (50%) than those who do not recall the ad (36%).
- Those who recall the ad are more likely to describe stormwater has having "major" or "some" impact on waterways (53%) than those who do not recall the ad (27%).

The full survey is available at:
https://5f19efc0-6724-487e-8188-1ad9d05d4ac5.filesusr.com/ugd/e78125_f42fdf228ee24360a4c569be2bfcf8f7.pdf

Targeted audience: Residents and businesses/institutions/commercial facilities

Responsible department/parties: Think Blue Massachusetts and Water Words that Work

Measurable goal(s): Water Words that Work reports that within the Connecticut River Stormwater Committee region the campaign resulted in an estimated:

211,881 Facebook and Instagram impressions
471,252 YouTube ad impressions
83,101 Spanish language impressions

Message dates: May 17 to June 4, 2021

Was message different than what proposed in your NOI/SWMP? Yes √ No

If yes, describe why the change was made: This message is a welcome addition to our program for Year 3 and will be part of the region's SWMP update.

Town of East Longmeadow Public Education and Outreach Summary, PY 3

Public Outreach & Education Requirements 2020-2021

1. **Public Meeting**
2. **CT River Storm Water video** "Where does stormwater go" posted on Jan. 7, 2021 with ELCAT and DPW website.
   5000 Households ELCAT.
3. **Door Hanger Leaf litter**- 1000 copies and handed out at transfer station: October 2020 Posted on ELCAT Bulletin Board 5000 households
4. **Pet Waste**-
   Dog Licensing/ Clerks Office - 500 Post Cards printed and distributed 2020; October 11, 2020 ELCAT Bulletin Board- Posted February 11, 2020(5000 households)
   Posters in BOH, Clerks Office, Rail Trail, Heritage Park; February 26, 2020 (Exposure to 10,000 residences per year)
   Poop Fairy Signs – October 7, 202010 printed and installed. 5 Heritage Park and 5 on Bike Trail-exposure 10,000 residents per year.
5. **Stormwater Management Plan (Public Meeting)** – 10-5-21
6. **BOH Dumpster Runoff**-
7. **BOH Septic System Facebook Posting-** Septic Tank Maintenance & What goes down the drain 9/18/2020
8. **BMP's** – Drain Layer Letter to Contractors
9. **TRUCK DECAL IMPRESSION** - 1 decals Sweeper, 500 views. Truck is out 50 days per year on average and 10 views per day on average.

Bradway Construction, Inc.		396 West St Ludlow, MA 01056	(413) 583-6533
C. Lemek & Sons Construction		49 Wood Drive Ludlow, MA 01056	(413) 636-8947
Gary Turnberg		135 Parker St East Longmeadow, MA 01028	(413) 525-0271
Kenneth Bousquet Jr. Excavation & Trucking		305 Miller St Ludlow, MA 01056	(413) 237-5523
Kent Brothers Excavating		376 College Hwy, Southampton, MA 01073	(413) 203-2800
Mark's Property Services		15 Hudson Drive, Southwick, MA 01077	(413) 478-0323
Santos Landscaping	Stephen Santos	PO Box 207, Palmer Ave Ludlow, MA 01056	(413) 589-9585
Skinner Excavation		289 Mountain Rd Hampden, MA 01036	(413) 566-5737
Thomas Wilson Enterprises, Inc.		310 Elm St East Longmeadow, MA 01028	(413) 525-6205

APPENDIX G

Table 4-1. SSO Inventory

East Longmeadow, Massachusetts
Revision Date: June 30, 2019

SSO Location[1]	Discharge Statement[2]	Date[3]	Time Start[3]	Time End[3]	Estimated Volume[4]	Description[5]	Mitigation Completed[6]	Mitigation Planned[7]
24 Franconia Circle	Direct to Receiving Water	2-29-16	11:00	11:30	1500 gallons	Sewer Blockage	Line jetted to remove blockage	Annual Inspection
66 Smith Avenue	Ground surface	4-1-19	10:55	11:45	500 Gallons	Sewer Blockage	Line jetted to remove blockage	

[1] Location (approximate street crossing/address and receiving water, if any)
[2] A clear statement of whether the discharge entered a surface water directly or entered the MS4
[3] Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge)
[4] Estimated volume(s) of the occurrence
[5] Description of the occurrence indicating known or suspected cause(s)
[6] Mitigation and corrective measures completed with dates implemented
[7] Mitigation and corrective measures planned with implementation schedules

APPENDIX H

Amend. No.	Description of the Amendment	Date of Amendment	Amendment Prepared by (Name/Signature)
1	Added outfall sampling results table, Phase 1 stormwater system map, Catchment Investigation Procedures, SWPPPs, and Good Housekeeping O&M Plan to Appendix F: Record Keeping	6/30/2020	Emily Tully, Tighe & Bond Emily Tully
2	Added outfall sampling summary memo and results including updated outfall priority list, updated stormwater system map, Preliminary Retrofit Analysis memorandum, Current Street Design and Parking Lot Guidelines Assessment, PVPC CT River stormwater committee PY3 public outreach summary table, and summary of the Town of East Longmeadow's PY3 public education and outreach to Appendix F: Record Keeping	6/30/2021	Emily Tully, Tighe & Bond Emily Tully
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9			

APPENDIX I

TOWN OF EAST LONGMEADOW
60 CENTER SQUARE
EAST LONGMEADOW, MA 01028

Denise Menard, Town Manager
Denise.Menard@eastlongmeadowma.gov
(413) 525-5400 ext. 1100

June 4, 2019

Thelma Murphy
Chief, Stormwater and Construction Permits Section
Office of Ecosystem Protection
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912

Re: 2016 Massachusetts Small Municipal Separate Storm Sewer System General Permit
Delegating an "Authorized Representative"

Dear Ms. Murphy:

This letter serves to designate the Town of East Longmeadow Department of Public Works Superintendent, Bruce Fenney as an authorized person for signing all reports including but not limited to the Stormwater Management Plan (SWMP), Stormwater Pollution Prevention Plans (SWPPPs), inspection reports, annual reports, monitoring reports, reports on training, and other information required by the Small MS4 General Permit. This authorization cannot be used for signing an NPDES permit application (e.g., Notice of Intent (NOI)) in accordance with 40 CFR 122.22.

By signing this authorization, I confirm that I meet the following requirements to make such a designation as set forth in Part B.11 of Appendix B of the Small MS4 General Permit:

> *For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).*

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely,

Denise Menard

Denise Menard
East Longmeadow Town Manager

APPENDIX J

Illicit Discharge Detection and Elimination (IDDE) Plan

DRAFT

Town of East Longmeadow

June 30, 2019

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Illicit Discharge Detection and Elimination Plan

Town of East Longmeadow

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1 Introduction

1.1 MS4 Program

This Illicit Discharge Detection and Elimination (IDDE) Plan has been developed by East Longmeadow's Department of Public Works to address the requirements of the United States Environmental Protection Agency's (USEPA's) 2016 National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the "2016 Massachusetts MS4 Permit" or "MS4 Permit."

The 2016 Massachusetts MS4 Permit requires that each permittee, or regulated community, address six Minimum Control Measures. These measures include the following:

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

Under Minimum Control Measure 3, the permittee is required to implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges. The IDDE program must also be recorded in a written (hardcopy or electronic) document. This IDDE Plan has been prepared to address this requirement.

1.2 Illicit Discharges

An "illicit discharge" is any discharge to a drainage system that is not composed entirely of stormwater, with the exception of discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire-fighting activities.

Illicit discharges may take a variety of forms. Illicit discharges may enter the drainage system through direct or indirect connections. Direct connections may be relatively obvious, such as cross-connections of sewer services to the storm drain system. Indirect illicit discharges may be more difficult to detect or address, such as failing septic systems that discharge untreated sewage to a ditch within the MS4, or a sump pump that discharges contaminated water on an intermittent basis.

Some illicit discharges are intentional, such as dumping used oil (or other pollutant) into catch basins, a resident or contractor illegally tapping a new sewer lateral into a storm drain pipe to avoid the costs of a sewer connection fee and service, and illegal dumping of yard wastes into surface waters.

Some illicit discharges are related to the unsuitability of original infrastructure to the modern regulatory environment. Examples of illicit discharges in this category include connected floor drains in old buildings, as well as sanitary sewer overflows that enter the drainage system. Sump pumps legally connected to the storm drain system may be used inappropriately, such as for the disposal of floor washwater or old household products, in many cases due to a lack of understanding on the part of the homeowner.

Elimination of some discharges may require substantial costs and efforts, such as funding and designing a project to reconnect sanitary sewer laterals. Others, such as improving self-policing of dog waste management, can be accomplished by outreach in conjunction with the minimal additional cost of dog waste bins and the municipal commitment to disposal of collected materials on a regular basis.

Regardless of the intention, when not addressed, illicit discharges can contribute high levels of pollutants, such as heavy metals, toxics, oil, grease, solvents, nutrients, and pathogens to surface waters.

1.3 Allowable Non-Stormwater Discharges

The following categories of non-storm water discharges are allowed under the MS4 Permit unless the permittee, USEPA or Massachusetts Department of Environmental Protection (MassDEP) identifies any category or individual discharge of non-stormwater discharge as a significant contributor of pollutants to the MS4:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground water
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
- Uncontaminated pumped groundwater
- Discharge from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water, springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual resident car washing
- De-chlorinated swimming pool discharges
- Street wash waters
- Residential building wash waters without detergents

If these discharges are identified as significant contributors to the MS4, they must be considered an "illicit discharge" and addressed in the IDDE Plan (i.e., control these sources so they are no longer significant contributors of pollutants, and/or eliminate them entirely).

1.4 Receiving Waters and Impairments

Table 1-1 lists the "impaired waters" within the boundaries of Town of East Longmeadow regulated area based on the 2014 Massachusetts Integrated List of Waters produced by MassDEP every two years. Impaired waters are water bodies that do not meet water quality standards for one or more designated use(s) such as recreation or aquatic habitat.

Table 1-1. Impaired Waters

East Longmeadow, Massachusetts

Water Body Name	Segment ID	Category	Impairment(s)	Associated Approved TMDL

Category 4a Waters – impaired water bodies with a completed Total Maximum Daily Load (TMDL).

Category 4c Waters – impaired water bodies where the impairment is not caused by a pollutant. No TMDL required.

Category 5 Waters – impaired water bodies that require a TMDL.

“Approved TMDLs” are those that have been approved by EPA as of the date of issuance of the 2016 MS4 Permit.

There are currently no listed “impaired waters” within the Town of East Longmeadow town limits

1.5 IDDE Program Goals, Framework, and Timeline

The goals of the IDDE program are to find and eliminate illicit discharges to municipal separate storm sewer system and to prevent illicit discharges from happening in the future. The program consists of the following major components as outlined in the MS4 Permit:

- Legal authority and regulatory mechanism to prohibit illicit discharges and enforce this prohibition
- Storm system mapping
- Inventory and ranking of outfalls
- Dry weather outfall screening
- Catchment investigations
- Identification/confirmation of illicit sources
- Illicit discharge removal
- Followup screening
- Employee training

The IDDE investigation procedure framework is shown in **Figure 1-1.** The required timeline for implementing the IDDE program is shown in **Table 1-2**.

Figure 1-1. IDDE Investigation Procedure Framework

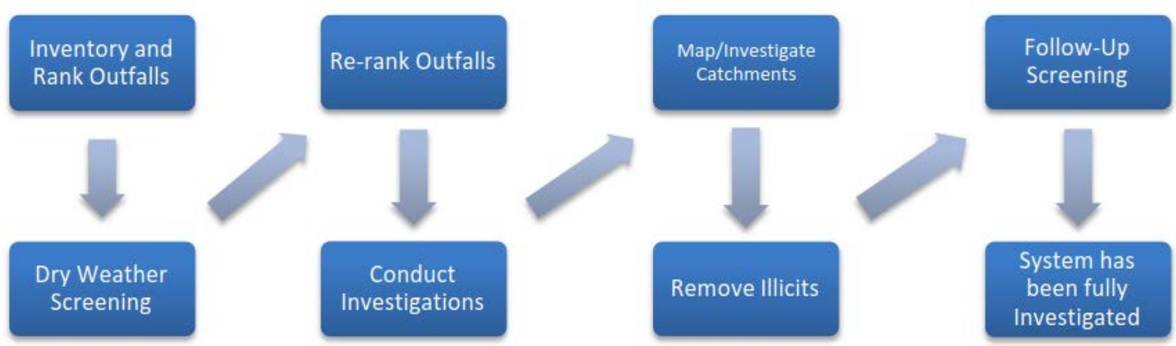

Table 1-2. IDDE Program Implementation Timeline

IDDE Program Requirement	Completion Date from Effective Date of Permit					
	1 Year	1.5 Years	2 Years	3 Years	7 Years	10 Years
Written IDDE Program Plan	*X*					
SSO Inventory	*X*					
Written Catchment Investigation Procedure		*X*				

IDDE Program Requirement	Completion Date from Effective Date of Permit					
	1 Year	1.5 Years	2 Years	3 Years	7 Years	10 Years
Phase I Mapping			***X***			
Phase II Mapping						***X***
IDDE Regulatory Mechanism or By-law (if not already in place)				***X***		
Dry Weather Outfall Screening				***X***		
Follow-up Ranking of Outfalls and Interconnections				***X***		
Catchment Investigations – Problem Outfalls					***X***	
Catchment Investigations – all Problem, High and Low Priority Outfalls						***X***

1.6 Work Completed to Date

The 2003 MS4 Permit required each MS4 community to develop a plan to detect illicit discharges using a combination of storm system mapping, adopting a regulatory mechanism to prohibit illicit discharges and enforce this prohibition, and identifying tools and methods to investigate suspected illicit discharges. Each MS4 community was also required to define how confirmed discharges would be eliminated and how the removal would be documented.

The Town of East Longmeadow has completed the following IDDE program activities consistent with the 2003 MS4 Permit requirements:

- Developed a map of outfalls and receiving waters
- Adopted an IDDE bylaw or regulatory mechanism
- Developed procedures for locating illicit discharges (i.e., visual screening of outfalls for dry weather discharges, dye or smoke testing)

In addition to the 2003 MS4 Permit requirements, other IDDE-related activities that have been completed include:

- SSO inventory
- Outfall sampling
- Additional storm system mapping, including the locations of catch basins, manholes and pipe connectivity

2 Authority and Statement of IDDE Responsibilities

2.1 Legal Authority

The Town of East Longmeadow has adopted a Stormwater Management By-Law (Revised 2018). A copy of the Stormwater Management By-Law is provided in **Appendix A**. The Stormwater Management By-Law provides the Town of East Longmeadow with adequate legal authority to:

- Prohibit illicit discharges
- Investigate suspected illicit discharges
- Eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system
- Implement appropriate enforcement procedures and actions.

The Town of East Longmeadow will review its current Stormwater Management By-Law and related land use regulations and policies for consistency with the 2016 MS4 Permit.

2.2 Statement of Responsibilities

The Department of Public Works is the lead municipal agency or department responsible for implementing the IDDE program pursuant to the provisions of the Stormwater Management By-Law. Other agencies or departments with responsibility for aspects of the program include:

- **Department of Public Works**
    - Has primary responsibility for coordinating compliance with the Phase II NPDES MS4 Stormwater Permit
    - Has primary responsibility for documenting suspected illicit discharges and providing for appropriate investigation, including but not limited to water quality monitoring, closed-circuit television inspection, smoke testing and dye testing
    - Coordinates with GIS Coordinator to maintain a current and accurate map of the storm drain system, updating as necessary
    - Responsible for Stormwater inspections during construction
    - Ensures that staff receives training in illicit discharge detection and elimination

  - Explains, justifies and defends Department programs, policies and activities; negotiates and resolves sensitive and controversial issues
  - Provides for effective management and financing of the Town's stormwater system
  - Coordinates with other Departments for new utility connections
- **Building Commissioner/Code Enforcement Officer**
  - Reviews and inspects all building construction projects in accordance with local, state and federal codes
  - Ensures public health, safety and welfare is secured
  - Enforces codes adopted by the Town of East Longmeadow
  - Performs on-site inspections and field investigations to verify that building codes are met
  - Responds to concerns regarding possible infractions of building codes and permit procedures
  - Issues stop work orders to perpetrators who are conducting unauthorized work
  - Reviews proposed construction plans or submissions and coordinates utility connections
  - Maintains records or database of onsite subsurface wastewater disposal systems and reviews records on a regular basis
- **Licensed Plumbing Inspector**
  - Reviews and inspects all building construction projects in accordance with local, state and federal codes
  - Investigates complaints of possible code violations, including building, sanitations and zoning violations and initiate appropriate remedial action to ensure compliance
- **Health Department**
  - Investigates and reports on all health hazards, complaints and nuisances
  - Issues cease and desist orders for violations of sanitation code
  - Conducts health inspections of public places
- **Planning & Community Development Director**
  - Responds to complaints, investigates potential violations and takes/recommends appropriate action/remediation
  - Coordinates with other departments, including the Department of Public Works for new utility connections
  - Ensures projects in front of the Planning Board follow the rules and regulations of the Town of East Longmeadow

3 Stormwater System Mapping

The Town of East Longmeadow originally developed mapping of its stormwater system to meet the mapping requirements of the 2003 MS4 Permit. A copy of the existing storm system map is provided in **Appendix B**. The 2016 MS4 Permit requires a more detailed storm system map than was required by the 2003 MS4 Permit. The revised mapping is intended to facilitate the identification of key infrastructure, factors influencing proper system operation, and the potential for illicit discharges.

The 2016 MS4 Permit requires the storm system map to be updated in two phases as outlined below. The Department of Public Works is responsible for updating the stormwater system mapping pursuant to the 2016 MS4 Permit. The Town of East Longmeadow will report on the progress towards completion of the storm system map in each annual report. Updates to the stormwater mapping will be included in **Appendix B**.

3.1 Phase I Mapping

Phase I mapping must be completed within two (2) years of the effective date of the permit (July 1, 2020) and include the following information:

- Outfalls and receiving waters (previously required by the MS4-2003 permit)
- Open channel conveyances (swales, ditches, etc.)
- Interconnections with other MS4s and other storm sewer systems
- Municipally owned stormwater treatment structures
- Water bodies identified by name and indication of all use impairments as identified on the most recent EPA approved Massachusetts Integrated List of Waters report
- Initial catchment delineations. Topographic contours and drainage system information may be used to produce initial catchment delineations.

The Town of East Longmeadow has completed the following updates to its stormwater mapping to meet the Phase I requirements:

- Outfalls and receiving waters (previously required by the MS4-2003 permit)
- Open channel conveyances (swales, ditches, etc.)
- Interconnections with other MS4s and other storm sewer systems

- Municipally owned stormwater treatment structures
- Water bodies identified by name and indication of all use impairments as identified on the most recent EPA approved Massachusetts Integrated List of Waters report
- Initial catchment delineations

The Town of East Longmeadow will update its stormwater mapping by July 1, 2019 to include the remaining Phase I information.

3.2 Phase II Mapping

Phase II mapping must be completed within ten (10) years of the effective date of the permit (July 1, 2028) and include the following information:

- Outfall spatial location (latitude and longitude with a minimum accuracy of +/-30 feet)
- Pipes
- Manholes
- Catch basins
- Refined catchment delineations. Catchment delineations must be updated to reflect information collected during catchment investigations.
- Municipal Sanitary Sewer system

The Town of East Longmeadow has completed the following updates to its stormwater mapping to meet the Phase II requirements:

- Outfall spatial location (latitude and longitude with a minimum accuracy of +/-30 feet)
- Pipes
- Manholes
- Catch basins

- Refined catchment delineations. Catchment delineations must be updated to reflect information collected during catchment investigations.
- Municipal Sanitary Sewer system

The Town of East Longmeadow will update its stormwater mapping by July 1, 2028 to include the remaining following Phase II information.

3.3 Additional Recommended Mapping Elements

Although not a requirement of the 2016 MS4 Permit, the Town of East Longmeadow has included the following recommended elements in its storm system mapping:

- Storm sewer material, size (pipe diameter), age
- Sanitary sewer system material, size (pipe diameter), age
- Topography
- Orthophotography

4 Sanitary Sewer Overflows (SSOs)

The 2016 MS4 Permit requires municipalities to prohibit illicit discharges, including sanitary sewer overflows (SSOs), to the separate storm sewer system. SSOs are discharges of untreated sanitary wastewater from a municipal sanitary sewer that can contaminate surface waters, cause serious water quality problems and property damage, and threaten public health. SSOs can be caused by blockages, line breaks, sewer defects that allow stormwater and groundwater to overload the system, power failures, improper sewer design, and vandalism.

The Town of East Longmeadow has completed an inventory of SSOs that have discharged to the MS4 within the five (5) years prior to the effective date of the 2016 MS4 Permit, based on review of available documentation pertaining to SSOs (**Table 4-**

1). The inventory includes all SSOs that occurred during wet or dry weather resulting from inadequate conveyance capacities or where interconnectivity of the storm and sanitary sewer infrastructure allows for transfer of flow between systems.

Upon detection of an SSO, the Town of East Longmeadow will eliminate it as expeditiously as possible and take interim measures to minimize the discharge of pollutants to and from its MS4 until the SSO is eliminated. Upon becoming aware of an SSO to the MS4, the Town of East Longmeadow will provide oral notice to EPA within 24 hours and written notice to EPA and MassDEP within five (5) days of becoming aware of the SSO occurrence.

The inventory in **Table 4-1** will be updated by the Department of Public Works when new SSOs are detected. The SSO inventory will be included in the annual report, including the status of mitigation and corrective measures to address each identified SSO.

Table 4-1. SSO Inventory

East Longmeadow, Massachusetts

Revision Date: June 30, 2019

SSO Location[1]	Discharge Statement[2]	Date[3]	Time Start[3]	Time End[3]	Estimated Volume[4]	Description[5]	Mitigation Completed[6]	Mitigation Planned[7]
24 Franconia Circle	Direct to Receiving Water (Pecousic Brook)	2-29-16	11:00	11:30	1500 gallons	Sewer Blockage	Line jetted to remove blockage	Monthly Inspection
66 Smith Avenue	Ground surface	4-1-19	10:55	11:45	500 Gallons	Sewer Blockage	Line jetted to remove blockage	Monthly Inspection

[1] Location (approximate street crossing/address and receiving water, if any)

[2] A clear statement of whether the discharge entered a surface water directly or entered the MS4

[3] Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge)

[4] Estimated volume(s) of the occurrence

[5] Description of the occurrence indicating known or suspected cause(s)

[6] Mitigation and corrective measures completed with dates implemented

[7] Mitigation and corrective measures planned with implementation schedules

5 Assessment and Priority Ranking of Outfalls

The 2016 MS4 Permit requires an assessment and priority ranking of outfalls in terms of their potential to have illicit discharges and SSOs and the related public health significance. The ranking helps determine the priority order for performing IDDE investigations and meeting permit milestones.

5.1 Outfall Catchment Delineations

A catchment is the area that drains to an individual outfall[1] or interconnection.[2] The catchments for each of the MS4 outfalls will be delineated to define contributing areas for investigation of potential sources of illicit discharges. Catchments are typically delineated based on topographic contours and mapped drainage infrastructure, where available. As described in **Section 3**, initial catchment delineations will be completed as part of the Phase I mapping, and refined catchment delineations have been completed as part of the Phase II mapping to reflect information collected during catchment investigations

5.2 Outfall and Interconnection Inventory and Initial Ranking

The Department of Public Works will complete an initial outfall and interconnection inventory and priority ranking to assess illicit discharge potential based on existing information. The initial inventory and ranking will be completed within one (1) year

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[1] **Outfall** means a point source as defined by 40 CFR § 122.2 as the point where the municipal separate storm sewer discharges to waters of the United States. An outfall does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels or other conveyances that connect segments of the same stream or other waters of the United States and that are used to convey waters of the United States. Culverts longer than a simple road crossing shall be included in the inventory unless the permittee can confirm that they are free of any connections and simply convey waters of the United States.

[2] **Interconnection** means the point (excluding sheet flow over impervious surfaces) where the permittee's MS4 discharges to another MS4 or other storm sewer system, through which the discharge is conveyed to waters of the United States or to another storm sewer system and eventually to a water of the United States.

from the effective date of the permit. An updated inventory and ranking will be provided in each annual report thereafter. The inventory will be updated annually to include data collected in connection with dry weather screening and other relevant inspections.

The outfall and interconnection inventory will identify each outfall and interconnection discharging from the MS4, record its location and condition, and provide a framework for tracking inspections, screenings and other IDDE program activities.

Outfalls and interconnections will be classified into one of the following categories:

1. **Problem Outfalls**: Outfalls/interconnections with known or suspected contributions of illicit discharges based on existing information shall be designated as Problem Outfalls. This shall include any outfalls/interconnections where previous screening indicates likely sewer input. Likely sewer input indicators are any of the following:

    - Olfactory or visual evidence of sewage,
    - 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.

    Dry weather screening and sampling, as described in **Section 6** of this IDDE Plan and Part 2.3.4.7.b of the MS4 Permit, is not required for Problem Outfalls.

2. **High Priority Outfalls**: Outfalls/interconnections that have not been classified as Problem Outfalls and that are:

    - Discharging to an area of concern to public health due to proximity of public beaches, recreational areas, drinking water supplies or shellfish beds
    - Determined by the permittee as high priority based on the characteristics listed below or other available information.

3. **Low Priority Outfalls**: Outfalls/interconnections determined by the permittee as low priority based on the characteristics listed below or other available information.

4. **Excluded outfalls**: Outfalls/interconnections with no potential for illicit discharges may be excluded from the IDDE program. This category is limited to roadway drainage in undeveloped areas with no dwellings and no sanitary sewers; drainage for athletic fields, parks or undeveloped green space and

associated parking without services; cross-country drainage alignments (that neither cross nor are in proximity to sanitary sewer alignments) through undeveloped land.

Outfalls will be ranked into the above priority categories (except for excluded outfalls, which may be excluded from the IDDE program) based on the following characteristics of the defined initial catchment areas, where information is available. Additional relevant characteristics, including location-specific characteristics, may be considered but must be documented in this IDDE Plan.

- **Previous screening results** – previous screening/sampling results indicate likely sewer input (see criteria above for Problem Outfalls).
- **Past discharge complaints and reports.**
- **Poor receiving water quality** – the following guidelines are recommended to identify waters as having a high illicit discharge potential:
    - Exceeding water quality standards for bacteria
    - Ammonia levels above 0.5 mg/l
    - Surfactants levels greater than or equal to 0.25 mg/l
- **Density of generating sites** – Generating sites are those places, including institutional, municipal, commercial, or industrial sites, with a potential to generate pollutants that could contribute to illicit discharges. Examples of these sites include, but are not limited to, car dealers; car washes; gas stations; garden centers; and industrial manufacturing areas.
- **Age of development and infrastructure** – Industrial areas greater than 40 years old and areas where the sanitary sewer system is more than 40 years old will probably have a high illicit discharge potential. Developments 20 years or younger will probably have a low illicit discharge potential.
- **Sewer conversion** – Contributing catchment areas that were once serviced by septic systems, but have been converted to sewer connections may have a high illicit discharge potential.
- **Historic combined sewer systems** – Contributing areas that were once serviced by a combined sewer system, but have been separated may have a high illicit discharge potential.
- **Surrounding density of aging septic systems** – Septic systems thirty years or older in residential land use areas are prone to have failures and may have a high illicit discharge potential.

- **Culverted streams** – Any river or stream that is culverted for distances greater than a simple roadway crossing may have a high illicit discharge potential.

- **Water quality limited waterbodies** that receive a discharge from the MS4 or waters with approved TMDLs applicable to the permittee, where illicit discharges have the potential to contain the pollutant identified as the cause of the water quality impairment.

Table 5-1 contains the initial outfall inventory and priority ranking matrix.

NOTE: Per Section 2.3.4.7.a.iii. of the 2016 Small MS4 General Permit, outfalls to receiving waters associates with approved TMDLs applicable to the permittee, where illicit discharges have the potential to contain the pollutant identified as the cause of the water quality impairment should be identified as High Priority outfalls. As the entirety of the Town is located within the Connecticut River/Long Island Sound watershed, ranking outfalls within the Town as High Priority does not allow for differentiation or priority use of resources on the IDDE Program. Therefore, upon the development of the final Notrogen Source Identification Report in permit year four, potential catchments determined to have high nitrogen loading will be reassessed as High Priority Catchments

Table 5-1. Outfall Inventory and Priority Ranking Matrix

East Longmeadow, Massachusetts

Revision Date: January 22, 2019

Outfall ID	Receiving Water	Previous Screening Results Indicate Likely Sewer Input? [1]	Discharging to Area of Concern to Public Health? [2]	Frequency of Past Discharge Complaints	Receiving Water Quality [3]	Density of Generating Sites [4]	Age of Development/ Infrastructure [5]	Historic Combined Sewers or Septic? [6]	Aging Septic? [7]	Culverted Streams? [8]	Additional Characteristics	Score	Priority Ranking
Information Source		Outfall inspections and sample results	GIS Maps	Town Staff	Impaired Waters List	Land Use/GIS Maps, Aerial Photography	Land Use Information, Visual Observation	Town Staff, GIS Maps	Land Use, Town Staff	GIS and Storm System Maps	Other		
Scoring Criteria		Yes = 3 (Problem Outfall) No = 0	Yes = 3 No = 0	Frequent = 3 Occasional = 2 None = 0	Poor = 3 Fair = 2 Good = 0	High = 3 Medium = 2 Low = 1	High = 3 Medium = 2 Low = 1	Yes = 3 No = 0	Yes = 3 No = 0	Yes = 3 No = 0	TBD		
WB-038	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-037	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-036	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MRD-002	Mill Road Conservation	0	0	0	0	1	2	0	3	0	0	6	HIGH
MRD-001	Mill Road Conservation	0	0	0	0	1	2	0	0	0	0	3	LOW
MRD-004	Mill Road Conservation	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-035	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
WB-054	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-053	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-052	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-051	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
MR-008	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH

MR-007	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-006	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-005	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-050	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-004	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-003	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-002	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-001	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-024	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-023	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-022	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-021	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-020	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH
MR-019	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-018	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-017	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH
MR-016	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-015	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-014	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-013	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-012	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-011	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH
MR-010	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW

MR-009	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-038	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-037	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-036	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-035	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
PRD-004	Mill River	0	3	0	0	1	2	0	0	0	0	6	HIGH
PRD-003	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
PRD-002	Mill River	0	3	0	0	1	2	0	0	0	0	6	HIGH
MR-034	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-049	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-048	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-047	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-046	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-045	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-044	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-043	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-042	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-041	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-040	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-039	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-070	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-069	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-033	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW

WB-067	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-066	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-065	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-064	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-063	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-062	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-061	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-060	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-032	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-031	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-059	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-058	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-057	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-056	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-028	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-055	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-086	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-085	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-084	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-083	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-082	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-081	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-080	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH

WB-079	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-078	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-077	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-076	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-075	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
WB-074	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-073	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
WB-072	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-071	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-102	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
WB-101	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-100	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-099	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-098	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-097	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-096	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-095	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-094	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-093	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-092	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-091	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-090	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-089	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

WB-088	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-087	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-118	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-117	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-116	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-115	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-114	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-014	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-113	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-112	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-111	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-110	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
MR-027	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-026	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-109	Watchaug Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
WB-108	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
WB-107	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
WB-106	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
WB-105	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
WB-104	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
WB-103	Watchaug Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
PB-013	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-016	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH

WB-015	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-012	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-011	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-010	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-009	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-008	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-007	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-006	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-005	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-004	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-003	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-014	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-002	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
SB-008	Schnelock Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
SB-007	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
SB-006	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
SB-005	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
SB-004	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
SB-003	Schnelock Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-001	Pecousic Brook	0	0	0	0	1	2	0	0	3	0	6	HIGH
PB-030	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-029	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-028	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

PB-027	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-026	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-024	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-023	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-022	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-020	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-019	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-018	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-017	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-016	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-015	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-011	Jawbuck Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-013	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-012	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-011	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-010	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-009	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-008	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-007	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-006	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-010	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	4	HIGH
JB-009	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	4	HIGH
JB-008	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	4	HIGH

FB-012	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-005	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-004	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-003	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-007	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-006	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
WB-002	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
WB-001	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
JB-005	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-004	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-003	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-046	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-045	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-044	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-043	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
PB-042	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
PB-041	Pecousic Brook	0	3	0	0	1	2	0	3	0	0	9	HIGH
PB-040	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-039	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-038	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-037	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-036	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-035	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH

PB-034	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-032	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-031	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-030	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-029	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-028	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-027	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-026	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-025	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-024	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-011	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-010	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-009	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-008	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
FB-007	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-006	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-005	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-003	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
FB-002	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
FB-001	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
PB-033	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-032	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-031	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH

WB-023	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-022	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-021	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
SB-002	Schnelock Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-062	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-061	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-060	Pecousic Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
PB-059	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-058	Pecousic Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
PB-057	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-017	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
FB-016	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-002	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-001	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-015	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-056	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-055	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-054	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-053	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
PB-052	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
PB-051	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
L-004	Town of Longmeadow	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-050	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

L-003	Town of Longmeadow	0	0	0	0	1	2	0	3	0	0	6	HIGH
L-002	Town of Longmeadow	0	0	0	0	1	2	0	0	0	0	3	LOW
L-001	Town of Longmeadow	0	0	0	0	1	2	0	0	0	0	3	LOW
MRD-003	Mill Road Conservation	0	0	0	0	1	2	0	3	0	0	6	HIGH
FB-015	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-020	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-025	Mill River	0	0	0	0	1	2	0	3	0	0	6	HIGH
PRD-001	Mill River	0	3	0	0	1	2	0	0	0	0	6	HIGH
PB-049	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-047	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-078	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-077	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-076	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-075	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-074	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-073	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-019	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-072	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-071	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-014	Freshwater Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
WB-018	Watchaug Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
WB-017	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-034	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

SB-001	Schnelock Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-070	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-069	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-068	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-013	Jawbuck Brook	0	0	0	0	2	2	0	3	0	0	7	HIGH
JB-012	Jawbuck Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-067	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-066	Pecousic Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
PB-065	Pecousic Brook	0	3	0	0	1	2	0	0	0	0	6	HIGH
DRD-004	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	LOW
DRD-003	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	LOW
DRD-002	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	LOW
DRD-001	City of Springfield	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-064	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-063	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-094	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-093	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-092	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-091	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-090	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-089	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-088	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-087	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

PB-086	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
FB-013	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-084	Pecousic Brook	0	0	0	0	3	2	0	3	0	0	8	HIGH
PB-083	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-082	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-081	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-033	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-080	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-079	Pecousic Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
PB-095	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-119	Watchaug Brook	0	0	0	0	1	2	0	3	0	0	6	HIGH
L-005	Town of Longmeadow	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-018	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
FB-019	Freshwater Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
JB-019	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
FB-022	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
PB-096	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-097	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-020	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
PB-098	Pecousic Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
WB-120	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PRD-005	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
PB-099	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

WB-121	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
MR-039	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-122	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-123	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-016	Jawbuck Brook	0	0	0	0	3	2	0	0	0	0	5	HIGH
FB-023	Freshwater Brook	0	0	0	0	2	2	0	0	0	0	4	LOW
MR-040	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-017	Jawbuck Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-018	Jawbuck Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-024	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
FB-025	Freshwater Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
PRD-006	Mill River	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-022	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH
WB-126	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
JB-021	Jawbuck Brook	0	3	0	0	2	2	0	0	0	0	7	HIGH
PB-100	Pecousic Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-124	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW
WB-125	Watchaug Brook	0	0	0	0	1	2	0	0	0	0	3	LOW

Scoring Criteria:

[1] Previous screening results indicate likely sewer input if any of the following are true:

- Olfactory or visual evidence of sewage,
- 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

[2] Outfalls/interconnections that discharge to or in the vicinity of any of the following areas: public beaches, recreational areas, drinking water supplies, or shellfish beds

[3] Receiving water quality based on latest version of MassDEP Integrated List of Waters.

- Poor = Waters with approved TMDLs (Category 4a Waters) where illicit discharges have the potential to contain the pollutant identified as the cause of the impairment
- Fair = Water quality limited waterbodies that receive a discharge from the MS4 (Category 5 Waters)
- Good = No water quality impairments

[4] Generating sites are institutional, municipal, commercial, or industrial sites with a potential to contribute to illicit discharges (e.g., car dealers, car washes, gas stations, garden centers, industrial manufacturing, etc.)

[5] Age of development and infrastructure:

- High = Industrial areas greater than 40 years old and areas where the sanitary sewer system is more than 40 years old
- Medium = Developments 20-40 years old
- Low = Developments less than 20 years old

[6] Areas once served by combined sewers and but have been separated, or areas once served by septic systems but have been converted to sanitary sewers.

[7] Aging septic systems are septic systems 30 years or older in residential areas.

[8] Any river or stream that is culverted for distance greater than a simple roadway crossing.

6 Dry Weather Outfall Screening and Sampling

Dry weather flow is a common indicator of potential illicit connections. The MS4 Permit requires all outfalls/interconnections (excluding Problem and excluded Outfalls) to be inspected for the presence of dry weather flow. The Department of Public Works is responsible for conducting dry weather outfall screening, starting with High Priority outfalls, followed by Low Priority outfalls, based on the initial priority rankings described in the previous section.

6.1 Weather Conditions

Dry weather outfall screening and sampling may occur when no more than 0.1 inches of rainfall has occurred in the previous 24-hour period and no significant snow melt is occurring. For purposes of determining dry weather conditions, program staff will use precipitation data from a municipal rain gage located at the Chestnut Street Pump Station.

6.2 Dry Weather Screening/Sampling Procedure

6.2.1 General Procedure

The dry weather outfall inspection and sampling procedure consists of the following general steps:

1. Identify outfall(s) to be screened/sampled based on initial outfall inventory and priority ranking
2. Acquire the necessary staff, mapping, and field equipment (see **Table 6-1** for list of potential field equipment)
3. Conduct the outfall inspection during dry weather:
    a. Mark and photograph the outfall
    b. Record the inspection information and outfall characteristics (using paper forms or digital form using a tablet or similar device) (see form in **Appendix C**)
    c. Look for and record visual/olfactory evidence of pollutants in flowing outfalls including odor, color, turbidity, and floatable matter (suds, bubbles, excrement, toilet paper or sanitary products). Also observe

outfalls for deposits and stains, vegetation, and damage to outfall structures.

4. If flow is observed, sample and test the flow following the procedures described in the following sections.
5. If no flow is observed, but evidence of illicit flow exists (illicit discharges are often intermittent or transitory), revisit the outfall during dry weather within one week of the initial observation, if practicable, to perform a second dry weather screening and sample any observed flow. Other techniques can be used to detect intermittent or transitory flows including conducting inspections during evenings or weekends and using optical brighteners.
6. Input results from screening and sampling into spreadsheet/database. Include pertinent information in the outfall/interconnection inventory and priority ranking.
7. Include all screening data in the annual report.

Previous outfall screening/sampling conducted under the 2013 MS4 Permit may be used to satisfy the dry weather outfall/screening requirements of the 2016 MS4 Permit only if the previous screening and sampling was substantially equivalent to that required by the 2016 MS4 Permit, including the list of analytes outlined in Section 2.3.4.7.b.iii.4 of the 2016 permit.

6.2.2 Field Equipment

Table 6-1 lists field equipment commonly used for dry weather outfall screening and sampling.

Table 6-1. Field Equipment – Dry Weather Outfall Screening and Sampling

Equipment	Use/Notes
Samsung Tablet	For data input, photographs and mapping
Chain of Custody Forms	To ensure proper handling of all samples
Pens/Pencils/Permanent Markers	For proper labeling
Nitrile Gloves	To protect the sampler as well as the sample from contamination
Flashlight/headlamp w/batteries	For looking in outfalls or manholes, helpful in early mornings as well

Equipment	Use/Notes
Cooler with Ice	For transporting samples to the laboratory
Personal Protective Equipment (PPE)	Reflective vest, Safety glasses and boots at a minimum
GPS Receiver	For taking spatial location data
Water Quality Meter	Hand held meter, if available, for testing for various water quality parameters such as ammonia, chlorine, conductivity, temp and pH
Test Kits	Have extra kits on hand to sample more outfalls than are anticipated to be screened in a single day
Label Tape	For labeling sample containers
Sample Containers	Make sure all sample containers are clean. Keep extra sample containers on hand at all times. Make sure there are proper sample containers for what is being sampled for (i.e., bacteria requires sterile containers).
Pry Bar or Pick	For opening catch basins and manholes when necessary
Sandbags	For damming low flows in order to take samples
Small Mallet or Hammer	Helping to free stuck manhole and catch basin covers
Utility Knife	Multiple uses
Measuring Tape	Measuring distances and depth of flow
Safety Cones	Safety
Hand Sanitizer	Disinfectant/decontaminant
Zip Ties/Duct Tape	For making field repairs
Rubber Boots/Waders	For accessing shallow streams/areas
Sampling Pole/Dipper/Sampling Cage	For accessing hard to reach outfalls and manholes

6.2.3 Sample Collection and Analysis

If flow is present during a dry weather outfall inspection, a sample will be collected and analyzed for the required permit parameters[3] listed in **Table 6-2**. The general procedure for collection of outfall samples is as follows:

1. Fill out all sample information on sample bottles and field sheets (see **Appendix C** for Sample Labels and Field Sheets)
2. Put on protective gloves (nitrile/latex/other) before sampling
3. Collect sample with dipper or directly in sample containers. If possible, collect water from the flow directly in the sample bottle. Be careful not to disturb sediments.
4. If using a dipper or other device, triple rinse the device with distilled water and then in water to be sampled (not for bacteria sampling)
5. Use test strips, test kits, and field meters (rinse similar to dipper) for most parameters (see **Table 6-2**)
6. Place laboratory samples on ice for analysis of bacteria and pollutants of concern
7. Fill out chain-of-custody form (**Appendix C**) for laboratory samples
8. Deliver samples to ConTest
9. Dispose of used test strips and test kit ampules properly
10. Decontaminate all testing personnel and equipment

In the event that an outfall is submerged, either partially or completely, or inaccessible, field staff will proceed to the first accessible upstream manhole or structure for the observation and sampling and report the location with the screening results. Field staff will continue to the next upstream structure until there is no longer an influence from the receiving water on the visual inspection or sampling.

Field test kits or field instrumentation are permitted for all parameters except indicator bacteria and any pollutants of concern. Field kits need to have appropriate detection limits and ranges. **Table 6-2** lists various field test kits and field instruments that can be used for outfall sampling associated with the 2016 MS4 Permit parameters, other

[3] Other potentially useful parameters, although not required by the MS4 Permit, include **fluoride** (indicator of potable water sources in areas where water supplies are fluoridated), **potassium** (high levels may indicate the presence of sanitary wastewater), and **optical brighteners** (indicative of laundry detergents).

than indicator bacteria and any pollutants of concern. Analytic procedures and user's manuals for field test kits and field instrumentation are provided in **Appendix D**.

Table 6-2. Sampling Parameters and Analysis Methods

Analyte or Parameter	Instrumentation (Portable Meter)	Field Test Kit
Ammonia		Hach™ Ammonia Test Strips
Surfactants (Detergents)		K-9404 Hach™ DE-2
Chlorine		Hach™ Chlorine Test Strips
Conductivity	Hach™ Model HQd	NA
Temperature	Hach™ Model HQd	NA
Salinity	Hach™ Model HQd	NA
Indicator Bacteria: *E. coli* (freshwater) or Enterococcus (saline water)	EPA certified laboratory procedure (40 CFR § 136)	NA
Total Nitrogen	EPA certified laboratory procedure (40 CFR § 136)	NA

[1] Where the discharge is directly into a water quality limited water or a water subject to an approved TMDL, the sample must be analyzed for the pollutant(s) of concern identified as the cause of the water quality impairment.

Testing for indicator bacteria and any pollutants of concern must be conducted using analytical methods and procedures found in 40 CFR § 136.[4] Samples for laboratory

[4] 40 CFR § 136: http://www.ecfr.gov/cgi-bin/text-idx?SID=b3b41fdea0b7b0b8cd6c4304d86271b7&mc=true&node=pt40.25.136&rgn=div5

analysis must also be stored and preserved in accordance with procedures found in 40 CFR § 136. **Table 6-3** lists analytical methods, detection limits, hold times, and preservatives for laboratory analysis of dry weather sampling parameters.

Table 6-3. Required Analytical Methods, Detection Limits, Hold Times, and Preservatives[4]

Analyte or Parameter	Analytical Method	Detection Limit	Max. Hold Time	Preservative
Ammonia	**EPA**: 350.2, **SM**: 4500-NH3C	0.05 mg/L	28 days	Cool ≤6°C, H_2SO_4 to pH <2, No preservative required if analyzed immediately
Surfactants	**SM**: 5540-C	0.01 mg/L	48 hours	Cool ≤6°C
Chlorine	**SM**: 4500-Cl G	0.02 mg/L	Analyze within 15 minutes	None Required
Temperature	**SM**: 2550B	*NA*	Immediate	None Required
Specific Conductance	**EPA**: 120.1, **SM**: 2510B	0.2 µs/cm	28 days	Cool ≤6°C
Salinity	**SM**: 2520	-	28 days	Cool ≤6°C
Indicator Bacteria: *E.coli*	*E.coli* **EPA**: 1603 **SM**: 9221B, 9221F , 9223 B **Other**: Colilert®, Colilert-18®	*E.coli* **EPA**: 1 cfu/100mL **SM**: 2 MPN/100mL **Other**: 1 MPN/100mL	8 hours	Cool ≤10°C, 0.0008% $Na_2S_2O_3$

Analyte or Parameter	Analytical Method	Detection Limit	Max. Hold Time	Preservative
Total Nitrogen	SM 4500 NH3-C	40 CFR 136	40 CFR 136	40 CFR 136

SM = Standard Methods

6.3 Interpreting Outfall Sampling Results

Outfall analytical data from dry weather sampling can be used to help identify the major type or source of discharge. **Table 6-4** shows values identified by the U.S. EPA and the Center for Watershed Protection as typical screening values for select parameters. These represent the typical concentration (or value) of each parameter expected to be found in stormwater. Screening values that exceed these benchmarks may be indicative of pollution and/or illicit discharges.

Table 6-4. Benchmark Field Measurements for Select Parameters

Analyte or Parameter	Benchmark
Ammonia	>0.5 mg/L
Conductivity	>2,000 µS/cm
Surfactants	>0.25 mg/L
Chlorine	>0.02 mg/L (detectable levels per the 2016 MS4 Permit)
Indicator Bacteria[5]: *E.coli*	*E.coli*: the geometric mean of the five most recent samples taken during the same bathing season shall not exceed 126 colonies per 100 ml and no single sample taken during the bathing season shall exceed 235 colonies per 100 ml
Total Nitrogen	As per 40 CFR 136

6.4 Follow-up Ranking of Outfalls and Interconnections

The Town of East Longmeadow will update and re-prioritize the initial outfall and interconnection rankings based on information gathered during dry weather screening. The rankings will be updated periodically as dry weather screening information becomes available, but will be completed within three (3) years of the effective date of the permit (July 1, 2020).

[5] Massachusetts Water Quality Standards: http://www.mass.gov/eea/docs/dep/service/regulations/314cmr04.pdf

Outfalls/interconnections where relevant information was found indicating sewer input to the MS4 or sampling results indicating sewer input are highly likely to contain illicit discharges from sanitary sources.

Such outfalls/interconnections will be ranked at the top of the High Priority Outfalls category for investigation. Other outfalls and interconnections may be re-ranked based on any new information from the dry weather screening.

7 Catchment Investigations

Once stormwater outfalls with evidence of illicit discharges have been identified, various methods can be used to trace the source of the potential discharge within the outfall catchment area. Catchment investigation techniques include but are not limited to review of maps, historic plans, and records; manhole observation; dry and wet weather sampling; video inspection; smoke testing; and dye testing. This section outlines a systematic procedure to investigate outfall catchments to trace the source of potential illicit discharges. All data collected as part of the catchment investigations will be recorded and reported in each annual report.

7.1 System Vulnerability Factors

The Department of Public Works will review relevant mapping and historic plans and records to identify areas within the catchment with higher potential for illicit connections. The following information will be reviewed:

- Plans related to the construction of the drainage network
- Plans related to the construction of the sewer drainage network
- Prior work on storm drains or sewer lines

- Board of Health or other municipal data on septic systems
- Complaint records related to SSOs
- Septic system breakouts.

Based on the review of this information, the presence of any of the following **System Vulnerability Factors (SVFs)** will be identified for each catchment:

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages
- Common or twin-invert manholes serving storm and sanitary sewer alignments
- Common trench construction serving both storm and sanitary sewer alignments
- Crossings of storm and sanitary sewer alignments where the sanitary system is shallower than the storm drain system
- Sanitary sewer alignments known or suspected to have been constructed with an underdrain system
- Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints
- Areas formerly served by combined sewer systems
- Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations
- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs
- Any sanitary sewer and storm drain infrastructure greater than 40 years old
- Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance)
- History of multiple Board of Health actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance).

A SVF inventory will be documented for each catchment (see **Table 7-1**), retained as part of this IDDE Plan, and included in the annual report.

Table 7-1. Outfall Catchment System Vulnerability Factor (SVF) Inventory

East Longmeadow, Massachusetts

Revision Date: June 18, 2019

Outfall ID	Receiving Water	1 History of SSOs	2 Common or Twin Invert Manholes	3 Common Trench Construction	4 Storm/Sanitary Crossings (Sanitary Above)	5 Sanitary Lines with Underdrains	6 Inadequate Sanitary Level of Service	7 Areas Formerly Served by Combined Sewers	8 Sanitary Infrastructure Defects	9 SSO Potential In Event of System Failures	10 Sanitary and Storm Drain Infrastructure >40 years Old	11 Septic with Poor Soils or Water Table Separation	12 History of BOH Actions Addressing Septic Failure
WB-038	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-037	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-036	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
MRD-002	Mill Road Conservation	No	No	No	No	No	No	No	No	Yes	Yes	No	No
MRD-001	Mill Road Conservation	No	No	No	No	No	No	No	No	No	Yes	No	No
MRD-004	Mill Road Conservation	No	No	No	No	No	No	No	No	Yes	Yes	No	No
WB-035	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-054	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-053	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-052	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-051	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-008	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-007	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-006	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-005	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
WB-050	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
MR-004	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No

MR-003	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-002	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-001	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-024	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-023	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-022	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-021	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-020	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-019	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-018	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-017	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-016	Mill River	No	No	No	No	No	No	No	No	Yes	No	No	No
MR-015	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-014	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-013	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-012	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
MR-011	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-010	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-009	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-038	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-037	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-036	Mill River	No	No	No	No	No	No	No	No	Yes	Yes	No	No
MR-035	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No

PRD-004	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
PRD-003	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
PRD-002	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-034	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-049	Watchaug Brook	No	No	No	No	No	No	No	No	Yes	No	No	No
WB-048	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-047	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-046	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-045	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-044	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-043	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-042	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-041	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-040	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-039	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-070	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-069	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
MR-033	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-067	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-066	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-065	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-064	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-063	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

WB-062	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-061	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-060	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-032	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-031	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-059	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-058	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-057	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-056	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-028	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-055	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-086	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-085	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-084	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-083	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-082	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-081	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-080	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-079	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-078	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-077	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-076	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-075	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

WB-074	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-073	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-072	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-071	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-102	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-101	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-100	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-099	Watchaug Brook	No	No	No	No	No	No	No	No	Yes	No	No	No
WB-098	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-097	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-096	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-095	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-094	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-093	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-092	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-091	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-090	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-089	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-088	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-087	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-118	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-117	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-116	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

WB-115	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-114	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-014	Pecousic Brook	No	No	No	No	No	No	No	No	Yes	Yes	No	No
WB-113	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-112	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-111	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-110	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
MR-027	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-026	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
WB-109	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-108	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-107	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-106	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-105	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-104	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-103	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
PB-013	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-016	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-015	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-012	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-011	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-010	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-009	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

PB-008	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-007	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-006	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-005	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-004	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-003	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-014	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-002	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
SB-008	Schnelock Brook	No	No	No	No	No	No	No	No	Yes	Yes	No	No
SB-007	Schnelock Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
SB-006	Schnelock Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
SB-005	Schnelock Brook	No	No	No	No	No	No	No	No	Yes	No	No	No
SB-004	Schnelock Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
SB-003	Schnelock Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-001	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-030	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-029	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-028	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-027	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-026	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-024	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-023	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-022	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

PB-020	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-019	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-018	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-017	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-016	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-015	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-011	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-013	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-012	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-011	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-010	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-009	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-008	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-007	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-006	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
JB-010	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-009	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-008	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-012	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-005	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-004	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-003	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
JB-007	Jawbuck Brook	No	No	No	No	No	No	No	No	Yes	Yes	No	No

JB-006	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-002	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-001	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-005	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-004	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-003	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-046	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-045	Pecousic Brook	No	No	No	No	No	No	No	No	No	No	No	No
PB-044	Pecousic Brook	No	No	No	No	No	No	No	No	No	No	No	No
PB-043	Pecousic Brook	No	No	No	No	No	No	No	No	No	No	No	No
PB-042	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-041	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-040	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-039	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-038	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-037	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-036	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-035	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-034	Pecousic Brook	Yes	No	No	No	No	No	No	No	No	Yes	No	No
WB-032	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-031	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-030	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-029	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

WB-028	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-027	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-026	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-025	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-024	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-011	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-010	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-009	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-008	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-007	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-006	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-005	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-003	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-002	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
FB-001	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
PB-033	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-032	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-031	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-023	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-022	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-021	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
SB-002	Schnelock Brook	No	No	No	No	No	No	No	No	No	No	No	No
PB-062	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

PB-061	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-060	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-059	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-058	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-057	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-017	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-016	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-002	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-001	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-015	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-056	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-055	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-054	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-053	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-052	Pecousic Brook	Yes	No	No	No	No	No	No	No	No	Yes	No	No
PB-051	Pecousic Brook	Yes	No	No	No	No	No	No	No	No	Yes	No	No
L-004	Town of Longmeadow	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-050	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
L-003	Town of Longmeadow	No	No	No	No	No	No	No	No	No	Yes	No	No
L-002	Town of Longmeadow	No	No	No	No	No	No	No	No	No	Yes	No	No
L-001	Town of Longmeadow	No	No	No	No	No	No	No	No	No	Yes	No	No
MRD-003	Mill Road Conservation	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-015	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

WB-020	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
MR-025	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
PRD-001	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-049	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-047	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-078	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-077	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-076	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-075	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-074	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-073	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-019	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-072	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-071	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-014	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-018	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-017	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-034	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
SB-001	Schnelock Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-070	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-069	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-068	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-013	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

JB-012	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-067	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-066	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-065	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
DRD-004	City of Springfield	No	No	No	No	No	No	No	No	No	Yes	No	No
DRD-003	City of Springfield	No	No	No	No	No	No	No	No	No	Yes	No	No
DRD-002	City of Springfield	No	No	No	No	No	No	No	No	No	Yes	No	No
DRD-001	City of Springfield	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-064	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-063	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-094	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-093	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-092	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-091	Pecousic Brook	No	No	No	No	No	No	No	No	Yes	Yes	No	No
PB-090	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-089	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-088	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-087	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-086	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-013	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-084	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-083	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-082	Pecousic Brook	No	No	No	No	No	No	No	No	Yes	Yes	No	No

PB-081	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-033	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-080	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-079	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-095	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-119	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
L-005	Town of Longmeadow	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-018	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-019	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-019	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-022	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-096	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-097	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-020	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-098	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-120	Watchaug Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PRD-005	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-099	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-121	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
MR-039	Mill River	No	No	No	No	No	No	No	No	Yes	No	No	No
WB-122	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-123	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
JB-016	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No

FB-023	Freshwater Brook	No	No	No	No	No	No	No	No	No	No	No	No
MR-040	Mill River	No	No	No	No	No	No	No	No	No	No	No	No
JB-017	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-018	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-024	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
FB-025	Freshwater Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PRD-006	Mill River	No	No	No	No	No	No	No	No	No	Yes	No	No
JB-022	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-126	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
JB-021	Jawbuck Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
PB-100	Pecousic Brook	No	No	No	No	No	No	No	No	No	Yes	No	No
WB-124	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No
WB-125	Watchaug Brook	No	No	No	No	No	No	No	No	No	No	No	No

Presence/Absence Evaluation Criteria:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages
2. Common or twin-invert manholes serving storm and sanitary sewer alignments
3. Common trench construction serving both storm and sanitary sewer alignments
4. Crossings of storm and sanitary sewer alignments where the sanitary system is shallower than the storm drain system
5. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system
6. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints
7. Areas formerly served by combined sewer systems
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations
9. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old

11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance)
12. History of multiple Board of Health actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance)

7.2 Dry Weather Manhole Inspections

The Town of East Longmeadow will implement a dry weather storm drain network investigation that involves systematically and progressively observing, sampling and evaluating key junction manholes in the MS4 to determine the approximate location of suspected illicit discharges or SSOs.

The Department of Public Works will be responsible for implementing the dry weather manhole inspection program and making updates as necessary. Infrastructure information will be incorporated into the storm system map, and catchment delineations will be refined based on the field investigation, where necessary. The SVF inventory will also be updated based on information obtained during the field investigations, where necessary.

Several important terms related to the dry weather manhole inspection program are defined by the MS4 Permit as follows:

- **Junction Manhole** is a manhole or structure with two or more inlets accepting flow from two or more MS4 alignments. Manholes with inlets solely from private storm drains, individual catch basins, or both are not considered junction manholes for these purposes.

- **Key Junction Manholes** are those junction manholes that can represent one or more junction manholes without compromising adequate implementation of the illicit discharge program. Adequate implementation of the illicit discharge program would not be compromised if the exclusion of a particular junction manhole as a key junction manhole would not affect the permittee's ability to determine the possible presence of an upstream illicit discharge. A permittee may exclude a junction manhole located upstream from another located in the immediate vicinity or that is serving a drainage alignment with no potential for illicit connections.

For all catchments identified for investigation, during dry weather, field crews will systematically inspect **key junction manholes** for evidence of illicit discharges. This program involves progressive inspection and sampling at manholes in the storm drain network to isolate and eliminate illicit discharges.

The manhole inspection methodology will be conducted in one of two ways (or a combination of both):

- By working progressively up from the outfall and inspecting key junction manholes along the way, or
- By working progressively down from the upper parts of the catchment toward the outfall.

For most catchments, manhole inspections will proceed from the outfall moving up into the system.

However, the decision to move up or down the system depends on the nature of the drainage system and the surrounding land use and the availability of information on the catchment and drainage system. Moving up the system can begin immediately when an illicit discharge is detected at an outfall, and only a map of the storm drain system is required. Moving down the system requires more advance preparation and reliable drainage system information on the upstream segments of the storm drain system, but may be more efficient if the sources of illicit discharges are believed to be located in the upstream portions of the catchment area. Once a manhole inspection methodology has been selected, investigations will continue systematically through the catchment.

Inspection of key junction manholes will proceed as follows:

1. Manholes will be opened and inspected for visual and olfactory evidence of illicit connections. A sample field inspection form is provided in **Appendix C**.

2. If flow is observed, a sample will be collected and analyzed at a minimum for ammonia, chlorine, and surfactants. Field kits can be used for these analyses. Sampling and analysis will be in accordance with procedures outlined in **Section 6**. Additional indicator sampling may assist in determining potential sources (e.g., bacteria for sanitary flows, conductivity to detect tidal backwater, etc.).

3. Where sampling results or visual or olfactory evidence indicate potential illicit discharges or SSOs, the area draining to the junction manhole will be flagged for further upstream manhole investigation and/or isolation and confirmation of sources.

4. Subsequent key junction manhole inspections will proceed until the location of suspected illicit discharges or SSOs can be isolated to a pipe segment between two manholes.

5. If no evidence of an illicit discharge is found, catchment investigations will be considered complete upon completion of key junction manhole sampling.

7.3 Wet Weather Outfall Sampling

Where a minimum of one (1) System Vulnerability Factor (SVF) is identified based on previous information or the catchment investigation, a wet weather investigation must also be conducted at the associated outfall. The Department of Public Works will be responsible for implementing the wet weather outfall sampling program and making updates as necessary.

Outfalls will be inspected and sampled under wet weather conditions, to the extent necessary, to determine whether wet weather-induced high flows in sanitary sewers or high groundwater in areas served by septic systems result in discharges of sanitary flow to the MS4.

Wet weather outfall sampling will proceed as follows:

1. At least one wet weather sample will be collected at the outfall for the same parameters required during dry weather screening.

2. Wet weather sampling will occur during or after a storm event of sufficient depth or intensity to produce a stormwater discharge at the outfall. There is no specific rainfall amount that will trigger sampling, although minimum storm event intensities that are likely to trigger sanitary sewer interconnections are preferred. To the extent feasible, sampling should occur during the spring (March through June) when groundwater levels are relatively high.

3. If wet weather outfall sampling indicates a potential illicit discharge, then additional wet weather source sampling will be performed, as warranted, or source isolation and confirmation procedures will be followed as described in **Section 7.4**.

4. If wet weather outfall sampling does not identify evidence of illicit discharges, and no evidence of an illicit discharge is found during dry weather manhole inspections, catchment investigations will be considered complete.

7.4 Source Isolation and Confirmation

Once the source of an illicit discharge is approximated between two manholes, more detailed investigation techniques will be used to isolate and confirm the source of the illicit discharge. The following methods may be used in isolating and confirming the source of illicit discharges

- Sandbagging
- Smoke Testing
- Dye Testing
- CCTV/Video Inspections
- Optical Brightener Monitoring
- IDDE Canines

These methods are described in the sections below. Instructions and Standard Operating Procedures (SOPs) for these and other IDDE methods are provided in **Appendix F**.

Public notification is an important aspect of a detailed source investigation program. Prior to smoke testing, dye testing, or TV inspections, the Department of Public Works will notify property owners in the affected area. Smoke testing notification will include robocalls and hanging notifications for single family homes, businesses and building lobbies for multi-family dwellings.

7.4.1 Sandbagging

This technique can be particularly useful when attempting to isolate intermittent illicit discharges or those with very little perceptible flow. The technique involves placing sandbags or similar barriers (e.g., caulking, weirs/plates, or other temporary barriers) within outlets to manholes to form a temporary dam that collects any intermittent flows that may occur. Sandbags are typically left in place for 48 hours, and should only be installed when dry weather is forecast. If flow has collected behind the sandbags/barriers after 48 hours it can be assessed using visual observations or by sampling. If no flow collects behind the sandbag, the upstream pipe network can be ruled out as a source of the intermittent discharge. Finding appropriate durations of dry weather and the need for multiple trips to each manhole makes this method both time-consuming and somewhat limiting.

7.4.2 Smoke Testing

Smoke testing involves injecting non-toxic smoke into drain lines and noting the emergence of smoke from sanitary sewer vents in illegally connected buildings or from cracks and leaks in the system itself. Typically a smoke bomb or smoke generator is used to inject the smoke into the system at a catch basin or manhole and air is then forced through the system. Test personnel are place in areas where there are suspected illegal connections or cracks/leaks, noting any escape of smoke (indicating an illicit connection or damaged storm drain infrastructure). It is important when using this technique to make proper notifications to area residents and business owners as well as local police and fire departments.

If the initial test of the storm drain system is unsuccessful then a more thorough smoke-test of the sanitary sewer lines can also be performed. Unlike storm drain smoke tests, buildings that do not emit smoke during sanitary sewer smoke tests may have problem connections and may also have sewer gas venting inside, which is hazardous.

It should be noted that smoke may cause minor irritation of respiratory passages. Residents with respiratory conditions may need to be monitored or evacuated from the area of testing altogether to ensure safety during testing.

7.4.3 Dye Testing

Dye testing involves flushing non-toxic dye into plumbing fixtures such as toilets, showers, and sinks and observing nearby storm drains and sewer manholes as well as stormwater outfalls for the presence of the dye. Similar to smoke testing, it is important to inform local residents and business owners. Police, fire, and local public health staff should also be notified prior to testing in preparation of responding to citizen phone calls concerning the dye and their presence in local surface waters.

A team of two or more people is needed to perform dye testing (ideally, all with two-way radios). One person is inside the building, while the others are stationed at the appropriate storm sewer and sanitary sewer manholes (which should be opened) and/or outfalls. The person inside the building adds dye into a plumbing fixture (i.e., toilet or sink) and runs a sufficient amount of water to move the dye through the plumbing system. The person inside the building then radios to the outside crew that the dye has been dropped, and the outside crew watches for the dye in the storm sewer and sanitary sewer, recording the presence or absence of the dye.

The test can be relatively quick (about 30 minutes per test), effective (results are usually definitive), and inexpensive. Dye testing is best used when the likely source of an illicit discharge has been narrowed down to a few specific houses or businesses.

7.4.4 CCTV/Video Inspection

Another method of source isolation involves the use of mobile video cameras that are guided remotely through stormwater drain lines to observe possible illicit discharges. IDDE program staff can review the videos and note any visible illicit discharges. While this tool is both effective and usually definitive, it can be costly and time consuming when compared to other source isolation techniques.

7.4.5 Optical Brightener Monitoring

Optical brighteners are fluorescent dyes that are used in detergents and paper products to enhance their appearance. The presence of optical brighteners in surface waters or dry weather discharges suggests there is a possible illicit discharge or insufficient removal through adsorption in nearby septic systems or wastewater treatment. Optical brightener monitoring can be done in two ways. The most common, and least expensive, methodology involves placing a cotton pad in a wire cage and securing it in a pipe, manhole, catch basin, or inlet to capture intermittent dry weather flows. The pad is retrieved at a later date and placed under UV light to determine the presence/absence of brighteners during the monitoring period. A second methodology uses handheld fluorometers to detect optical brighteners in water sample collected from outfalls or ambient surface waters. Use of a fluorometer, while more quantitative, is typically more costly and is not as effective at isolating intermittent discharges as other source isolation techniques.

7.4.6 IDDE Canines

Dogs specifically trained to smell human related sewage are becoming a cost-effective way to isolate and identify sources of illicit discharges. While not widespread at the moment, the use of IDDE canines is growing as is their accuracy. The use of IDDE canines is not recommended as a standalone practice for source identification; rather it is recommended as a tool to supplement other conventional methods, such as dye testing, in order to fully verify sources of illicit discharges.

7.5 Illicit Discharge Removal

When the specific source of an illicit discharge is identified, the Town of East Longmeadow will exercise its authority as necessary to require its removal. The annual report will include the status of IDDE investigation and removal activities including the following information for each confirmed source:

- The location of the discharge and its source(s)
- A description of the discharge
- The method of discovery
- Date of discovery
- Date of elimination, mitigation or enforcement action OR planned corrective measures and a schedule for completing the illicit discharge removal
- Estimate of the volume of flow removed.

7.5.1 Confirmatory Outfall Screening

Within one (1) year of removal of all identified illicit discharges within a catchment area, confirmatory outfall or interconnection screening will be conducted. The confirmatory screening will be conducted in dry weather unless System Vulnerability Factors have been identified, in which case both dry weather and wet weather confirmatory screening will be conducted. If confirmatory screening indicates evidence of additional illicit discharges, the catchment will be scheduled for additional investigation.

7.6 Ongoing Screening

Upon completion of all catchment investigations and illicit discharge removal and confirmation (if necessary), each outfall or interconnection will be re-prioritized for screening and scheduled for ongoing screening once every five (5) years. Ongoing screening will consist of dry weather screening and sampling consistent with the procedures described in **Section 6** of this plan. Ongoing wet weather screening and sampling will also be conducted at outfalls where wet weather screening was required due to System Vulnerability Factors and will be conducted in accordance with the procedures described in **Section 7.3**. All sampling results will be reported in the annual report.

8 Training

Annual IDDE training will be made available to all employees involved in the IDDE program. This training will at a minimum include information on how to identify illicit discharges and SSOs and may also include additional training specific to the functions of particular personnel and their function within the framework of the IDDE program. Training records will be maintained in **Appendix E**. The frequency and type of training will be included in the annual report.

9 Progress Reporting

The progress and success of the IDDE program will be evaluated on an annual basis. The evaluation will be documented in the annual report and will include the following indicators of program progress:

- Number of SSOs and illicit discharges identified and removed
- Number and percent of total outfall catchments served by the MS4 evaluated using the catchment investigation procedure
- Number of dry weather outfall inspections/screenings
- Number of wet weather outfall inspections/sampling events
- Number of enforcement notices issued
- All dry weather and wet weather screening and sampling results
- Estimate of the volume of sewage removed, as applicable
- Number of employees trained annually.

The success of the IDDE program will be measured by the IDDE activities completed within the required permit timelines.

Appendix A

Legal Authority

Section 8.070 STORMWATER MANAGEMENT

8.070.010 Definitions

The following definitions describe the meaning of the terms used in this by-law:

Adverse Impact: Harmful effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

Best Management Practices (BMP): Structural or biological devices that temporarily store or treat stormwater runoff to reduce flooding, remove pollutants, and provide other amenities. They can also be nonstructural practices that reduce pollutants at their source. Examples of BMPs are described in the Massachusetts Department of Environmental Protection's (MassDEP) stormwater design manual: Stormwater Management Handbook, Volume 2: Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Handbook (February 2008, MassDEP, as updated or amended).

Board of Public Works: The permitting and enforcement agency.

Construction Activity: Disturbance of the ground by removal of surface cover, grading, excavation, clearing or filling.

Detention: The temporary storage of storm runoff in a BMP, which is used to control the "peak discharge" rates, and which provides gravity settling of pollutants.

Discharge of Pollutants: The addition of a pollutant or combination of pollutants into a Municipal Separate Storm Sewer System (MS4) or into the waters of the Commonwealth from any source.

Groundwater: Water beneath the surface of the ground.

Illicit Discharge: Direct or indirect non-stormwater discharge to an MS4, except as specifically exempted in Illicit Stormwater Section 8.07.100. (D). The term does not include a discharge in compliance with a National Pollutant Discharge and Elimination System (NPDES) stormwater discharge permit or resulting from fire fighting or other municipal activities, not including Construction Activities.

Illicit Connection: Surface or subsurface drain or conveyance, which allows an illicit discharge into an MS4. Illicit connections include conveyances which allow a non-stormwater discharge to an MS4 including sewage, process wastewater or wash water and connections from indoor drains, sinks or toilets, regardless of whether said connection was previously allowed, permitted or approved before the effective date of this by-law.

Infiltration: The downward movement of water from the surface to the subsoil.

Municipal Separate Storm Sewer System (MS4): The system of conveyances designed or used for collecting or conveying stormwater, including road or street with a drainage system, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, drain channel, reservoir, and other drainage owned or operated by the Town of East Longmeadow.

National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit: A permit issued by the United States Environmental Protection Agency or jointly with the state that authorizes the discharge of pollutants to waters of the United States.

Non-Stormwater Discharges: Discharge to the MS4 not composed entirely of stormwater.

Peak Discharge: The maximum rate of flow during a storm.

Permeable soils: Soil materials with a sufficiently rapid infiltration rate so as to greatly reduce or eliminate surface and stormwater runoff.

Person: An individual, group of individuals, association, partnership, corporation, company, business, organization, trust, estate, administrative agency, public or quasi-public entity, the commonwealth or political subdivision thereof or the federal government, to the extent permitted by law and an officer, employee or agent of such person.

Pollutant: Any element or property of sewage, agricultural, industrial, commercial or residential waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is introduced into the MS4 or waters of the Commonwealth. Pollutants shall include, but not be limited to: dredged spoil, solid waste, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, hot fluids, wrecked or discarded equipment, rock, sand, and industrial, municipal, agricultural and residential waste discharged into water.

Retention: The holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

Runoff: Rainfall, snowmelt, or irrigation water flowing over the ground surface.

Stormwater: Runoff from precipitation or snow melt.

Stormwater Management Facility: A structural stormwater management measure, including stormwater management basins and filtration or other treatment systems.

Uncontaminated Water: Water containing no pollutants.

Uncontaminated Groundwater: Groundwater containing no pollutants.

Waters of the Commonwealth: All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and groundwater.

Wastewater: Sanitary waste or sludge and water used during manufacturing, cleaning or processing of materials that enters the MS4 or waters of the Commonwealth.

8.070.020 Purpose

(A) The purpose of this section is to better manage land development in order to protect, maintain, and enhance the public health, safety, and general welfare of the citizens of East Longmeadow by establishing minimum requirements and procedures to control the adverse impacts associated with stormwater runoff.

8.070.030 Authority

The Board of Public Works or its designee shall administer, enforce and implement this section. The Board of Public Works shall promulgate rules, regulations and a permitting process to effectuate the purposes of this section. Failure by the Board of Public Works to promulgate such rules and regulations shall not have the effect of suspending or invalidating this section.

8.070.040 Applicability

(A) *Applicability.* This by-law shall apply to activities that result in disturbance of one or more acres (43,560+ square feet) of land. In determining whether an activity is subject to jurisdiction under this by-law, the Board of Public Works or its designee and applicant shall consider the entirety of the project, including any likely future expansion, and not separate phases or segments thereof. The applicant shall not phase or segment a project to evade, defer or curtail review under this by-law. Except as authorized by the Board of Public Works or its designee, no person shall perform an activity that results in disturbance of one or more acres of land.

(B) *Exemptions.* The following uses and activities are exempt from compliance with this by-law:

1. Stormwater discharges resulting from land disturbance activities that are subject to an Order of Conditions issued by the Conservation Commission under the Wetlands Protection Act;

2. An agricultural activity which is in compliance with an approved soil conservation plan prepared or approved by the United States Natural Resource Conservation Service;

3. Logging which is in compliance with a timber management plan approved under the Forest Cutting Practices Act by Massachusetts Department of Conservation and Recreation;

4. Activities that do not disturb more than one acre (43,560 square feet) of land;

5. Construction of municipal utilities;

6. In-kind repairs to a stormwater treatment system deemed necessary by the East Longmeadow Board of Public Works; and

7. An emergency activity that is immediately necessary for the protection of life, property or the environment, as determined by the Board of Public Works.

(C) *Waivers.* The Board of Public Works may waive strict compliance with any requirement of this by-law or the rules and regulations promulgated hereunder upon written findings of fact setting forth the basis for the waiver by the Board of Public Works.

8.070.050 Permit Requirements

(A) *Permit required.* Prior to the approval of a Special Permit, Site Plan or waiver thereof or Building Permit for an activity regulated hereunder, a Stormwater Management Permit must be approved by the Board of Public Works or its designee.

(B) *Permit fees.* For Stormwater Management Permit fee shall be based on the amount of land to be disturbed at the site and the fee structure shall be established by the Board of Public Works by regulation. If, in the judgment of the Board of Public Works, or its designee consulting services are necessary or appropriate, the applicant shall, prior to a determination on an application, deposit with the Town, an amount determined by the Board of Public Works or its designee to be sufficient to cover the full costs of such services. All such consultants shall be selected by the Board of Public Works or its designee and paid out of said deposit. The Town will reimburse the applicant for any credits remaining after a consultant has been paid within thirty (30) days of said payment. In the event the deposit is insufficient to cover consultant services, the outstanding balance is to be paid by the applicant within 30 days of receipt of invoice for the outstanding balance.

(C) *Stormwater and erosion control plan.* The application for a stormwater management permit shall consist of submittal of a stormwater management and erosion control plan prepared in accordance with the rules and regulations.

(D) *Stormwater Management Performance Standards.* Projects that require a permit under this by-law must meet the Massachusetts Stormwater Management Standards.

8.070.060 Performance Bond

The Board of Public Works shall require from the developer a cash bond prior to the submittal of a building permit application for the construction of a development requiring a stormwater management facility. The amount of the security shall not be less than the total estimated construction cost of the stormwater management facility including the applicable prevailing wage cost for the project. The bond shall be forfeited for failure to complete work specified in the approved stormwater management permit, compliance with all of the provisions of this by-law and other applicable laws and rules and regulations, and any time limitations. No portion of the bond shall be released without an inspection of the work by the Board of Public Works or its designee. The bond shall not be fully released without submission to the Board of Public Works or its designee of acceptable "as-built" plans and certification of completion that the stormwater management facilities are in compliance with the permit and plans approved thereunder.

8.070.070 Certificate of Completion

The Board of Public Works or its designee shall issue a letter certifying completion upon receipt and approval of the final inspection reports, final plans, including evidence of recording of permanent easements, and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this by-law.

8.070.080 Illicit Discharges Purpose

The purpose of this portion of the by-law is to regulate illicit connections and discharges to the MS4,, to protect East Longmeadow's water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment, by:

(a) preventing pollutants from entering East Longmeadow's MS4;

(b) prohibiting illicit connections and unauthorized discharges to the MS4;

(c) requiring the removal of all such illicit connections;

(d) establishing the legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

8.070.090 Illicit Discharges Applicability

This section shall apply to flows entering the MS4.

8.070.100 Illicit Discharges Prohibited Activities

(A) *Illicit discharges.* No person shall dump, discharge, cause or allow to be discharged a pollutant or non-stormwater discharge into MS4s or into waters of the Commonwealth.

(B) *Illicit connections.* No person shall construct, use, allow, maintain or continue an illicit connection to an MS4, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection.

(C) *Obstruction of storm drain systems.* No person shall obstruct or interfere with the normal flow of stormwater into or out of an MS4 without prior approval from the Board of Public Works or its designee.

(D) *Exemptions.* This section shall not apply to the following non-stormwater discharges or flows provided that the source is not a significant contributor of a pollutant to MS4s:

1. waterline flushing;
2. flow from potable water sources;
3. springs;
4. natural flow from riparian habitats and wetlands;
5. diverted stream flow;
6. rising groundwater;
7. uncontaminated groundwater infiltrating (entering the MS4 from the ground through such means as defective pipes, pipe joints, connections, or manholes), or uncontaminated pumped groundwater;

8. water from exterior foundation drains, footing drains (not including active groundwater dewatering systems), sump pumps, or air conditioning condensation;
9. discharge from landscape irrigation or lawn watering;
10. water from individual residential car washing;
11. discharge from dechlorinated swimming pool water (less than one ppm chlorine) provided the water is allowed to stand for one week prior to draining and the pool is drained in such a way as not to cause a nuisance;
12. discharge from street sweeping;
13. discharge or flow resulting from ice and snow control operations
14. dye testing, provided verbal notification is given to the Board of Public Works or its designee prior to the time of the test;
15. discharge or flow resulting from fire fighting activities
16. non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order administered under the authority of the United States Environmental Protection Agency, provided that the discharge is in full compliance with the requirements of the permit, waiver, or order and applicable laws and regulations;
17. discharge for which advanced written approval is received from the Board of Public Works or its designee as necessary to protect public health, safety, welfare, and the environment; and
18. incidental discharge (e.g., dust, drops of fluids) from maintenance and normal activities related to allowed uses, which results in de minimus levels of pollution entering the MS4 or Waters of the Commonwealth in East Longmeadow. This by-law does not supersede any other local, state or federal requirements.

8.070.110 Notification of Spills

Notwithstanding any other requirements of local, state or federal law, as soon as a person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of a known or suspected release of materials at that facility operation which is resulting or may result in illicit discharge of pollutants that person shall take the necessary steps to ensure containment, and cleanup of the release. In the event of a release enters the MS4 or Waters of the Commonwealth in East Longmeadow, the person shall immediately notify the East Longmeadow Board of Public Works. Written confirmation of telephone, facsimile or in-person notifications shall be provided to the Board of Public Works or its designee within three business days thereafter. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained by said facility owner or operator for at least three years.

8.070.120 Enforcement

Any officer, employee, person or entity observing or having actual knowledge of a violation of this by-law or a rule or regulation adopted hereunder that he is responsible for enforcing may, as an alternative to seeking a criminal penalty for violation of this by-law, give the offender a ticket in a form in compliance with the requirements of and in the manner established in G.L. c. 40, §21D and Section 8.130 of the East Longmeadow General By-laws. The Board of Public Works shall designate the person or persons responsible for enforcement.

The Penalty for each violation of this stormwater management portion of the by-law and the rules and regulations adopted hereunder shall be $200.00 and each day or part thereof shall constitute a separate violation.

The Board of Public Works, in addition to issuing said tickets, may enforce the provisions of this by-law by injunctive relief if it determines that the health, safety or welfare of any resident or member of the public or that the well being of the community is or will be endangered by the violation(s).

Any permit issued pursuant to this by-law shall contain language requiring the applicant to pay any and all costs, including attorney fees and expert witness fees, incurred by the town in seeking court action regarding the enforcement of this by-law and the rules and regulations adopted hereunder.

The prior provisions of this by-law notwithstanding, the Board of Public Works or its designee may enter onto a person's land to inspect any work performed under a permit issued pursuant to this by-law. The Board of Public Works may also enter any property to determine if such property is in violation of this by-law or rules and regulations if it has a good faith basis to believe an activity requiring a permit is being performed on the property without such a permit.

The Board of Public Works may, for cause shown, suspend or terminate a person's connection to the MS4 and any permit issued pursuant to this by-law.

Notice of the intent to suspend or terminate a person's connection to the MS4 or a permit shall be given in writing to the owner of the property and the permit holder, if different, by delivering, to the owner to the address listed for taxation purposes in the Assessor's Office, and the permit holder at the address listed in the application; a copy of the notice of hearing shall be delivered at least ten (10) business days before said hearing date and shall, in addition, be mailed by 1st class mail, postage prepaid at least fourteen (14) days before said hearing.

The notice shall contain the:

1. Name and address of the owner of the property;
2. The name and address of the permit holder if different than the owner;
3. The action contemplated;
4. Statement of violations believed to exist; and
5. A statement that the owner and permit holder may present evidence regarding alleged violations.

If the Board of Public Works or its designee determines in writing that the public health, safety or welfare requires immediate action, it may suspend or terminate MS4 service and any permit immediately. However, in such a case, notice as set forth above, shall be delivered and mailed to the owner and permit holder, if different, informing them that they have fifteen (15) days from the date of the suspension or termination to appeal said action of the Board of Public Works.

8.070.130 Transitional Provisions

Property owners shall comply with the illicit discharges sections of this by-law, but such property owners shall in no case have more than six months from the effective date of the by-law to comply with its provisions, unless good cause is shown for the failure to comply with the by-law during that period.

RULES AND REGULATIONS
FOR THE
MANAGEMENT OF STORMWATER

EAST LONGMEADOW, MASSACHUSETTS

Town of East Longmeadow

Department of Public Works

January 23, 2012

Adopted by the East Longmeadow Board of Public Works at a Public Meeting on January 23, 2012.

Executive Summary

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Section 1
General

1.1 Authority

These Rules and Regulations are adopted by the Board of Public Works as the Stormwater permitting and enforcement agency pursuant to the Town of East Longmeadow General Bylaws Section 4.090(B) and Section 8.070. The Board of Public Works authorizes the Department of Public Works to act as its agent in implementing and enforcing these regulations.

1.2 Purpose

The purpose of these Stormwater Management Rules and Regulations is to better manage land development in order to protect, maintain, and enhance the public health, safety, and general welfare of the citizens of East Longmeadow by establishing minimum requirements and procedures to control the Adverse Impacts associated with Stormwater Runoff.

1.3 Applicability

This by-law shall apply to activities that result in disturbance of one or more acres (43,560+ square feet) of land. In determining whether an activity is subject to jurisdiction under this by-law, the Department of Public Works and Applicant shall consider the entirety of the project, including any likely future expansion, and not separate phases or segments thereof. The Applicant shall not phase or segment a project to evade, defer or curtail review under this by-law. Except as authorized by the Department of Public Works pursuant to these regulations, no Person shall perform an activity that results in disturbance of one or more acres of land.

1.4 Exemptions

The following uses and activities are exempt from compliance with this by-law:

1. Storm water discharges resulting from land disturbance activities that are subject to an Order of Conditions issued by the Conservation Commission under the Wetlands Protection Act;

2. An agricultural activity which is in compliance with an approved soil conservation plan prepared or approved by the United States Natural Resource Conservation Service;
3. Logging which is in compliance with a timber management plan approved under the Forest Cutting Practices Act by Massachusetts Department of Conservation and Recreation;
4. Activities that do not disturb more than one acre (43,560 square feet) of land;
5. Construction of municipal utilities;
6. In-kind repairs to a Stormwater treatment system deemed necessary by the East Longmeadow Board of Public Works or Department of Public Works; and

7. An emergency activity that is immediately necessary for the protection of life, property or the environment, as determined by the Board of Public Works or the Department of Public Works.

1.5 Amendments

These Rules and Regulations or any portion thereof may be amended from time to time in accordance with the General Bylaws Section 4.090 (B) and Section 8.070.030.

The Application for Stormwater Management Permit shall be governed by the Stormwater Rules and Regulations in effect at the time of submission of such application.

1.6 Coordination with Municipal Departments and Other Agencies

Compliance with these Rules and Regulations does not preclude the need to comply with other local, state and federal regulations.

1.7 Effective Date

These regulations become effective after approval by the Board of Public Works and publication.

Section 2
Definitions

As used in these Rules and Regulations, the following terms shall mean:

Adverse Impact: Harmful effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

Applicant - A Person, as hereinafter defined, who applies for the approval of a plan of a Paper Street Development. Applicant shall include an owner, his/her agent, representative or assigns.

Best Management Practices (BMP): Structural or biological devices that temporarily store or treat Stormwater Runoff to reduce flooding, remove Pollutants, and provide other amenities. They can also be nonstructural practices that reduce Pollutants at their source. Examples of BMPs are described in the Massachusetts Department of Environmental Protection's (MassDEP) stormwater design manual: Stormwater Management Handbook, Volume 2: Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Handbook (February 2008, MassDEP, as updated or amended).

Board of Public Works: The permitting and enforcement agency.

Construction Activity: Disturbance of the ground by removal of surface cover, grading, excavation, clearing or filling.

Design Storm: A rainfall event of specified size and return frequency that is used to calculate the Runoff volume and Peak Discharge rate to a BMP.

Detention: The temporary storage of Stormwater Runoff in a BMP, which is used to control the Peak Discharge rates, and which provides gravity settling of Pollutants.

Discharge of Pollutants: The addition of a Pollutant or combination of Pollutants into a Municipal Separate Storm Sewer System (MS4) or into the Waters of the Commonwealth from any source.

Drainage Area: That area contributing Runoff to a single point measured in a horizontal plane, which is enclosed by a Ridgeline.

Groundwater: Water beneath the surface of the ground.

Illicit Discharge: Direct or indirect Non-Stormwater Discharge to an MS4, except as specifically exempted in Illicit Stormwater Section 8.07.100. (D). The term does not include a discharge in compliance with a National Pollutant Discharge and Elimination System (NPDES) Stormwater discharge permit or resulting from fire fighting or other municipal activities, not including Construction Activities.

Illicit Connection: Surface or subsurface drain or conveyance, which allows an Illicit Discharge into an MS4. Illicit Connections include conveyances which allow a Non-Stormwater Discharge to an MS4 including sewage, process Wastewater or wash water and connections from indoor drains, sinks or toilets, regardless of whether said connection was previously allowed, permitted or approved before the effective date of this by-law.

Impervious Surfaces: Material or structure on or above the ground that prevents water infiltrating the underlying soil. Impervious Surfaces include paved roads, paved parking lots, sidewalks, and rooftops.

Infiltration: The downward movement of water from the surface to the subsoil.

Municipal Separate Storm Sewer System (MS4): The system of conveyances designed or used for collecting or conveying Stormwater, including road or street with a drainage system, gutter, curb, inlet, piped storm drain, pumping facility, Retention or Detention basin, drain channel, reservoir, and other drainage owned or operated by the Town of East Longmeadow.

National Pollutant Discharge Elimination System (NPDES) Stormwater discharge permit: A permit issued by the United States Environmental Protection Agency or jointly with the state that authorizes the Discharge of Pollutants to waters of the United States.

Non-Stormwater Discharges: Discharge to the MS4 not composed entirely of stormwater.

Outfall: The part of a storm drain or other Stormwater structure where the contents are released.

Peak Discharge: The maximum rate of flow during a storm.

Permeable Soils: Soil materials with a sufficiently rapid Infiltration rate so as to greatly reduce or eliminate surface and Stormwater Runoff.

Person: An individual, group of individuals, association, partnership, corporation, company, business, organization, trust, estate, administrative agency, public or quasi-public entity, the commonwealth or political subdivision thereof or the federal government, to the extent permitted by law and an officer, employee or agent of such Person.

Pollutant: Any element or property of sewage, agricultural, industrial, commercial or residential waste, Runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is introduced into the MS4 or Waters of the Commonwealth. Pollutants shall include, but not be limited to: dredged spoil, solid waste, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, hot fluids, wrecked or discarded equipment, rock, sand, and industrial, municipal, agricultural and residential waste discharged into water.

Recharge: The process by which Groundwater is replenished by precipitation through the percolation of Runoff and surface water through the soil.

Retention: The holding of Runoff in a basin without release except by means of evaporation, Infiltration, or emergency bypass.

Ridgeline: The maximum elevation that connects the upper boundary of a watershed.

Runoff: Rainfall, snowmelt, or irrigation water flowing over the ground surface.

Stormwater: Runoff from precipitation or snow melt.

Stormwater Management Facility: A structural Stormwater management measure, including Stormwater management basins and filtration or other treatment systems.

Swale: A depression or wide shallow ditch used to temporarily store, route, or filter Runoff.

Uncontaminated Water: Water containing no Pollutants.

Uncontaminated Groundwater: Groundwater containing no Pollutants.

Waters of the Commonwealth: All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and Groundwater.

Wastewater: Sanitary waste or sludge and water used during manufacturing, cleaning or processing of materials that enter the MS4 or waters of the Commonwealth.

Section 3
Permit Application Submission

3.1 Administrative Procedures and Requirements

Unless exempt under Section 1.4 of these Rules and Regulations, prior to disturbance of one or more acres (43,560+ square feet) of land, an Applicant shall file five (5) copies of a completed application package for a Stormwater Management Permit to the Department of Public Works. The Stormwater Management Application shall consist of the following:

1. A properly executed Application Form signed by the Applicant and all other owners of record, and providing all information requested. See Application Form in Appendix A.

2. A Stormwater Management and Erosion Control Plan, which shall be prepared and signed by a professional engineer licensed by the Commonwealth and which shall contain sufficient information to describe the nature and purpose of the proposed development. The plan, with contents as described in Section 3.3, shall serve as the basis for subsequent construction.

3. Supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which Stormwater Runoff shall be managed for the entire development.

4. Ongoing maintenance agreement.

5. A list of requested waivers, if applicable. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrate that strict compliance with the Bylaw or Rules and Regulations is not necessary to meet the purposes or objectives of the bylaw.

6. A non-refundable application fee, payable to the Town of East Longmeadow, in the amount calculated as follows:

Project Type	**Permit Review and Inspection Fee**
Minor Project – Single or Multifamily Residential	$100
Minor Project – Commercial or Residential Subdivision (less than 5 acre disturbed)	$500
Major Project – Commercial or Residential Subdivision (greater than 5 acre disturbed)	$500 + $100 per acre above 5 acres

If, in the judgment of the Department of Public Works, consulting services are necessary or appropriate, the Applicant shall, prior to a determination on an application, deposit with the Town, an amount determined by the Department of Public Works to be sufficient to cover the full costs of such services. All such consultants shall be selected by the Department of Public Works and paid out of said deposit. The Town will reimburse the Applicant for any credits remaining after a consultant has been paid within thirty (30) days of said payment. In the event the deposit is insufficient to cover consultant services, the outstanding balance is to be paid by the Applicant pursuant to procedures outlined in paragraphs 5.1 of these Rules and Regulations within 30 days of receipt of invoice for the outstanding balance.

3.2 Waivers

The Board of Public Works may waive strict compliance with any requirement of these rules and regulations upon written findings of fact setting forth the basis for the waiver by the Board of Public Works or the Department of Public Works. Any request for a waiver shall be made in writing at the time of the application.

3.3 Stormwater Management and Erosion Control Plan Contents

The Stormwater Management and Erosion Control Plan shall be prepared and signed by a professional engineer licensed by the Commonwealth which meets the design requirements provided by this by-law. The plan shall include sufficient information to evaluate the environmental characteristics of the affected areas, the potential impacts of the proposed development on water resources; and the effectiveness and acceptability of measures proposed for managing Stormwater Runoff. The plan must be designed to meet the Massachusetts Stormwater Management Standards as set forth in Section 4.2, and the erosion and sediment control performance standards in Section 4.3, and the Stormwater Management Handbook (February 2008, MassDEP, as updated or amended). The Applicant shall certify on the drawings that all clearing, grading, drainage, construction, and development shall be conducted in strict accordance with the plan. The minimum information submitted for support of a Stormwater Management and Erosion Control Plan shall be as follows:

1. A project narrative including a brief description of the project, amount and type of existing and proposed Impervious Surfaces, and how and where Stormwater will be controlled,
2. A locus map,
3. The existing zoning, and land use at the site,
4. The proposed land use,
5. The location(s) of existing and proposed easements,
6. The location of existing and proposed utilities,
7. The site's existing and proposed topography with contours at two-foot intervals,
8. The existing site hydrology,
9. A description and delineation of existing Stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which storm water flows,
10. A delineation of 100-year flood plains, if applicable,
11. Estimated seasonal high Groundwater elevation (November to April) in areas to be used for Stormwater Retention, Detention, or Infiltration,
12. The existing and proposed vegetation and ground surfaces with Runoff coefficient for each,
13. A Drainage Area map showing pre and postconstruction watershed boundaries, Drainage Area and storm water flow paths,
14. A description and drawings of the components of the proposed drainage system including:

a. Locations, cross sections, and profiles of brooks, streams, drainage Swales and their method of stabilization,

b. All measures for the Detention, Retention or Infiltration of water,

c. All measures for the protection of water quality,

d. The structural details for all components of the proposed drainage systems and storm water management facilities,

e. Notes on drawings specifying materials to be used, construction specifications, and typicals,

14. Expected hydrology with supporting calculations,
15. Proposed improvements including location of buildings or other structures, Impervious Surfaces, and drainage facilities, if applicable,
16. Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, clearing, stripping, interim grading, construction, final grading, material stockpiling areas and vegetative stabilization,
17. A description of construction and waste materials expected to be stored on site, and a description of controls to reduce Pollutants from these materials including storage practices to minimize exposure of the materials to Stormwater, and spill prevention and response,
18. Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures, and
19. A maintenance schedule for the period of construction.

3.4 Performance Guarantee

The Applicant shall file performance guarantee in the form of a cash bond prior to the submittal of a building permit application for the construction of a development requiring a Stormwater Management Facility. A performance guarantee for the project under the Subdivision Control Law will meet this criterion. The amount of the security shall not be less than the total estimated construction cost of the Stormwater Management Facility. The bond so required in this section shall include provisions relative to forfeiture for failure to complete work specified in the approved Stormwater Management Plan, compliance with all of the provisions of this by-law and other applicable laws and regulations, and any time limitations. The bond shall not be fully released without a final inspection of the completed work by the Department of Public Works, submission of "as-built" plans, and certification of completion by the authorized permitting agency of the Stormwater Management Facilities being in compliance with the approved plan and the provisions of this by-law.

3.5 Review Procedures

Review of Applications for Stormwater Management Permits shall follow the procedures provided below.

1. A Stormwater Management and Erosion Control Plan (or an application for waiver) shall be submitted to the Department of Public Works for review and approval. Five (5) clearly labeled copies of the Stormwater Management Plan shall be submitted.

2. The Department of Public Works shall have seven days from the receipt of the application to review the application for administrative completeness. If found incomplete, it shall be returned by First Class Mail to the Applicant within 10 (ten) business days of filing, with written notice of the deficiencies.
3. The Department of Public Works as authorized permitting agency shall distribute copies of the Stormwater Management Permit application to the Planning Department and the Conservation Commission for review, as deemed appropriate, and shall consider comments submitted by said departments during the review period.
4. The Department of Public Works shall take final action within 28 days of the determination the application is a complete application unless such time is extended by agreement between the Applicant and the Department of Public Works.
5. The authorized permitting agency must find that the Stormwater Management and Erosion Control Plan submitted with the permit application meets the following criteria:
   a. The Stormwater Management and Erosion Control Plan is consistent with the purposes and objectives of these Rules and Regulations;
   b. The Stormwater Management and Erosion Control Plan meets the performance standards described in Section 4.
6. The authorized permitting agency's action, rendered in writing, shall consist of either:
   a. Approval of the Stormwater Management Permit application based upon determination that the proposed plan meets the purposes in Section 1.2 and the standards in Section 4 of these rules and regulations, and shall adequately protect the water resources of the community and is in compliance with the requirements set forth in this by-law;
   b. Approval of the Stormwater Management Permit application subject to conditions, modifications or restrictions required by the Board of Public Works which shall ensure that the project meets the purposes in Section 1.2 and the standards in Section 4 of these rules and regulations, and adequately protects water resources, set forth in this by-law;
   c. Disapproval of the Stormwater Management Permit application based upon a determination that the proposed plan, as submitted, does not meet the purposes in Section 1.2 and the standards in Sections 4 or adequately protect water resources, as set forth in these rules and regulations.
   d. If the Department of Public Works modifies or disapproves such a plan, it shall state in writing its reasons for its action and shall rescind such disapproval when the plan has been amended to conform to the Rules and Regulations of the Department of Public Works
7. Failure of the authorized permitting agency to take final action upon an application within the time specified above shall be deemed to be an approval of said application.

3.6 Plan Changes

The Applicant must notify the Department of Public Works in writing of any changes in the project authorized in a Stormwater Management Permit before any change or alteration is made. The Department of Public Works may approve changes, or if the DPW determines that the change or alteration is significant, based on the Stormwater Management requirements of these Rules and Regulations and accepted construction practices, the DPW may require that an amended Application be filed and reviewed. If any change or alteration from the Stormwater Management Permit occurs during construction activities, the DPW may require the installation of interim measures before approving the change or alteration.

3.7 Permit Extensions

A Stormwater Management Permit shall be valid for three years from the date the permit is issued, except that compliance with the Operation and Maintenance Plan shall be a continuing and ongoing requirement. The Department of Public Works may grant extensions for additional time upon written request submitted no later than 30 days prior to the extension of the permit.

Section 4
Performance Standards and Design Requirements

4.1 Basic Requirements

The basic design criteria methodologies and construction specifications, subject to the review and approval of the Department of Public Works, shall be consistent with those generally found in the most current edition of the Stormwater Management Handbook, Volume 2: Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Handbook (February 2008, MassDEP, as updated or amended), unless the Department's regulations modify or alter said methodologies or specifications.

4.2 Stormwater Management Performance Standards

Projects that require a Stormwater Management Permit must meet the standards of the Massachusetts Stormwater Management Policy. These standards are:

1. No new Stormwater conveyances (e.g. Outfalls) shall discharge untreated Stormwater directly to or cause erosion in wetlands or Water of the Commonwealth.
2. Stormwater Management Facilities must be designed so that post-development Peak Discharge rates do not exceed predevelopment Peak Discharge rates.
3. Loss of annual Recharge to Groundwater should be minimized through the use of Infiltration measures to the maximum extent practicable. The annual Recharge from the post-development site should approximate the annual Recharge rate from the predevelopment or existing site conditions, based on soil types.
4. For new development, Stormwater Management Facilities must be designed to remove 80 percent of the average annual load (post development conditions) of total suspended solids (TSS). It is presumed that this standard is met when:
   a. Suitable nonstructural practices for source control and pollution prevention are implemented;
   b. Stormwater management Best Management Practices (BMPs) are sized to capture the prescribed Runoff volume; and
   c. Stormwater management BMPs are maintained as designed.
5. Stormwater discharges from areas with higher potential Pollutant loads require the use of specific Stormwater management BMPs (see Stormwater Management Handbook, February 2008, MassDEP, as updated or amended). The use of Infiltration practices without pretreatment is prohibited.
6. Stormwater discharges to critical areas must utilize certain Stormwater management BMPs approved for critical areas (see Stormwater Management Handbook, February 2008, MassDEP, as updated or amended). Critical areas are outstanding resource waters (ORWs), cold-water fisheries, vernal pools and Recharge areas for public water supplies.
7. Redevelopment of previously developed sites must meet the Stormwater management standards to the maximum extent practicable, as determined by the Board of Public Works. However, if it is not practicable to meet all the standards,

new (retrofitted or expanded) Stormwater Management Facilities must be designed to improve existing conditions.

8. Erosion and sediment controls must be implemented to prevent impacts during disturbance and construction activities.
9. All Stormwater Management Facilities must have an operation and maintenance plan to ensure that systems function as designed. The operation and maintenance plan must be implemented for the life of the system.
10. All Illicit Discharges to the Stormwater Management Facilities are prohibited.

When the proposed discharge may have an impact upon a sensitive receptor, including streams, wetlands, vernal pools, and/or storm sewers, the authorized permitting agency may require an increase in these minimum requirements, based on existing Stormwater Management Facility capacity.

4.3 Erosion and Sediment Control Performance Standards

The erosion and sediment control plan should be designed to meet the following performance standards:

1. Minimize total area of disturbance.
2. Sequence activities to minimize simultaneous areas of disturbance.
3. Minimize peak rate of Runoff in accordance with the MassDEP Stormwater Policy.
4. Minimize soil erosion and control sedimentation during construction. Prevention of erosion is preferred over sedimentation control.
5. Divert Uncontaminated Water around disturbed areas.
6. Maximize Groundwater Recharge.
7. Install and maintain all erosion and sediment control measures in accordance with the manufacturers' specifications and good engineering practices
8. Prevent off-site transport of sediment.
9. Protect and manage on- and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project).
10. Comply with applicable federal, state and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control.
11. Prevent Adverse Impact from the proposed activities to habitats mapped by the Massachusetts Natural Heritage and Endangered Species Program as estimated habitats of rare wildlife and certified vernal pools, and priority habitats of rare species.
12. Institute interim and permanent stabilization measures. The measures shall be instituted on a disturbed area as soon as practicable but no more than 14 days after Construction Activity has temporarily or permanently ceased on that portion of the site.
13. Properly manage on-site construction and waste materials.
14. Prevent off-site vehicle tracking of sediments.

Section 5
Inspections, Operation and Maintenance

5.1 Basic Requirements

Inspection shall be carried out at appropriate times during the development of the Stormwater Management Facility as described in Section 5.2. The Applicant shall notify the Town Engineer/Superintendent of Public Works or his/her designee, at least 48 hours before carrying out each operation to be inspected.

The Town Engineer/Superintendent of Public Works or his/her designee may make arrangements with consultants to carry out such inspections and/or provide consulting services with regard to the project, on behalf of the Town.

The costs of inspection shall be born by the Applicant and paid to the Town of East Longmeadow by certified check or money order within thirty (30) business days of the inspection. Inspection costs shall include but not be limited to: on-site inspections, "portal-to-portal" travel, off-site analysis of plans, water testing, and soil testing. In the case of consultant services, a deposit shall be made to the Town as described in Section 3.1.

Failure to pay for such services as referenced above within thirty (30) days following the mailing of an invoice shall be sufficient grounds for the Department of Public Works to deny a plan or rescind its approval of a Stormwater Management Permit.

The Applicant has the responsibility to ensure that the approved construction plans are implemented. Use of qualified Persons to furnish adequate and timely engineering supervision during construction is required. Surveillance and field revisions by Town officials or consultants appointed by the Department of Public Works cannot be construed as fulfilling this responsibility.

A cash deposit shall be required and shall be used by the Town to pay for any additional consultants which it finds necessary to hire in order to carry out an effective review of the proposed improvements.

Failure to comply with the inspection procedure may necessitate removal of improvements at the expense of the Applicant or rescission of the permit.

5.2 Inspections of Improvements

Filing an application for a permit grants the Department of Public Works, or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with the resulting permit. Inspections during the work shall be arranged with the Department of Public Works prior to starting construction. The Department of Public Works will provide the Applicant with a checklist covering these inspections and the Department of Public Works will sign this checklist after satisfactory completion of each step by the Applicant. Inspections shall be requested at least 48 hours in advance of each inspection by notice to the Town's inspector. See Appendix B for the Stormwater Management Inspection Checklist. The Applicant shall arrange for scheduling the following inspections:

Initial inspection. Prior to approval of a plan

Erosion control inspections. After erosion control installation, site clearing, rough grading and final grading to ensure erosion control practices are in accordance with the plan.

Bury inspection. Prior to backfilling of underground drainage or Stormwater conveyance structures;

Final inspection. When all site work, including construction of Stormwater Management Facilities and landscaping have been completed.

The Department of Public Works or its agent shall inspect the work and either approve it or notify the Applicant in writing in what respects there has been a failure to comply with the requirements of the approved plan. Any portion of the work which does not comply shall be promptly corrected by the Applicant or the Applicant shall be subject to the penalty provisions of Section 6.3. The town may conduct random inspections to ensure effective control of erosion and sedimentation during all phases of construction, when it has a reasonable basis to believe that a violation of this by-law is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this by-law.

5.3 Post-Construction and Operation and Maintenance

Prior to issuance of a building permit for a site on which Stormwater management is required, the authorized permitting agency shall require the Applicant or owner to execute an operation, maintenance and inspection agreement binding on all subsequent owners of land served by the private Stormwater Management Facility. The agreement shall be designed to ensure that water quality standards are met in all seasons and throughout the life of the system. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the town or its authorized representative and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards. The agreement shall include:

1. *Names of land owners.* The name(s) of the land owner(s) for all components of the system.
2. *Maintenance agreements.* Maintenance agreements that specify:
    a. The names and addresses of the Person(s) responsible for operation and maintenance.
    b. The Person(s) responsible for financing maintenance and emergency repairs.
    c. A maintenance schedule for all drainage structures, including Swales and ponds.
    d. A list of easements with the purpose and location of each.
    e. The signature(s) of the owner(s).
3. *Stormwater management easements as necessary for:*
    a. Access for facility inspections and maintenance.
    b. Preservation of Stormwater Runoff conveyance, Infiltration, and Detention areas and facilities, including flood routes for the 100-year storm event.
    c. Direct maintenance access by heavy equipment to structures requiring regular cleanout.
4. *Stormwater management easement requirements.*

Section 6
Enforcement and Penalties

6.1 Violations

The Department of Public Works agent or employee having actual knowledge or information of a violation of these rules and regulations that he is responsible for enforcing may, as an alternative to seeking a criminal penalty for violation of this by-law, give the offender a ticket in a form in compliance with the requirements of and in the manner established in G.L. c. 40, §21D and Section 8.130 of the East Longmeadow General By-laws.

The Department of Public Works or its agent may enter onto a Person's land to inspect any work performed under a permit issued pursuant to these rules and regulations or to determine if such property is in violation of these rules and regulations if it has a good faith basis to believe an activity requiring a permit is being performed on the property without such a permit.

The Board of Public Works may, for cause shown, suspend or terminate a Person's connection to the MS4 and any permit issued pursuant to this by-law.

6.2 Stop Work Orders

Notice of the intent to suspend or terminate a Person's connection to the MS4 or a permit shall be given in writing to the owner of the property and the permit holder, if different, by delivering via hand delivery or certified mail, to the owner to the address listed for taxation purposes in the Assessor's Office, and the permit holder at the address listed in the application. A copy of the notice of hearing shall be delivered at least ten (10) business days before said hearing date and shall, in addition, be mailed by 1st class mail, postage prepaid at least fourteen (14) days before said hearing.

The notice shall contain the:

1. Name and address of the owner of the property;
2. The name and address of the permit holder if different than the owner;
3. The action contemplated;
4. Statement of violations believed to exist; and
5. A statement that the owner and permit holder may present evidence regarding alleged violations.

If the Board of Public Works or its designee determines in writing that the public health, safety or welfare requires immediate action, it may suspend or terminate MS4 service and any permit immediately. However, in such a case, notice as set forth above, shall be delivered and mailed to the owner and permit holder, if different, informing them that they have fifteen (15) days from the date of the suspension or termination to appeal said action of the Board of Public Works.

6.3 Penalties

The Penalty for each violation of this Stormwater management portion of the rules and regulations adopted hereunder shall be $200.00 and each day or part thereof shall constitute a separate violation.

The Board of Public Works, in addition to issuing said tickets, may enforce the provisions of this by-law by injunctive relief if it determines that the health, safety or welfare of any resident or member of the public or that the well being of the community is or will be endangered by the violation(s).

Any permit issued pursuant to these rules and regulations shall contain language requiring the Applicant to pay any and all costs, including attorney fees and expert witness fees, incurred by the town in seeking court action regarding the enforcement of this by-law and the rules and regulations adopted hereunder.

6.4 Restoration of Lands

A violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the East Longmeadow Board of Public Works shall take necessary corrective action, the cost of which shall become a lien upon the property until paid.

6.5 Holds on Occupancy Permits

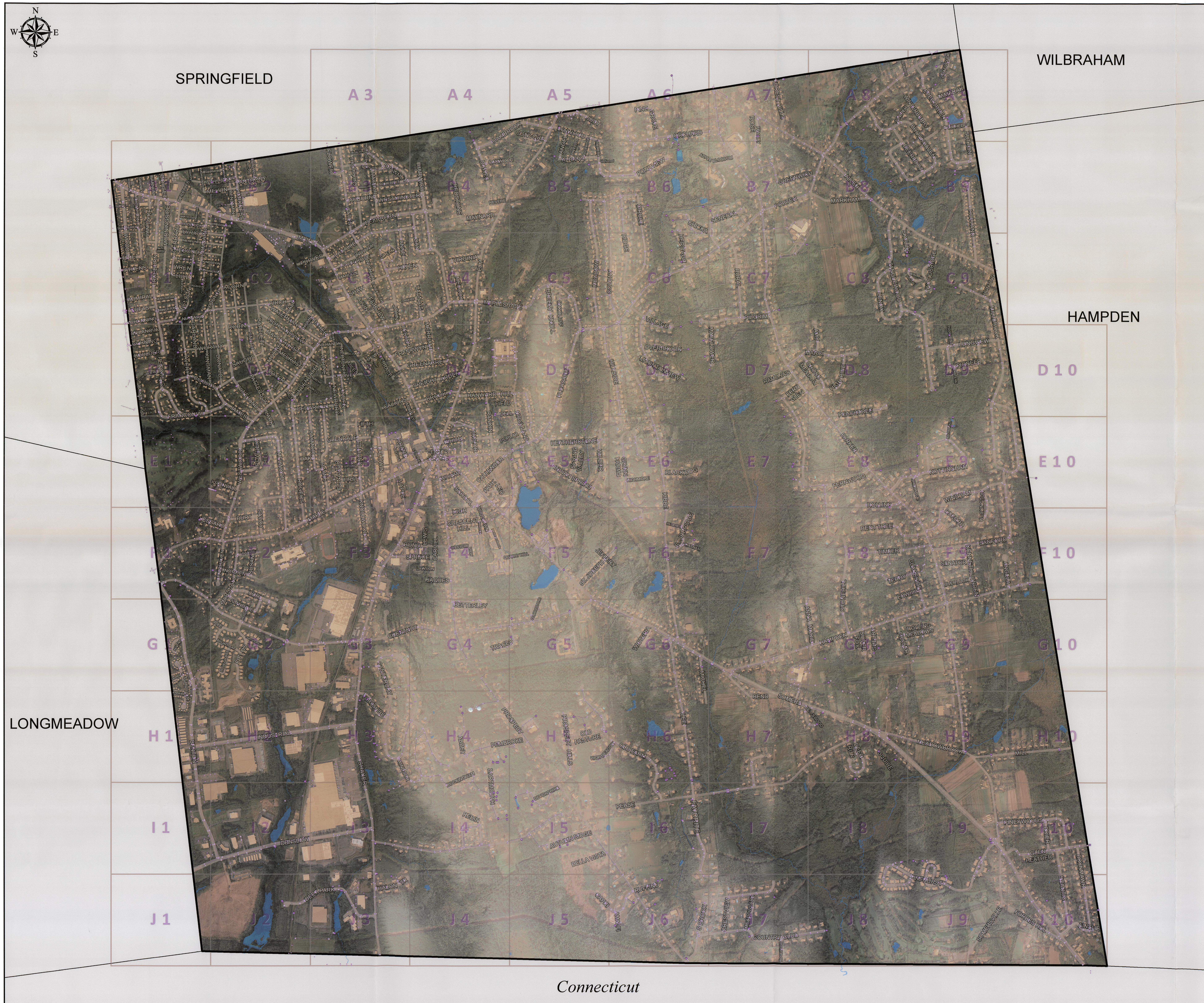
Occupancy permits will not be granted unless corrections to all Stormwater management practices have been made and accepted by the Department of Pubic Works.

6.6 Severability

The invalidity of any section or provision of this section shall not invalidate any other section or provision thereof.

Appendix B

Storm System Mapping



Stormwater System
EAST LONGMEADOW, MA

11/16/2018

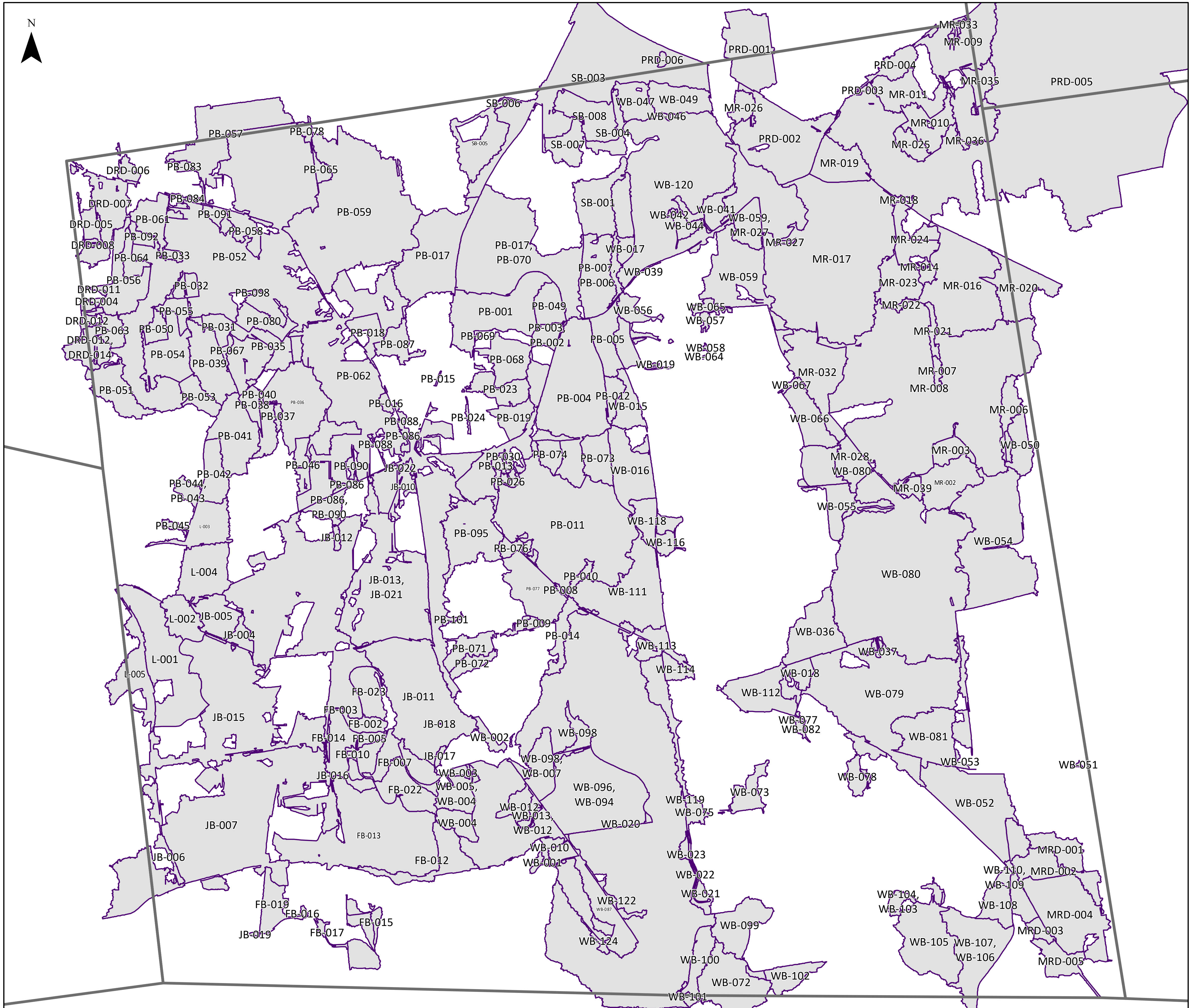
Catch Basin		Drain Line		Waterbodies	
Undigitized Catch Basin		East Longmeadow Border		Roadway ROW	
Drain Manholes		Grid Index		Structures	
Outfalls		Town Borders			

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Please use this information as a guide and confirm all locations before instituting any plan or policy.

These data are not suitable for engineering applications or site work nor can the data be used to determine absolute delineation. Instead, the data should be used to portray zones of uncertainty and possible risks.

Map created by East Longmeadow IT Department

ABBEY	H4	CORNING	D1	HIGH	F4	MORNINGSIDE	B1	SENATOR	F9
ACORN	C2	COSGROVE	C3	HIGH MEADOW	H5	MOUNTAINVIEW	D6	SENECAL	B7
ADMIRAL	C1	COUNTRY CLUB	J7	HIGH PINE	D8	MURRAY	D4	SHAKER	H3
AINSLIE	J10	CRANE	E3	HIGHLANDVIEW	D2	NELSON	C1	SHAW	C3
ALANDALE	G2	CRESCENT HILL	F4	HIGHMORE	E6	NEPTUNE	D3	SHAWMUT	B3
ALBANO	B5	CRESTVIEW	J7	HILLSIDE	D6	NEWBURY	D3	SHELBY	G8
ALLEN	B8	CROSS	C1	HOLLAND	B9	NIAGARA	C1	SHERWOOD	E9
ALLEN CREST	C9	DALE	C2	HOLLY	G2	NORDEN	F2	SILVER FOX	G8
ALPINE	D3	DARTMOUTH	I4	HOLY CROSS	C1	NORTH	C3	SKYLINE	C8
ALTACREST	C1	DAWES	B4	HOME	C2	NOTTINGHAM	E9	SLUMBER	A8
ALVIN	C3	DAY	C4	HUNTING	C9	OAK	E2	SMITH	D2
AMALFI	J6	DEARBORN	B3	INDIAN SPRING	E5	OAK BLUFF	C5	SOMERS	H7
AMARETTA	B1	DECELLES	B1	INDIANA	C3	OAK BROOK	A4	SOMERSET	B3
AMY	D8	DEER PARK	J3	INDUSTRIAL	H2	OAKWOOD	B4	SOMERSVILLE	J9
ANGEL	B5	DEER RUN	H8	INWARD COMMONS*	F4	ODION	B1	SPEIGHT ARDEN	D4
ANGELA	F9	DEERFOOT	B9	JAMES	D2	OLD FARM	H6	SPRING VALLEY	E5
ANNA MARIE	G8	DELL	D4	JAQUES	F4	OLD PASTURE	H5	SPRUCE	F4
ANNE	C3	DENSLOW	I2	JEFFERY	F5	ORANGE	C1	SQUIRE	H8
ANTHONY	B2	DEVONSHIRE	I5	JENNIFER	H1	ORCHARD	A6	ST. JOSEPH	F5
APPLE BLOSSOM	B7	DEWEY	D3	JOHN	C3	ORPHEUM	B2	STONEHILL	F8
ARCH	D3	DONALD	D2	JUDY	A5	OVERBROOK	D6	STURBRIDGE	F6
ASH	D3	DONAMOR	E3	JUNIPER	A8	OVERLOOK	F9	SUMMERFIELD	B1
ATHENS	C1	DORSET	B1	KELSEY	C1	OXFORD	F9	SUSAN	F2
AUBURN	B3	EDGEWOOD	B5	KENNETH LUNDEN	F9	PALM	D2	SUTTON	B9
AUTUMN RIDGE	I5	EDMUND	E3	KENSINGTON	C1	PANAMA	D3	TAMARAK	A9
AVERY	D1	EDWILL	F8	KIBBE	E6	PARK	E4	TANGLEWOOD	C8
BALDWIN	E3	ELIZABETH	C3	KINGMAN	D1	PARKER	E8	TAYLOR	E4
BALMORAL	E9	ELM	C4	KINGSTON	C2	PATIENCE	F6	TERRACE	D3
BARNUM	B1	ERICKA	B6	KNOLLWOOD	F3	PATTERSON	D2	TERRY	F8
BARRIE	F2	EUCLID	C1	KRONVALL	E2	PEACHTREE	D8	THERESA	B5
BARTLETT	D2	EVERGREEN	A9	LANTERN	D9	PEASE	I6	THOMPKINS	B3
BAYMOR	E3	FAIRHAVEN	F2	LARK	E2	PECOUSIC	D1	THOMPSON	B1
BAYNE	E3	FAIRVIEW	C3	LASALLE	C3	PEMBROKE	H4	TIMBER	F8
BELLA VISTA	I5	FAVORITE	I6	LAURENCE	G1	PHYLLIS	B5	TOWN VIEW	D1
BEND	H7	FEATHER REED*	G2	LAWSON	F4	PILGRIM	C7	TRACEY	G4
BENJAMIN	B2	FENWAY	A7	LEE	H6	PINE	C1	TRINADAD	B3
BENT TREE	F8	FERN	D2	LEGION	E3	PINE GROVE	A6	TUFTS	C1
BENTON	H1	FERN GLEN	D7	LENOX	C8	PINEHURST*	J9	TURNER	B1
BETTERLEY	G4	FERNWOOD	E8	LEO	E4	PINEYWOODS	I10	Un-Named	B5
BETTSWOOD	H8	FIELD	D4	LESSARD	F2	PIONEER	D9	VADNAIS	C4
BIRCH	C2	FIELDS*	G2	LESTER	D3	PLEASANT	D5	VAN DYKE	B1
BIRCHLAND	E5	FIFTH	E3	LEWIS	F4	PONDVIEW	B6	VERANDA	D3
BLACK DOG	E6	FIRST	E3	LINDEN	D3	POPLAR	E4	VILLAGE	C6
BLUEGRASS*	G2	FISHER	D3	LINDENDALE	D2	PORTER	B7	VILLANOVA	D1
BOND	F4	FLOWER	B3	LOMBARD	C1	POWDER HILL	E2	VINELAND	D2
BOULDER	D1	FORBES HILL	J10	LONDERGAN	B1	PRINCETON	C1	VIRGINIA	C4
BRAEBURN	C1	FOREST HILLS	A7	LONGVIEW	D9	PROSPECT	H5	VOYER	D2
BREEZY KNOLL	C5	FOX HEDGE	A9	LORI	F2	PROSPECT HILLS	H5	VREELAND	B2
BRIER	I10	FRANCONIA	D1	LULL	C1	PURVES	C3	W ALLEN RIDGE	B2
BROADLEAF*	G2	FRANKWYN	D4	LYNWOOD	A5	PUTTING GREEN	D1	WATERMAN	C2
BROOK	D4	FRASER	G8	LYRIC	C1	QUARRY HILL*	F5	WELLINGTON	E9
BROOKHAVEN	A9	GARLAND	D1	MAIN	C2	RAMONA'S	D7	WENDOVER	F4
BRYNMAWR	I10	GASKELL	D3	MAPLE	F3	RANKIN	E4	WESTERN VIEW	F4
BUNKER	D1	GATES	B3	MAPLEHURST	D2	REDIN	I4	WESTMINSTER	B3
BURT	F2	GERRARD	C1	MAPLESHADE	C4	REDSTONE	B4	WESTWOOD	E2
CALKINS	D3	GLEN HEATHER	I10	MARCI	D8	REVERE	B4	WHITE	E4
CALLENDER	E4	GLENDALE	E3	MARDON	C3	RIDGE	C6	WILDER	E5
CANTERURY	G3	GLYNN FARMS	E6	MARKHAM	B8	RIDGEWOOD	J7	WILLIAM	E4
CAPRI	J5	GRANBY	B1	MARSHALL	F2	ROBIN	D2	WINDHAM	E9
CARA	A5	GREEN	C3	MARYLAND	B3	ROCKINGHAM	H4	WINDING BROOK	C9
CARVILL	F4	GREENACRE	D4	MAYFAIR	B3	RODERICK	B1	WINDSOR	H3
CEDAR HILL	D3	GREENWICH	B7	MAYFLOWER	D7	ROGERS	E2	WINTERBERRY	A9
CENTER SQUARE	E4	GROVE	D3	MAYNARD	B4	ROLLING MEADOWS	G9	WISTERIA	G6
CENTRAL	E4	HALON TR	J3	MEADOW	C5	ROLLINS	E8	WOOD	C1
CHADWYCK	A9	HAMLET	C1	MEADOWBROOK	H9	ROSE	A7	WOODBRIDGE	C9
CHANNING	C1	HAMPDEN	G8	MEADOWLARK	J7	ROSEMONT	B1	WOODLAWN	F4
CHATHAM	F6	HANWARD HILL	D4	MELODY	C4	RUFFINO	J6	WORTHY	D1
CHESTNUT	G3	HARKNESS	B2	MELROSE	D2	RURAL	C7	WREN	C1
CIRCLE	B6	HARMON	B2	MELVIN	B2	RUSKIN	D3	YETTO	B2
CLARESIDE	F9	HARRIS	G1	MELWOOD	E2	RYE*	G2	YORKSHIRE	H3
CLIFF	D3	HARVEST	D9	MERELINE	C1	S BROOK	J6	YOUNG	C2
COBBLESTONE	G5	HARWICH	B4	MERRIAM	D4	SANFORD	F9		
COLONY	C6	HAZELHURST	B2	MICHEL	G6	SAUGUS	D2		
CONANT	D3	HEATHERSTONE	E5	MILES	D3	SAVOY	F2		
CONCORD	A5	HEDGEROW	B3	MILL	H10	SCANTIC	J10		
CONE	D3	HELEN	C3	MILLBROOK	C9	SCHOOL	E4		
CONVERSE	C3	HERITAGE	C6	MOORE	D2	SCHUYLER	G1		
COOLEY	D1	HICKORY	B3	MORELAND	B1	SECOND	E3		



EAST LONGMEADOW, MA

Preliminary Catchments

DPW

6/20/2019

Town Boundary

Catchments

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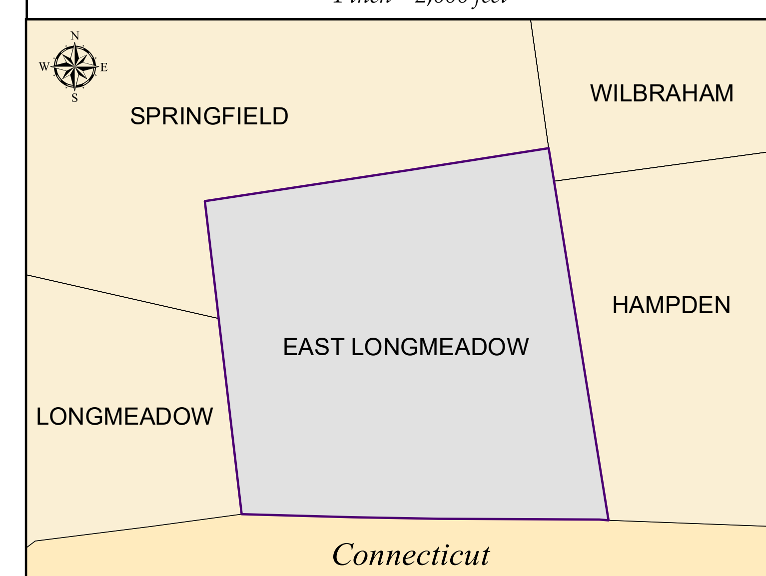
Map created by East Longmeadow IT Department
Orthophotography c/o MassGIS, ©Google

1 inch = 2,000 feet



Appendix C

Field Forms, Sample Bottle Labels, and Chain of Custody Forms

Outfall Water Quality Testing

Submitted By: Intern_EastLongmeadow

Submitted Time: Aug 2, 2018, 3:22:18 PM

Outfall_ID

WB-072

Subbasin_Abbr

WB

Date

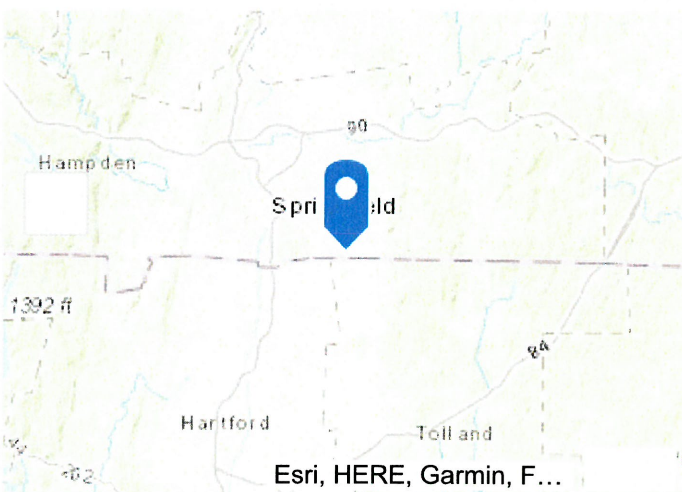
Aug 2, 2018

Time

15:18

Location

Lat: 42.03636 Lon: -72.48727



Inspector

cc ml

Rainfall Last 24 Hours

0

Rainfall Last 48 Hours

0

PipeSize

36

Pipe Material

RCP

Flow Description

Trickle

Flow Depth

0.2

Flow Width

6

Land Use In Area

Open Space

Odor Description

- **None**

Odor Severity

0 - None

Flow Color

- **Orange**

Flow Color Intensity

3 - Clearly Visible in Outfall Flow

Turbidity

2 - Cloudy

Floatables

- **Petroleum (Oil Sheen)**

Floatables Severity

0 - None

Outfall Damage

- **None**

Outfall Deposits and Stains

- **None**

Vegetation

- **Normal**

Pool Quality

- **Colors**
- **Excessive Algae**
- **Oil Sheen**

Pipe Henthic Growth

None

Ammonia (Nitrogen)

0.25

Chlorine

0.38

Conductivity

248

Salinity

0.28

Surfactants

0

Temperature

23.7

Photo

Photo-20180802-192204.jpg

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name:
Address:
Phone:
Project Name:
Project Location:
Project Number:
Project Manager:
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By:

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
O Field Filtered
O Lab to Filter

Orthophosphate Samples
O Field Filtered
O Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA:
CT:
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

con-test ANALYTICAL LABORATORY
www.contestlabs.com
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

SAMPLE ID.	PRESERVATIVE
ANALYSIS	DATE TIME
SITE NAME	con-test ANALYTICAL LABORATORY

SAMPLE ID.	PRESERVATIVE
ANALYSIS	DATE TIME
SITE NAME	con-test ANALYTICAL LABORATORY

SAMPLE ID.	PRESERVATIVE
ANALYSIS	DATE TIME
SITE NAME	con-test ANALYTICAL LABORATORY

SAMPLE ID.	PRESERVATIVE
ANALYSIS	DATE TIME
SITE NAME	con-test ANALYTICAL LABORATORY

Appendix D

Water Quality Analysis Instructions, User's Manuals and Standard Operating Procedures

Be Right™

Ammonia (Nitrogen) Test Strips, 0-6.0 mg/L

Product #:	**2755325**
USD Price:	$24.79
Available	

Suitable for both lab and field testing, Hach Test Strips are easy to use and easy to read. Ammonia (Nitrogen) is a product of microbiological decay of plant and animal protein. Its presence in raw surface waters usually indicates domestic or agricultural pollution. Above certain levels, it is toxic to fish. Contains 25 tests.

Easy to use, disposable, and inexpensive

A great way to obtain quick, quantitative answers in the field or in the lab

---

Specifications

Footnote:	*mg/L unless otherwise noted, ppb = µg/L, ppm = mg/L.; gpg = grains per gallon; 1 gpg = 17.1 mg/L or 17.1 ppm.
Model:	Test Strips
Number of tests:	25
Parameter:	Ammonia, Nitrogen, low range - As NH_3-N, For freshwater
Platform :	Test Strip
Range:	0 - 6 ppm
Ship Wt. (lbs):	0.25
Smallest Increment Steps:	Steps: 0, 0.25, 0.5, 1.0, 3.0, 6.0 ppm

Detergents Test Kit

DE-2 (143203)

DOC326.97.00058

Test preparation

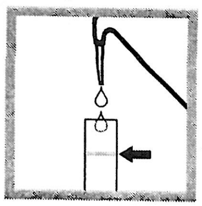
CAUTION:* ⚠ *Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

- Put the color disc on the center pin in the color comparator box (numbers to the front).
- Use sunlight or a lamp as a light source to find the color match with the color comparator box.
- Rinse the tubes with sample before the test. Rinse the tubes with deionized water after the test.
- If the color match is between two segments, use the value that is in the middle of the two segments.
- If the color disc becomes wet internally, pull apart the flat plastic sides to open the color disc. Remove the thin inner disc. Dry all parts with a soft cloth. Assemble when fully dry.
- Use the filtration procedure for samples that contain turbidity.
- If the test result is more than the maximum limit, dilute the sample as follows. Use the dropper to add 1 mL of sample to a tube. Dilute the sample to the 20-mL line with deionized water. Use the diluted sample in the test procedure. Multiply the value in the scale window by 20 to get the test result in mg/L.
- To use the included demineralizer bottle, fill the bottle with tap water and shake to mix. Use this water as deionized water in the test procedure. Fill the bottle again when empty. Replace the resin after the bottle is filled approximately 100 times.
- Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

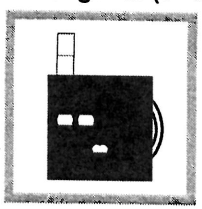
Replacement items

Description	Quantity	Item no.
Chloroform, ACS grade	500 mL	1445849
Detergents Reagent	100 mL MDB	105932
Wash Water Buffer Solution	500 mL	99949
Color comparator box	each	173200
Color disc, detergents, 0–1.2 mg/L	each	9265700
Demineralizer bottle, 177-mL capacity	each	1429900
Dropper, glass, 0.5- and 1.0-mL marks	5/pkg	1419705
Filter thimble	1	51200
Glass viewing tubes, 5-mL and 20-mL marks	6/pkg	173606
Glass wool	5 g	252074
Pipet bulb	1	178600
Stoppers for viewing tubes, No. 2 plastic	6/pkg	1448001
Test tube, 13 x 100 mm	10/pkg	56510
Transfer pipet	1	221800

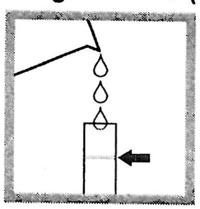
Test procedure—Detergents (0–1.2 mg/L as LAS (linear alkylate sulfonate) and/or ABS (alkyl benzene sulfonate)



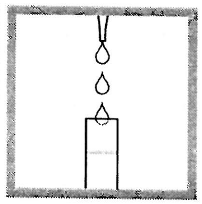
1. Fill a tube to the top line (20 mL) with deionized water.



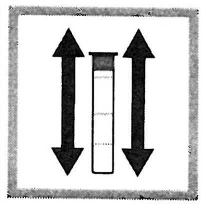
2. Put the tube into the left opening of the color comparator box.



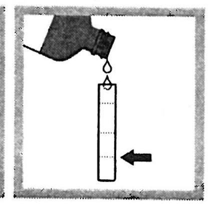
3. Fill a second tube to the top line (20 mL) with sample.



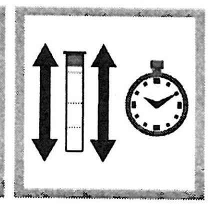
4. Add 12 drops of Detergents Reagent.



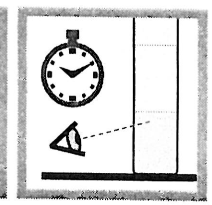
5. Put the stopper on the second tube. Shake to mix.



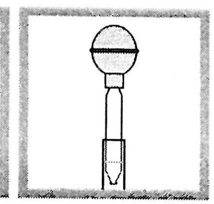
6. Add chloroform to the first line (5 mL). Chloroform is heavier than water and goes to the bottom of the tube.



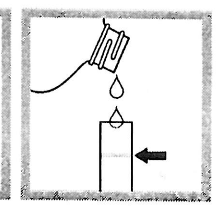
7. Put the stopper on the tube. Shake vigorously for 30 seconds.



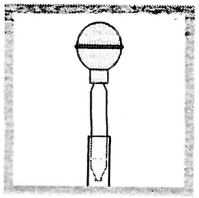
8. Do not touch the tube for 1 minute to let the chloroform separate from the sample.



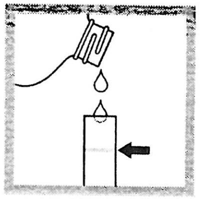
9. Use the transfer pipet to remove the top water layer from the tube. Discard the water.



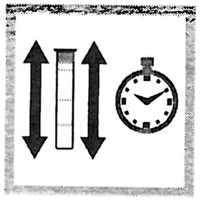
10. Add Wash Water Buffer Solution to the top mark (20 mL).



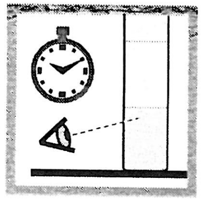
11. Use the transfer pipet to remove the Wash Water Buffer. Discard the buffer. This step removes the remaining water sample.



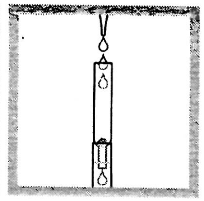
12. Add Wash Water Buffer to the top mark (20 mL).



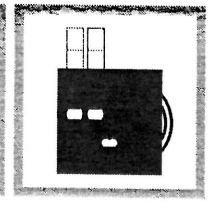
13. Put the stopper on the tube. Shake vigorously for 30 seconds.



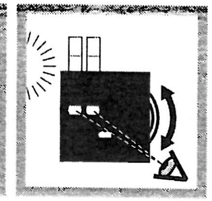
14. Do not touch the tube for 1 minute to let the chloroform separate.



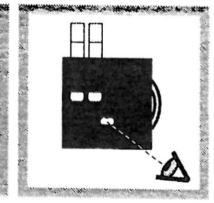
15. If the sample contains turbidity, complete the Filtration procedure for turbid samples on page 2.



16. Put the second tube into the color comparator box.



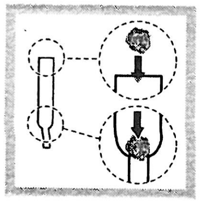
17. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



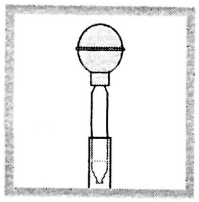
18. Read the result in mg/L in the scale window.

Filtration procedure for turbid samples

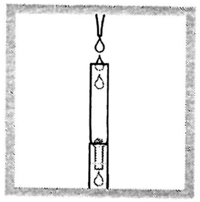
If the sample contains turbidity, pour the chloroform layer through a filter during the test procedure after step 15.



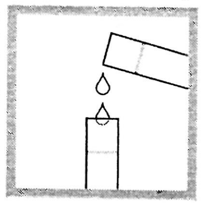
1. *Put a small ball* (the size of a large pea) of glass wool in the filter thimble.



2. Use the transfer pipet to remove the chloroform layer from the viewing tube.



3. Put the filter thimble on a clean test tube. Add the chloroform to the filter thimble.



4. Use the filtered chloroform to continue the test procedure after step 15.

Chlorine Test Kit

CN-70 (1454200), CN-70F (1454201), CN-70T (1454202)

DOC326.98.00003

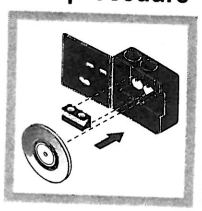
Test preparation

CAUTION: ⚠ ***Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.***

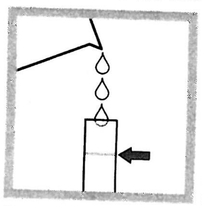
NOTICE: This product has not been evaluated to test for chlorine and chloramines in medical applications in the United States.

- Analyze samples immediately after collection.
- Put the color disc on the center pin in the color comparator box (numbers to the front).
- Use sunlight or a lamp as a light source to find the color match with the color comparator box.
- Rinse the tubes with sample before the test. Rinse the tubes with deionized water after the test.
- If the color match is between two segments, use the value that is in the middle of the two segments.
- If the color disc becomes wet internally, pull apart the flat plastic sides to open the color disc. Remove the thin inner disc. Dry all parts with a soft cloth. Assemble when fully dry.
- The long-path adapter for the low range test shows the color in the tubes from top to bottom. Make sure the light source is above the tubes during the color match.
- Undissolved reagent does not have an effect on test accuracy.
- For free chlorine, read the result immediately after the reagent is added to prevent interference from monochloramine. If the sample contains 3.0 mg/L monochloramine, the free chlorine result increases each minute by 0.1 mg/L.
- If the low range test result is more than the maximum limit, use the mid range test procedure with a fresh sample.

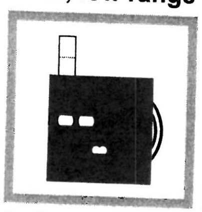
Test procedure—Free or total chlorine, low range (0–0.68 mg/L Cl_2)



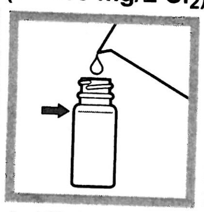
1. Install the long-path adapter in the color comparator box.



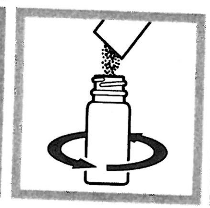
2. Fill a tube to the top line with sample.



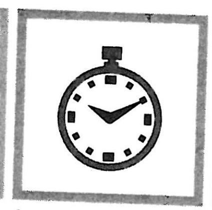
3. Put the tube into the left opening of the color comparator box.



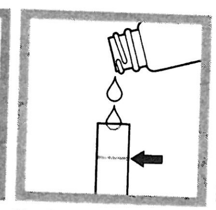
4. Fill the bottle to the 25-mL mark with sample.



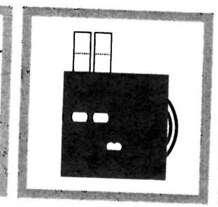
5. Add one DPD (Free or Total) Chlorine Powder Pillow. Swirl to mix.



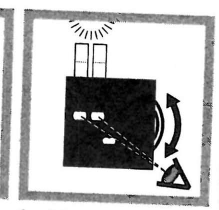
6. For free chlorine, read the result within 1 minute.
For total chlorine, wait 3 minutes. Read the result within 6 minutes.



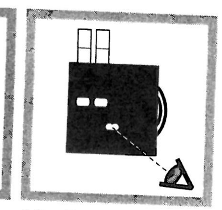
7. Fill a second tube to the top line with the prepared sample.



8. Put the second tube into the color comparator box.



9. Hold the color comparator box below a light source. Turn the color disc to find the color match.



10. Read the value in the scale window. Divide the value by 5 to get the result in mg/L.

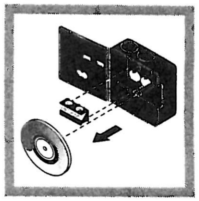
Replacement items

Description	Unit	Item no.
DPD Free Chlorine Reagent Powder Pillows, 25 mL	100/pkg	1407099
DPD Total Chlorine Reagent Powder Pillows, 25 mL	100/pkg	1406499
Bottle, square, with 25-mL mark	each	1704200
Color disc, DPD chlorine, 0–3.4 mg/L	each	990200
Color comparator box	each	173200
Long-path adapter	each	2412200
Plastic viewing tubes, 18 mm, with caps	4/pkg	4660004

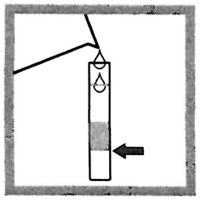
Optional items

Description	Unit	Item no.
Caps for plastic viewing tubes (4660004)	4/pkg	4660014
Glass viewing tubes, glass, 18 mm	6/pkg	173006
Stoppers for 18-mm glass tubes and AccuVac Ampuls	6/pkg	173106
Water, deionized	500 mL	27249

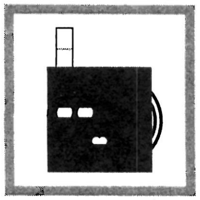
Test procedure—Free or total chlorine, mid range (0–3.4 mg/L Cl_2)



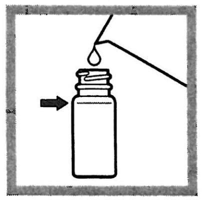
1. If installed, remove the long-path adapter.



2. Fill a tube to the first line (5 mL) with sample.

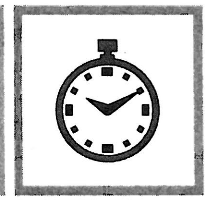


3. Put the tube into the left opening of the color comparator box.

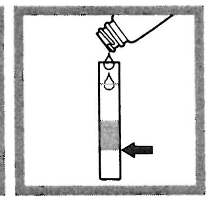


4. Fill the bottle to the 25-mL mark with sample.

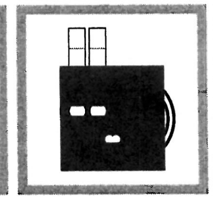
5. Add one DPD (Free or Total) Chlorine Powder Pillow. Swirl to mix.



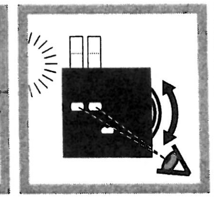
6. For free chlorine, read the result within 1 minute.
For total chlorine, wait 3 minutes. Read the result within 6 minutes.



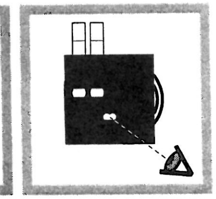
7. Fill a second tube to the first line (5 mL) with the prepared sample.



8. Put the second tube into the color comparator box.



9. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



10. Read the result in mg/L in the scale window.

 www.hach.com 800-227-4224 techhelp@hach.com

01/2016, Edition 4

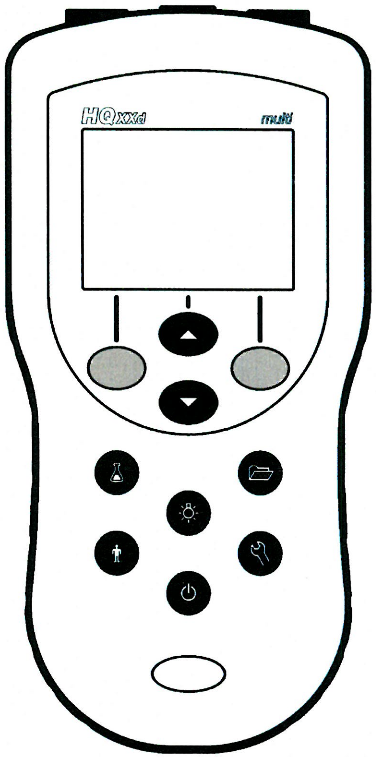
HACH®

DOC022.53.80017

HQd Portable Meter

10/2017, Edition 6

User Manual



Specifications

Specifications are subject to change without notice.

Specification	Details
Dimensions	19.7 x 9.5 cm (7.75 x 3.75 in.)
Weight	335 g (0.75 lb) without batteries; 430 g (0.95 lb) with four AA alkaline batteries
Meter enclosure	IP67, waterproof to 1 meter for 30 minutes
Battery enclosure	Water resistant to 0.6 m (2 ft) for 15 seconds
Power requirements (internal)	AA Alkaline or rechargeable Nickel Metal Hydride (NiMH) batteries (4); battery life: up to 200 hours
Power requirements (external)	Class II, external power adapter: 100–240 VAC, 50/60 Hz input; 4.5 to 7.5 VDC (7 VA) output
Meter protection class	Class I
Storage temperature	–20 to +60 °C (–4 to +140 °F)
Operating temperature	0 to +60 °C (32 to 140 °F)
Operating humidity	90% (non-condensing)
5-pin input connector	M12 connector for IntelliCAL™ probes
8-pin input connector	The 8-pin connector enables USB and external AC power connectivity
USB/DC adapter	Peripheral and host
Data memory (internal)	500 results
Data storage	Automatic in Press to Read mode and Interval Mode. Manual in Continuous Read Mode.
Data export	USB connection to PC or USB storage device (limited to the storage device capacity). Transfer entire data log or as readings are taken.
Connections	Integrated USB type A (for USB flash memory device, printer, keyboard) and Integrated USB type B (for PC)
Temperature correction	Off, automatic and manual (parameter dependent)
Measurement display lock	Continuous measurement, Interval or Press to Read mode. Averaging function for LDO probes.
Keyboard	External PC keyboard connector via USB/DC adapter

General information

In no event will the manufacturer be liable for direct, indirect, special, incidental or consequential damages resulting from any defect or omission in this manual. The manufacturer reserves the right to make changes in this manual and the products it describes at any time, without notice or obligation. Revised editions are found on the manufacturer's website.

Safety information

NOTICE

The manufacturer is not responsible for any damages due to misapplication or misuse of this product including, without limitation, direct, incidental and consequential damages, and disclaims such damages to the full extent permitted under applicable law. The user is solely responsible to identify critical application risks and install appropriate mechanisms to protect processes during a possible equipment malfunction.

Please read this entire manual before unpacking, setting up or operating this equipment. Pay attention to all danger and caution statements. Failure to do so could result in serious injury to the operator or damage to the equipment.

Make sure that the protection provided by this equipment is not impaired. Do not use or install this equipment in any manner other than that specified in this manual.

Use of hazard information

⚠ DANGER
Indicates a potentially or imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING
Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION
Indicates a potentially hazardous situation that may result in minor or moderate injury.

NOTICE
Indicates a situation which, if not avoided, may cause damage to the instrument. Information that requires special emphasis.

Precautionary labels

Read all labels and tags attached to the instrument. Personal injury or damage to the instrument could occur if not observed. A symbol on the instrument is referenced in the manual with a precautionary statement.

	This symbol, if noted on the instrument, references the instruction manual for operation and/or safety information.
	This symbol indicates that the marked item can be hot and should not be touched without care.
	Electrical equipment marked with this symbol may not be disposed of in European domestic or public disposal systems. Return old or end-of-life equipment to the manufacturer for disposal at no charge to the user.

Product overview

The HQd series portable meters are used with digital IntelliCAL™ probes to measure various parameters in water. The meter automatically recognizes the type of probe that is connected to the meter. Measurement data can be stored and transferred to a printer, PC or USB storage device.

The HQd series meters are available in 4 models:

- HQ11d—pH/mV/ORP
- HQ14d—conductivity, salinity, total dissolved solids (TDS), resistivity
- HQ30d—all IntelliCAL probes, 1 probe connector
- HQ40d—all IntelliCAL probes, 2 probe connectors

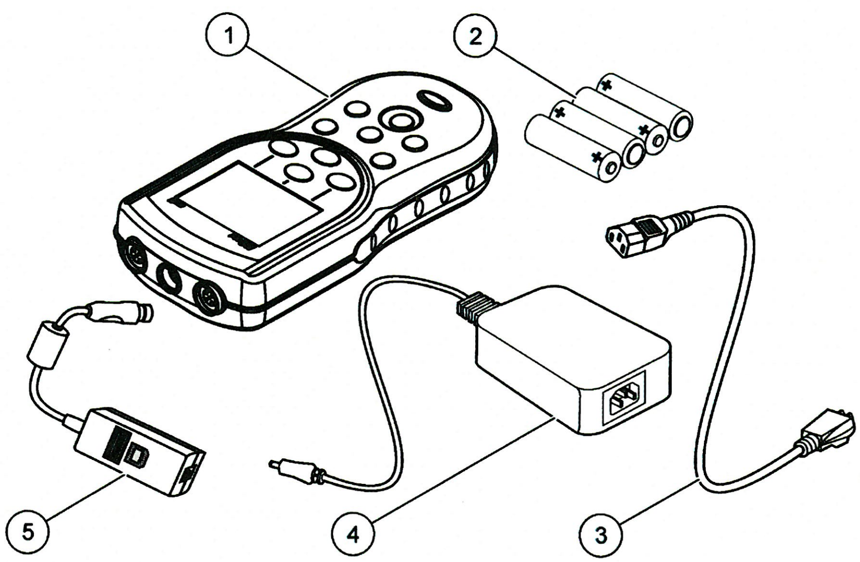
Features common to all models:

- Automatic probe and parameter recognition
- Instrument guided calibration procedures
- Calibration data stored in the probe
- Probe specific method settings for regulatory compliance and Good Laboratory Practice (GLP)
- Security Options
- Real-time data logging via USB connection
- USB connectivity to PC/printer/USB storage device/keyboard
- Bi-directional communication with PC-based systems via a virtual serial port connection
- Sample ID and Operator ID for data traceability
- Adjustable automatic shut-off

Product components

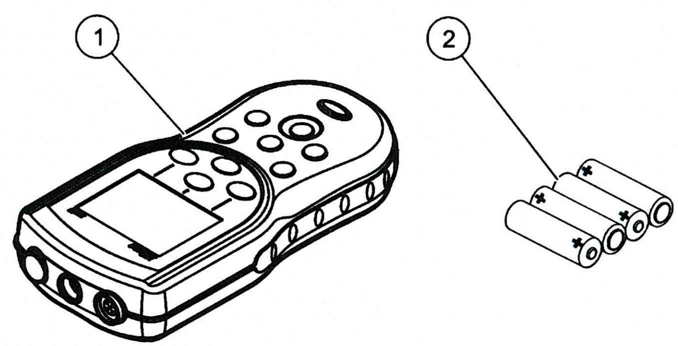
Refer to Figure 1 and Figure 2 to make sure that all components have been received. If any items are missing or damaged, contact the manufacturer or a sales representative immediately.

Figure 1 Meter components (HQ40d model)



1 Meter	4 AC-DC power supply
2 AA batteries (pk/4)	5 USB/DC adapter
3 AC power cord	

Figure 2 Meter components (HQ11d, HQ14d and HQ30d models)



1 Meter	2 AA batteries (pk/4)

Installation

CAUTION

Multiple hazards. Only qualified personnel must conduct the tasks described in this section of the document.

Install the batteries

WARNING

Explosion hazard. Incorrect battery installation can cause the release of explosive gases. Be sure that the batteries are of the same approved chemical type and are inserted in the correct orientation. Do not mix new and used batteries.

NOTICE

The battery compartment is not waterproof. If the battery compartment becomes wet, remove and dry the batteries and dry the interior of the compartment. Check the battery contacts for corrosion and clean them if necessary.

NOTICE

When using nickel metal hydride (NiMH) batteries, the battery icon will not indicate a full charge after freshly charged batteries have been inserted (NiMH batteries are 1.2 V versus 1.5 V for alkaline batteries). Even though the icon does not indicate complete charge, 2300 mAH NiMH batteries will achieve 90% of instrument operation lifetime (before recharge) versus new alkaline batteries.

NOTICE

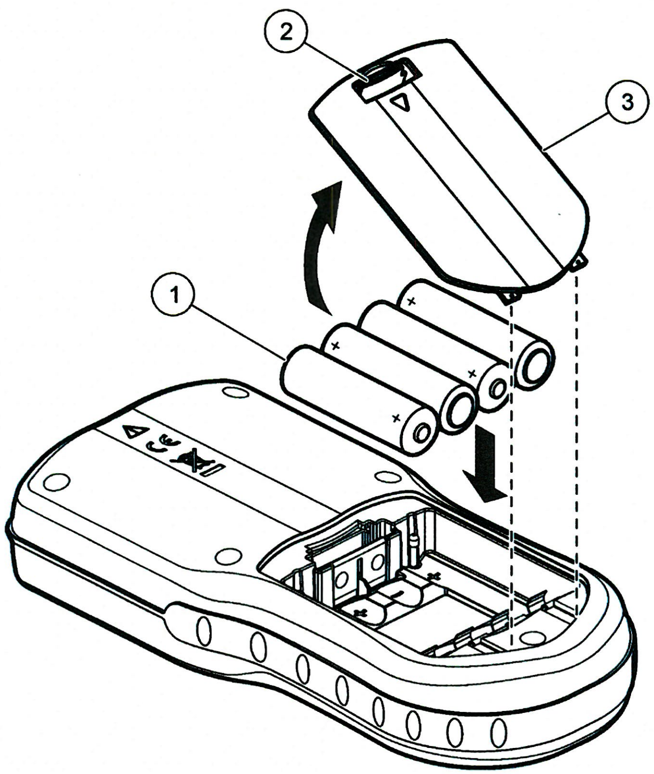
To avoid potential damage to the meter from battery leakage, remove the meter batteries prior to extended periods of non-use.

The meter can be powered with AA alkaline or rechargeable NiMH batteries. To conserve battery life, the meter will power off after 5 minutes of inactivity. This time can be changed in the Display Options menu.

For battery installation refer to Figure 3.

1. Pull the release tab on the battery cover and the remove the cover.
2. Install 4 AA alkaline or 4 AA nickel metal hydride (NiMH) batteries. Make sure that the batteries are installed in the correct polarity.
3. Replace the battery cover.

Figure 3 Battery installation



1 Batteries	2 Release tab	3 Battery cover

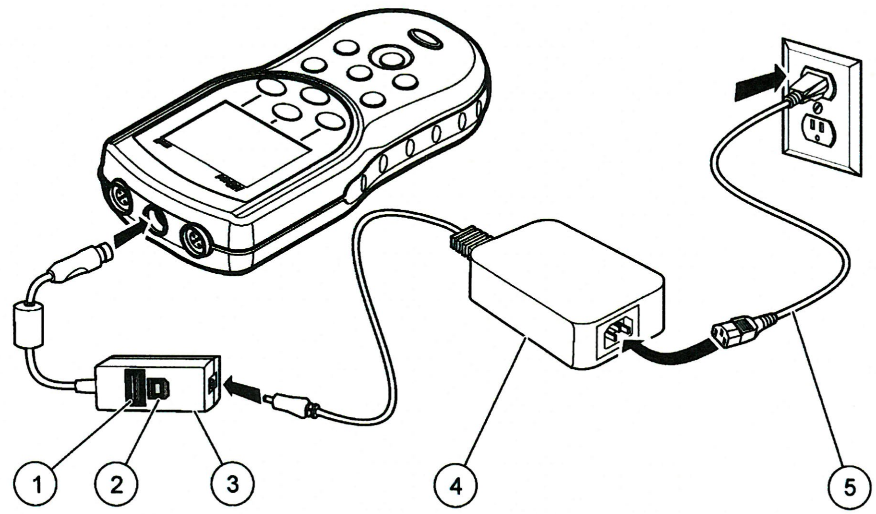
Connect to AC power

DANGER	
	Electrocution Hazard. AC power outlets in wet or potentially wet locations MUST ALWAYS be provided with a Ground Fault Circuit Interrupting (GFCI/GFI) circuit breaker. The AC-DC power adapter for this product is not sealed and must not be used on wet benches or in wet locations without GFCI protection.

The meter can be powered by AC power with an AC power adapter kit. The kit includes an AC-DC power supply, USB/DC adapter and AC power cord.

1. Turn the meter off.
2. Plug the AC power cord into the AC-DC power supply (Figure 4).
3. Connect the AC-DC power supply to the USB/DC adapter.
4. Connect the USB/DC adapter to the meter.
5. Plug the AC power cord into an AC receptacle.
6. Turn the meter on.

Figure 4 AC power connection

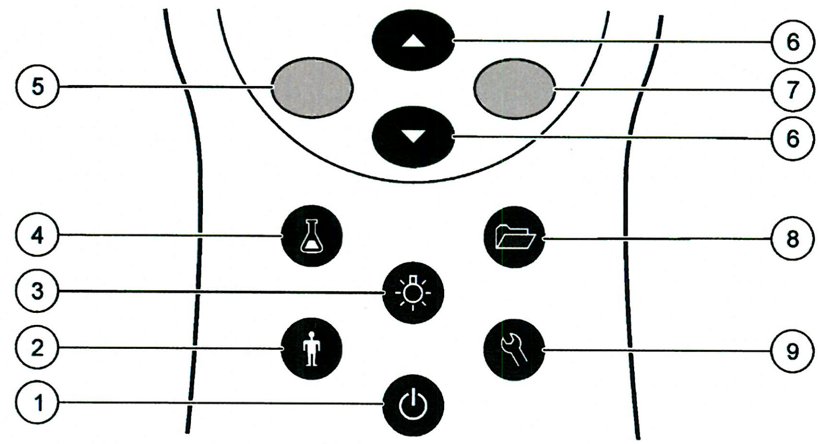


1 USB storage device/printer/Qwerty keyboard connection (USB peripheral)	4 AC-DC power supply
2 Personal computer connection (USB host)	5 AC power cord
3 USB/DC adapter	

User interface and navigation

User interface

Figure 5 Keypad description



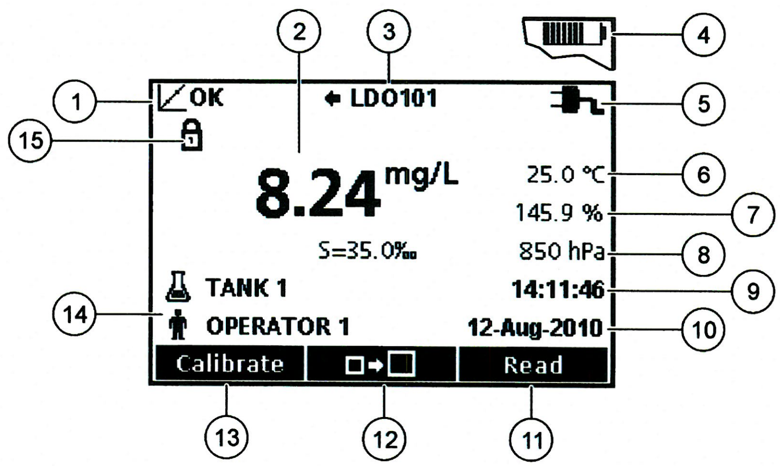
1 ON/OFF: turn on or turn off the meter	6 UP and DOWN key: scroll through menus, enter numbers and letters or change the reading screen view
2 OPERATOR ID: associate data with an individual	7 GREEN/RIGHT key: reads, selects, confirms or stores data
3 BACKLIGHT: illuminate the display screen	8 DATA LOG: recall or transfer stored data
4 SAMPLE ID: associate data with a sample location	9 METER OPTIONS: change settings, run check standards, view meter information
5 BLUE/LEFT key: calibrates, cancels or exits the current menu	

Display description

Measurement screen

The meter display shows the concentration, units, temperature, calibration status, operator ID, sample ID, date and time (Figure 6).

Figure 6 Single screen display



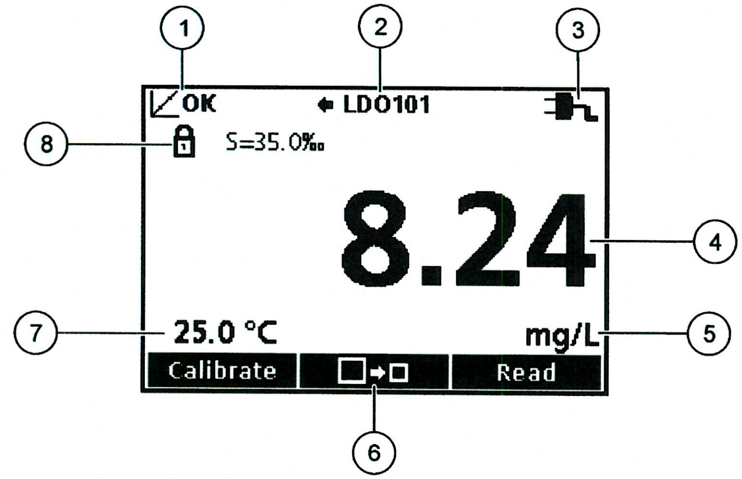
1	Calibration status indicator	**9**	Time
2	Main measurement value and unit	**10**	Date
3	IntelliCAL probe type and port indicator	**11**	Read (OK, Select)
4	Battery status	**12**	Display size icon
5	Power source	**13**	Calibrate (Cancel, Exit)
6	Sample temperature (°C or °F)	**14**	Sample and operator identification
7	Secondary measurement unit	**15**	Stability or display lock indicator
8	Tertiary units (for some probes)		

Big-screen mode

The font size of the sample reading can be increased or decreased with the △ key (Figure 7).

Note: *△ When two probes are connected, push and hold the key to select the big-screen mode. The big-screen mode can also be selected in the Display Options menu (Refer to* Set the display options *on page 20).*

Figure 7 Single-screen display—big-screen mode



1	Calibration status indicator	**5**	Main measurement unit
2	IntelliCAL probe type and port indicator	**6**	Display size icon
3	Power source or battery status	**7**	Sample temperature (°C or °F)
4	Main measurement value	**8**	Stability or display lock indicator

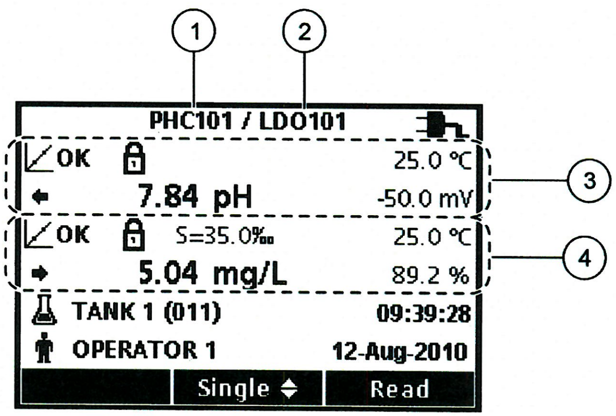
Dual-screen mode (HQ40d model only)

When two probes are connected to the HQ40d meter, the display can show the reading from both probes simultaneously or show just one probe (Figure 8).

Note: *For probe calibration, change the screen mode to the single screen mode.*

To change the screen mode to single or dual screen, use the △ and ▽ keys. In dual screen mode, the △ key will select the probe on the left and the ▽ key will select the probe on the right.

Figure 8 Dual-screen display



1	Probe that is connected to port on left	3	Measurement information for probe on left
2	Probe that is connected to port on right	4	Measurement information for probe on right

Navigation

The meter contains menus to change various options. Use the △ and ▽ keys to highlight different options. Push the GREEN/RIGHT key to select an option. There are two ways to change options:

1. Select an option from a list: Use the △ and ▽ keys to select an option. If check boxes are shown, more than one option can be selected. Push the BLUE/LEFT key under Select.

   ***Note:** To deselect check boxes, push the BLUE/LEFT key under Deselect.*
2. Enter an option value using the arrow keys:
   Push the △ and ▽ keys to enter or change a value.
3. Push the GREEN/RIGHT key to advance to the next space.
4. Push the GREEN/RIGHT key under OK to accept the value.

Startup

Turn the meter on and off

Push the ⏻ key to turn on or turn off the meter. If the meter does not turn on, make sure that the batteries are properly installed or that the AC power supply is properly connected to an electrical outlet.

Change the language

The display language is selected when the meter is powered on for the first time. The language can also be changed from the Meter Options menu.

Access to the language menu can be restricted with the Security Options. Refer to Security options on page 18.

1. Push the 🔧 key and select Language.
2. Select a language from the list.

   ***Note:** While turning the meter on, the language can also be changed when the power key is pushed and held.*

Change the date and time

The date and time can be changed from the Date & Time menu.

1. Push the key and select Date & Time.
2. Update the time and date information:

Option	Description
Format	Select one of the formats below for the date and time. Use the △ and ▽ keys to select from the format options. dd-mm-yyyy 24h dd-mm-yyyy 12h mm/dd/yyyy 24h mm/dd/yyyy 12h dd-mmm-yyyy 24h dd-mmm-yyyy 12h yyyy-mm-dd 24h yyyy-mm-dd 12h
Date	Use the △ and ▽ keys to enter the current date.
Time	Use the △ and ▽ keys to enter the current time.

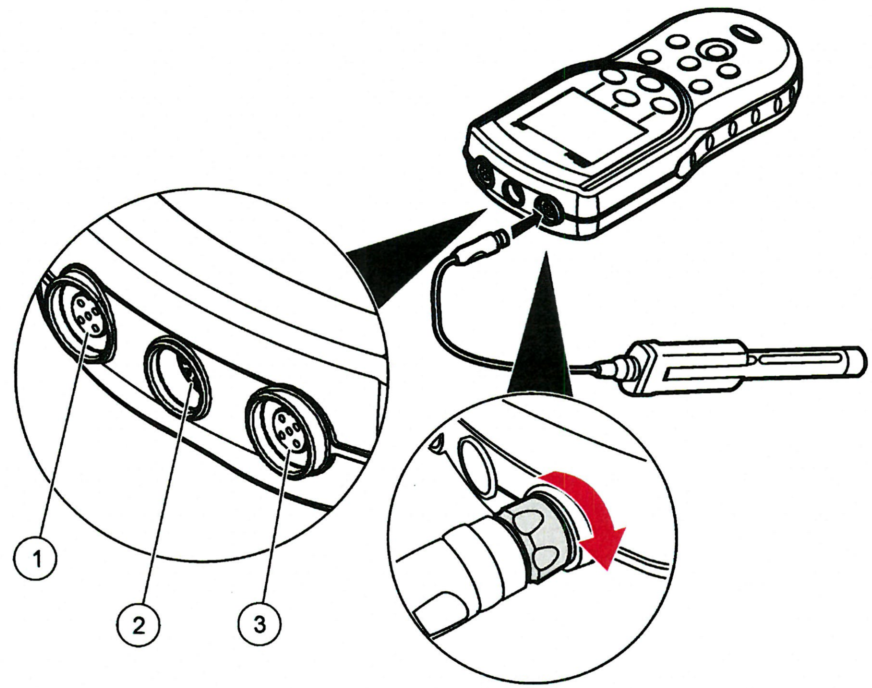
The current date and time will be shown on the display.

Connect a probe after the date and time setup, so that the meter is ready to take a measurement.

Connect a probe

1. Make sure that the display shows the current time and date.
   Note: *The time stamp for a probe is set when the probe is first connected to the meter. This time stamp makes it possible to record the probe history and record the time when measurements are made.*
2. Plug the probe into the meter (Figure 9).
3. Push and turn the locking nut to tighten.

Figure 9 Probe connection



1 Probe connection port (HQ40d only)	**2** USB/DC adapter port	**3** Probe connection port

Standard operation

About calibration

Each probe uses a different type of calibration solution. Make sure to calibrate the probes frequently to maintain the highest level of accuracy.

Note: *For step-by-step instructions, refer to the documents that are included with each probe.*

The calibration icon ? can indicate that:

- the calibration timer has expired
- the LDO sensor cap should be replaced

- the calibration is out of range
- the calibration results are outside acceptance criteria settings

About sample measurements

Each probe has specific preparation steps and procedures for taking sample measurements. For step-by-step instructions, refer to the documents that are included with the probe.

About check standards

Run Check Standards verifies equipment accuracy by measuring a solution of a known value. The meter will indicate if the Check Standard passed or failed. If the Check Standard fails, the calibration icon ? is shown until the probe is calibrated.

The meter can be set to automatically show a reminder for check standard measurement at a specified interval with a specified acceptance criteria. The reminder, value of the check standard, and acceptance criteria can be changed. For step-by-step instructions, refer to the documents that are included with the probe.

Use a sample ID

The sample ID tag is used to associate measurements with a particular sample location. If assigned, stored data will include the sample ID.

1. Push the key.
2. Select, create or delete a sample ID:

Option	Description
Current ID	Select an ID from a list. The current ID will be associated with sample data until a different ID is selected.
Create a New Sample ID	Enter a name for a new sample ID.
Delete Sample ID	Delete an existing sample ID.

Use an operator ID

The operator ID tag associates measurements with an individual operator. All stored data will include the operator ID.

1. Push the key.
2. Select, create or delete an operator ID:

Option	Description
Current ID	Select an ID from a list. The current ID will be associated with sample data until a different ID is selected.
Create a New Operator ID	Enter a name for a new operator ID (maximum 10 names can be entered).
Delete Operator ID	Delete an existing operator ID.

Data management

About stored data

The following types of data are stored in the data log:

- Sample measurements: stored automatically each time a sample is measured in the Press to Read or Interval Mode. When the continuous measurement mode is used, data is stored only when Store is selected.
- Calibrations: stored only when Store is selected at the end of a calibration. Calibration data is also stored in the IntelliCAL (R) probe.
- Check standard measurements: stored automatically each time a check standard is measured (in the Press to Read or Interval Mode).

When the data log becomes full (500 data points), the oldest data point is deleted when a new data point is added. The entire data log can be deleted to remove data that has already been sent to a printer or PC (key > Delete Data Log). To prevent deletion of the data log by a user, use the Security Options menu.

View stored data

The data log contains sample, calibration and check standard data. The most recent data point in the data log is tagged as Data Point 001.

1. Push the key.
2. Select View Data Log to view the stored data. The most recent data point is shown. The top of the screen shows whether the data is from a sample reading, a calibration or a check standard. Push the key to view the next most recent data point.

Option	Description
Reading Log	Reading Log—shows sample measurements including the time, date, operator and sample ID. Select Details to view the associated calibration data.
Calibration Log	Calibration Log—shows calibration data. Select Details to view additional information about the calibration.
Check Standard Log	Check Standard Log—shows check standard measurements. Select Details to view the calibration data that was associated with the measurement.

View stored probe data

Make sure that a probe is connected to the meter. If two probes are connected, select the appropriate probe when prompted.

1. To view the calibration data that is stored in a probe, push the key and select View Probe Data. The current calibration and calibration history for the probe can be viewed.

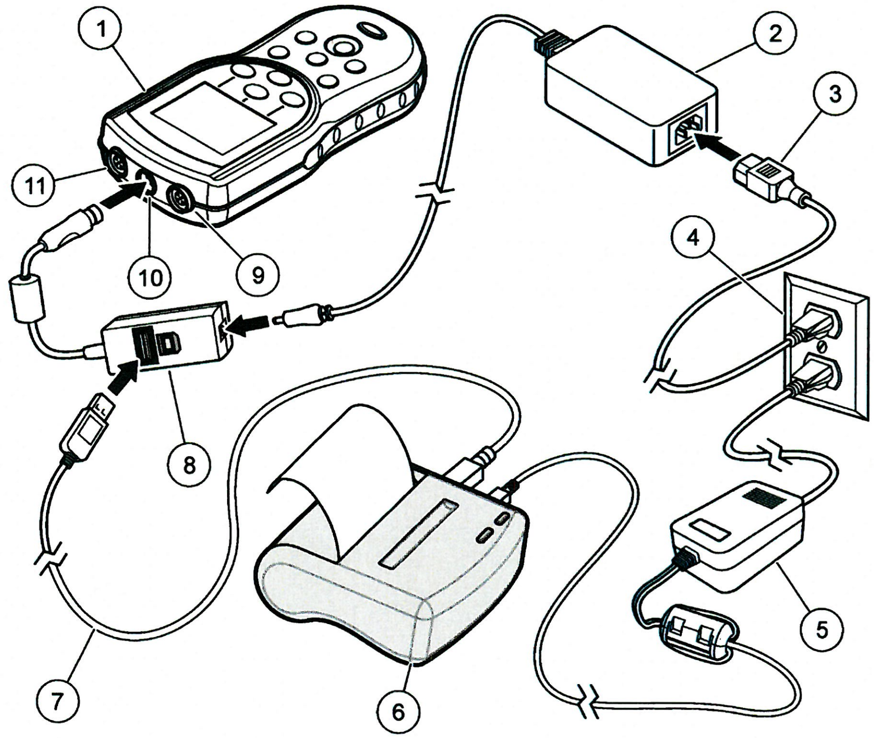
Option	Description
View Current Calibration	The current calibration information shows the calibration details for the most recent calibration. If the probe has not been calibrated by the user, the factory calibration data is shown.
View Calibration History	The calibration history shows a list of the times when the probe was calibrated. Select a date and time to view a summary of the calibration data.

Print stored data

The meter must connect to AC power to start the USB connection. Make sure that the connection to AC power is made before the meter is powered on.
All data can be sent to a printer. Compatible printers should support a minimum of 72 columns of data, be capable of printing up to 500 continuous data-stream events in 1, 2 and 3 lines of text and fully support code page 437 and code page 850.

1. Turn off the meter. Make sure that the meter is connected to AC power. Refer to Connect to AC power on page 8.
2. Connect the printer to the meter with a USB cable type A. Refer to Figure 10.
3. Turn on the meter.
4. Push the key.
5. Select Send Data Log. Wait for the display to show "Transfer Complete" and wait for the printer to stop printing. Disconnect the printer.

Figure 10 Connection to the printer



1 Meter	7 USB cable
2 AC-DC power supply	8 USB/DC adapter
3 AC power cord	9 Port for probe connection
4 AC power outlet	10 Port for USB/DC adapter
5 Power supply for printer (optional)	11 Port for probe connection
6 Printer, FCC Part 15B, Class B compliant	

Change the report options

Printed reports for sample data can contain 1, 2 or 3 lines of information. Refer to Examples of printed reports on page 28 for further information.

1. Push the key. Select Report Options.
2. Select Report Type and select one of the options.

Option	Description
Basic report	One line of data.
Advanced report	Two lines of data. The first line contains the same information as in the basic report.
Total report	Three lines of data. The first two lines contain the same information as in the advanced report.

Send data to a USB storage device

NOTICE

The transfer of a large number of data points will take some time. DO NOT disconnect the USB storage device until the transfer is complete.

Data can be transferred to a USB storage device for storage or transfer to a computer.

1. Turn off the meter. Make sure that the meter is connected to AC power.
2. Plug the USB storage device into the meter before the meter is powered on.
3. Turn on the meter.
4. Push the key.
5. Select Send Data Log. Wait for the display to show "Transfer Complete" and for any lights on the USB storage device to stop flashing. Then remove the USB device.

   Note: *If the data transfer is slow, reformat the USB storage device to use the file allocation table (FAT) format for the next use.*

Open data files on a PC

Data that has been downloaded to a USB storage device can be transferred to a computer. The data is sent in a text (.txt) file format.

1. Plug the USB storage device into the computer.
2. Find the data file. The file will have the following format: "Meter Serial Number-Data File Type-Date Time". Example: 9999NN000000-SENDDATA-0603131624.TXT
3. Save the data file to a location on the computer.
4. Open a spreadsheet program such as Microsoft® Excel® spreadsheet software.
5. Open the data file from the spreadsheet program. Select the delimited option with comma as the delimiter.
   The data will be shown in the spreadsheet program.
   ***Note:** If an application is used that is not compatible with column headings, the headings can be omitted. Refer to Remove column headers on page 18.*

Data file description

Data that is saved to a USB storage device and then opened in a spreadsheet application will have multiple columns of data. A description for each of the columns is shown in Table 1.

Table 1 Spreadsheet column descriptions

Column header name	Data description and example values
Type	Type of data: RD = Reading; CL = Calibration; CK = Check Standard; CH = Calibration History; IC = Current Calibration
Parameter	Type Parameter: LDO, pH, CD (conductivity), ORP, ISE
Date	Date of reading: stored in user-defined date format
Time	Time of reading: stored in user-defined format
Operator ID	Operator ID that was used when the data was recorded. Shows "- - -" if no operator ID is used.

Table 1 Spreadsheet column descriptions (continued)

Column header name	Data description and example values
Probe Model	Model number of probe, for example pHC101, CDC401, LDO101
Probe SN	Probe serial number If two probes are connected to the HQ40d meter, the serial number shows "<" or ">" to identify the port (left or right) the probe was connected to during the reading.
Method name	User-defined name of the probe settings that were used for the reading.
Sample ID	Sample ID that was used when the data was recorded. Shows "Sample ID" if the default sample ID is used.
Primary Reading Value	Measured value. Shows "—" if the value was out of range.
Primary Reading Units	Measurement units, for example pH or µS/cm
Supp Reading 1	First supplemental reading (example: temperature), if applicable
Supp Units 1	Units for first supplemental reading, if applicable.
Supp Reading 2	Second supplemental reading (example: "mV" for pH), if applicable
Supp Units 2	Units for second supplemental reading, if applicable
Supp Reading 3	Third supplemental reading, if applicable
Supp Units 3	Units for third supplemental reading, if applicable.
Reading Setting 1–4	Any settings that affect the reading, for example "NaCl/Non-Linear"
Any settings that affect the reading, for example "NaCl/Non-Linear"	Reading Message 1–4 Any message that was shown during the measurement, for example "Out of limits".

Table 1 Spreadsheet column descriptions (continued)

Column header name	Data description and example values
Check Std Value	Value of the check standard that was used to verify accuracy, for example: 7.00 pH–25 °C (pH, temp-compensated); 7.01 pH (pH, custom)
Check Std Units	Check standard units, for example µS/cm. ***Note:*** *pH is not displayed here as it is included in the previous column.*
Check Std Graph	Bar-graph showing the measurement in relation to the acceptance limits. Example: "6.901 <—|—> 7.101".
Check Std Status	Status of the check standard reading. Example: "Reading within limits", "Reading outside limits"
Calibration Status	Status of the calibration that is in use. OK = current calibration is valid; ? = calibration has expired.
Cal Date	Date of calibration reading: stored in user-defined date format
Cal Time	Time of calibration reading: stored in user-defined time format
Cal Operator ID	The operator ID specified when the probe was calibrated. Shows "- - -" if undefined.
Cal Slope Name	Slope (pH or LDO) or cell constant (conductivity)
Cal Slope	The slope value for the calibration
Cal Slope Aux	Used by pH to give the percent of nominal slope
Cal Slope Units	Units of the calibration slope. Example: "mV/pH" for pH
Cal Offset	Calibration offset value
Cal Offset Units	Calibration offset units. Example: "mV" for pH.
Cal r^2	Calibration correlation coefficient without a unit (may be blank)

Table 1 Spreadsheet column descriptions (continued)

Column header name	Data description and example values
Cal Number of Std's	Number of standards used during calibration, for example 5. May be blank depending on record type, parameter type, and method settings.
Cal Std 1	Known value of the first calibration standard
Cal Std 1 Units	Units of the first calibration standard
Cal Std 1 Primary Value	Measured value of the first calibration standard
Cal Std 1 Primary Units	Associated units for the calibration measurement
Cal Std 1 Supp Value	Value of supplemental measurement, for example temperature
Cal Std 2–7	Known value of additional calibration standards, if used
Cal Std 2–7 Units	Units of additional calibration standards, if used
Cal Std 2–7 Primary Value	Measured values of additional calibration standards, if used
Cal Std 2–7 Primary Units	Associated units for additional calibration measurements, if used
Cal Std 2–7 Supp Value	Value of supplemental measurement, for example temperature
Cal Std Supp Units	Units applicable to all secondary calibration readings. Example: "°C" or "°F" for temperature
Cal Message 1–4	Any messages about the calibration
Date/Time POSIX	Date and time of reading stored in POSIX format (number of seconds from January 1, 1970) Example: 1149234913
Cal Date/Time POSIX	Date and time of calibration stored in POSIX format (number of seconds from January 1, 1970). Example: 1111320348
Meter SN	Meter serial number used to take the measurement

Remove column headers

When transferred data is viewed in a spreadsheet program, the first row of data contains headings to identify the type of data in each column. If an application or post-processing method is used that is incompatible with the headers, the column headers can be omitted.

1. Push the key.
2. Select Column Headers.
3. Set the column headers to off.

Send data directly to a computer

Data can be transferred from any HQd series meter directly to a computer when the HQ40d PC Application is installed. The data can be sent in real time during data collection, or the entire data log can be transferred.

To download the most current version of the software, refer to the applicable product page on the manufacturer's website.

1. Install the HQ40d PC Application on the computer.
2. Turn off the meter. Make sure that the meter is connected to AC power.
3. Connect the PC to the meter with a USB type B cable.
4. Turn on the meter.
5. Open the HQ40d PC Application on the computer. Click on the green triangle in the menu bar to start a connection.
6. Collect the data in real time or transfer the data from the data log:

    - Real time—when a data point is stored in the meter, the result is sent simultaneously to the PC Application (refer to Set the measurement mode on page 21).
    - Data log—push the key and select Send Data Log. Wait for the display to show "Transfer Complete." The data is sent as a comma separated values (.csv) file.

    The data is shown in the HQ40d PC Application window.

Advanced operation

Security options

The Security Options menu is used to protect the meter setup and method settings from unwanted changes. This menu is available in the Full Access Options menu.

The Setup Measurement Mode, Date and Time, Temperature Units, Language, Probe settings, Delete data log and Security Options screens are disabled in the Operator Access Options menu. All menu options are enabled in the Full Access Options menu.

Note: *The Full Access Options menu is shown when the key is pushed when Security Options is OFF, whether or not a password has been set.*

When the meter is powered on for the first time and Security Options is selected, the display prompts the user to set a password. Until the meter is shut off, pushing the key will still display the Full Access Options menu, even after Security Options is turned on and a password has been set. After the meter is shut off and powered on again with Security Options on, the Operator Access Options menu is displayed until a valid password is entered.

Store the password in a safe and accessible place. If the specified password is forgotten and Security Options is turned on, the operator is locked out of the restricted menus. Contact technical support if the password is lost.

Turn Security Options on

The Security Options and the Set Password options are used together to prevent access to restricted menus.

1. Push the key and select Security Options.
2. Change the settings as needed to allow or prevent menu access.

Option	Description
Security Options	When Security Options is on, and a password has been specified, the password is required to enable the Full Access Options menu. If the meter is turned off while Security Options is on, the password is required to enable the Full Access Options menu again when the meter is turned on.
Set Password	Set a password that must be entered to enable the Full Access Options menu. The requirement for password entry is controlled by setting Security Options on or off.

Full access options menu

The Full Access Options menu is displayed when Security Options is OFF or when Security Options is ON and a valid password is entered (Table 2). These options do not need to be changed if the factory default settings are used.

Table 2 Full Access Options

Option	Description
(Probe model) settings	Settings such as measurement options, calibration options, check standard options, units and resolution. Refer to the probe documentation for more information. ***Note:** A probe must be connected to the meter.*
Run check standard	Measure standard solution (available for pH, conductivity, ORP and ISE probes)
Measurement mode	Press to Read
	Interval: Duration and Interval
	Continuous
Instrument information	Probe information
	Meter information
Security options	ON or OFF
	Set password
Display options	Contrast
	Auto shutoff
	Backlight
	Mode
Sounds	Key press
	Stability alert
	Calibration reminder
Date and time	Format
	Date
	Time
Temperature units	Set temperature units
Language	Select language

Restricted operator access options menu

The Operator Access Options menu is shown at meter startup when Security Options is ON (Table 3). When a valid password is entered, the menu changes to Full Access Options.

Table 3 Operator access options

Option	Description
(Probe model) settings	Only methods (if methods exist) can be selected. Refer to the probe documentation. ***Note:** A probe must be connected to the meter.*
Run check standard	Measure standard solution (available for pH, conductivity, ORP and ISE probes) ***Note:** A probe must be connected to use this option.*
Instrument information	Probe information
	Meter information
Access password	Enter password
Display options	Contrast
	Auto shutoff
	Backlight
	Mode
Sounds	Key press
	Stability alert
	Calibration reminder

Set the display options

Use Display Options to change the display contrast, battery saving auto-shutoff options, the backlight option or the detailed or big reading screen mode.

1. Push the key and select Display Options.
2. Select which display option to change.

Option	Description
Contrast	Adjust the contrast of the display. The lightest setting is 0 and the darkest setting is 9.
Auto-shutoff	To maximize battery life, set a time period after which the meter will automatically power off if no key is pushed (1, 2, 5, 10, 30 min, 1 h, 2 h or never). Auto-shutoff is not active when the meter is connected to AC power or in the Interval Reading Mode.
Backlight	The display backlight is turned off when the key is pushed. Is it possible to set a time period after which the backlight will automatically power off if no key is pushed.
Mode	Select Detailed or Big screen size. Detailed will show more information with smaller numbers and text. Big will show less information with larger numbers and text. ***Note:** The screen size can also be selected from the measure mode (refer to Display description on page 9).*

Set the sound options

The meter can make an audible sound when a key is pushed, when stability is reached or when the calibration reminder is due. The meter also makes an audible sound when it begins transferring data to a USB storage device and again when the data transfer is complete.

1. Push the key and select Sound.
2. Choose which events will produce an audible sound. Multiple items can be selected.

Option	Description
Key Press	The meter will make an audible sound whenever a key is pushed.
Stability Alert	The meter will make an audible sound whenever measurement stability is reached.
Cal reminder	The meter will make an audible sound when calibration is due. ***Note:** Refer to Set the probe calibration reminder on page 21 to set the calibration reminder to on or off.*

Set the probe calibration reminder

Make sure that a probe is connected to the meter.

1. Push the key and select the probe settings.
2. Select Modify Current Settings.
3. Select Calibration Options.
4. Select Calibration Reminder.

Option	Description
Calibration reminder	Reminder repeat: Off, 2 h, 4 h, 8 h, 2 d, 5 d, 7d Expires: Immediately, Reminder + 30 min, Reminder + 1 hr, Reminder + 2 hr, Continue Reading The meter can be set to make an audible sound when calibration is due. Calibration expires after a specified time set by the user. ***Note:*** *The meter cannot be used to read samples after calibration has expired unless Continue Reading is selected.*

Change the temperature units

To select degrees Celsius or Fahrenheit:

1. Push the key and select Temperature Units.
2. Select the Celsius or Fahrenheit option.

Set the measurement mode

One of three modes can be used to specify when measurements are taken and how the data is stored. When a data point is stored, the result is sent simultaneously to any device (PC/printer/ USB storage device) that is connected to the meter.

1. Push the key and select Measurement Mode.
2. Select Mode.
3. Select one of the measurement modes.

Option	Description
Press to Read	The sample is measured only when the GREEN/RIGHT key under Read is pushed. Data is stored in the data log automatically when the stability criteria are met.
Interval	The sample is measured at regular intervals for a specified duration (refer to Set auto measurement intervals on page 21). Data is stored in the data log automatically.
Continuous	The sample is measured continuously. Data is stored in the data log only when the GREEN/RIGHT key under Store is pushed.

Set auto measurement intervals

When the measurement mode is set to Interval, the time intervals and duration must be specified. Measurements are stored at the user-defined intervals whether or not stability criteria are met.
Note: *Use of an external USB storage device or direct printer connection while in Interval Measurement mode prevents data from being over-written in the data log. Data points are over-written on a First In/First Out basis. Refer to Prevent data log overflow in interval mode on page 22.*

1. Push the key and select Measurement Mode.
2. Select Mode.
3. Select Interval as the Measurement Mode.
4. Select Duration and select the total time that measurements will be taken for (15 min, 30 min, 1 h, 4 h, 8 h, 24 h, 48 h or no limit).
5. Select Interval and select how often measurements will be taken (every 10 s, 30 s, 1 min, 5 min, 15 min or 30 min).

Start interval measurements

During interval measurements, the meter goes into a standby state between readings to conserve power. The auto-shutoff option is disabled. Measurements stop when the selected interval duration has passed. The auto-shutoff option then becomes active.

Interval measurements are suspended for calibrations, check standard measurements or when the key is pushed. Interval measurements resume when returning to the measurement screen.

1. From the Main Measurement screen, select Start to begin interval measurements. The screen will show “Recording” and the remaining time of the duration. The sample number automatically advances when each reading is taken.
2. To stop interval measurements, select Stop.
3. To repeat the interval measurement after it has been stopped or completed, select Start.

Prevent data log overflow in interval mode

When measurements are taken at specified intervals (Table 4), each result is automatically stored. The meter can store up to 500 data records. When 500 records have been stored, data is replaced on a first-in, first-out basis. To prevent loss of data, connect the meter to a PC/printer/USB storage device.
Note: *Stop interval measurements before changes are made to a method or to meter settings.*

Table 4 Recommended interval/duration pairs

Interval	Duration
10 seconds	1 hour
30 seconds	4 hours
1 minute	8 hours
5 minutes	24 hours

Note: *When 2 probes are connected to the meter, use the next lowest recommended duration time. For example, for a 30-second interval, set the duration to 1 hour to prevent data log overload with 2 probes.*

View instrument information

The instrument information menu shows specific information such as the serial number for the meter or IntelliCAL (R) probe(s).

1. Push the key and select Instrument Information.
2. Select (Probe model) Information or Meter Information.

Option	Description
Probe information	The Probe Information screen shows the probe model number, serial number, software version and date of first use. For LDO and LBOD probes, the lot code for the sensor cap and the remaining time before sensor cap replacement is shown. ***Note:*** *A probe must be connected to the meter.*
Meter information	The Meter Information screen shows the meter model number, serial number, software version and memory information. The amount of memory used and the number of available user method settings, operator IDs and sample IDs is shown.

Update the meter software

A USB storage device that contains software update files is used to update the meter software.
Note: *The meter must be turned off and then on again before the software update will begin. The software update initiates upon meter startup after the USB device is correctly inserted.*

NOTICE

Do not remove the USB device until the “Update complete” message is shown. The meter can become damaged if the USB device is removed before the update process is complete.

1. Save stored data from the data log to a USB storage device or to a PC. Refer to Send data to a USB storage device on page 15 and Send data directly to a computer on page 18.
2. Turn off the meter.
3. Connect the USB/DC adapter, AC-DC power supply and cord (Figure 4 on page 9).

4. Insert the USB storage device that contains the software update files into the USB/DC adapter.
5. Turn on the meter.
   The update process starts. The display will show “Updating meter to <firmware version>”. After an interval, the display changes to “Updating files, please wait...” In addition, the display will show a rotating flask and emit a periodic audio signal during the update process.
   Note: *A large capacity USB storage device increases the time required for completion of the update process, even if most of the device memory is empty.*
6. Wait for the meter to finish the software update. When the update process is complete, the message “Update complete. Remove USB device” is shown. The meter will turn off after the USB device has been removed.
7. Repeat steps 1 through 6 to update the software in other HQd meters as necessary.

Download software updates

To download the most current version of the software, refer to the applicable product page on the manufacturer's website.

1. Transfer the update files to a USB storage device.
2. Follow the instructions in Update the meter software on page 22 to update the software in the meter.

Transfer method settings

Probe settings that have been changed by the user for measurements, calibrations or check standards (Meter Options > (Probe Model) Settings > Modify Current Settings) can be copied to a USB storage device. The USB device can then be used to transfer the method settings to other HQd meters that accept the same probes.

NOTICE

Make sure the USB storage device does not contain HQd meter software update files to prevent unintentional updates.

1. Turn off the meter.
2. Connect the meter to AC power (Figure 4 on page 9).
3. Plug the USB storage device into the USB/DC adapter before the meter is powered on.
4. Turn on the meter.
5. Push the key and select Transfer Methods. If the USB device already contains a method settings file, an option to export or import methods is shown. Select Export Methods.
6. In the Select Methods to Export screen, select one or more methods to copy to the USB device. A check mark is shown next to each selected method.
7. Select OK. The settings are copied to the USB storage device. When complete, the Transfer Summary screen is shown.
8. Connect the AC power and USB device to a meter that will receive the method settings. Turn the meter on.
9. Push the key and select Transfer Methods. If the USB device already contains a method settings file, an option to export or import methods is shown. Select Import Methods.
10. In the Select Methods to Import screen, select one or more methods to transfer to the meter. A check mark is shown next to each selected method.
11. Select OK. The user method settings are transferred from the USB storage device to the meter. When complete, the Transfer Summary screen is shown. Select details to view additional information about the transfer.
12. Disconnect the USB storage device from the meter.

Bi-directional Communication between the meter and a PC

For measurement automation the meter can be used to implement a command set for meter remote control or automated data transfer. The command set can be used to perform minimal configuration and to control the meter. To set up the meter for communication and control, refer to About meter configuration on page 24. For additional information and the command set contact Technical Support.

About meter control

The virtual serial connection can be used to control meter functions from a PC. For example, the functions include starting a measurement cycle, turning off the meter and sending the entire measurement (including calibrations) to the PC or other information management system.

About meter configuration

To use the meter communication and control from the PC, an INF file must be installed.

1. The meter software must be version 2.0.0.710 or higher.
   To download the most current version of the software, refer to the applicable product page on the manufacturer's website.
2. Open the Zip file.
3. Copy the INF file from the software upgrade package to a convenient location on the PC.

   Note: *The INF file must be installed to use the meter manual control from a PC.*
4. Turn on the meter.
5. Push the key and select Instrument Information.
6. Select USB Device Type and then select Virtual Serial to use the virtual serial port on the meter.
7. Push OK. The meter will automatically restart to complete the setting change.
8. Connect the meter with the USB cable to the PC and turn on the meter.
   Windows XP starts the "Found New Hardware Wizard".
9. Select "No, not at this time" to the query "Can Windows connect to Windows Update to search for software?"
10. Click Next. The next wizard screen will prompt.
11. Select "Install from a list or specific location (Advanced)" to the query "What do you want the wizard to do?"
12. Click Next. The next wizard screen will prompt.
13. Select the option "Search for the best driver in these locations."
14. Uncheck the "Search removable media (floppy, CD-ROM)" option and select the "Include this location in the search:" and click the "Browse" button.
15. Select the INF folder or location and click OK.
16. Click Next. The new software will be installed.
17. Click Finish to complete the Found New Hardware Wizard for: HQd Meter - Virtual Serial Port.
18. To make sure that the installation succeeded, go to Computer Management>Device Manager>Ports. The new installed port is listed as HQd Meter - Virtual Serial Port (COM#).
19. The meter is now ready for communication with PC-based systems using the Virtual Serial port. A program interface must be developed by the user for the command set used to control the meter functions from the PC. Contact Technical Support for more information and command set documentation.

Maintenance

CAUTION
Multiple hazards. Only qualified personnel must conduct the tasks described in this section of the document.

Clean the meter

The meter is designed to be maintenance-free and does not require regular cleaning for normal operation. Exterior surfaces of the meter may be cleaned as necessary.

1. Wipe the surface of the meter with a damp cloth.
2. Use a cotton-tipped applicator to clean or dry the connectors.

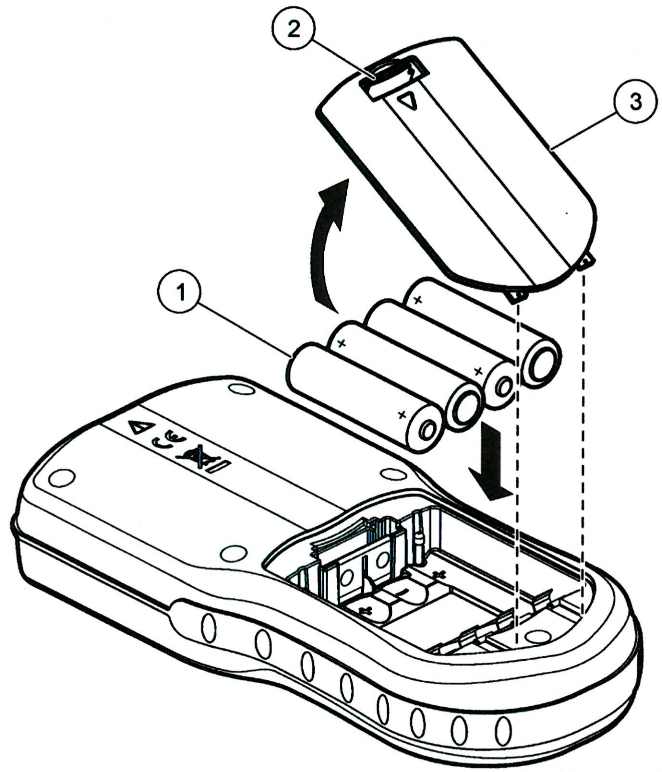
Replace the batteries

WARNING
Explosion hazard. Incorrect battery installation can cause the release of explosive gases. Be sure that the batteries are of the same approved chemical type and are inserted in the correct orientation. Do not mix new and used batteries.

For battery replacement, refer to Figure 11. Make sure that the cover is tightly closed to maintain the IP67 enclosure rating.

1. Pull the release tab on the battery cover and the remove the cover.
2. Remove the batteries.
3. Install 4 AA alkaline or 4 AA nickel metal hydride (NiMH) batteries. Make sure that the batteries are installed in the correct polarity.
4. Replace the battery cover.

Figure 11 Battery replacement



1 Batteries	2 Release tab	3 Battery cover

Troubleshooting

Refer to the following table for common problem messages or symptoms, possible causes and corrective actions.

Error/Warning	Description	Solution
Connect a Probe	Probe disconnected or connected improperly	Tighten the locking nut on the probe connector.
		Disconnect the probe and then connect the probe again
	Software not updated to most current version	To download the most current version of the software, refer to the applicable product page on the manufacturer's website.
	Problem with probe	Connect a different IntelliCAL probe to verify if problem is with probe or meter
Probe Not Supported	Probe disconnected or connected improperly	Tighten the locking nut on the probe connector.
		Disconnect the probe and then connect the probe again.
	Software not updated to most current version	To download the most current version of the software, refer to the applicable product page on the manufacturer's website.
	Problem with probe	Connect a different IntelliCAL probe to the meter to verify if problem is with the meter or the probe.
	HQd meter does not support IntelliCAL probe	Contact Technical Support.
Bootloader X.X.XX.XX error	Software not updated to most current version.	To download the most current version of the software, refer to the applicable product page on the manufacturer's website.

Error/Warning	Description	Solution
0 days remaining message (For LDO and LBOD only)	LDO or LBOD sensor cap used for 365 days	Replace the LDO or LBOD sensor cap and iButton®.
	There are 0 days remaining in the life of the LDO sensor cap.	Replace the LDO sensor cap. Calibration will be allowed. However, the calibration icon and question mark will appear on the measurement screen even if the calibration has passed.
	Meter set to incorrect date and time	**1.** Disconnect the probe from the meter. **2.** Remove the meter batteries. **3.** Install the meter batteries properly. Follow the polarity makings. **4.** Set correct date and time in the meter. **5.** Connect the probe and verify that message has been removed.
	Software not updated to most current version	To download the most current version of the software, refer to the applicable product page on the manufacturer's website.
Meter not configured	Software error(s)	If the meter starts up correctly, back up the Data Log and Method files. To download the most current version of the software, refer to the applicable product page on the manufacturer's website.

Error/Warning	Description	Solution
Meter will not power on or powers on intermittently	Batteries are not installed correctly	Examine battery orientation to make sure the batteries follow the polarity markings. Test again.
		Clean the battery terminals, then install new batteries.
		Connect AC power adapter and test again.
	Software not updated to most current version	To download the most current version of the software, refer to the applicable product page on the manufacturer's website.
	Damaged meter	Contact Technical Support.
Unable to access Full Access Options screen	Correct password has not been entered	Contact Technical Support.
Unable to access Full or Operator Access Options screen	Software not updated to most current version	To download the most current version of the software, refer to the applicable product page on the manufacturer's website.

Replacement parts and accessories

Note: *Product and Article numbers may vary for some selling regions. Contact the appropriate distributor or refer to the company website for contact information.*

Replacement parts

Description	Item no.
AC Power/USB Adapter Kit, 115 VAC	5826300
AC Power/USB Adapter Kit, 230 VAC	5834100
Batteries, Alkaline AA	1938004
Battery cover	9245500
Battery Contact, dual fixed	5188400

Replacement parts (continued)

Description	Item no.
Battery Contact, dual spring	5188800
Cable, USB 6 ft (1.8 m), Type A male, Type B male	5924000
Field Kit (includes Protective Glove Kit for meter and five 120-mL sample cups)	5825800
Field Case for 2 probes with up to 5 m cables (10 m total). Includes empty case, insert for meter and probe storage, 4 containers for sample collection.	8505500
Field Case for 3 probes with up to 5 m cables (15 m total). Includes empty case, insert for meter and probe storage, 4 containers for sample collection.	8505501
Field Case for 2 probes with greater than 5 m cables (30 m total). Includes empty case, insert for meter with protective glove.	8505600
Keyboard (QWERTY), USB type	LZV582
Printer, USB Thermal Printer Kit, DPU-S445, 100 - 240 V AC	**US:** LQV161.53.10000 **EU:** LQV161.99.10000
Printer Paper for DPU-S445, thermal, 5/pk	5836000
Probe Clips, color coded (5 colors, 2 clips of each color), 10/pk	5818400
Probe Depth Marker (rugged cables)	5828610
Probe Holder, standard (fits on protective glove)	5829400
Protective Glove Kit for meter	5828700
Universal Probe Stand for standard IntelliCAL Probes	8508850

Examples of printed reports

Printed reports contain a report header and all stored data for samples, check standards and calibrations.

Report header
The first line of a report shows the report header (Figure 12).

Figure 12 Report header

```
9999RV123456-SENDDATA-0512131618.TXT
RD LDO 16:14:32 12-08-10 6.59     mg/L     NORTH TANK   -05 JOSEPH L
```

1 Meter serial number[1]	**3** Date and time, 24 h (YYMMDDhhmm)
2 Report label	**4** File type extension

Data reports
Sample data can be printed in a basic, advanced or total report format.

- Total report—refer to Figure 13.
- Advanced report—refer to Figure 14.
- Basic report—refer to Figure 15.

[1] The probe serial number is shown on calibration history and current calibration reports.

Figure 13 Basic report for sample data—1 line

```
9999RV123456-SENDDATA-0512131618.TXT
RD LDO 16:14:32 12-08-10 6.59    mg/L   NORTH TANK   -05 JOSEPH L
```

1 Data type (RD=reading)	**6** Units
2 Parameter (pH, LDO, etc.)	**7** Sample ID: user-defined; shows “SAMPLE ID” if undefined
3 Time (hh:mm:ss in 24 h or user-defined format)	**8** Sample ID counter
4 Date (DD-MM-YY or user-defined format)	**9** Operator ID: user-defined; shows “- - -” if undefined
5 Measured value	

Figure 14 Advanced report for sample data—2 lines

```
9999RV123456-SENDDATA-0512131618.TXT
RD LDO 16:14:32 12-08-10 6.59     mg/L   PLATTE BDGE2022 JULIE
LDO101     >52040259 24.1°C,96.2%,831hPa       S = 0.0%
Out of limits
```

1 Probe model	**4** Additional units: shows all additional units associated with the reading.
2 Error message (if applicable)	**5** Probe settings: shows the highest-priority setting associated with the reading
3 Probe serial number (a “<“ or “>” on the HQ40d meter indicates the probe position)	

Figure 15 Total report for sample data—3 lines

```
9999RV123456-SENDDATA-0512131618.TXT
RD pH   07:52:47 12-08-10 3.95    pH     PLATTE BDGE2046 JULIE
   pHC301     <06047527 21.8°C,167.0mV
   Default      CAL12:52 12-08-10 58.36mV/pH  -9.3mV  MICHAEL
      1            2        3         4          5       6
```

1	Method name for probe settings	4	Calibration slope/ratio/constant
2	Time of calibration, prefaced by "CAL" and displayed as hh:mm in 24 h (or user-defined) format	5	Offset—contents vary depending on type of parameter and user settings. May be blank.
3	Date of calibration (DD-MM-YY or user-defined format)	6	Operator ID: user-defined; shows "- - -" if undefined

Check standard reports

Check standard data is printed with 1 line of information (Figure 16)

Figure 16 Check standard report

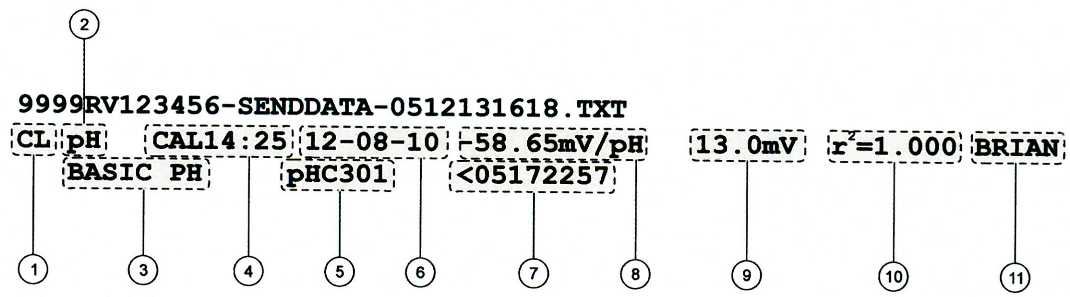
```
9999RV123456-SENDDATA-0512131618.TXT
ST pH  15:24:07 12-08-10 5.71   pH    Fail         GEORGE
 1  2     3        4      5      6      7             8
```

1	Report type (ST = check standard)	5	Measured value
2	Report type (ST = check standard)	6	Units
3	Time (hh:mm:ss in 24 h or user-defined format)	7	Check standard status: Pass/Fail based on the acceptance criteria
4	Date (DD-MM-YY or user-defined format)	8	Operator ID: user-defined; shows "- - -" if undefined

Calibration reports

Calibration data is printed when the data log is sent to the printer or when probe data is sent to the printer. Calibration data is printed with 2 lines of information (Figure 17).

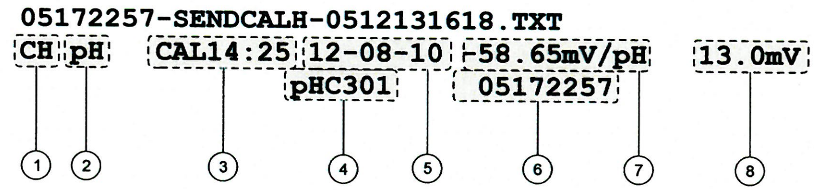
Figure 17 Calibration report



1	Report type (CL = calibration, IC = current calibration)	7	Probe serial number (a "<" or ">" on the HQ440d meter indicates the probe position)
2	Parameter (pH, LDO, etc.)	8	Calibration slope/ratio/constant
3	Method name for probe settings	9	Offset—contents vary depending on type of parameter and user settings. May be blank.
4	Time of calibration, prefaced by "CAL" and displayed as hh:mm in 24 h (or user-defined) format	10	r^2: contents vary depending on type of parameter being read, configuration of specific method and number of calibration standards used. May be blank.
5	Probe model	11	Operator ID: user-defined; shows "- - -" if undefined
6	Date of calibration (DD-MM-YY or user-defined format)		

The calibration history can be printed from the probe data menu. Refer to Figure 18.

Figure 18 Calibration history report



1 Report type (CH=calibration history)	**5** Date of calibration (DD-MM-YY or user-defined format)
2 Parameter (pH, LDO, etc.)	**6** Probe serial number (a “<“ or “>” on the HQ40d meter indicates the probe position).
3 Time of calibration, prefaced by “CAL” and displayed as hh:mm in 24 h (or user-defined) format	**7** Calibration slope/ratio/constant
4 Probe model	**8** Offset—contents vary depending on type of parameter and user settings. May be blank.

Appendix E

IDDE Employee Training Record

Illicit Discharge Detection and Elimination (IDDE)

Employee Training Record

East Longmeadow, Massachusetts

Date of Training: ______________________

Duration of Training: __________________

Name	Title	Signature

Name	Title	Signature

Appendix F

Source Isolation and Confirmation Methods:

Instructions, Manuals, and SOPs

Draft Bacterial Source Tracking Protocol, EPA New England, 2012

EPA New England Bacterial Source Tracking Protocol
Draft – January 2012

Purpose

This document provides a common framework for EPA New England ("EPA-NE") staff to develop and implement bacterial source tracking sample events, and provides a recommended approach to watershed association, municipal, and State personnel. Adopted from Boston Water and Sewer Commission ("BWSC") (2004), Pitt (2004), and based upon fieldwork conducted and data collected by EPA-NE, the protocol relies primarily on visual observations and the use of field test kits and portable instrumentation during dry and wet weather to complete a screening-level investigation of stormwater outfall discharges or flows within the drainage system. When necessary, the addition of more conclusive chemical markers may be included. The protocol is applicable to most typical Municipal Separate Storm Sewer Systems ("MS4s") and smaller tributary streams. The smaller the upstream catchment area and/or more concentrated the flow, the greater the likelihood of identifying an upstream wastewater source.

Introduction

The protocol is structured into several phases of work that progress through investigation planning and design, laboratory coordination, sample collection, and data evaluation. The protocol involves the concurrent collection and analyses of water samples for surfactants, ammonia, total chlorine, and bacteria. When more precise confirmation regarding the presence or absence of human sanitary sewage is necessary, and laboratory capacity is available, the additional concurrent collection of samples for select Pharmaceutical and Personal Care Product ("PPCP") analysis is advised. When presented with a medium to large watershed or numerous stormwater outfalls, the recommended protocol is the screening of all outfalls using the surfactant, ammonia, total chlorine, and bacterial analyses, in addition to a thorough visual assessment. The resulting data and information should then be used to prioritize and sample a subset of outfalls for all parameters, including PPCP compounds and additional analyses as appropriate. Ideally, screening-level analyses can be conducted by state, municipal, or local watershed association personnel, and a prioritized sub-set of outfalls can be sampled through a commercial laboratory or by EPA-NE using more advanced confirmatory techniques.

Step I – Reconnaissance and Investigation Design

Each sample event should be designed to answer a specific problem statement and work to identify the source of contamination. Any relevant data or reports from State, municipal, or local watershed associations should be reviewed when selecting sample locations. Aerial photography, mapping services, or satellite imagery resources are available free to the public through the internet, and offer an ideal way to pre-select locations for either field verification or sampling.

Sample locations should be selected to segregate outfall sub-catchment areas or surface waters into meaningful sections. A common investigative approach would be the identification of a specific reach of a surface water body that is known to be impaired for bacteria. Within this specific reach, stormwater outfalls and smaller tributary streams would be identified by desktop reconnaissance, municipal outfall mapping, and field investigation when necessary. Priority outfalls or areas to field verify the presence of outfalls should be selected based on a number of factors, including but not limited to the following: those areas with direct discharges to critical or impaired waters (e.g. water supplies, swimming beaches); areas served by common/twin-invert manholes or underdrains; areas with inadequate levels of sanitary sewer service, Sanitary Sewer Overflows ("SSOs") or the subject of numerous/chronic sanitary sewer customer complaints; formerly combined sewer areas that have been separated; culverted streams, and; outfalls in densely populated areas with older infrastructure. Pitt (2004) provides additional detailed guidance.

When investigating an area for the first time, the examination of outfalls in dry-weather is recommended to identify those with dry-weather flow, odor, and the presence of white or gray filamentous bacterial growth that is common (but not exclusively present) in outfalls contaminated with sanitary. For those outfalls with dry-weather flow and no obvious signs of contamination, one should never assume the discharge is uncontaminated. Sampling by EPA-NE staff has identified a number of outfalls with clear, odorless discharges that upon sampling and analyses were quite contaminated. Local physical and chemical conditions, in addition to the numerous causes of illicit discharges, create outfall discharges that can be quite variable in appearance. Outfalls with no dry-weather flow should be documented, and examined for staining or the presence of any obvious signs of past wastewater discharges downstream of the outfall.

As discussed in BWSC (2004), the protocol may be used to sample discreet portions of an MS4 sub-catchment area by collecting samples from selected junction manholes within the stormwater system. This protocol expands on the BWSC process and recommends the concurrent collection of bacteria, surfactant, ammonia, and chlorine samples at each location to better identify and prioritize contributing sources of illicit discharges, and the collection of PPCP compounds when more conclusive source identification is necessary.

Finally, as discussed further in Step IV, application of this sampling protocol in wet-weather is recommended for most outfalls, as wet-weather sampling data may indicate a number of illicit discharge situations that may not be identified in dry weather.

Step II – Laboratory Coordination

All sampling should be conducted in accordance with a Quality Assurance Project Plan ("QAPP"). A model QAPP is included as Attachment 1. While the QAPP details sample collection, preservation, and quality control requirements, detailed coordination with the appropriate laboratory staff will be necessary. Often sample events will need to be scheduled well in advance. In addition, the sampling team must be aware of the strict holding time requirements for bacterial samples – typically samples analysis must begin within 6 hours of sample collection. For sample analyses conducted by a commercial laboratory, appropriate coordination must occur to determine each facilities respective procedures and requirements.

The recommendations in this protocol are based on the use of a currently unpublished EPA-NE modification to *EPA Method 1694 – Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS*. Several commercial laboratories may offer Method 1694 capability. EPA-NE recommends those entities wishing to utilize a contract laboratory for PPCP analyses ensure that the laboratory will provide quantitative analyses for acetaminophen, caffeine, cotinine, carbamazepine, and 1,7-dimethylexanthine, at Reporting Limits similar to those used by EPA-NE (See Attachment 2). Currently, the EPA-NE laboratory has limited capacity for PPCP sampling, and any proposed EPA-NE PPCP sample events must be coordinated well in advance with the appropriate staff.

Step III – Sample Collection

Once a targeted set of outfalls has been selected, concurrent sampling and analyses for surfactants, ammonia, and total chlorine (which can all be done through the use of field kits), in addition to bacteria (via laboratory analysis) should be conducted. When numerous outfalls with dry-weather flow exist, sample locations should be prioritized according to the criteria mentioned above. In addition, field screening using only the field kits may occur during the field reconnaissance. However, it must be emphasized that the concurrent sampling and analyses of bacteria, surfactant, ammonia, and total chlorine parameters is the most efficient and cost-effective screening method.

When first observed, the physical attributes of each outfall or sampling location should be noted for construction materials, size, flow volume, odor, and all other characteristics listed on the data collection form (Attachment 3). In addition, GPS coordinates should be collected and a photograph of the sample location taken. Whenever possible, the sampling of storm drain outfalls should be conducted as close to the outfall opening as possible. Bacterial samples should be collected first, with care to not disturb sediment materials or collect surface debris/scum as best possible. A separate bottle is used to collect a single water sample from which aliquots will be analyzed for surfactants, ammonia, and total chlorine. A sample for PPCP analysis is recommended to be collected last, as the larger volume required and larger bottle size may cause some sediment disturbance in smaller outfalls or streams. If necessary, a second smaller, sterile and pre-cleaned sampling bottle may be used to collect the surface water which can then be poured into the larger PPCP bottle. Last, a properly calibrated temperature/specific conductance/salinity meter should be used to record all three parameters directly from the stream or outfall. When flow volume or depth is insufficient to immerse the meter probe, a clean sample bottle may be utilized to collect a sufficient volume of water to immerse the probe. In such instances, meter readings should be taken immediately.

As soon as reasonably possible, sample aliquots from the field kit bottle should be analyzed. When concurrent analyses are not possible, ammonia and chlorine samples should be processed first, followed by surfactant analysis, according to each respective Standard Operating Procedure as appropriate based on the particular brand and type of field test kit being used. All waste from the field test kits should be retained and disposed of according to manufacture instructions. Where waste disposal issues would otherwise limit the use of field kits, EPA-NE recommends that, at a minimum, ammonia test strips with a Reporting Limit below 0.5 mg/L be utilized. Such test strips typically are inexpensive and have no liquid reagents associated with their use. Results should be recorded, samples placed in a cooler on ice, and staff should proceed to the next sample location.

Upon completion of sampling and return to the laboratory, all samples will be turned over to the appropriate sample custodian(s) and accompanied by an appropriate Chain-of-Custody ("COC") form.

Step IV – Data Evaluation

Bacterial results should be compared to the applicable water quality standards. Surfactant and ammonia concentrations should be compared to the thresholds listed in Table 1. Evaluation of the data should include a review for potential positive results due to sources other than human wastewater, and for false negative results due to chemical action or interferences. In the EPA-NE region, field sampling has indicated that the biological breakdown of organic material in historically filled tidal wetlands may cause elevated ammonia readings, as can the discharge from many landfills. In addition, salinity levels greater than 1 part per thousand may cause elevated surfactant readings, the presence of oil may likewise indicate elevated levels, and fine suspended particulate matter may cause inconclusive surfactant readings (for example, the indicator ampule may turn green instead of a shade of blue). Finally, elevated chlorine from leaking drinking water infrastructure or contained in the illicit wastewater discharge may inhibit bacterial growth and cause very low bacterial concentrations. Any detection of total chlorine above the instrument Reporting Limit should be noted.

Table 1 – Freshwater Water Quality Criteria, Threshold Levels, and Example Instrumentation [1]

Analyte/ Indicator	**Threshold Levels/ Single Sample[3]**	**Instrumentation**
E. coli [2]	235 cfu/100ml	Laboratory via approved method
Enterococci [2]	61 cfu/100ml	Laboratory via approved method
Surfactants (as MBAS)	$\geq$ 0.25 mg/l	MBAS Test Kit (e.g. CHEMetrics K-9400)
Ammonia (NH_3)	$\geq$ 0 .5 mg/l	Ammonia Test Strips (e.g. Hach brand)
Chlorine	> Reporting Limit	Field Meter (e.g. Hach Pocket Colorimeter II)
Temperature	See Respective State Regulations	Temperature/Conductivity/Salinity Meter (e.g. YSI Model 30)

[1] The mention of trade names or commercial products does not constitute endorsement or recommendation for use by the U.S. EPA

[2] 314 CMR 4.00 MA - Surface Water Quality Standards - Class B Waters.

[3] Levels that may be indicative of potential wastewater or washwater contamination

Once dry-weather data has been examined and compared to the appropriate threshold values, outfalls or more discreet reaches of surface water can be selected for sampling or further investigation. Wet-weather sampling is also recommended for all outfalls, in particular for those that did not have flow in dry weather or those with dry-weather flow that passed screening thresholds. Wet-weather sampling will identify a number of situations that would otherwise pass unnoticed in dry weather. These wet-weather situations include, but are not limited to the following: elevated groundwater that can now cause an exchange of wastewater between cracked or broken sanitary sewers, failed septic systems, underdrains, and storm drains; increased sewer volume that can exfiltrate through cracks in the sanitary piping; increased sewer volume that can enter the storm drain system in common manholes or directly-piped connections to storm drains; areas subject to capacity-related SSO discharges, and; illicit connections that are not carried through the storm drain system in dry-weather.

Step V – Costs

Use of field test kits and field instruments for a majority of the analytical parameters allows for a significantly reduced analytical cost. Estimated instrument costs and pro-rated costs per 100 samples are included in Table 2. The cost per 100 samples metric allows averaged costs to account for reagent refills that are typically less expensive as they do not include the instrument cost, and to average out the initial capital cost for an instrument such as a temperature/ conductivity/salinity meter. For such capital costs as the meters, the cost over time will continue to decrease.

Table 2 – Estimated Field Screening Analytical Costs [1]

Analyte/ Indicator	Instrument or Meter [2]	Instrument or Meter Cost/No. of Samples	Cost per Sample (Based on 100 Samples) [3]
Surfactants (as MBAS)	Chemetrics K-9400	$77.35/20 samples ($58.08/20 sample refill)	$3.09
Ammonia (NH_3)	Hach brand 0 – 6 mg/l	$18.59/25 samples	$0.74
Total Chlorine	Hach Pocket Colorimeter II	$389/100 samples ($21.89 per 100 sample refill)	$3.89
Temperature/ Conductivity/ Salinity	YSI	$490 (meter and cable probe)	$4.90

1 Estimated costs as of February 2011

2 The mention of trade names or commercial products does not constitute endorsement or recommendation for use by the U.S. EPA

3 One-time meter costs and/or refill kits will reduce sample costs over time

From Table 2, the field analytical cost is approximately $13 per outfall. Typical bacterial analyses costs can vary depending on the analyte, method, and total number of samples to be performed by the laboratory. These bacterial analyses costs can range from $20 to $60. Therefore, the analytical cost for a single outfall, based on the cost per 100 samples, ranges from $33 to $73. As indicated above, these costs will decrease slightly over time due to one-time capitals costs for the chlorine and temperature/conductivity/salinity meters.

Step VI – Follow-Up

Once all laboratory data has been reviewed and determined final in accordance with appropriate quality assurance controls, results should be reviewed with appropriate stakeholders to determine next steps. Those outfalls or surface water segments that fail to meet the appropriate water quality standard, and meet or exceed the surfactant and ammonia threshold values, in the absence of potential interferences mentioned in Step IV, indicate a high likelihood for the presence of illicit connections upstream in the drainage system or surface water. Whereas illicit discharges are quite variable in nature, the exceedance of the applicable water quality standard and only the ammonia or surfactant threshold value may well indicate the presence of an illicit connection. When available, the concurrent collection and analyses of PPCP data can greatly assist in confirming the presence of human wastewater. However, such data will not be available in all instances, and the collective data set and information regarding the physical characteristics of each sub-catchment or surface water reach should be used to prioritize outfalls for further investigation. As warranted, data may be released to the appropriate stakeholders, and should be accompanied by an explanation of preliminary findings. Release of EPA data should be fully discussed with the case team or other appropriate EPA staff.

References Cited

Boston Water & Sewer Commission, 2004, *A systematic Methodology for the Identification and Remediation of Illegal Connections.* 2003 Stormwater Management Report, chap. 2.1.

Pitt, R. 2004 *Methods for Detection of Inappropriate Discharge to Storm Drain Systems. Internal Project Files*. Tuscaloosa, AL, *in* The Center for Watershed Protection and Pitt, R., *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*: Cooperative Agreement X82907801-0, U.S. Environmental Protection Agency, variously paged. Available at: http://www.cwp.org.

Instrumentation Cited (Manufacturer URLs)

MBAS Test Kit - CHEMetrics K-9400: http://www.chemetrics.com/Products/Deterg.htm

Portable Colorimeter – Hach Pocket Colorimeter II: http://www.hach.com/

Ammonia (Nitrogen) Test Strips: http://www.hach.com/

Portable Temperature/Conductivity/Salinity Meter: YSI Model 30: http://www.ysi.com/productsdetail.php?30-28

Disclaimer: The mention of trade names or commercial products in this protocol does not constitute endorsement or recommendation for use by the U.S. EPA.

Attachment 1

Stormwater Monitoring Quality Assurance Project Plan
2012-2017

RFA #

Sampling Plan Acceptance

EPA OES Enforcement and Project Manager/Coordinator **Signature:**	**Date:**
EPA OEME Project Managers/Coordinator **Signature:**	**Date:**
EPA OEME QA Officer **Signature:**	**Date:**
EPA Chemistry Team Lead **Signature:**	**Date:**

1.0 Background

U.S. EPA Administrative Order 5360.1 requires that “all projects involving environmental monitoring performed by or for the U.S. EPA shall not be undertaken without an adequate Quality Assurance Project Plan (QAPP).” The purpose of this document is to describe the process used to develop, select, manage, and finalize stormwater monitoring projects. In describing this process, quality assurance goals and methods will be established, thus ensuring that the overall program and each monitoring project will meet or exceed EPA requirements for quality assurance.

The objective of these projects will be to collect data that is usable by EPA OES enforcement staff for enforcement actions and information requests. The primary focus of this project will be on urban water stormwater outfalls in the New England Region watersheds.

2.0 Sampling overview

Monitoring will be conducted on pre-scheduled days with the Laboratory. Samples will be retrieved from surface water, in stream or outfalls at suspected hotspots or areas that need further delineation. Sample sites will be located using GPS, with an accuracy goal of ± 1 meter and PDOP less than 6. Less accurate GPS reading or coordinates from maps will be accepted when site or other conditions do not allow ± 1 meter accuracy.

The primary focus of this sampling will be used to identify illegal discharges.
Results from the sampling will be used by EPA enforcement staff for enforcement purposes. For this project, sampling will be conducted according to EPA’s Ambient Water Sampling SOP (Table 3). Volunteers and watershed association staff may assist in sampling. All procedures will be followed that are specified in Table 3. Parameter to be sampled will be predetermined by enforcement (OES) and OEME staff, based on data needs.

A. Locations

Site locations will be determined from field or desktop reconnaissance by project staff. Sample analyses will be predetermined based on conditions known about the sampling location prior to sampling. These may include data from previous sampling or from data collected from Mass DEP or local watershed associations. Any of the parameters listed in table 2 may be analyzed.

B. Analytical Methods and Reporting limits

Sample analyses will be conducted by EPA Laboratories.

This effort will test and compare the most appropriate analytical methods including, but not limited to; laboratory analysis, test kits and field analysis to determine the most effective and cost-efficient outfall and in-stream sampling approach.
Multiple and repeated testing will occur at each location to compare different method for identifying sewage contamination.

PPCPs, E.coli and enterococcus will be analyzed by EPA’s Laboratory. Surfactants, ammonia, total chlorine will be analyzed with field test kits. Potential additional laboratory analyses include nitrogen (nitrate/nitrite), TSS, BOD, surfactants, ammonia and TPH. The Laboratory used for each sampling event will be determined prior to sampling by the OEME Project Manager based on required analyses Laboratory availability and contract funds available.

Where available, a known concentration sample will be used to evaluate the performance of each test method. The known concentration sample will be processed in the field and Laboratory as a routine sample. The analyst or field technician will not know the concentration of the sample prior to analyzing and reporting the sample result. Sampling for PPCP testing will be done using extreme care not to contaminate the sample. No caffeine products should be consumed prior to sampling.

Table 1: Parameter specifications

Parameter (lab - equipment)	Preservation	Holding time
PH	None	Immediate
Temperature	None	Immediate
Sp Cond	None	Immediate
DO	None	Immediate
Total Phosphorus (EPA)	H_2SO_4 (pH <2) + Ice	28 days
TSS (EPA)	Ice	7 days
TSS (Alpha)	Ice	7 days
BOD (Alpha)	Ice	48 hours
Surfactants (Alpha)	Ice	48 hours
Surfactants (field kit – Chemetrics)	None	Immediate
Ammonia (alpha)	H_2SO_4 (pH <2) + Ice	28 days
Ammonia (test strips)	None	Immediate
TPH Petroleum ID (alpha)	Ice	7 Days to extraction 40 days after extraction
E. Coli (EPA)	Ice	6 hrs to lab
Enterococcus (EPA)	Ice	6 hrs to lab
PPCP	Ice (acidified in Lab)	7 day to extraction 40 days after extraction
Chlorine (Field kit – Hach)	None	Immediate

Attachment 1

Table 2: Analytical References and Quality Control Goals

		Water Quality Criteria or Guidelines	Quality Assurance Goals		
Parameter (lab- equipment)	**Reporting Limits**	**(MA or EPA)**	**Precision**	**Accuracy**	**Completeness**
PH	4 to 10 units	6.5 - 8.3	0.02 unit	± 0.3 units	90%
Temperature	0 to +40°C	28.3°C	0.1 °C	± 0.15°C	90%
Sp Cond	0 to 100 mS/cm	NA	5 uS/cm	±10% cal std (µS/cm)	90%
DO	0.5mg/l to Sat	≥5 mg/l , ≥60% saturation	0.02mg/l	± .5 mg/l	90%
Total Phosphorus (EPA)	5.0 ug/l	NA	Field dup 30% RPD	MS 70-130%	90%
TSS (EPA)	5mg/L	NA	Field dup 30% RPD	See SOP	
TSS (Alpha)	5 mg/L	NA	Field dup 30% RPD	See SOP	90%
BOD (Alpha)	2 mg/L	NA	Field dup 30% RPD	See SOP	90%
Surfactants (field kit – Chemetrics)	0.25 mg/L[1]	0.25 mg/L	Field dup 30% RPD	TBD	90%
Ammonia (test strips)	0.25 mg/L[1]	1.0 mg/L	Field dup 30% RPD	TBD	90%
TPH Petroleum ID (alpha)	Variable	NA	Field dup 30% RPD	See SOP	
E. Coli (EPA)	4 col./ 100 ml	<=126 col./100 ml* <= 235 col./100 ml	±100 col/100ml or 30% RPD	N/A	90%
Enterococcus (EPA)	1 col/100ml	<=33 col./100 ml* <= 61 col./100 ml	±100 col/100ml or 30% RPD	See SOP	90%
PPCP	TBD	NA	Field dup 50% RPD	TBD	90%
Chlorine (Field kit – Hach)	0.02 mg/l	NA	Field dup 30% RPD	TBD	90%

Note
*Geometric mean Criteria
TBD = To be determined, Field methods and some colorimeter methods do not have accuracy criteria determined.
[1] Needs field verification to confirm

Attachment 1

Table 3: Field and Laboratory References

Parameter	Analytical Method Reference	SOP reference
	Field References- 5/2005	
pH		
Conductivity		
Temperature		
dissolved oxygen	n/a	ECASOP-YSISondes9
Ambient water samples	n/a	ECASop-Ambient Water Sampling2
Chain of custody of samples	n/a	EIASOP-CHAINOFCUST
Sample login, tracking, disposition	n/a	EIASOP-ADMLOG14
	Lab. References- 5/ 2005	
Total Phosphorus (EPA)	EPA 365.3	EIASOP-INGTP8
TSS (EPA)	EPA 160.2	EIASOP-INGTSS-TDS-VRES5
TSS (Alpha)	EPA 160.2,SM2540D	SOP/07-29
BOD (Alpha)	EPA 405.1,SM5210B	SOP/07-13
Surfactants (field kit – Chemetrics)	Chemetrics	Draft
Ammonia (test strips)	Hach	Draft
TPH Petroleum ID (alpha)	8015B (M)	0-017
E. Coli (EPA)	SM9230	ECASOP- TC/EC Colilert2
Enterococcus (EPA)	SM9230	ECASOP-Enterolert1
PPCP	EPA 1694	TBD
Chlorine (Field kit – Hach)	Hach	TBD

*Specific conductance is the only parameter identified as non critical

Bottle list

Table 4: Bottle Sampling List

Parameter (lab - equipment)	Bottle	Preservation
	Primary analyses	
E. Coli (EPA)	(2) 120ml or 250ml sterile	Ice
Enterococcus (EPA)		Ice
PPCP	1 Liter Amber	Ice (acidified in Lab)
	Optional analyses	
Chlorine (Alpha)	500 ml	Ice
Total Phosphorus (EPA)	125 ml	H_2SO_4 (pH <2) + Ice
TSS (EPA)	1 liter	Ice
TSS (Alpha)	1 liter	Ice
BOD (Alpha)	1 Liter	Ice
TPH Petroleum ID (alpha)	2 -1 Liter Amber Glass tephlon lined	Ice
E. Coli (Alpha)	120 ml sterile	Ice
Enterococcus (Alpha)	120 ml sterile	Ice

C. Quality Control

Calibration:	EPA will calibrate its sondes according to the EPA sonde calibration SOP.
Field duplicate:	One duplicate sample will be collected per sampling event or approximately for every ten samples.
Trip Blank:	OEME Chemist will run appropriate QA samples for PPCP's. One blank sample will be collected for approximately every ten bacteria samples. Reported data that is less than 5 times the trip (field) blank concentration will be flagged.
QC Criteria:	Are specified in table 2, data not meeting this criteria will be reviewed by the Project Manager. Data that does not meet laboratory QA/QC criteria will be flagged by the laboratory.

D. Chain of Custody

Chain of custody procedures will follow the OEME/Investigations Office SOP (Table 3)

3.0 Data Review

EPA Microbiology data will be reviewed by the Biology QAO. Alpha generated microbiology samples will be reviewed by the OEME Project Manager. All field data and draft data reports will be reviewed by the OEME Project manager. Laboratory generated data (from Alpha and EPA) will be reviewed by the Chemistry Team Leader.

4.0 Data reports

Data reports will be reviewed by the Project Coordinator and the OEME Project Manager before a final report is release to the Enforcement Coordinator. Draft reports may be released without a complete review.

5.0 Attachments

1) Standard Operating Procedure Enterococcus (SM9230B), Multiple Tube Technique. SOP/07-01 *Alpha Analytical, Inc. May 28, 2005*

2) Standard Operating Procedure E. Coli (SM9213D). SOP/07-41 *Alpha Analytical, Inc. May 28, 2005*

3) Standard Operating Procedure MBAS, Ionic Surfactants. Draft SOP *EPA Laboratory. January 28, 2010*

4) Standard Operating Procedure Nitrogen Ammonia. Draft SOP *EPA Laboratory. February 10, 2011*

5) Standard Operating Procedure Total Chlorine. Draft SOP *EPA Laboratory. February 12, 2010*

6) Standard Operating Procedure TSS/ TVSS (SM2540 D, EPA 160.2). SOP/07-29 *Alpha Analytical, Inc. September 29, 2007*

7) Standard Operating Procedure BOD-5day, SBOD-5day, and cBOD-5day (SM 5210B, and EPA 405.1). SOP/07-13 *Alpha Analytical, Inc. September 29, 2007*

8) Standard Operating Procedure TPH 8015D – Modified 0-017 (EPA 8015D Modified) *Alpha Analytical, Inc. March 04, 2008*

9) Standard Operating Procedure determination of Trace Elements in Water and Wastes by Inductively Coupled Plasma- Mass Spectrometry (200.8). SOP/06-11 Alpha Analytical, Inc. July 13, 200

10) Standard Operating Procedure Inductively Coupled Plasma – Mass Spectrometry (6020). SOP/06-10 Alpha Analytical, Inc. October 25, 2007

Target Compounds, Uses, and Reporting Limits

Target Compound	Major Use	RL (ng/L)	Daily Dose (ng)
Caffeine	Natural Stimulant	5.0	200,000,000
1,7-DMX	Metabolite of caffeine	2.5	N/A
Acetaminophen	Pain Reliever	2.5	650,000,000
Carbamazepine	Anti- depressant / bi-polar Anti-convulsant (epilepsy)	0.5	100,000,000
Primidone	Anti- epilepsy drug (AED)	5.0	100,000,000
Atenolol	Beta Blocker High Blood Pressure	2.5	50,000,000
Cotinine	Metabolite of Nicotine	0.5	3,500-7,200 (ng/mL)
Urobilin	By-product of hemoglobin breakdown (mammals)	5.0	1,300,000 ng/g in feces
Azithromycin	Antibiotic	1.6	200,000,000

Attachment 3

STORMWATER MONITORING

Field Collection Requirements (To be recorded at each site)

Sample-

Site Name ______________________

Time collected____________________

Date collected____________________

Inspection-

****Take picture at site****

Outfall diameter________('na' if open stream)

Flow estimate_________('na' if open stream)

Odor___________________________

Color___________________________

Turbidity_______________________

Floatables______________________

Other observations_______________

____

YSI Meter (calibrate in lab)-

Salinity_________________________

Temp___________________________

Conductivity (give both #'s)

____

Location information-

Short description of where sample was collected at site__________________

____

____

GPS_____________________________

____

Field Kits listed in the order they should be conducted in, include any applicable notes-

NH3 strip________________________

Cl2 kit__________________________

Hach meter – (3 min wait)

Surfactant_______________________

Chemetrics K-9400 Blue box/detergent test kit

Additional Notes:

(Note any changes in weather conditions)_________________________

____

____

____

____

STORMWATER MONITORING (PAGE 2)

Field Equipment List

Waste Containers (2 total – clearly labeled):

1 liter amber plastic for surfactants/detergents kit waste
1 liter amber plastic for Cl2 kit waste

Sample Bottles (3 total for each sample location)-
120ml sterile – E.coli/entero
1 Liter amber glass: PPCP, *EPA* (Peter Philbrook)
120ml-250ml plastic – Field Kit Bottle – to be used on site for kits listed above

***Fill out chain of custody

In Carboy Container
☐Log book
☐COC forms
☐Extra sample bottles
☐Colored tape
☐Sharpies
☐Write-On-Rain Pens
☐Paper towels
☐GPS
☐Sampling plan & GPS locations
☐Regular length Powder Free Gloves
☐Squirt bottle of DI Water
☐Coolers with Ice
☐Waders/Boots
☐YSI multi parameter Meter

Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, 2004

Chapter 13: Tracking Discharges to a Source

Chapter 13: Tracking Discharges To A Source

Once an illicit discharge is found, a combination of methods is used to isolate its specific source. This chapter describes the four investigation options that are introduced below.

Storm Drain Network Investigation

Field crews strategically inspect manholes within the storm drain network system to measure chemical or physical indicators that can isolate discharges to a specific segment of the network. Once the pipe segment has been identified, on-site investigations are used to find the specific discharge or improper connection.

Drainage Area Investigation

This method relies on an analysis of land use or other characteristics of the drainage area that is producing the illicit discharge. The investigation can be as simple as a "windshield" survey of the drainage area or a more complex mapping analysis of the storm drain network and potential generating sites. Drainage area investigations work best when prior indicator monitoring reveals strong clues as to the likely generating site producing the discharge.

On-site Investigation

On-site methods are used to trace the source of an illicit discharge in a pipe segment, and may involve dye, video or smoke testing within isolated segments of the storm drain network.

Septic System Investigation

Low-density residential watersheds may require special investigation methods if they are not served by sanitary sewers and/ or storm water is conveyed in ditches or swales. The major illicit discharges found in low-density development are failing septic systems and illegal dumping. Homeowner surveys, surface inspections and infrared photography have all been effectively used to find failing septic systems in low-density watersheds.

13.1 Storm Drain Network Investigations

This method involves progressive sampling at manholes in the storm drain network to narrow the discharge to an isolated pipe segment between two manholes. Field crews need to make two key decisions when conducting a storm drain network investigation—where to start sampling in the network and what indicators will be used to determine whether a manhole is considered clean or dirty.

Where to Sample in the Storm Drain Network

The field crew should decide how to attack the pipe network that contributes to a problem outfall. Three options can be used:

- Crews can work progressively up the trunk from the outfall and test manholes along the way.
- Crews can split the trunk into equal segments and test manholes at strategic junctions in the storm drain system.
- Crews can work progressively down from the upper parts of the storm drain network toward the problem outfall.

The decision to move up, split, or move down the trunk depends on the nature and land use of the contributing drainage area. Some guidance for making this decision is provided in Table 53. Each option requires different levels of advance preparation. Moving up the trunk can begin immediately when an illicit discharge is detected at the outfall, and only requires a map of the storm drain system. Splitting the trunk and moving down the system require a little more preparation to analyze the storm drain map to find the critical branches to strategically sample manholes. Accurate storm drain maps are needed for all three options. If good mapping is not available, dye tracing can help identify manholes, pipes and junctions, and establish a new map of the storm drain network.

Option 1: Move up the Trunk

Moving up the trunk of the storm drain network is effective for illicit discharge problems in relatively small drainage areas. Field crews start with the manhole closest to the outfall, and progressively move up the network, inspecting manholes until indicators reveal that the discharge is no longer present (Figure 50). The goal is to isolate the discharge between two storm drain manholes.

Table 53: Methods to Attack the Storm Drain Network

Method	Nature of Investigation	Drainage System	Advance Prep Required
Follow the discharge up	Narrow source of an individual discharge	Small diameter outfall (< 36”) Simple drainage network	No
Split into segments	Narrow source of a discharge identified at outfall	Large diameter outfall (> 36”), Complex drainage Logistical or traffic issues may make sampling difficult.	Yes
Move down the storm drain	Multiple types of pollution, many suspected problems—possibly due to old plumbing practices or number of NPDES permits	Very large drainage area (> one square mile).	Yes

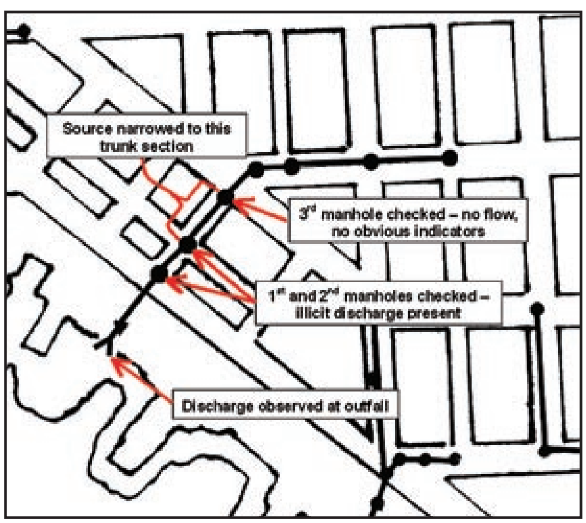


Figure 50: Example investigation following the source up the storm drain system

Option 2: Split the storm drain network

When splitting the storm drain network, field crews select strategic manholes at junctions in the storm drain network to isolate discharges. This option is particularly suited in larger and more complex drainage areas since it can limit the total number of manholes to inspect, and it can avoid locations where access and traffic are problematic.

The method for splitting the trunk is as follows:

1. Review a map of the storm drain network leading to the suspect outfall.
2. Identify major contributing branches to the trunk. The trunk is defined as the largest diameter pipe in the storm drain network that leads directly to the outfall. The "branches" are networks of smaller pipes that contribute to the trunk.
3. Identify manholes to inspect at the farthest downstream node of each contributing branch and one immediately upstream (Figure 51).
4. Working up the network, investigate manholes on each contributing branch and trunk, until the source is narrowed to a specific section of the trunk or contributing branch.
5. Once the discharge is narrowed to a specific section of trunk, select the appropriate on-site investigation method to trace the exact source.
6. If narrowed to a contributing branch, move up or split the branch until a specific pipe segment is isolated, and commence the appropriate on-site investigation to determine the source.

Option 3: Move down the storm drain network

In this option, crews start by inspecting manholes at the "headwaters" of the storm drain network, and progressively move down pipe. This approach works best in very large drainage areas that have many potential continuous and/or intermittent discharges. The Boston Water and Sewer Commission has employed the headwater option to investigate intermittent discharges in complex drainage areas up to three square miles (Jewell, 2001). Field crews certify that each upstream branch of the storm drain network has no contributing discharges before moving down pipe to a "junction manhole" (Figure 52). If discharges are found, the crew performs dye testing to pinpoint the discharge. The crew then confirms that the discharge is removed before moving farther down the pipe network. Figure 53 presents a detailed flow chart that describes this option for analyzing the storm drain network.

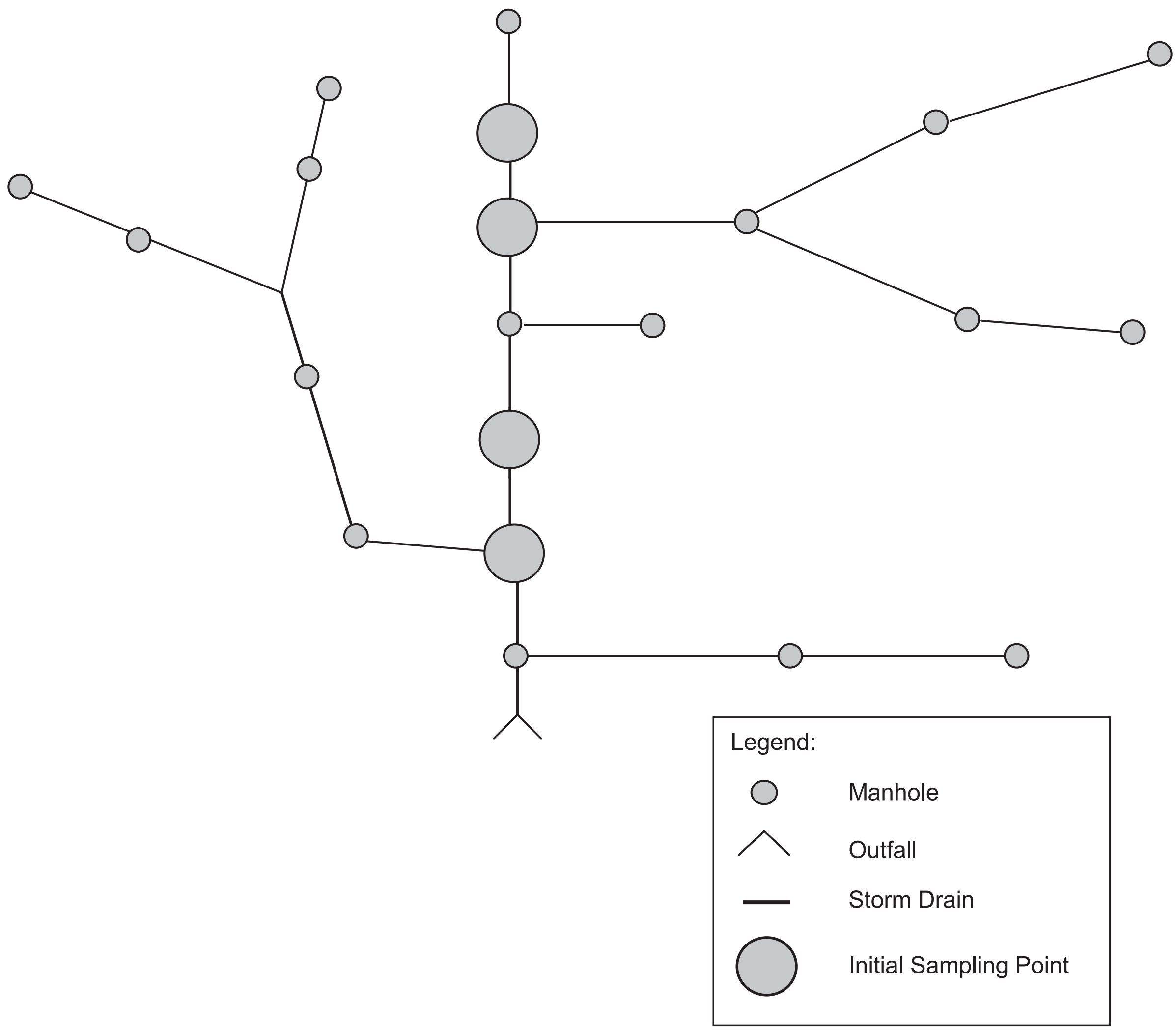


Figure 51: Key initial sampling points along the trunk of the storm drain

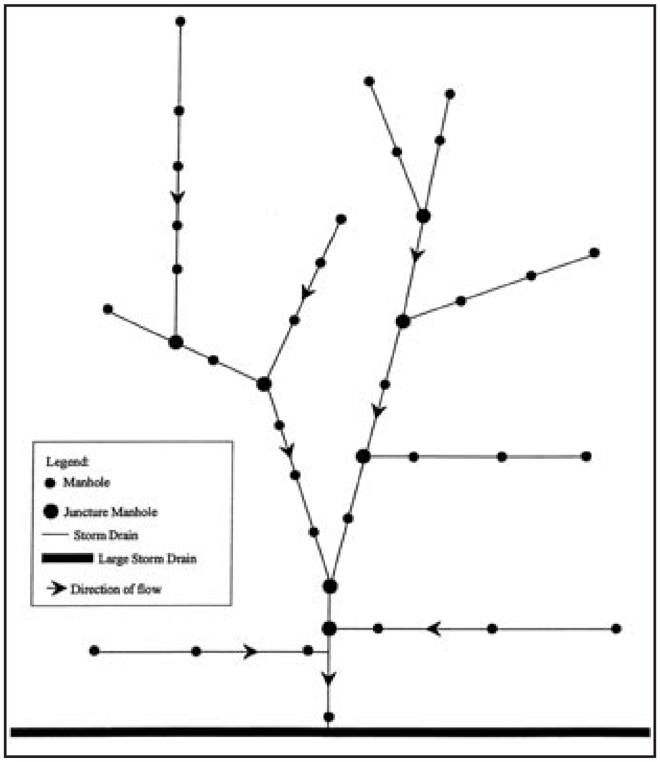


Figure 52: Storm Drain Schematic Identifying "Juncture Manholes" (Source: Jewell, 2001)

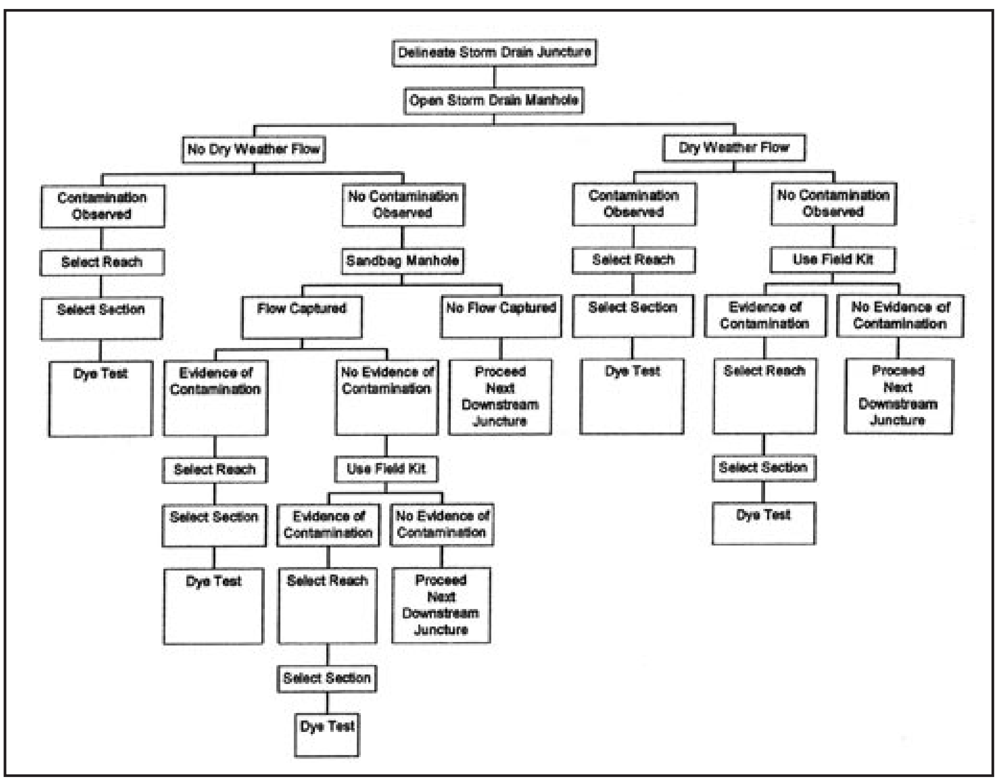


Figure 53: A Process for Following Discharges Down the Pipe (Source: Jewell, 2001)

Dye Testing to Create a Storm Drain Map

As noted earlier, storm drain network investigations are extremely difficult to perform if accurate storm drain maps are not available. In these situations, field crews may need to resort to dye testing to determine the flowpath within the storm drain network. Fluorescent dye is introduced into the storm drain network and suspected manholes are then inspected to trace the path of flow through the network (U.S. EPA, 1990). Two or three member crews are needed for dye testing. One person drops the dye into the trunk while the other(s) looks for evidence of the dye down pipe.

To conduct the investigation, a point of interest or down pipe "stopping point" is identified. Dye is then introduced into manholes upstream of the stopping point to determine if they are connected. The process continues in a systematic manner until an upstream manhole can no longer be determined, whereby a branch or trunk of the system can be defined, updated or corrected. More information on dye testing methods is provided in Section 13.3.

Manhole Inspection: Visual Observations and Indicator Sampling

Two primary methods are used to characterize discharges observed during manhole inspections—visual observations and indicator sampling. In both methods, field crews must first open the manhole to determine whether an illicit discharge is present. Manhole inspections require a crew of two and should be conducted during dry weather conditions.

Basic field equipment and safety procedures required for manhole inspections are outlined in Table 54. In particular, field crews need to be careful about how they will safely divert traffic (Figure 54). Other safety considerations include proper lifting of manhole covers to reduce the potential for back injuries, and testing whether any toxic or flammable fumes exist within the manhole before the cover is removed. Wayne County, MI has developed some useful operational procedures for inspecting manholes, which are summarized in Table 55.

Table 54: Basic Field Equipment Checklist

• Camera and film or digital camera	• Storm drain, stream, and street maps
• Clipboards	• Reflective safety vests
• Field sheets	• Rubber / latex gloves
• Field vehicle	• Sledgehammer
• First aid kit	• Spray paint
• Flashlight or spotlight	• Tape measures
• Gas monitor and probe	• Traffic cones
• Manhole hook/crow bar	• Two-way radios
• Mirror	• Waterproof marker/ pen
• Hand held global positioning satellite (GPS) system receiver (best resolution available within budget, at least 6' accuracy)	

Figure 54: Traffic cones divert traffic from manhole inspection area

Table 55: Field Procedure for Removal of Manhole Covers
(Adapted from: Pomeroy et al., 1996)

Field Procedures:

1. Locate the manhole cover to be removed.
2. Divert road and foot traffic away from the manhole using traffic cones.
3. Use the tip of a crowbar to lift the manhole cover up high enough to insert the gas monitor probe. Take care to avoid creating a spark that could ignite explosive gases that may have accumulated under the lid. Follow procedures outlined for the gas monitor to test for accumulated gases.
4. If the gas monitor alarm sounds, close the manhole immediately. Do not attempt to open the manhole until some time is allowed for gases to dissipate.
5. If the gas monitor indicates the area is clear of hazards, remove the monitor probe and position the manhole hook under the flange. Remove the crowbar. Pull the lid off with the hook.
6. When testing is completed and the manhole is no longer needed, use the manhole hook to pull the cover back in place. Make sure the lid is settled in the flange securely.
7. Check the area to ensure that all equipment is removed from the area prior to leaving.

Safety Considerations:

1. Do not lift the manhole cover with your back muscles.
2. Wear steel-toed boots or safety shoes to protect feet from possible crushing injuries that could occur while handling manhole covers.
3. Do not move manhole covers with hands or fingers.
4. Wear safety vests or reflective clothing so that the field crew will be visible to traffic.
5. Manholes may only be entered by properly trained and equipped personnel and when all OSHA and local rules a.

Visual Observations During Manhole Inspection

Visual observations are used to observe conditions in the manhole and look for any signs of sewage or dry weather flow. Visual observations work best for obvious illicit discharges that are not masked by groundwater or other "clean" discharges, as shown in Figure 55. Typically, crews progressively inspect manholes in the storm drain network to look for contaminated flows. Key visual observations that are made during manhole inspections include:

- Presence of flow
- Colors
- Odors
- Floatable materials
- Deposits or stains (intermittent flows)

Figure 55: Manhole observation (left) indicates a sewage discharge. Source is identified at an adjacent sewer manhole that overflowed into the storm drain system (right).

Indicator Sampling

If dry weather flow is observed in the manhole, the field crew can collect a sample by attaching a bucket or bottle to a tape measure/rope and lowering it into the manhole (Figure 56). The sample is then immediately analyzed in the field using probes or other tests to get fast results as to whether the flow is clean or dirty. The most common indicator parameter is ammonia, although other potential indicators are described in Chapter 12.

Manhole indicator data is analyzed by looking for "hits," which are individual samples that exceed a benchmark concentration. In addition, trends in indicator concentrations are also examined throughout the storm drain network.

Figure 56: Techniques to sample from the storm drain

Figure 57 profiles a storm drain network investigation that used ammonia as the indicator parameter and a benchmark concentration of 1.0 mg/L. At both the outfall and the first manhole up the trunk, field crews recorded finding "hits" for ammonia of 2.2 mg/L and 2.3 mg/ L, respectively. Subsequent manhole inspections further up the network revealed one manhole with no flow, and a second with a hit for ammonia (2.4 mg/L). The crew then tracked the discharge upstream of the second manhole, and found a third manhole with a low ammonia reading (0.05 mg/L) and a fourth with a much higher reading (4.3 mg/L). The crew then redirected its effort to sample above the fourth manhole with the 4.3 mg/L concentration, only to find another low reading. Based on this pattern, the crew concluded the discharge source was located between these two manholes, as nothing else could explain this sudden increase in concentration over this length of pipe.

The results of storm drain network investigations should be systematically documented to guide future discharge investigations, and describe any infrastructure maintenance problems encountered. An example of a sample manhole inspection field log is displayed in Figure 58.

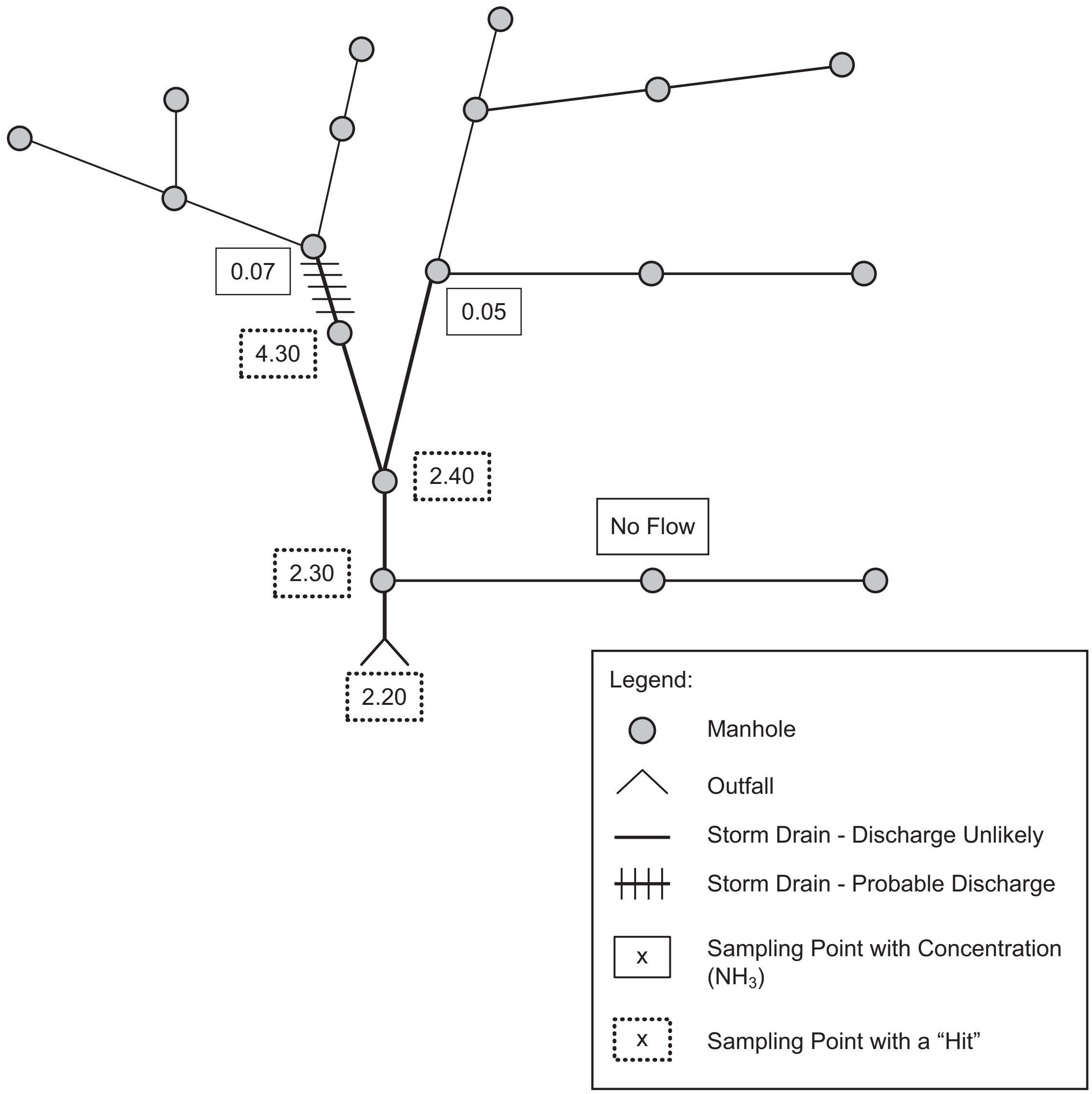


Figure 57: Use of ammonia as a trace parameter to identify illicit discharges

BOSTON WATER AND SEWER COMMISSION
MANHOLE INSPECTION LOG

Manhole ID No.

Inspection Date: ____________________ Tributary Area: ______________________________

Street: __________________________ Manhole Type:

Inspection: Not Found ___ Surface ___ Internal ___ Sanitary Sewer _____ Storm Drain _____

Follow Up Inspection _________ High Outlet _______ Lovejoy _______

Time Since Last Rain:

Inspector: _________________________ < 48 hours _____ 48 – 72 hours _____ > 72 hours _____

Observations:

Standing Water in Manhole: Yes ____ No ____ Color of Water: Clear ____ Cloudy ____ Other _____________

Flow in Manhole: Yes _____ No _____ Velocity: Slow _____ Medium _____ Fast _____ Depth of Flow: _____ in.

Color of Flow: No Flow: _____ Clear _____ Cloudy _____ Suspended Solids _____ Other _______________

Blockages: Yes _____ No _____ Sediment in Manhole: Yes ____ No____ If Yes: Percent of Pipe Filled: _____ %

Floatables: None _____ Sewage _____ Oily Sheen _____ Foam _____ Other ______________________

Odor: None _____ Sewage _____ Oil _____ Soap _____Other ___________________________

Field Testing:

pH _____ Temp _____ Spec. Cond. _____ Surfactants: Yes _____ No __ Ammonia: Yes _____ No __

Contamination:

Found During Inspection Yes __ Check one: __Observation __Positive Test Kit Result

No __ Sandbagged Placed No __ Yes ____ Give Date ________

Sandbag Checked (Date): ________ Flow was ____ Captured ____ Not Captured:

Condition of Manhole:

Grade: At _____ Above_____ Below _____ High Outlet: Blocked

Common Manholes: Yes ___ No ___ NA ___

Lovejoy: Cover Plate in Place Yes ___ No ___ NA ___

	Good	Fair	Poor	Comments
Pavement	____	____	____	______________
Cover	____	____	____	______________
Frame	____	____	____	______________
Corbel	____	____	____	______________
Walls	____	____	____	______________
Floor	____	____	____	______________

Construction Material:

	Brick	Precast	Other
Corbel	___	___	______________
Walls	___	___	______________
Floor	___	___	______________

Comments: Manhole Correct as Mapped Yes _____ No _____

N↑

Plan of Manhole

Figure 58: Boston Water and Sewer Commission Manhole Inspection Log (Source: Jewell, 2001)

Methods to isolate intermittent discharges in the storm drain network

Intermittent discharges are often challenging to trace in the storm drain network, although four techniques have been used with some success.

Sandbags

This technique involves placement of sandbags or similar barriers within strategic manholes in the storm drain network to form a temporary dam that collects any intermittent flows that may occur. Any flow collected behind the sandbag is then assessed using visual observations or by indicator sampling. Sandbags are lowered on a rope through the manhole to form a dam along the bottom of the storm drain, taking care not to fully block the pipe (in case it rains before the sandbag is retrieved). Sandbags are typically installed at junctions in the network to eliminate contributing branches from further consideration (Figure 59). If no flow collects behind the sandbag, the upstream pipe network can be ruled out as a source of the intermittent discharge.

Sandbags are typically left in place for no more than 48 hours, and should only be installed when dry weather is forecast. Sandbags should not be left in place during a heavy rainstorm. They may cause a blockage in the storm drain, or, they may be washed downstream and lost. The biggest downside to sandbagging is that it requires at least two trips to each manhole.

Optical Brightener Monitoring (OBM) Traps

Optical brightener monitoring (OBM) traps, profiled in Chapter 12, can also be used to detect intermittent flows at manhole junctions. When these absorbent pads are anchored in the pipe to capture dry weather flows, they can be used to determine the presence of flow and/or detergents. These OBM traps are frequently installed by lowering them into an open-grate drop inlet or storm drain inlet, as shown in Figure 60. The pads are then retrieved after 48 hours and are observed under a fluorescent light (this method is most reliable for undiluted washwaters).

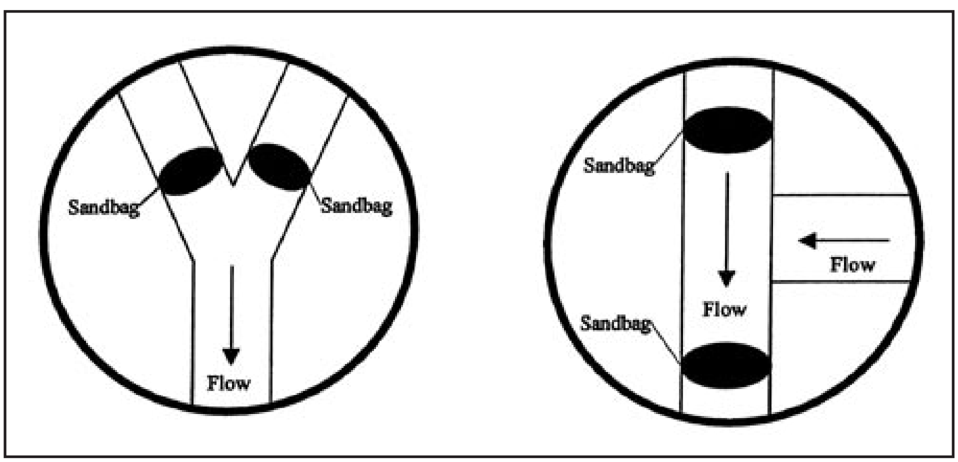


Figure 59: Example sandbag placement (Source: Jewell, 2001)

Figure 60: Optical Brightener Placement in the Storm Drain
(Source: Sargent and Castonguay, 1998)

Automatic Samplers

A few communities have installed automated samplers at strategic points within the storm drain network system that are triggered by small dry weather flows and collect water quality samples of intermittent discharges. Automated sampling can be extremely expensive, and is primarily used in very complex drainage areas that have severe intermittent discharge problems. Automated samplers can pinpoint the specific date and hours when discharges occur, and characterize its chemical composition, which can help crews fingerprint the generating source.

Observation of Deposits or Stains

Intermittent discharges often leave deposits or stains within the storm drain pipe or manhole after they have passed. Thus, crews should note whether any deposits or stains are present in the manhole, even if no dry weather flow is observed. In some cases, the origin of the discharge can be surmised by collecting indicator samples in the water ponded within the manhole sump. Stains and deposits, however, are not always a conclusive way to trace intermittent discharges in the storm drain network.

13.2 Drainage Area Investigations

The source of some illicit discharges can be determined through a survey or analysis of the drainage area of the problem outfall. The simplest approach is a rapid windshield survey of the drainage area to find the potential discharger or generating sites. A more sophisticated approach relies on an analysis of available GIS data and permit databases to identify industrial or other generating sites. In both cases, drainage area investigations are only effective if the discharge observed at an outfall has distinct or unique characteristics that allow crews to quickly ascertain the probable operation or business that is generating it. Often, discharges with a unique color, smell, or off-the-chart indicator sample reading may point to a specific industrial or commercial source. Drainage area investigations are not helpful in tracing sewage discharges, since they are often not always related to specific land uses or generating sites.

Rapid Windshield Survey

A rapid drive-by survey works well in small drainage areas, particularly if field crews are already familiar with its business operations. Field crews try to match the characteristics of the discharge to the most likely type of generating site, and then inspect all of the sites of the same type within the drainage area until the culprit is found. For example, if fuel is observed at an outfall, crews might quickly check every business operation in the catchment that stores or dispenses fuel. Another example is illustrated in Figure 61 where extremely dense algal growth was observed in a small stream during the winter. Field crews were aware of a fertilizer storage site in the drainage area, and a quick inspection identified it as the culprit.

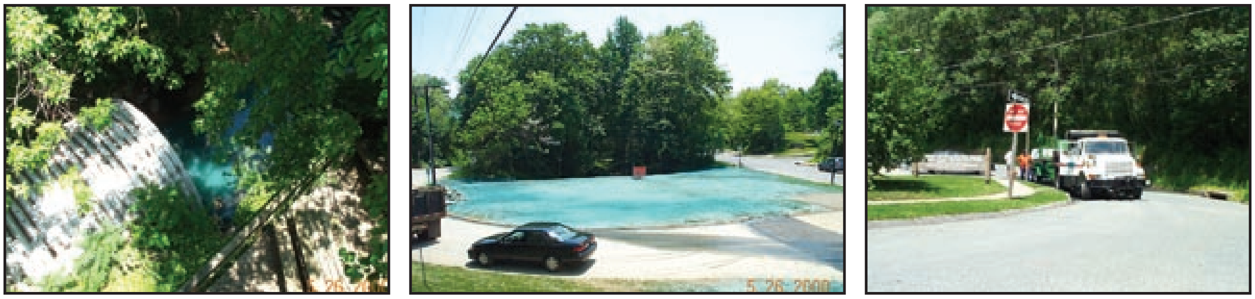


Figure 61: Symptom (left): Discoloration of stream; Diagnosis: Extra hydroseed leftover from an upstream application (middle) was dumped into a storm drain by municipal officials (right).

A third example of the windshield survey approach is shown in Figure 62, where a very thick, sudsy and fragrant discharge was noted at a small outfall. The discharge appeared to consist of wash water, and the only commercial laundromat found upstream was confirmed to be the source. On-site testing may still be needed to identify the specific plumbing or connection generating the discharge.

Detailed Drainage Area Investigations

In larger or more complex drainage areas, GIS data can be analyzed to pinpoint the source of a discharge. If only general land use data exist, maps can at least highlight suspected industrial areas. If more detailed SIC code data are available digitally, the GIS can be used to pull up specific hotspot operations or generating sites that could be potential dischargers. Some of the key discharge indicators that are associated with hotspots and specific industries are reviewed in Appendix K.

13.3 On-site Investigations

On-site investigations are used to pinpoint the exact source or connection producing a discharge within the storm drain network. The three basic approaches are dye, video and smoke testing. While each approach can determine the actual source of a discharge, each needs to be applied under the right conditions and test limitations (see Table 56). It should be noted that on-site investigations are not particularly effective in finding *indirect* discharges to the storm drain network.

Figure 62: The sudsy, fragrant discharge (left) indicates that the laundromat is the more likely culprit than the florist (right).

Table 56: Techniques to Locate the Discharge		
Technique	**Best Applications**	**Limitations**
Dye Testing	• Discharge limited to a very small drainage area (<10 properties is ideal) • Discharge probably caused by a connection from an individual property • Commercial or industrial land use	• May be difficult to gain access to some properties
Video Testing	• Continuous discharges • Discharge limited to a single pipe segment • Communities who own equipment for other investigations	• Relatively expensive equipment • Cannot capture non-flowing discharges • Often cannot capture discharges from pipes submerged in the storm drain
Smoke Testing	• Cross-connection with the sanitary sewer • Identifying other underground sources (e.g., leaking storage techniques) caused by damage to the storm drain	• Poor notification to public can cause alarm • Cannot detect all illicit discharges

TIP

The Wayne County Department of the Environment provides excellent training materials on on-site investigations, as well as other illicit discharge techniques. More information about this training can be accessed from their website: http://www.wcdoe.org/Watershed/Programs___Srvcs_/IDEP/idep.htm.

Figure 63: Dye Testing Plumbing (NEIWPCC, 2003)

Dye Testing

Dye testing is an excellent indicator of illicit connections and is conducted by introducing non-toxic dye into toilets, sinks, shop drains and other plumbing fixtures (see Figure 63). The discovery of dye in the storm drain, rather than the sanitary sewer, conclusively determines that the illicit connection exists.

Before commencing dye tests, crews should review storm drain and sewer maps to identify lateral sewer connections and how they can be accessed. In addition, property owners must be notified to obtain entry permission. For industrial or commercial properties, crews should carry a letter to document their legal authority to gain access to the property. If time permits, the letter can be sent in advance of the dye testing. For residential properties, communication can be more challenging. Unlike commercial properties, crews are not guaranteed access to homes, and should call ahead to ensure that the owner will be home on the day of testing.

Communication with other local agencies is also important since any dye released to the storm drain could be mistaken for a spill or pollution episode. To avoid a costly and embarrassing response to a false alarm, crews should contact key spill response agencies using a "quick fax" that describes when and where dye testing is occurring (Tuomari and Thomson, 2002). In addition, crews should carry a list of phone numbers to call spill response agencies in the event dye is released to a stream.

At least two staff are needed to conduct dye tests – one to flush dye down the plumbing fixtures and one to look for dye in the downstream manhole(s). In some cases, three staff may be preferred, with two staff entering the private residence or building for both safety and liability purposes.

The basic equipment to conduct dye tests is listed in Table 57 and is not highly specialized. Often, the key choice is the type of dye to use for testing. Several options are profiled in Table 58. In most cases, liquid dye is used, although solid dye tablets can also be placed in a mesh bag and lowered into the manhole on a rope (Figure 64). If a

Table 57: Key Field Equipment for Dye Testing *(Source: Wayne County, MI, 2000)*
Maps, Documents • Sewer and storm drain maps (sufficient detail to locate manholes) • Site plan and building diagram • Letter describing the investigation • Identification (e.g., badge or ID card) • Educational materials (to supplement pollution prevention efforts) • List of agencies to contact if the dye discharges to a stream. • Name of contact at the facility
Equipment to Find and Lift the Manhole Safely (small manhole often in a lawn) • Probe • Metal detector • Crow bar • Safety equipment (hard hats, eye protection, gloves, safety vests, steel-toed boots, traffic control equipment, protective clothing, gas monitor)
Equipment for Actual Dye Testing and Communications • 2-way radio • Dye (liquid or "test strips") • High powered lamps or flashlights • Water hoses • Camera

Figure 64: Dye in a mesh bag is placed into an upstream manhole (left); Dye observed at a downstream manhole traces the path of the storm drain (right)

longer pipe network is being tested, and dye is not expected to appear for several hours, charcoal packets can be used to detect the dye (GCHD, 2002). Charcoal packets can be secured and left in place for a week or two, and then analyzed for the presence of dye. Instructions for using charcoal packets in dye testing can be accessed at the following website: http://bayinfo.tamug.tamu.edu/gbeppubs/ms4.pdf.

The basic drill for dye tests consists of three simple steps. First, flush or wash dye down the drain, fixture or manhole. Second, pop open downgradient sanitary sewer manholes and check to see if any dye appears. If none is detected in the sewer manhole after an hour or so, check downgradient storm drain manholes or outfalls for the presence of dye. Although dye testing is fairly straightforward, some tips to make testing go more smoothly are offered in Table 59.

Table 58: Dye Testing Options

Product	Applications
Dye Tablets	• Compressed powder, useful for releasing dye over time • Less messy than powder form • Easy to handle, no mess, quick dissolve • Flow mapping and tracing in storm and sewer drains • Plumbing system tracing • Septic system analysis • Leak detection
Liquid Concentrate	• Very concentrated, disperses quickly • Works well in all volumes of flow • Recommended when metering of input is required • Flow mapping and tracing in storm and sewer drains • Plumbing system tracing • Septic system analysis • Leak detection
Dye Strips	• Similar to liquid but less messy
Powder	• Can be very messy and must dissolve in liquid to reach full potential • Recommended for very small applications or for very large applications where liquid is undesirable • Leak detection
Dye Wax Cakes	• Recommended for moderate-sized bodies of water • Flow mapping and tracing in storm and sewer drains
Dye Wax Donuts	• Recommended for large sized bodies of water (lakes, rivers, ponds) • Flow mapping and tracing in storm and sewer drains • Leak detection

Table 59: Tips for Successful Dye Testing
(Adapted from Tuomari and Thompson, 2002)

Dye Selection
- Green and liquid dyes are the easiest to see.
- Dye test strips can be a good alternative for residential or some commercial applications. (Liquid can leave a permanent stain).
- Check the sanitary sewer before using dyes to get a "base color." In some cases, (e.g., a print shop with a permitted discharge to the sanitary sewer), the sewage may have an existing color that would mask a dye.
- Choose two dye colors, and alternate between them when testing multiple fixtures.

Selecting Fixtures to Test
- Check the plumbing plan for the site to isolate fixtures that are separately connected.
- For industrial facilities, check most floor drains (these are often misdirected).
- For plumbing fixtures, test a representative fixture (e.g., a bathroom sink).
- Test some locations separately (e.g., washing machines and floor drains), which may be misdirected.
- If conducting dye investigations on multiple floors, start from the basement and work your way up.
- At all fixtures, make sure to flush with plenty of water to ensure that the dye moves through the system.

Selecting a Sewer Manhole for Observations
- Pick the closest manhole possible to make observations (typically a sewer lateral).
- If this is not possible, choose the nearest downstream manhole.

Communications Between Crew Members
- The individual conducting the dye testing calls in to the field person to report the color dye used, and when it is dropped into the system.
- The field person then calls back when dye is observed in the manhole.
- If dye is not observed (e.g., after two separate flushes have occurred), dye testing is halted until the dye appears.

Locating Missing Dye
- The investigation is not complete until the dye is found. Some reasons for dye not appearing include:
- The building is actually hooked up to a septic system.
- The sewer line is clogged.
- There is a leak in the sewer line or lateral pipe.

Video Testing

Video testing works by guiding a mobile video camera through the storm drain pipe to locate the actual connection producing an illicit discharge. Video testing shows flows and leaks within the pipe that may indicate an illicit discharge, and can show cracks and other pipe damage that enable sewage or contaminated water to flow into the storm drain pipe.

Video testing is useful when access to properties is constrained, such as residential neighborhoods. Video testing can also be expensive, unless the community already owns and uses the equipment for sewer inspections. This technique will not detect all types of discharges, particularly when the illicit connection is not flowing at the time of the video survey.

Different types of video camera equipment are used, depending on the diameter and condition of the storm sewer being tested.

Field crews should review storm drain maps, and preferably visit the site before selecting the video equipment for the test. A field visit helps determine the camera size needed to fit into the pipe, and if the storm drain has standing water.

In addition to standard safety equipment required for all manhole inspections, video testing requires a Closed-Circuit Television (CCTV) and supporting items. Many commercially available camera systems are specifically adapted to televise storm sewers, ranging from large truck or van-mounted systems to much smaller portable cameras. Cameras can be self-propelled or towed. Some specifications to look for include:

- The camera should be capable of radial view for inspection of the top, bottom, and sides of the pipe and for looking up lateral connections.
- The camera should be color.
- Lighting should be supplied by a lamp on the camera that can light the entire periphery of the pipe.

When inspecting the storm sewer, the CCTV is oriented to keep the lens as close as possible to the center of the pipe. The camera can be self-propelled through the pipe using a tractor or crawler unit or it may be towed through on a skid unit (see Figures 65 and 66). If the storm drain has ponded water, the camera should be attached to a raft, which floats through the storm sewer from one manhole to the next. To see details of the sewer, the camera and lights should be able to swivel both horizontally and vertically. A video record of the inspection should be made for future reference and repairs (see Figure 67).

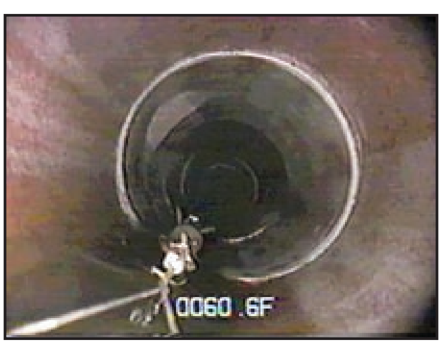


Figure 65: Camera being towed

Smoke Testing

Smoke testing is another "bottom up" approach to isolate illicit discharges. It works by introducing smoke into the storm drain system and observing where the smoke surfaces. The use of smoke testing to detect illicit discharges is a relatively new application, although many communities have used it to check for infiltration and inflow into their sanitary sewer network. Smoke testing can find improper

Figure 66: Tractor-mounted camera

Figure 67: Review of an inspection video

connections, or damage to the storm drain system (Figure 68). This technique works best when the discharge is confined to the upper reaches of the storm drain network, where pipe diameters are to small for video testing and gaining access to multiple properties renders dye testing infeasible.

Notifying the public about the date and purpose of smoke testing before starting is critical. The smoke used is non-toxic, but can cause respiratory irritation, which can be a problem for some residents. Residents should be notified at least two weeks prior to testing, and should be provided the following information (Hurco Technologies, Inc., 2003):

- Date testing will occur
- Reason for smoke testing
- Precautions they can take to prevent smoke from entering their homes or businesses
- What they need to do if smoke enters their home or business, and any health concerns associated with the smoke
- A number residents can call to relay any particular health concerns (e.g., chronic respiratory problems)

Program managers should also notify local media to get the word out if extensive smoke testing is planned (e.g., television, newspaper, and radio). On the actual day of testing, local fire, police departments and 911 call centers should be notified to handle any calls from the public (Hurco Technologies, Inc., 2003).

The basic equipment needed for smoke testing includes manhole safety equipment, a smoke source, smoke blower, and sewer plugs. Two smoke sources can be used for smoke testing. The first is a smoke "bomb," or "candle" that burns at a controlled rate and releases very white smoke visible at relatively low concentrations (Figure 69). Smoke bombs are suspended beneath a blower in a manhole. Candles are available in 30 second to three minute sizes. Once opened, smoke bombs should be kept in a dry location and should be used within one year.

The second smoke source is liquid smoke, which is a petroleum-based product that is injected into the hot exhaust of a blower where it is heated and vaporized (Figure 70). The length of smoke production can vary depending on the length of the pipe being

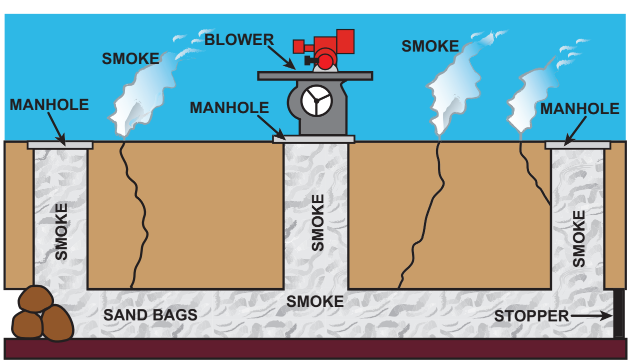


Figure 68: Smoke Testing System Schematic

Figure 69: Smoke Candles

Figure 70: Smoke blower

tested. In general, liquid smoke is not as consistently visible and does not travel as far as smoke from bombs (USA Blue Book).

Smoke blowers provide a high volume of air that forces smoke through the storm drain pipe. Two types of blowers are commonly used: “squirrel cage” blowers and direct-drive propeller blowers. Squirrel cage blowers are large and may weigh more than 100 pounds, but allow the operator to generate more controlled smoke output. Direct-drive propeller blowers are considerably lighter and more compact, which allows for easier transport and positioning.

Three basic steps are involved in smoke testing. First, the storm drain is sealed off by plugging storm drain inlets. Next, the smoke is released and forced by the blower through the storm drain system. Lastly, the crew looks for any escape of smoke above-ground to find potential leaks.

One of three methods can be used to seal off the storm drain. Sandbags can be lowered into place with a rope from the street surface. Alternatively, beach balls that have a diameter slightly larger than the drain can be inserted into the pipe. The beach ball is then placed in a mesh bag with a rope attached to it so it can be secured and retrieved. If the beach ball gets stuck in the pipe, it can simply be punctured, deflated and removed. Finally, expandable plugs are available, and may be inserted from the ground surface.

Blowers should be set up next to the open manhole after the smoke is started. Only one manhole is tested at a time. If smoke candles are used, crews simply light the candle, place it in a bucket, and lower it in the manhole. The crew then watches to see where smoke escapes from the pipe. The two most common situations that indicate an illicit discharge are when smoke is seen rising from internal plumbing fixtures (typically reported by residents) or from sewer vents. Sewer vents extend upward from the sewer lateral to release gas buildup, and are not supposed to be connected to the storm drain system.

13.4 Septic System Investigations

The techniques for tracing illicit discharges are different in rural or low-density residential watersheds. Often, these watersheds lack sanitary sewer service and storm water is conveyed through ditches or swales, rather than enclosed pipes. Consequently, many illicit discharges enter the stream as indirect discharges, through surface breakouts of septic fields or through straight pipe discharges from bypassed septic systems.

The two broad techniques used to find individual septic systems—on-site investigations and infrared imagery—are described in this section.

On-Site Septic Investigations

Three kinds of on-site investigations can be performed at individual properties to determine if the septic system is failing, including homeowner survey, surface condition analysis and a detailed system inspection. The first two investigations are rapid and relatively simple assessments typically conducted in targeted watershed areas. Detailed system inspections are a much more thorough investigation of the functioning of the septic system that is conducted by a certified professional. Detailed system inspections may occur at time of sale of a property, or be triggered by poor scores on the rapid homeowner survey or surface condition analysis.

Homeowner Survey

The homeowner survey consists of a brief interview with the property owner to determine the potential for current or future failure of the septic system, and is often done in conjunction with a surface condition analysis.

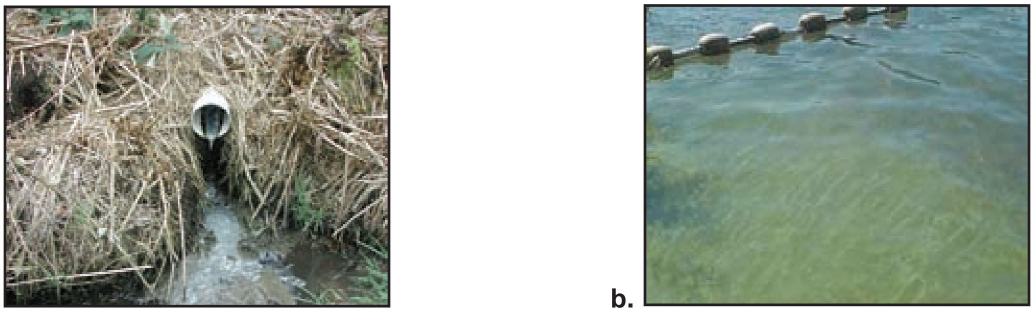
Table 60 highlights some common questions to ask in the survey, which inquire about resident behaviors, system performance and maintenance activity.

Surface Condition Analysis

The surface condition analysis is a rapid site assessment where field crews look for obvious indicators that point to current or potential production of illicit discharges by the septic system (Figure 71). Some of the key surface conditions to analyze have been described by Andrews *et al*., (1997) and are described below:

- Foul odors in the yard
- Wet, spongy ground; lush plant growth; or burnt grass near the drain field
- Algal blooms or excessive weed growth in adjacent ditches, ponds and streams
- Shrubs or trees with root damage within 10 feet of the system
- Cars, boats, or other heavy objects located over the field that could crush lateral pipes
- Storm water flowing over the drain field
- Cave-ins or exposed system components
- Visible liquid on the surface of the drain field (e.g., surface breakouts)
- Obvious system bypasses (e.g., straight pipe discharges)

Table 60: Septic System Homeowner Survey Questions *(Adapted from Andrews et al., 1997 and Holmes Inspection Services)*
• How many people live in the house?[1] • What is the septic tank capacity?[2] • Do drains in the house empty slowly or not at all? • When was the last time the system was inspected or maintained? • Does sewage back up into the house through drain lines? • Are there any wet, smelly spots in the yard? • Is the septic tank effluent piped so it drains to a road ditch, a storm sewer, a stream, or is it connected to a farm drain tile?
[1] Water usage ranges from 50 to 100 gallons per day per person. This information can be used to estimate the wastewater load from the house (Andrews et. al, 1997). *[2] The septic tank should be large enough to hold two days' worth of wastewater (Andrews et. al, 1997).*



a. b.

Figure 71: (a) Straight pipe discharge to nearby stream. (b) Algal bloom in a nearby pond.
(Sources: a- Snohomish County, WA, b- King County, WA)

Detailed System Inspection

The detailed system inspection is a much more thorough inspection of the performance and function of the septic system, and must be completed by a certified professional. The inspector certifies the structural integrity of all components of the system, and checks the depth of solids in the septic tank to determine if the system needs to be pumped out. The inspector also sketches the system, and estimates distance to groundwater, surface water, and drinking water sources. An example septic system inspection form from Massachusetts can be found at http://www.state.ma.us/dep/brp/wwm/soilsys.htm.

Although not always incorporated into the inspection, dye testing can sometimes point to leaks from broken pipes, or direct discharges through straight pipes that might be missed during routine inspection. Dye can be introduced into plumbing fixtures in the home, and flushed with sufficient running water. The inspector then watches the septic field, nearby ditches, watercourses and manholes for any signs of the dye. The dye may take several hours to appear, so crews may want to place charcoal packets in adjacent waters to capture dye until they can return later to retrieve them.

Infrared Imagery

Infrared imagery is a special type of photography with gray or color scales that represent differences in temperature and emissivity of objects in the image (www.stocktoninfrared.com), and can be used to locate sewage discharges. Several different infrared imagery techniques can be used to identify illicit discharges. The following discussion highlights two of these: aerial infrared thermography[13] and color infrared aerial photography.

Infrared Thermography

Infrared thermography is increasingly being used to detect illicit discharges and failing septic systems. The technique uses the temperature difference of sewage as a marker to locate these illicit discharges. Figure 72 illustrates the thermal difference

[13] Infrared thermography is also being used by communities such as Mecklenburg County and the City of Charlotte in NC to detect illicit discharges at outfalls.

between an outfall discharge (with a higher temperature) and a stream.

The equipment needed to conduct aerial infrared thermography includes an aircraft (plane or helicopter); a high-resolution, large format, infrared camera with appropriate mount; a GPS unit; and digital recording equipment. If a plane is used, a higher resolution camera is required since it must operate at higher altitudes. Pilots should be experienced since flights take place at night, slowly, and at a low altitude. The camera may be handheld, but a mounted camera will provide significantly clearer results for a larger area. The GPS can be combined with a mobile mapping program and a video encoder-decoder that encodes and displays the coordinates, date, and time (Stockton, 2000). The infrared data are analyzed after the flight by trained analysts to locate suspected discharges, and field crews then inspect the ground-truthed sites to confirm the presence of a failing septic system.

Late fall, winter, and early spring are typically the best times of year to conduct these investigations in most regions of the country. This allows for a bigger difference between receiving water and discharge temperatures, and interference from vegetation is minimized (Stockton, 2004b). In addition, flights should take place at night to minimize reflected and direct daylight solar radiation that may adversely affect the imagery (Stockton, 2004b).

Color Infrared Aerial Photography

Color infrared aerial photography looks for changes in plant growth, differences in soil moisture content, and the presence of standing water on the ground to primarily identify failing septic systems (Figure 73).

The Tennessee Valley Authority (TVA) uses color infrared aerial photography to detect failing septic systems in reservoir watersheds. Local health departments conduct follow-up ground-truthing surveys to determine if a system is actually failing (Sagona, 1986). Similar to thermography, it is recommended that flights take place at night, during leaf-off conditions, or when the water table is at a seasonal high (which is when most failures typically occur (U.S. EPA, 1999).

Figure 72: Aerial thermography showing sewage leak

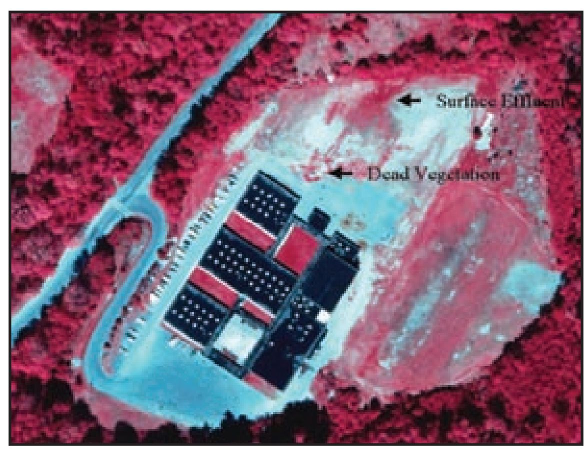


Figure 73: Dead vegetation and surface effluent are evidence of a septic system surface failure.
(Source: U.S. EPA, 1999)

13.5 The Cost to Trace Illicit Discharge Sources

Tracing illicit discharges to their source can be an elusive and complex process, and precise staffing and budget data are difficult to estimate. Experience of Phase I NPDES communities that have done these investigations in the past can shed some light on cost estimates. Some details on unit costs for common illicit discharge investigations are provided below.

Costs for Dye, Video, and Smoke Testing

The cost of smoke, dye, and video testing can be substantial and staff intensive, and often depend on investigation specific factors, such as the complexity of the drainage network, density and age of buildings, and complexity of land use. Wayne County, MI, has estimated the cost of dye testing at $900 per facility. Video testing costs range from $1.50 to $2.00 per foot, although this increases by $1.00 per foot if pipe cleaning is needed prior to testing.

Table 61 summarizes the costs of start-up equipment for basic manhole entry and inspection, which is needed regardless of which type of test is performed. Tables 62 through 64 provide specific equipment costs for dye, video and smoke testing, respectively.

Table 61: Common Field Equipment Needed for Dye, Video, and Smoke Testing

Item	Cost
1 Digital Camera	$200
Clipboards, Pens, Batteries	$25
1 Field vehicle	$15,000 - $35,000
1 First aid kit	$30
1 Spotlight	$40
1 Gas monitor and probe	$900 - $2,100
1 Hand-held GPS Unit	$150
2 Two-way radios	$250 - $750
1 Manhole hook	$80 - $130
1 Mirror	$70 - $130
2 Reflective safety vests	$40
Rubber/latex gloves (box of 100)	$25
1 Can of Spray Paint	$5
4 Traffic Cones	$50

Table 62: Equipment Costs for Dye Testing		
Product	**Water Volume**	**Cost**
Dye Strips	1 strip/500 gallons	$75 – $94 per 100 strips
Dye Tablets	0 – 50,000 gallons	$40 per 200 tablets
Liquid Concentrate (Rhodamine WT)	0 – 50,000 gallons	$80 – $90 per gallon $15 – $20 per pint
Powder	50,000 + gallons	$77 per lb
Dye Wax Cakes	20,000 – 50,000 gallons	$12 per one 1.25 ounce cake
Dye Wax Donuts	50,000 + gallons	$104 – $132 per 42 oz. donut
Price Sources: *Aquatic Eco-Systems http://www.aquaticeco.com/* *Cole Parmer http:/www.coleparmer.com* *USA Blue Book http:/www.usabluebook.com*		

Table 63: Equipment Costs for Video Testing	
Equipment	**Cost**
GEN-EYE 2™ B&W Sewer Camera with VCR & 200’ Push Cable	$5,800
100’ Push Rod and Reel Camera for 2” – 10” Pipes	$5,300
200’ Push Rod and Reel Camera for 8” – 24” Pipes	$5,800
Custom Saturn III Inspection System 500’ cable for 6-16” Lines	$32,000 ($33,000 with 1000 foot cable)
OUTPOST • Box with build-out • Generator • Washdown system	 $6,000 $2,000 $1,000
Video Inspection Trailer • 7’x10’ trailer & build-out • Hardware and software package • Incidentals	 $18,500 $15,000 $5,000
Sprinter Chassis Inspection Vehicle • Van (with build-out for inspecting 6” – 24” pipes) • Crawler (needed to inspect pipes >24”) • Software upgrade (optional but helpful for extensive pipe systems)	 $130,000 $18,000 $8,000
Sources: USA Blue Book and Envirotech	

Table 64: Equipment Costs for Smoke Testing	
Equipment	**Cost**
Smoke Blower	$1,000 to $2,000 each
Liquid Smoke	$38 to $45 per gallon
Smoke Candles, 30 second (4,000 cubic feet)	$27.50 per dozen
Smoke Candles, 60 Second (8,000 cubic feet)	$30.50 per dozen
Smoke Candles, 3 Minute (40,000 cubic feet)	$60.00 per dozen
Sources: Hurco Tech, 2003 and Cherne Industries, 2003	

Costs for Septic System Investigations

Most septic system investigations are relatively low cost, but factors such as private property access, notification, and the total number of sites investigated can increase costs. Unit costs for the three major septic system investigations are described below.

Homeowner Survey and Surface Condition Analysis

Both the homeowner survey and the surface condition analysis are relatively low cost investigation techniques. Assuming that a staff person can investigate one home per hour, the average cost per inspection is approximately $25. A substantial cost savings can be realized by using interns or volunteers to conduct these simple investigations.

Detailed System Inspection

Septic system inspections are more expensive, but a typical unit cost is about $250, and may also include an additional cost of pumping the system, at roughly $150, if pumping is required to complete the inspection (Wayne County, 2003). This cost is typically charged to the homeowner as part of a home inspection.

Aerial Infrared Thermography

The equipment needed to conduct aerial infrared thermography is expensive; cameras alone may range from $250,000 to $500,000 (Stockton, 2004a). However, private contractors provide this service. In general, the cost to contract an aerial infrared thermography investigation depends on the length of the flight (flights typically follow streams or rivers); how difficult it will be to fly the route; the number of heat anomalies expected to be encountered; the expected post-flight processing time (typically, four to five hours of analysis for every hour flown); and the distance of the site from the plane's "home" (Stockton, 2004a). The cost range is typically $150 to $400 per mile of stream or river flown, which includes the flight and post-flight analyses (Stockton, 2004a).

As an alternative, local police departments may already own an infrared imaging system that may be used. For instance, the Arkansas Department of Health used a state police helicopter with a Forward Looking Infrared (FLIR) imaging system, GPS, video equipment, and maps (Eddy, 2000). The disadvantage to this is that the equipment may not be available at optimal times to conduct the investigation. In addition, infrared imaging equipment used by police departments may not be sensitive enough to detect the narrow range of temperature difference (only a few degrees) often expected for sewage flows (Stockton, 2004a).

Illicit Discharge Detection and Elimination Manual: A Handbook for Municipalities, New England Interstate Water Pollution Control Commission, 2003
Chapter 5: Tracing the Source of an Illicit Discharge

5 DEVELOPING AND IMPLEMENTING AN IDDE PLAN: TRACING THE SOURCE OF AN ILLICIT DISCHARGE

Developing and implementing a plan to detect and address illicit discharges is the third mandatory element of a Phase II IDDE program. EPA recommends that the plan include the following four components: (1) locating priority areas; (2) tracing the source of an illicit discharge; (3) removing the source of an illicit discharge; and (4) program evaluation and assessment. The second component, tracing the source of an illicit discharge, is the subject of this chapter.

THE IDDE PLAN

- **Locating priority areas**
- ➤ **Tracing the source of an illicit discharge**
- **Removing the source of an illicit discharge**
- **Program evaluation and assessment**

Once storm drain outlets with evidence of illicit discharges have been located, various methods can be used to pinpoint the exact source of the discharge. These techniques, many of which are already used by municipal sewer departments, include manhole observation, video inspection, smoke testing, dye testing, aerial infrared and thermal photography, and tracking illegal dumping.

MANHOLE OBSERVATIONS

A key tracing technique is to follow dry-weather flows upstream along the conveyance system to bracket the location of the source. This can be accomplished by taking the following steps:

- ➤ Consult the drainage system map.
- ➤ Check the next "upstream" manhole with a junction to see if there is evidence of discharge. You may wish to sample each manhole that has a discharge.
- ➤ Repeat these steps until a junction is found with no evidence of discharge; the discharge source is likely to be located between the junction with no evidence of discharge and the next downstream junction.
- ➤ Be aware of the surrounding areas and look for water in gutters and streets.

A key tracing technique is to follow dry-weather flows upstream along the conveyance system to bracket the location of the source.

Note that the Boston Water and Sewer Commission has had success working in the opposite direction (i.e., upstream to downstream) (Jewell 2001). Manhole observations can be time-consuming, but they are generally a necessary step before conducting other tests.

VIDEO INSPECTION

Mobile video cameras can be guided remotely through storm sewer lines to observe possible illegal connections into storm sewer systems and record observations on a videocassette or DVD. Public works staff can observe the videos and note any visible illegal connections. This technique is time-consuming and expensive but thorough and usually definitive, and it does not require the intrusion on members of the public that some of the other methods do.

SMOKE TESTING

This technique involves injecting non-toxic smoke into storm sewer lines and then noting the emergence of smoke from sanitary sewer vents in illegally connected buildings or from cracks and leaks in the storm sewer lines. The injection is accomplished by placing a smoke bomb in the storm sewer manhole below ground and forcing air in after it. Smoke-generating machines can also be used. Test personnel should be stationed at points of suspected illegal connections or cracks/leaks, noting any escape of smoke (indicating an illicit connection or damaged storm sewer infrastructure). Prior to performing this test, it is necessary to inform building owners and occupants in the area in advance. It is also advisable to inform the police and fire departments.

Smoke testing involves injecting non-toxic smoke into storm sewer lines and then noting the emergence of smoke from sanitary sewer vents in illegally connected buildings or from cracks and leaks in the storm sewer lines.

For a more thorough smoke-test program, the sanitary sewer lines can also be smoked. For houses that do not emit smoke during either the sanitary sewer or the storm sewer system tests, sewer gas may be venting inside, which is hazardous. Interviews with various IDDE program staff suggest that the smoke-test method is more effective in infiltration/inflow investigations of the sanitary sewer system than in detecting illegal connections to the storm sewer system.

Smoke may cause minor irritation of respiratory passages; residents with respiratory conditions should receive special attention to determine if it is safe for them to be present for the testing. Smoke testing is typically used to survey an area all at once, in contrast to dye testing, which tests one building at a time.

DYE TESTING

This technique involves flushing non-toxic dye into toilets and sinks and observing storm sewer and sanitary sewer manholes and storm sewer outfalls for the presence of the dye. Prior to performing this test, it is necessary to inform building owners and occupants in advance and gain permission for entry. Local public health and state water quality staff should also be notified so that they will be prepared to respond to citizens calling about any dye observed in surface waters.

To perform the test, you need a crew of two or more people (ideally, all with two-way radios). One person is inside the building; the others are stationed at the appropriate storm sewer and sanitary sewer manholes (which

CASE STUDY: NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

LOCATING AND TRACING ILLICIT DISCHARGES IN NEW HAMPSHIRE COASTAL COMMUNITIES

In 1996, the New Hampshire Department of Environmental Services (NHDES) began a program of investigating and eliminating illicit connections to storm drainage systems in coastal communities to reduce bacterial contamination in coastal waters. The following excerpt from the NHDES report on the first phase of the project describes the process used to detect and trace illicit discharges.

Beginning in the summer of 1996, the coastal shorelines were surveyed by foot or canoe at low tide for potential pollution sources. All pipes, seeps, streams, and swales with flow were sampled for bacteria. In addition, temperature was measured, and observations related to the condition of the pipe (stained or structurally damaged), odor, evidence of untreated wastewater (e.g., toilet paper), turbidity, color, debris, estimated flow, and any other observations were noted. Dry pipes were rechecked on several occasions for intermittent flow. Evidence indicating the presence of wastewater and/or elevated bacteria levels prompted further investigation of these locations.

Upstream catch basins and manholes associated with the outfall pipes that were identified by the screening process were surveyed for evidence of wastewater and sampled for bacteria. Smoke testing (using non-toxic smoke blown into catch basins) was then used to identify buildings connected to the storm drainage system by canvassing the neighborhood for vents emitting smoke. Final confirmation of an illicit connection from the buildings that emitted smoke was accomplished by dye testing indoor plumbing and observing the storm drainage and sewer systems for the presence or absence of the dye.

Feeder streams were surveyed for outfall pipes with dry-weather flow. Other potential bacteriological sources (e.g., pigeon roosting sites on bridges) were bracketed with water quality sampling stations. Where contaminated seeps and swales were suspected, the drainage area was surveyed for potential sources, such as broken sewer mains.

Landry, N. 1999. Elimination of Illicit Connections in Coastal New Hampshire Spurs Cooperation and Controversy: A Final Report to the New Hampshire Estuaries Project. New Hampshire Department of Environmental Services.

should be opened) and/or outfalls. The inside person drops dye into a plumbing fixture (i.e., toilet or sink) and runs a sufficient amount of water to move the dye through the plumbing system. The inside person then radios to the outside crew that the dye has been dropped, and the outside crew watches for the dye in the storm sewer and sanitary sewer, recording the presence or absence of the dye.

The test is relatively quick (about 30 minutes per test), effective (results are usually definitive), and cheap. Dye testing is best used when the likely source of an illicit discharge has been narrowed down to a few specific houses or businesses.

AERIAL INFRARED AND THERMAL PHOTOGRAPHY

Aerial infrared and/or thermal photography can be used to locate illicit discharges from outfalls and failing septic systems using temperature and vegetation as markers. This technique requires knowledge of aerial photo interpretation. Using aerial infrared or thermal photographs, do the following:

- For outfalls
  - Note if discharge has a higher temperature than that of the stream
  - Note if algae growth is concentrated near an outfall
- For potentially failing septic systems
  - Note evidence of increased moisture in surrounding soil
  - Observe vegetation located close to the potentially failing septic system, and note any increase in vegetation compared to the surrounding area
  - Observe any increase in temperature readings at the septic system location

Aerial infrared and/or thermal photography can be used to locate illicit discharges from outfalls and failing septic systems using temperature and vegetation as markers.

This is still a developing technology and not commonly used for IDDE programs. You may still need further tests to determine specific houses/businesses with illegal connections. This technique has been used primarily for the detection of failing septic systems, which are only considered "illicit discharges" under the Phase II Storm Water program if they discharge into the storm sewer system.

TRACKING ILLEGAL DUMPING

Developing a coordinated system for collecting and tracking reports of illegal dumping can help pinpoint this difficult-to-find source of illicit discharges. Suggestions for tracking illegal dumping include the following:

- Create a hotline that can be used to report any illegal-dumping behavior (i.e., who illegally dumped and where illegal dumping occurred).
- Observe the materials that have been illegally dumped and trace the potential sources of the materials.
- Note where dumping occurs most often, record patterns of time of day and day of the week, and note common responsible parties.

Developing a coordinated system for collecting and tracking reports of illegal dumping can help pinpoint this difficult-to-find source of illicit discharges.

Challenges in addressing illegal dumping include the difficulty of catching dumpers in the act and the significant staff time needed to receive, respond to, and track complaints.

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