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TOWN OF
DOVER

STORMWATER MANAGEMENT PLAN UPDATE

JUNE 2025

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APPENDICES

1. INTRODUCTION

WHY IS THIS IMPORTANT?

Stormwater runoff commonly transports pollutants through municipal separate storm sewer systems (MS4s), where it is discharged, often untreated, into local water bodies. To the public, the MS4 is more commonly known as a stormwater drainage system or simply as the "drain." These stormwater drains have been constructed in developed areas to reduce the risk of flooding and damage to our built infrastructure. Unfortunately, stormwater drainage systems carry pollution during rain events and snow melt – this can include oil, trash, nutrients, and any other materials found on lawns, streets, and parking lots.

In the Town of Dover, stormwater runoff discharges that are conveyed by the MS4 to the environment are regulated under the Clean Water Act and require a Permit. Dover is one of thousands of communities and institutions across the country that must comply with these regulations. The stormwater drainage system discharge Permit is known as the "MS4 General Permit" and is issued and managed by both the U.S. Environmental Protection Agency (EPA) and the State of Massachusetts Department of Environmental Protection (MassDEP).

WHAT DOES DOVER HAVE TO DO?

The Town of Dover has had MS4 General Permit coverage since 2003. As part of the permitting requirements Dover is required to develop a written Stormwater Management Program (SWMP). This SWMP is a "living" reference document that will guide the Town's implementation of requirements within the permit. Dover is required to keep records of, and report on, the activities and measures that are implemented and consistent with the SWMP. MS4 General permit requirements are summarized (and simplified) as follows:

Implement public education programs to help Town residents, business owners, and developers understand their role in keeping stormwater clean.

Engage the public in decision-making throughout the program.

Find and address failed septic systems or leaky or unauthorized sanitary sewer lines that might be discharging into the drainage system.

Ensure that construction projects do not pollute runoff with sediments and debris.

Ensure that new development and redevelopment control and treat runoff before it leaves the property.

Engage in pollution prevention actions like road and parking area best practices (cleaning drainage systems and sweeping pavements), and ensure that municipal activities like vehicle washing, lawn maintenance, and materials storage do not contribute to stormwater pollution.

1.1 STORMWATER REGULATION

No updates.

1.2 PERMIT PROGRAM BACKGROUND

No updates.

1.3 STORMWATER MANAGEMENT PROGRAM (SWMP)

The Permit Year (PY) corresponds to each regulatory year starting on July 1, 2018. The original version of this SWMP, dated June 2019 has been updated herein to reflect the Town of Dover's stormwater management program updates, progress, and achievements through PY 7 (ending June 30, 2025). The Town's June 2025 update simplifies the SWMP format by referencing the previous version where no updates have been prepared for a particular section. A revision log tracking these updates is provided as **Appendix V**. The original version of the SWMP and its associated attachments can be accessed at the Department of Public Works. Additional information on the progress of the stormwater management program is provided in the MS4 Annual Report, which is submitted to the EPA and MassDEP annually.

Appendices A, B, C, D, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, and U have remained unchanged since the original version of this SWMP was published. Refer to the original SWMP document to view these Appendices. **Appendices E and F** have been updated in PY 7. **Appendix F**, the June 2025 IDDE Plan Update, includes the original Dover IDDE Plan as an attachment. To minimize redundancy, this attachment has been removed from the SWMP and remains available at the Department of Public Works.

1.4 TOWN SPECIFIC MS4 BACKGROUND

No updates.

1.5 SMALL MS4 AUTHORIZATION

No updates.

1.6 STORMWATER MANAGEMENT PROGRAM TEAM

Title/ Position of Responsible Person	Name of Responsible Person	Contact Information	Role/Program Element(s)
Operations Superintendent	Robert Tosi	Phone: (508) 785-0058 Email: rtosi@doverma.gov	• Supervise Personnel • Oversee enforcement of ordinances and standard operating procedures
Director of Public Works	Kevin McCabe	Phone: (508) 785-0058 Email: kmccabe@doverma.gov	• Supervise Personnel • Oversee enforcement of ordinances and standard operating procedures • Record Keeping
Town Engineer	Michael Angieri	Phone: (508) 785-0058 x112 Email: mangieri@doverma.gov	• Oversee enforcement of ordinances and standard operating procedures • Record Keeping

2. TOWN OF DOVER

2.1 RECIVING WATERS

Per the requirements of part 1.10.2 of the MS4 General Permit, an inventory of the "Final Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle" (Final 2022 Integrated List) that receive discharge from the Town's MS4 and the estimated number of outfalls that discharge directly to each Integrated List waterbody segment is shown below. The list has been updated from the original Receiving Waters Table provided in the June 2019 SWMP and the Town's MS4 General Permit Notice of Intent (NOI) submission to the EPA dated September 28, 2018.

Waterbody Segment that Receives Flow from the MS4	Number of Outfalls into Receiving Water Segment
Tubwreck Brook	21
Charles River	25
Trout Brook	36
Mill Brook	8
North Brook	19
Noanet Brook	3
Hales Pond	6
Bubbling Brook	1
Reserve Pond	5
Unnamed water bodies/tributaries	19

Any updates to the numbers reported above will be included in future revisions of this document and described in the Annual Report, if necessary.

2.2 ELIGIBILITY: ENDANGERED SPECIES AND HISTORIC PROPERTIES

No Updates.

2.3 TMDLS AND WATER QUALITY LIMITED WATERS

The waterbody impairments listed in the Receiving Waters Table in the June 2019 SWMP and the Town's MS4 General Permit NOI submission to the EPA dated September 26, 2018, are based on the Final Massachusetts Year 2014 Integrated List of Waters. The updated Receiving Waters Table, which includes impaired waters located within the boundaries of the Town of Dover's regulated area, is based on the Town of Dover Massachusetts 2022 Integrated List of Waters. 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. A map of the updated Town's Separate Storm System and Impaired Waters and Special Resource Waters Maps, are included in **Appendix E**. The impaired waters are summarized in the table below.

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Monitoring Requirements
Charles River	MA72-05	Yes	5	Fanwort	NMR*
				Water Chestnut	NMR*
				Algae	Total Phosphorus (freshwater)
				Benthic Macroinvertebrates	None Provided***
				Chlordane in Fish Tissue	NMR*
				DDT in Fish Tissue	NMR*
				Dissolved Oxygen	Dissolved Oxygen Temperature BOD_5 Total Phosphorus (freshwater)
				Dissolved Oxygen Supersaturation	
				Mercury in Fish Tissue	NMR*
				Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				Total Phosphorus	Total Phosphorus
				Turbidity	Total Suspended Solids
Charles River	MA72-06	Yes	5	Eurasian Water Milfoil, Myriophyllum Spicatum	NMR*
				Fanwort	NMR*
				Flow Regime Modification	NMR*
				Non-Native Aquatic Plants	NMR*
				Water Chestnut	NMR*

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Monitoring Requirements
				Algae	Total Phosphorus (freshwater)
				Cause Unknown [Fish Population Imbalance]	None Provided***
				DDT in Fish Tissue	NMR*
				Fish Bioassessments	Contact Mass DEP**
				Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				PCBs in Fish Tissue	NMR*
				Total Phosphorus	Total Phosphorus
Charles River	MA72-07	Yes	5	Curly-leaf Pondweed	None Provided***
				Eurasian Water Milfoil, Myriophyllum Spicatum	NMR*
				Fish Passage Barrier	NMR*
				Flow Regime Modification	NMR*
				Water Chestnut	NMR*
				Benthic Macroinvertebrates	None Provided***
				DDT in Fish Tissue	NMR*
				Escherichia coli (E. coli)	E. coli
				Fish Bioassessments	Contact Mass DEP**
				Harmful Algal Blooms	None Provided***
				Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				PCBs in Fish Tissue	NMR*
				Total Phosphorus	Total Phosphorus
				Temperature	NMR*
Lymans Pond	MA72070	Yes	4a	Aquatic Plants (Macrophytes)	NMR*
				Turbidity	Total Suspended Solids and Turbidity
Noannet Pond	MA72084	No	4c	Aquatic Plants (Macrophytes)	NMR*

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Monitoring Requirements
Trout Brook	MA72-19	Yes	5	Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				Temperature	NMR*
Powissett Brook	MA72-20	Yes	5	Combined Biota/Habitat Bioassessments	Contact Mass DEP**
Unnamed Tributary	MA72-41	Yes	5	Escherichia coli (E. Coli)	E. Coli
Mill Brook	MA73-12	No	2	N/A	N/A
Tubwreck Brook	MA73-07	No	2	N/A	N/A

1. *NMR = No monitoring required.
2. **MassDEP has indicated no monitoring is required for this parameter.
3. ***Appendix G of the 2016 MS4 GP does not provide a monitoring parameter for this Impairment Cause.

Future reissuance and/or approval of the Massachusetts Integrated List of Waters may necessitate additional modifications to this Plan to maintain compliance with applicable requirements.

2.3.1 Phosphorus Control Plan

In accordance with Appendix F of the MS4 General Permit, the Town of Dover has developed a Phosphoros Control Plan (PCP) for the Charles River watershed.

A copy of the PCP is available at the Department of Public Works.

3. BEST MANAGEMENT PRACTICES (BMPS) FOR MINIMUM CONTROL MEASURES (MCM)

3.1 MCM 1: PUBLIC EDUCATION AND OUTREACH

3.1.1 BMPs

No updates except for the following:

3.1.1.7 BMP 1-7 – Social Media Posts

The Town intends to develop social media posts highlighting proper stormwater management practices, specifically targeting local business owners and developers. These posts will be shared on the Town's social media forums, including Facebook and X (formerly Twitter). The number of followers on these platforms at the time of the posts will be tracked.

3.2 MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

3.2.1 BMPs

No updates.

3.3 MCM 3: ILLICIT DISCHARGE AND DETECTION ELIMINATION

3.3.1 BMPs

No updates except for the following:

3.3.1.1 BMP 3-3 – Map of Storm Sewer System

The Town has developed a Separate Stormwater Sewer System Map consistent with the requirements of Part 2.3.4.5.a of the MS4 General Permit. The map, provided in **Appendix E** of this SWMP Update, includes the following information:

- Outfalls and receiving waters
- Municipally owned stormwater treatment structures
- Catch basins
- Waterbodies identified by name and indication of all use impairments per the most recent Massachusetts Integrated List of Waters Report

The Town's MS4 map will be updated to reflect changes identified through the stormwater control measure (SCM) inventory, inspections, and dry and wet

weather outfall screening and catchment investigations. These updates will be incorporated upon completion of ongoing fieldwork and desktop analysis efforts.

This BMP has been updated to provide the most current information regarding the contents of the Town's Separate Storm Sewer System Map.

3.3.1.2 BMP 3-4 – IDDE Program

The Town developed a written IDDE Program Plan in PY1 consistent with the requirements of Part 2.3.4.6 of the MS4 General Permit. The IDDE Program Plan includes the following information:

- Dover's Legal Authority to implement the IDDE Program Plan
- Stormwater System Mapping
- Assessment and Priority Ranking of Outfalls
- Written Procedures for:
    - Dry Weather Outfall Screening
    - Wet Weather Outfall Screening
    - Catchment Investigations
    - Illicit Discharge Source Isolation and Confirmation
    - Illicit Discharge Abatement
- IDDE Training and Progress Tracking Requirements

This BMP has been updated to reflect the completion of the IDDE Program Plan. Updates were made to the IDDE Program Plan in PY7. The updated IDDE Plan can be found in **Appendix F.**

3.3.1.3 BMP 3-5 – Employee Training

This BMP has been updated to reflect the annual IDDE training that was provided to Town staff on December 17, 2024. A copy of the training sign-in sheet and PDF version of the PowerPoint presentation is available at Dover Public Works.

3.4 MCM 4: CONSTRUCTION SITE RUNOFF CONTROL

3.4.1 BMPs

No updates except for the following:

3.4.1.1 BMP 4-5 – Waste Control

The Town has developed and implemented written requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes. A Stormwater Bylaw was approved by the Town at Annual Town Meeting on May 6, 2024 (Chapter 159), regulating non-stormwater discharges to the storm drain system.

3.5 MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT

3.5.1 BMPs

No updates except for the following:

3.5.1.6 BMP 5-6 – Post Construction Design Standards

The Town has developed stormwater design standards to further promote infiltration of post-construction stormwater runoff, i.e. grassed swales, infiltration basins and trenches, porous pavement, etc. These regulations are included in the Town's Stormwater Bylaw (Chapter 159).

3.6 MCM 6: POLLUTION PREVENTION AND GOOD HOUSEKEEPING

3.6.1 BMPs

No updates except for the following:

3.6.1.1 BMP 6-8 – Stormwater Treatment Structures Inspection and Maintenance Procedures

Annual inspections were completed in December 2024. A copy of the Dover PY7 SCM Inventory and Inspection Memorandum summarizing the Town's annual SCM inspection findings can be accessed at Dover Public Works.

3.6.1.2 BMP 6-9 – SWPPP

In Permit Year 2, the Town developed a Stormwater Pollution Prevention Plan (SWPPP) for their Department of Public Works Facility (Highway Garage) and Transfer Station, consistent with the requirements of part 2.3.7.b.ii of the MS4 General Permit. This SWPPP can be accessed at the respective Dover Facilities.

Quarterly SWPPP inspections are completed annually and can be accessed at Dover Public Works.

3.6.1.3 BMP 6-14 – Employee Training - General Stormwater Topics

Annual IDDE, pollution prevention and good housekeeping, and stormwater pollution prevention training was provided to Town staff on December 17, 2024. A copy of the training sign-in sheet and PDF version of the PowerPoint presentation is available at Dover Public Works.

4. ANNUAL EVALUATION

4.1 SELF-EVALUATION

The Town of Dover conducts annual evaluations of its program compliance, the appropriateness of its identified Best Management Practices (BMPs), whether it's meeting new Permit requirements, and progress towards achieving its identified measurable goals, which include reducing the discharge of pollutants to the maximum extent practicable ("MEP"). The Town documents the findings of these annual evaluations in their MS4 Program Annual Report, submitted to the EPA and MassDEP by the end of September.

4.2 RECORD KEEPING

The Town of Dover will keep records required by the MS4 General Permit for at least five (5) years after they are generated. Records include but are not limited to: information used in the development of any written (hardcopy or electronic) program required by this permit, any monitoring results, copies of reports, records of screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the NOI, SWMP, SWPPP, and annual reports. Records will be available for public observation as requested. Records will be submitted to the EPA or MassDEP as requested.

4.3 ANNUAL REPORTS

Annual reports are due to the EPA and MassDEP each year within 90 days of the close of the permit year (June 30th). The annual reports shall include the following content:

- Self-assessment review of compliance with permit conditions;
- An assessment/evaluation of:
    - The appropriateness of the identified BMPs
    - Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP
    - The identified measurable goals for each of the MCMs
- All outfall screening and sampling results;
- Summary of stormwater activities planned to be undertaken during the next reporting cycle;
- Any change in identified BMPs or measurable goals and justification for those changes; and
- The information specified under the reporting requirements for each MCM.

Changes to the Town's stormwater permit compliance program do not need to be updated in their NOI, however, this information will be included in the Town's Annual Reports and SWMP updates. Annual Reports are also made available for public access on the EPA's website at Regulated MS4s in Massachusetts (https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities).

5. CERTIFICATION

"I certify under penalty of law that this document and all appendices 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."

Signature _____ **Date** 7/1/2025

Name Kevin McCabe

Appendices

APPENDIX A: NOTICE OF INTENT

No Updates.

APPENDIX B: EPA STORMWATER DISCHARGE AUTHORIZATION LETTER

No Updates.

APPENDIX C: CERTIFICATION LETER FOR DELEGATION OF "AUTHORIZED REPRESENTATIVE"

No Updates.

APPENDIX D: IDDE LEGAL AUTHORITY/BYLAW

No Updates.

APPENDIX E: PHASE I MAP OF STORM SEWER SYSTEM AND IMPAIRED AND SPECIAL RESOURCE WATERS

Impaired and Special Resource Waters

Town of Dover, MA

N

Legend

2022 Integrated List Data - 305(b)/ 314/303(d)

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
- Dover Boundary

Charles River MA72-05 TDML: Yes

Charles River MA72-06 TDML: Yes

Charles River MA72-07 TDML: Yes

Trout Brook MA72-19 TDML: Yes

Powissett Brook MA72-20 TDML: Yes

Noannet Pond MA72084 TDML: No

Unnamed Tributary MA72-41 TDML: Yes

Lymans Pond MA72070 TDML: Yes

Tubwreck Brook MA73-07 TDML: No

Mill Brook MA73-12 TDML: No

0 0.1 0.3 0.5 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: June 2025

Outfall Map

Town of Dover, MA

N

Legend

- Outfall
- Dover Roads
- Dover Streams
- Dover Waterbodies
- Town Boundaries

0 0.3 0.5 1 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: May 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

WELLESLEY
NEEDHAM
NATICK
DEDHAM
WESTWOOD
SHERBORN
MEDFIELD
WALPOLE
NORWOOD
MILLIS

Catch Basin Map

Town of Dover, MA

N

Legend

- CatchBasin
- Dover Roads
- Dover Streams
- Dover Waterbodies
- Town Boundaries

0 0.1 0.3 0.5 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: May 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

WELLESLEY
NEEDHAM
NATICK
DEDHAM
SHERBORN
MEDFIELD
WESTWOOD
NORWOOD
WALPOLE
MILLIS

Stormwater Control Measures Map

Town of Dover, MA

N

Legend

- Storm Control Measure
- Dover Roads
- Dover Streams
- Dover Waterbodies
- Town Boundaries

0 0.10.3 0.5 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: May 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

WELLESLEY
NEEDHAM
NATICK
DEDHAM
SHERBORN
WESTWOOD
MEDFIELD
NORWOOD
WALPOLE
MILLIS

SCM-014
SCM-010
SCM-016
SCM-015
SCM-006
SCM-005
SCM-008
SCM-007
SCM-009
SCM-001
SCM-002
SCM-018
SCM-017
SCM-004
SCM-011
SCM-003
SCM-012
SCM-013

APPENDIX F: IDDE PLAN UPDATE – JUNE 2025

TOWN OF

DOVER

ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM PLAN UPDATE

JUNE 2025

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FIGURES

APPENDICES

1. INTRODUCTION

1.1 General

This Illicit Discharge Detection and Elimination (IDDE) Plan has been developed by the Town of Dover to address the requirements of the United States Environmental Protection Agency's (EPA'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.

The original version of the Town's IDDE Program Plan, dated June 2019, and prepared by Tata and Howard has been incorporated into this PY7 IDDE Plan update, dated June 2025, prepared by Woodard and Curran. This PY7 update reflects the Town of Dover's original IDDE program and updates made by Tata and Howard through PY6 in addition to program updates made by Woodard and Curran between PY6 and PY7. Additional information related to the progress of the Town's IDDE program is provided in the MS4 Annual Report that is submitted to the EPA and MassDEP in September each year. A revision log tracking the IDDE Program Plan updates is located in **appendix H**.

1.2 Illicit Discharge

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 drainpipe 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 wash water 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-stormwater 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, such as:

- 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., the Town is responsible 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 receiving waters, including "impaired waters", within the boundaries of the Town of Dover's regulated area based on the Town of Dover Massachusetts 2022 Integrated List of Waters produced by MassDEP every two years. At the time of update of this plan, the 2022 Integrated List of Waters was the most recent list not in draft form. 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: LISTED WATERBODIES

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Monitoring Requirements
Charles River	MA72-05	Yes	5	Fanwort	NMR*
				Water Chestnut	NMR*
				Algae	Total Phosphorus (freshwater)
				Benthic Macroinvertebrates	None Provided***
				Chlordane in Fish Tissue	NMR*
				DDT in Fish Tissue	NMR*
				Dissolved Oxygen	Dissolved Oxygen Temperature BOD_5 Total Phosphorus (freshwater)
				Dissolved Oxygen Supersaturation	
				Mercury in Fish Tissue	NMR*
				Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				Total Phosphorus	Total Phosphorus
				Turbidity	Total Suspended Solids

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Monitoring Requirements
Charles River	MA72-06	Yes	5	Eurasian Water Milfoil, Myriophyllum Spicatum	NMR*
				Fanwort	NMR*
				Flow Regime Modification	NMR*
				Non-Native Aquatic Plants	NMR*
				Water Chestnut	NMR*
				Algae	Total Phosphorus (freshwater)
				Cause Unknown [Fish Population Imbalance]	None Provided***
				DDT in Fish Tissue	NMR*
				Fish Bioassessments	Contact Mass DEP**
				Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				PCBs in Fish Tissue	NMR*
				Total Phosphorus	Total Phosphorus
Charles River	MA72-07	Yes	5	Curly-leaf Pondweed	None Provided***
				Eurasian Water Milfoil, Myriophyllum Spicatum	NMR*
				Fish Passage Barrier	NMR*
				Flow Regime Modification	NMR*
				Water Chestnut	NMR*
				Benthic Macroinvertebrates	None Provided***
				DDT in Fish Tissue	NMR*
				Escherichia coli (E. coli)	E. coli
				Fish Bioassessments	Contact Mass DEP**
				Harmful Algal Blooms	None Provided***
				Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				PCBs in Fish Tissue	NMR*

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Monitoring Requirements
				Total Phosphorus	Total Phosphorus
				Temperature	NMR*
Lymans Pond	MA72070	Yes	4a	Aquatic Plants (Macrophytes)	NMR*
				Turbidity	Total Suspended Solids and Turbidity
Noannet Pond	MA72084	No	4c	Aquatic Plants (Macrophytes)	NMR*
Trout Brook	MA72-19	Yes	5	Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
				Temperature	NMR*
Powissett Brook	MA72-20	Yes	5	Combined Biota/Habitat Bioassessments	Contact Mass DEP**
Unnamed Tributary	MA72-41	Yes	5	Escherichia coli (E. Coli)	E. Coli
Mill Brook	MA73-12	No	2	N/A	N/A
Tubwreck Brook	MA73-07	No	2	N/A	N/A

*NMR = No monitoring required.

1. **MassDEP has indicated no monitoring is required for this parameter.
2. ***Appendix G of the 2016 MS4 GP does not provide a monitoring parameter for this Impairment Cause.

In compliance with the Total Maximum Daily Load (TMDL) for Nutrients in the Upper/Middle Charles River, IDDE programs implemented in the Charles River watershed shall involve conducting comprehensive system-wide assessments of drainage systems to identify illicit sewage sources. This includes dry- and wet weather nutrient sampling and physical investigations, such as manhole inspections, dye testing, and videoing drains. "Easy to fix" sources, such as direct pipe connections, should be eliminated, and more complex illicit sources should be eliminated through prioritized planning with schedules.

In compliance with the Pathogen TMDL for the Charles River Watershed, the progress of the IDDE program should be evaluated by tracking metrics such as percent of manholes/structures inspected, percent of outfalls screened, estimated flow/volume of illicit discharges removed, number of homes inspected/dye tested, etc.

1.5 Dover IDDE Program Goals, Framework, and Timeline

The goals of the IDDE program are to find and eliminate illicit discharges to the 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
- Follow-up 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

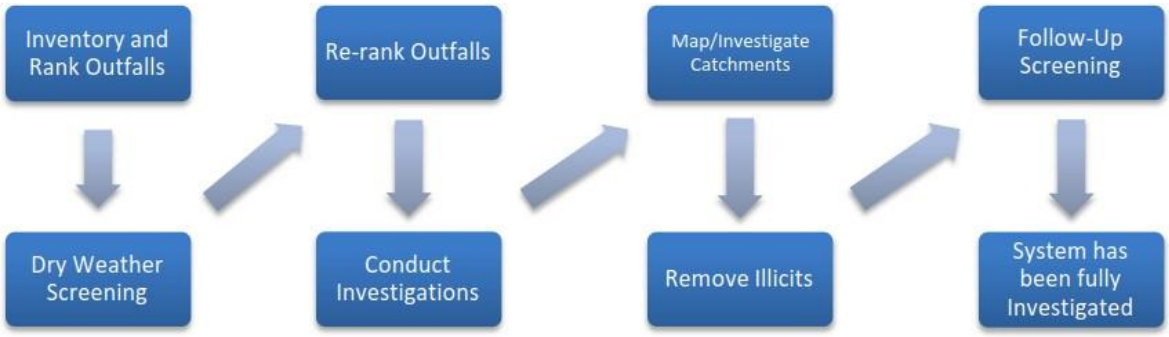


TABLE 1-2: IDDE PROGRAM IMPLEMENTATION TIMELINE

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*				
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 Dover 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

In addition to completed activities, the Town is actively performing an MS4 system asset inventory in conjunction with storm system mapping updates. Ongoing activities include:

- Stormwater Control Measures (SCM) identification and inspection
- Storm drain network field verification
- Digitization of record plan sets from paper copies to PDF. Storm drain plan sets are slated to be migrated from PDF to the Town's geographic information system database.

Pending MS4 Permit requirement activities include:

- Sanitary Sewer Overflow (SSO) Inventory
- IDDE catchment investigations.

2. LEGAL AUTHORITY AND RESPONSIBLE DEPARTMENTS

2.1 Legal Authority

The Town of Dover has adopted a General Bylaw, Chapter 159, Stormwater Management and Erosion Control containing the illicit discharge bylaw, which was adopted at the Dover Annual Town Meeting on May 2, 2016. A copy of the Town of Dover Bylaw is provided in **Appendix A**. The Town of Dover Bylaw provides the Town of Dover 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

2.2 Responsibilities

The Dover Public Works is the lead municipal agency or department responsible for implementing the IDDE program pursuant to the provisions of the Town of Dover. Other agencies or departments with responsibility for aspects of the program include:

- Town Engineer/Engineering Department – IDDE enforcement with developers.

3. SYSTEM MAPPING

A copy of the Town's 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 Dover Public Works is responsible for updating the stormwater system mapping pursuant to the 2016 MS4 Permit. The Town of Dover 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 Map Updates

The Town of Dover has completed Phase I mapping, which includes the following information:

- Updated catch basin locations
- Water bodies
- Outfalls and receiving waters
- Open channel conveyances (swales, ditches, etc.)
- Interconnections with other MS4s and other storm sewer systems (do not exist)
- 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.

3.2 Phase II Map Updates

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.

The Town of Dover will update its stormwater mapping by July 1, 2028 to include the remaining Phase II information.

4. SANITARY SEWER OVERFLOW INVENTORY

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 Dover does not currently have a municipal sanitary sewer system in operation. All wastewater facilities in Town are private septic systems. Therefore, completion of 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 is not applicable to the Town of Dover.

The inventory in **Table 4-1** summarizes SSOs 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. Table 4-1 will be updated by the Dover Public Works if a municipal sanitary sewer system is created and 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.

Upon detection of an SSO if a municipal sanitary sewer system is created in the future, the Town of Dover 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 Dover 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.

TABLE 4-1: SSO INVENTORY REVISION DATE: JUNE 30,2024

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]

Notes:

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 or interconnection. 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 will be 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 Dover 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 is complete. 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 recreational areas or drinking water supplies.

- 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; and cross-country drainage 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.

- **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
- **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.

appendix E provides the outfall inventory and priority ranking matrix.

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 Dover 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 the National Weather Service (NWS), Norwood, Massachusetts weather station; https://www.weather.gov/box/stationobs?siteid=OWD. If the NWS Norwood location is not available or not reporting current weather data, then the NWS Taunton location will be used as a back-up; https://www.weather.gov/box/stationobs?siteid=TAN.

6.2 Dry Weather Screening/Sampling Procedure

The following summarizes general procedures, field equipment, and sample and collection analysis associated with dry weather outfall screening and sampling.

6.2.1 Mobilizing and Screening 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.
4. Mark and photograph the outfall.
5. Record the inspection information and outfall characteristics using digital forms using a tablet or similar device. See example paper forms in **appendix C.**
6. 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.
7. If flow is observed, sample and test the flow following the procedures described in the following sections.
8. 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.

9. Input results from screening and sampling into spreadsheet/database. Include pertinent information in the outfall/interconnection inventory and priority ranking.
10. Include all screening data in the annual report.

6.2.2 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
Clipboard	For organization of field sheets and writing surface
Field Sheets	Field sheets for both dry weather inspection and Dry weather sampling should be available with extras
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
Cooler with Ice	For transporting samples to the laboratory
Digital Camera	For documenting field conditions at time of inspection
Personal Protective Equipment (PPE)	Reflective vest, Safety glasses and boots at a minimum
GPS Receiver	For taking spatial location data
Water Quality Sonde	If needed, for sampling conductivity, temperature, pH
Water Quality Meter	Handheld meter, if available, for testing for various water quality parameters such as ammonia, surfactants and chlorine
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 Procedure and Analysis

If flow is present during a dry weather outfall inspection, a sample will be collected and analyzed for the required permit parameters 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.
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 for laboratory samples.
8. Deliver samples to laboratory or schedule pick up of samples by laboratory, if available.
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 than indicator bacteria and any pollutants of concern.

TABLE 6-2: SAMPLING PARAMETERS AND ANALYSIS METHODS

Analyte or Parameter	Instrumentation (Portable Meter)	Field Test Kit
Ammonia	CHEMetrics™ V-2000 Colorimeter Hach™ DR/890 Colorimeter Hach™ Pocket Colorimeter™ II	CHEMetrics™ K-1410 CHEMetrics™ K-1510 (series) Hach™ NI-SA Hach™ Ammonia Test Strips
Surfactants (Detergents)	CHEMetrics™ I-2017	CHEMetrics™ K-9400 and K-9404 Hach™ DE-2
Chlorine	CHEMetrics™ V-2000, K-2513 Hach™ Pocket Colorimeter™ II	NA

Analyte or Parameter	Instrumentation (Portable Meter)	Field Test Kit
Conductivity	CHEMetrics™ I-1200 YSI Pro30 YSI EC300A Oakton 450	NA
Temperature	YSI Pro30 YSI EC300A Oakton 450	NA
Salinity	YSI Pro30 YSI EC300A Oakton 450	NA
Temperature	YSI Pro30 YSI EC300A Oakton 450	NA
Indicator Bacteria: *E. coli* (freshwater) or Enterococcus (saline water)	EPA certified laboratory procedure (40 CFR § 136)	NA
Pollutants of Concern[1]	EPA certified laboratory procedure (40 CFR § 136)	NA

Note: [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[1]. Samples for laboratory analysis must also be stored and preserved in accordance with procedures found in 40 CFR § 136[1]. **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

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	None Required

[1] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136

Analyte or Parameter	Analytical Method	Detection Limit	Max. Hold Time	Preservative
			minutes	
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* Enterococcus	*E.coli* **EPA**: 1603 **SM**: 9221B, 9221F , 9223 B **Other**: Colilert ®, Colilert- 18® *Enterococcus* **EPA**: 1600 **SM**: 9230 C **Other**: Enterolert®	*E.coli* **EPA**: 1 cfu/100mL **SM**: 2 MPN/100mL **Other**: 1 MPN/100mL *Enterococcus* **EPA**: 1 cfu/100mL **SM**: 1 MPN/100mL **Other**: 1 MPN/100mL	8 hours	Cool ≤10°C, 0.0008% $Na_2S_2O_3$
Total Phosphorus	**EPA**: Manual-365.3, Automated Ascorbic acid digestion-365.1 Rev. 2, ICP/AES4-200.7 Rev. 4.4 **SM**: 4500-P E-F	**EPA**: 0.01 mg/L **SM** : 0.01 mg/L	28 days	Cool ≤6°C, H_2SO_4 to pH <2
Total Nitrogen (Ammonia + Nitrate/Nitrite, methods are for Nitrate-Nitrite and need to be combined with Ammonia listed above.)	**EPA**: Cadmium reduction (automated)-353.2 Rev. 2.0, **SM**: 4500-NO_3 E-F	**EPA**: 0.05 mg/L **SM** : 0.05 mg/L	28 days	Cool ≤6°C, H_2SO_4 to pH <2

SM = Standard Methods

6.3 Data Compilation and 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 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
Bacteria – E. coli	≥410 cfu/100mL (statistical threshold value)

6.4 Follow-Up Ranking of Outfalls and Interconnections

The Town of Dover updated and re-prioritized the initial outfall and interconnection rankings based on information gathered during dry weather screening. Per the permit requirements, this was completed within three (3) years of the effective date of the permit (July 1, 2021).

During the dry weather screenings and investigations, no evidence was found relative to illicit discharges. Sampling from dry weather discharges indicated satisfactory water quality results at all observed locations. Other outfalls and interconnections were 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 Dover 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
- Prior work on storm drains
- Board of Health or other municipal data on septic systems
- 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:

- Any 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 SVF analysis was conducted in December 2024 by Woodard & Curran which flagged any catchment with storm drain infrastructure greater than 40 years old. One Hundred and one (101) systems were identified to have the one (1) SVF and will require wet weather outfall sampling. The updates to the SVF inventory are documented for each catchment (see **Appendix F)**, retained as part of this IDDE Plan, and included in the annual report.

7.2 Wet Weather Outfall Sampling

Where a minimum of one (1) SVFs are identified based on previous information or the catchment investigation, a wet weather investigation must also be conducted at the associated outfall. The Dover 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 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.

7.3 Dry Weather Manhole Inspections

The Town of Dover 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 Dover 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.

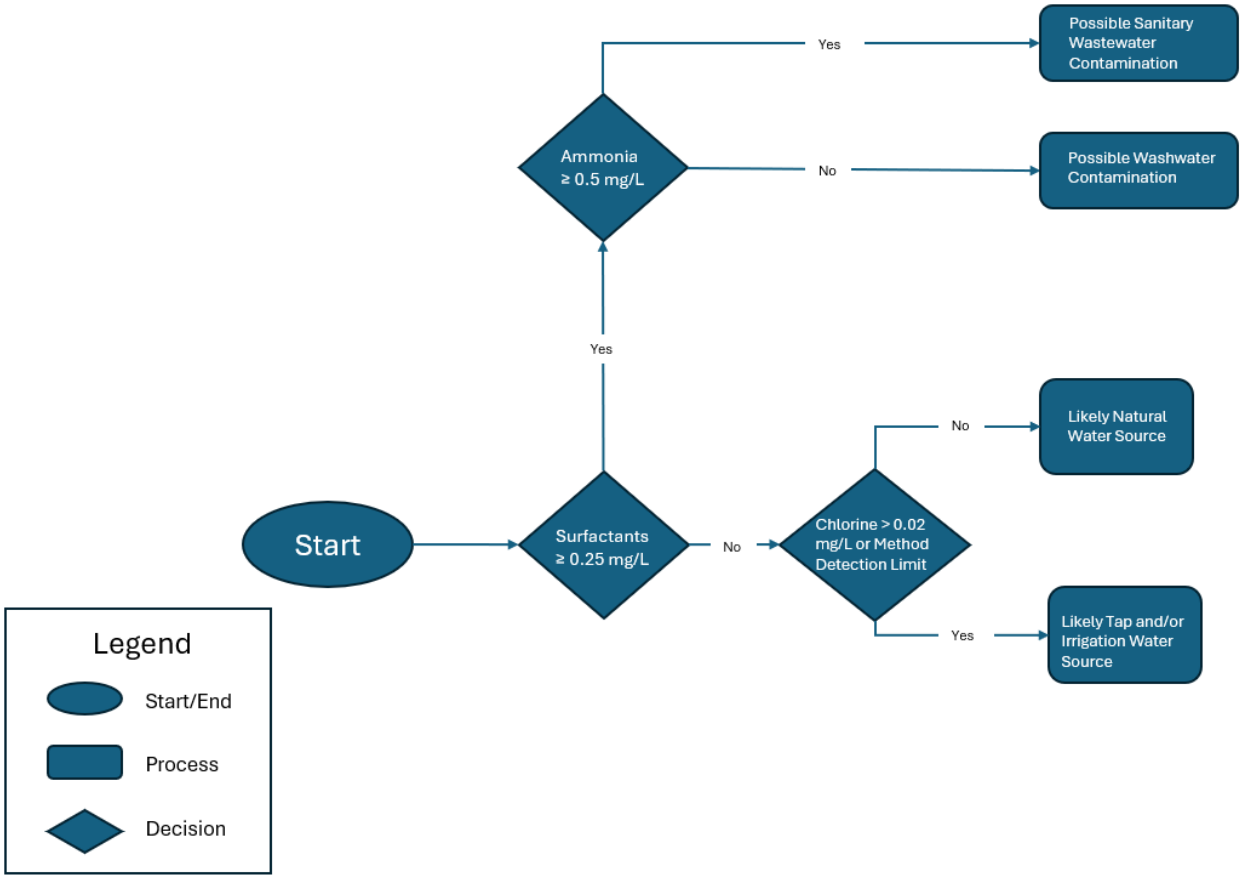
For most catchments, manhole inspections will proceed from the outfall moving up into the system.

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.
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.). See **Figure 7-1** for an overview of the use of sampling data for identification of potential sources of illicit discharges.
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 7-1: FLOW CHART TO IDENTIFY POSSIBLE ILLICIT DISCHARGES[2]



7.4 Source Isolation and Confirmation

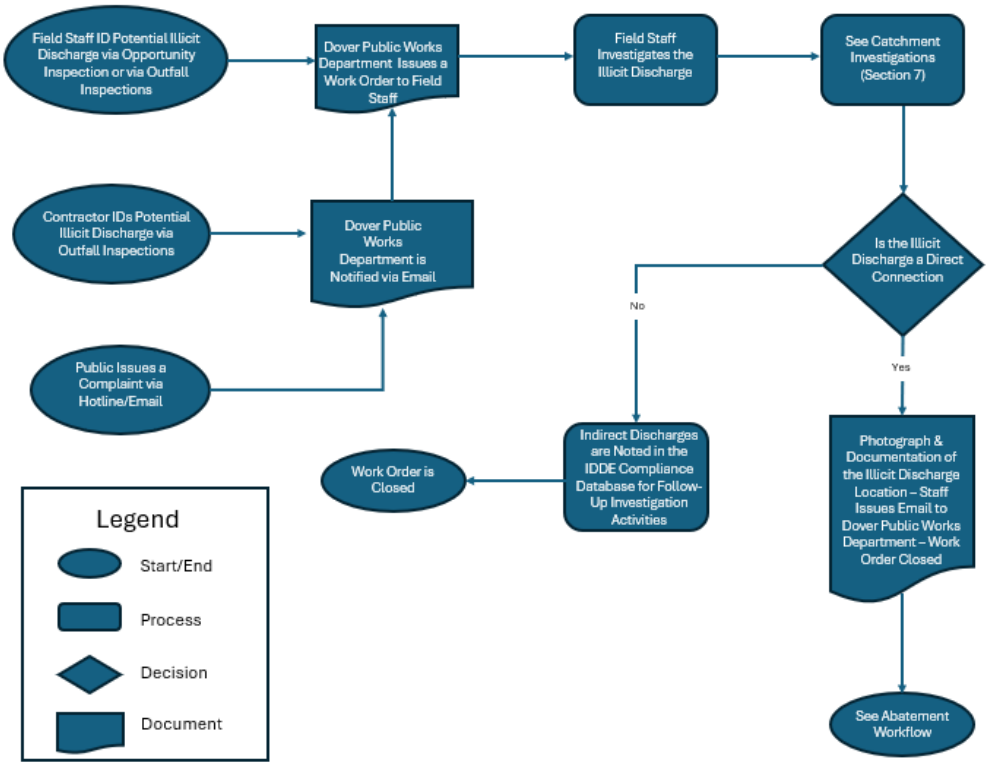
Once the source of an illicit discharge is approximated between two manholes, more detailed investigation techniques will be used to isolate and confirm the source of the illicit discharge. The following methods may be used in isolating and confirming the source of illicit discharges. See the process of confirming and illicit discharge in **Figure 7-2** and methods described in the sections below.

- Sandbagging
- Smoke Testing
- Dye Testing
- CCTV/Video Inspections
- Optical Brightener Monitoring

[2] Adapted from Chapter 12 of the Center for Watershed Protection's Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (2004): Figure 47, pg. 131.

- IDDE Canines

FIGURE 7-2: ILLICIT DISCHARGE INVESTIGATION – WORKFLOW PROCESS



Public notification is an important aspect of a detailed source investigation program. Prior to smoke testing, dye testing, or TV inspections, the Dover Public Works will notify property owners in the affected area.

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.

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 Dover will exercise its authority as necessary to require its removal. Illicit discharges should be removed in accordance with the Illicit Discharge Abatement Plan outlined in Section 8. Within 60 days of an illicit discharge abatement, dry weather confirmatory sampling will be conducted just upstream and downstream in the nearest manholes to the abated illicit discharge to confirm removal.

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.

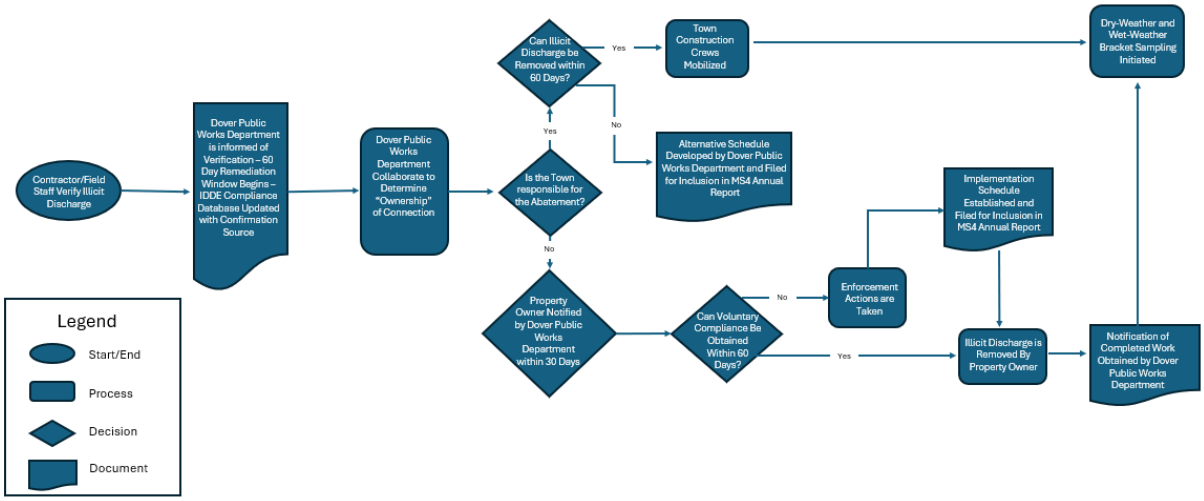
7.6 Ongoing Screening

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. ILLICT DISCHARGE ABATEMENT PLAN

Upon the Dover Public Works Department receiving confirmation of a verified illicit discharge, the 60-day window for remediation will have been triggered and Public Works will initiate the elimination workflow process as shown in **Figure 8-1**.

FIGURE 8-1: ILLICIT DISCHARGE ABATEMENT- WORKFLOW PROCESS



Connections from private properties are common sources of direct and indirect illicit discharges, and therefore this Abatement Plan focuses on the procedures to follow if the Town finds that the property owner is the responsible party. If the Town is responsible for removal of the illicit discharge, such as in cases of exfiltration from broken sewer mains, the Town will follow a 60-day corrective action timeline (as possible). The Town will structure its abatement activities based on flow volume, impacts to human health, etc. Any deviation from the 60-day corrective action timeline will be explained, and an updated timeline will be outlined and included during MS4 General Permit annual reporting.

8.1 Voluntary Compliance

The preferred approach to address illicit discharge problems is to pursue voluntary compliance from the property owner and/or responsible party using education further described in Section 8. Often, business operators and residential property owners are not aware of the existence of illicit connections or activities on their properties that may constitute an illicit discharge. In these cases, providing information about the connection or operation, the environmental consequences, and suggestions on how to remedy the problem may be enough to secure voluntary compliance from the property owner and/or responsible party.

8.2 Operational Problems

Property owners and/or responsible parties are responsible for correcting operational problems that are resulting in illicit discharges to the storm drainage system. Operation modifications could include sewer lateral maintenance to repair defects or eliminate blockages, moving washing activities indoor or

undercover, locating an appropriate discharge location for liquid wastes, or other appropriate measures. Through site visits and education, the Town or other program partners may provide technical assistance to aid property owners in identifying and addressing operational problems.

8.3 Structural Problems

Many illicit discharges will require structural modification to correct the problem. Structural modifications are used to redirect discharges from sewer laterals or piped gray water connections to an approved sanitary wastewater collection or disposal system or other appropriate location. Structural repairs to defective sanitary sewer collection infrastructure may also be necessary. Correcting structural problems is the responsibility of the property owner and/or responsible party, though the Town may provide technical assistance throughout the process.

8.4 Enforcement Actions

When voluntary compliance cannot be obtained or does not produce the desired result, the Town will pursue follow-up enforcement action. Enforcement actions will be the responsibility of Dover Public Works (or its assignees). **Table 8-1** outlines detailed enforcement steps.

TABLE 8-1: ENFORCEMENT TIMELINE

Illicit Discharge Elimination Step	Details
Step 1 –Initial Actions (0 to 60 Days)	- Provide landowner education. - Encourage voluntary compliance. - Set compliance date (determined on individual incident basis). - Notify landowner in writing within 30 days of verification to remove illicit discharge. - Provide staff support and/or technical assistance. - Request evidence of corrected problem. - Conduct site visit to verify compliance and completion of work.
Step 2 –Follow-up Actions (60 to 90 Days)	- Send "notice of violation" letter*, as specified in the Bylaws, indicating that unresolved issues and fines will be referred to prosecutor. - Request evidence of corrected problem. - Conduct site visit to verify compliance and completion of work.
Step 3 –Final Actions (90+ Days)	- Send second "notice of violation" letter*. - Prosecutor to commence fines in accordance with the Ordinance.

*Document copies of all letters

8.4.1 Enforcement Timeline

The timeline for corrective action procedures from the "date of verification" of an illicit direct connection is 60 days. Any deviation from the 60-day corrective action timeline must be submitted in writing with justification for the delay during MS4 General Permit annual reporting. Compliance dates should be included in all violation notices.

If property owners are not addressing problems in a timely manner (i.e. within 60 days of verification), this may warrant a more aggressive enforcement approach, such as suspending access to the storm drain, if an

"imminent and substantial danger" exists. Additionally, the Town may step in and perform the repairs necessary to remove an illicit connection, eliminate an illicit discharge, and/or clean-up a dumping incident. Property owners will also be responsible for reimbursing the Town for any costs incurred in correcting illicit discharge problems.

8.5 Follow Up Screening

Within 60 days of the illicit discharge abatement, dry weather and wet weather confirmatory sampling of ammonia, chlorine, and surfactant should be conducted just "upstream" and "downstream" in nearest manholes to the abated illicit discharge to confirm removal.

8.6 Record Keeping

Throughout the investigation and corrective action activities, all information related to the incident or property in question should be well documented utilizing a series of work orders, email correspondence, and compliance database updates. Along with monitoring and investigation activities, summaries of corrective action will be included in each MS4 Annual Report submitted by every (90) ninety days from the close of each reporting period. Records for each verified illicit discharge removed from the Town's MS4 within the 60-day corrective action timeline should include:

- location of discharge and source,
- description of discharge,
- method/date of discovery,
- date of elimination,
- mitigation action and associated costs, and
- estimated volume of flow removed.

Additional records should be maintained for each illicit discharge that is not removed within 60 days of verification, including:

- justification for delayed corrective action,
- schedule for removal of illicit discharge,
- explanation of why schedule is as expeditious as possible, and
- description of legal actions against landowner (if applicable.

9. 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 D.** The frequency and type of training will be included in the annual report.

10. PROGRAM PROGRESS AND 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 (IDDE BYLAW OR ORDINANCE)

Town of Dover, MA
Wednesday, June 12, 2019

Chapter 159. Stormwater Management and Erosion Control

[HISTORY: Adopted ATM 5-2-2016, Art. 21.[1] Amendments noted where applicable.]

GENERAL REFERENCES
Groundwater protection districts — See Ch. **116**.
Wetlands protection — See Ch. **181**.
Zoning — See Ch. **185**.

[1] *Editor's Note: This article was adopted as Ch. 117 but was renumbered to fit into the alphabetical organization of the Code.*

§ 159-1. Purpose.

A. The purpose of this bylaw is to provide for the health, safety, and general welfare of the citizens of the Town of Dover through the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. The bylaw establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process.

B. The objectives of this bylaw are:

(1) To prevent pollutants from entering Dover's municipal separate storm sewer system;

(2) To prohibit illicit connections and unauthorized discharges to the MS4;

(3) To require the removal of all such illicit discharges;

(4) To comply with state and federal regulations relating to stormwater discharges; and

(5) To establish legal authority to ensure compliance with the provisions of this bylaw through inspection, monitoring, and enforcement.

§ 159-2. Definitions.

For the purposes of this bylaw, the following shall mean:

AUTHORIZED ENFORCEMENT AGENCY

The Town of Dover's Board of Selectmen shall administer and implement this bylaw. The Town's Highway Department shall enforce this bylaw. Any powers granted to or duties imposed must be delegated in writing by the Board of Selectmen to the appropriate agents of the Town, i.e. the employees of and agents of the Highway Department, the Board of Health, the Conservation Commission, Building Inspector, and Town Engineer.

BEST MANAGEMENT PRACTICES (BMPS)

Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CLEAN WATER ACT

The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) and any subsequent amendments thereto.

HAZARDOUS MATERIAL

Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

ILLEGAL DISCHARGE

Any direct or indirect non-stormwater discharge to the storm drain system, except as exempted in § **159-5** of this bylaw.

ILLICIT CONNECTIONS

An illicit connection is defined as either of the following: Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wastewater to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency, or any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

INDUSTRIAL ACTIVITY

Activities subject to NPDES Industrial Permits as defined in 40 CFR Section 122.26(b)(14).

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT

A permit issued by EPA that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

NON-STORMWATER DISCHARGE

Any discharge to the storm drain system that is not composed entirely of stormwater.

PERSON

Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

POLLUTANT

Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnance, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved

and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

PREMISES

Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

STORM DRAIN SYSTEM

Publicly owned facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

STORMWATER

Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

WASTEWATER

Any water or other liquid, other than uncontaminated stormwater, discharged from a facility.

§ 159-3. Applicability.

This bylaw shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

§ 159-4. Responsibility for administration.

The Board of Selectmen shall administer and implement the provisions of this bylaw. The Highway Department shall enforce this bylaw. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated in writing by the Chairman of the Board of Selectmen to persons or entities acting in the beneficial interest of the Town of Dover.

§ 159-5. Discharge prohibitions.

A. Prohibition of illegal discharges. No person shall discharge or cause to be discharged into the municipal separate storm sewer system (MS4) or watercourses any materials, including but not limited to pollutants or waters containing pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

(1) The following discharges are exempt from discharge prohibitions established by this bylaw:

(a) Water line flushing or other potable water sources.

(b) Landscape irrigation or lawn watering.

(c) Diverted stream flows.

(d) Rising groundwater.

(e) Uncontaminated groundwater infiltration from storm drains.

(f) Uncontaminated pumped groundwater.

(g) Foundation or footing drains.

(h) Crawl space pumps.

(i) Air conditioning condensation.

(j) Springs.

(k) Individual resident car washing.

(l) Natural riparian habitat or wetland flows.

(m) Dechlorinated swimming pools.

(n) Street wash waters.

(o) Residential building wash waters without detergents.

(p) Firefighting activities.

(2) Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.

(3) Dye testing is an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test.

(4) The prohibition shall not apply to any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

B. Prohibition of illicit connections.

(1) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this bylaw if the person connects a line conveying sewage to the MS4 or watercourse, or allows such a connection to continue.

§ 159-6. Notification of spills.

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the MS4 system, or water of the U.S., said person shall take all the necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies and the Town of Dover Highway Department. In the event of nonhazardous materials, said person shall notify the Town of Dover

Highway Department in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Town of Dover Highway Department within three business days of the phone notice. If the discharge of prohibited material emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

§ 159-7. Monitoring of discharges.

Inspectors authorized by the Board of Selectmen shall be permitted to enter and inspect facilities subject to regulation under this bylaw as often as may be necessary to determine compliance with this bylaw. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized inspectors.

§ 159-8. Enforcement.

The Board of Selectmen, through the Highway Department, shall enforce this bylaw, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

A. Civil relief. If a person violates the provisions of this bylaw, regulations, permit, notice, or order issued thereunder, the Board of Selectmen may seek injunctive relief in a court of competent jurisdiction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

B. Orders.

   (1) The Board of Selectmen or another authorized agent may issue a written order to enforce the provisions of this bylaw or the regulations thereunder, which may include:

      (a) Elimination of illicit connections or discharges to the MS4;

      (b) Performance of monitoring, analyses, and reporting;

      (c) That unlawful discharges, practices, or operations shall cease and desist; and

      (d) Remediation of contamination in connection therewith.

   (2) If the enforcing body determines that abatement or remediation of contamination is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the enforcing body may, at its option, undertake such work, and expenses thereof shall be charged to the violator.

C. Criminal penalty. Any person who violates any provision of this bylaw, regulation, order or permit issued thereunder, shall be punished by a fine of not more than $250. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

D. Noncriminal disposition. As an alternative to criminal prosecution or civil action, the Board of Selectmen may elect to utilize the noncriminal disposition procedure set forth in M.G.L. Ch. 40, § 21D, in which case the Highway Department shall be the enforcing Town department. The penalty for the 1st violation shall be $100. The penalty for the 2nd violation shall be $250. The penalty for the 3rd and

subsequent violation shall be $300. Each day or part thereof that such violations occurs or continues shall constitute a separate offense.

E. Entry to perform duties under this bylaw. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Highway Department, its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under the bylaw and regulations and may make or cause to be made such examinations, surveys or sampling as the Department deems reasonably necessary.

F. Appeals. The decisions or orders of the Board of Selectmen shall be final. Further relief shall be to a court of competent jurisdiction.

G. Remedies not exclusive. The remedies listed in this bylaw are not exclusive of any other remedies available under any applicable federal, state or local law.

§ 159-9. Severability.

The provisions of this bylaw are hereby declared to be severable. If any provision, paragraph, sentence or clause of this bylaw or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this bylaw.

APPENDIX B: STORM SYSTEM MAPPING

Outfall Map

Town of Dover, MA

N

Legend

- Outfall
- Dover Roads
- Dover Streams
- Dover Waterbodies
- Town Boundaries

0 0.3 0.5 1 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: May 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

WELLESLEY
NEEDHAM
NATICK
DEDHAM
WESTWOOD
SHERBORN
MEDFIELD
WALPOLE
NORWOOD
MILLIS

Catch Basin Map

Town of Dover, MA

N

Legend

- CatchBasin
- Dover Roads
- Dover Streams
- Dover Waterbodies
- Town Boundaries

0 0.1 0.3 0.5 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: May 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

WELLESLEY
NEEDHAM
NATICK
DEDHAM
SHERBORN
MEDFIELD
WESTWOOD
NORWOOD
WALPOLE
MILLIS

Stormwater Control Measures Map

Town of Dover, MA

N

Legend

- Storm Control Measure
- Dover Roads
- Dover Streams
- Dover Waterbodies
- Town Boundaries

0 0.10.3 0.5 Miles

Woodard & Curran

Project #: 0235506.00
Map Created: May 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

WELLESLEY
NEEDHAM
NATICK
DEDHAM
SHERBORN
WESTWOOD
MEDFIELD
NORWOOD
WALPOLE
MILLIS

SCM-014
SCM-010
SCM-016
SCM-015
SCM-006
SCM-005
SCM-008
SCM-007
SCM-009
SCM-001
SCM-002
SCM-018
SCM-017
SCM-004
SCM-011
SCM-003
SCM-012
SCM-013

APPENDIX C: EXAMPLE FIELD FORMS

Job No.: _____ **Entity:** _____

Inspector: _____ **Date:** _____

CATCH BASIN INSPECTION FORM

Catch Basin I.D.	_____	**Final Discharge from Structure?** Yes ☐ No ☐ **If Yes, Discharge to Outfall No:**_____	
Catch Basin Label:	**Stencil** ☐ **Ground Inset** ☐ **Sign** ☐ **None** ☐ **Other**_____		
Basin Material:	Concrete ☐ Corrugated metal ☐ Stone ☐ Brick ☐ Other: _____ ☐	**Catch Basin Condition:**	Good ☐ Poor ☐ Fair ☐ Crumbling ☐
Pipe Material:	Concrete ☐ HDPE ☐ PVC ☐ Clay Tile ☐ Other:_____	**Pipe Measurements:**	Inlet Dia. (in): d= ____ Outlet Dia. (in): D= ____

Required Maintenance/ Problems (check all that apply):

- ☐ Tree Work Required
- ☐ New Grate is Required
- ☐ Pipe is Blocked
- ☐ Frame Maintenance is Required
- ☐ Remove Accumulated Sediment
- ☐ Pipe Maintenance is Required
- ☐ Basin Undermined or Bypassed
- ☐ Cannot Remove Cover
- ☐ Ditch Work
- ☐ Corrosion at Structure
- ☐ Erosion Around Structure
- ☐ Remove Trash & Debris
- ☐ Need Cement Around Grate

Other: _____

Catch Basin Grate Type :	**Sediment Buildup Depth :**	**Repair/Replace:**	**Street Name/ Structure Location:**
Bar: ☐ Cascade: ☐ Other:_____ Properly Aligned: Yes ☐ No ☐	0-6 (in): _____ 6-12(in): _____ 12-18 (in): _____ 18-24 (in): _____ 24 + (in): _____	Repair ☐ Replace ☐ No Action ☐ Comments:	

***If the outlet is submerged check yes and indicate approximate height of water above the outlet invert.** h above invert (in):___ Yes ☐ No ☐

☐ **Flow**

☐ **Standing Water**

(check one or both)

Observations:	
Color:	
Odor:	

Weather Conditions : Dry > 24 hours ☐ Wet ☐

Sample of Screenings Collected for Analysis? Yes ☐ No ☐

Comments:

Circle those present:

Foam	Oil Sheen
Sanitary Waste	Bacterial Sheen
Orange Staining	Floatables
Excessive sediment	Pet Waste
Other:_____	Optical Enhancers

Job No.: _____ **Entity:** _____

Inspector: _____ **Date:** _____

OUTFALL INSPECTION FORM

Outfall I.D.	_____	**Final Discharge from Structure?** Yes ☐ No ☐	
Outfall Label:	**Stencil** ☐ **Ground Inset** ☐ **Sign** ☐ **None** ☐ **Other**_____		
Headwall Material:	Concrete ☐ Corrugated metal ☐ Stone ☐ Brick ☐ Other: _____ ☐	**Outfall Condition:**	Good ☐ Poor ☐ Fair ☐ Crumbling ☐
Pipe Material:	Concrete ☐ HDPE ☐ PVC ☐ Clay Tile ☐ Other:_____	**Pipe Measurements:**	Inlet Dia. (in): d= ____ Outlet Dia. (in): D= ____

Required Maintenance/ Problems (check all that apply):

- ☐ Tree Work Required
- ☐ New Grate is Required
- ☐ Pipe is Blocked
- ☐ Headwall Maintenance is Required
- ☐ Remove Accumulated Sediment
- ☐ Pipe Maintenance is Required
- ☐ Outrfall Undermined or Bypassed
- ☐ Cannot Remove Cover
- ☐ Ditch Work
- ☐ Corrosion at Structure
- ☐ Erosion Around Structure
- ☐ Remove Trash & Debris
- ☐ Need Cement Around Grate

Other: _____

Sketch:	**Sediment Buildup Depth :**	**Repair/Replace:**	**Street Name/ Structure Location:**
	0-6 (in): _____ 6-12(in): _____ 12-18 (in): _____ 18-24 (in): _____ 24 + (in): _____	Repair ☐ Replace ☐ No Action ☐ Comments:	

***If the outlet is submerged check yes and indicate approximate height of water above the outlet invert.** h above invert (in):___ Yes ☐ No ☐

☐ **Flow**

☐ **Standing Water**

(check one or both)

Observations:

Color:	
Odor:	

Weather Conditions : Dry > 24 hours ☐ Wet ☐

Sample of Screenings Collected for Analysis? Yes ☐ No ☐

Comments:

Circle those present:

Foam	Oil Sheen
Sanitary Waste	Bacterial Sheen
Orange Staining	Floatables
Excessive sediment	Pet Waste
Other:_____	Optical Enhancers

Outfall ID: _____ **Town:** _____

Inspector: _____ **Date:** _____

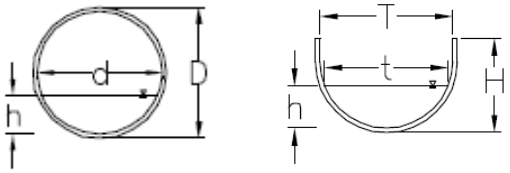
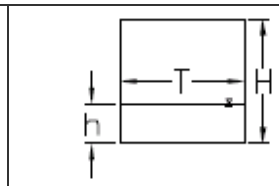
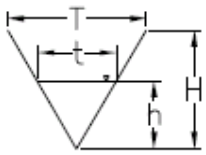
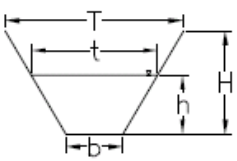
Street Name _____

Last rainfall event _____

DRY WEATHER OUTFALL INSPECTION SURVEY

Type of Outfall (check one):		**Pipe Outfall** ☐	**Open Swale Outfall** ☐
Outfall Label:	**Stencil** ☐ **Ground Inset** ☐ **Sign** ☐ **None** ☐ **Other**_____		
Pipe Material:	Concrete ☐ Corrugated metal ☐ Clay Tile ☐ Plastic ☐ Other: _____ ☐	**Pipe Condition:**	Good ☐ Poor ☐ Fair ☐ Crumbling ☐
Swale Material:	Paved (asphalt) ☐ Concrete ☐ Earthen ☐ Stone ☐ Other: _____ ☐	**Swale Condition:**	Good ☐ Poor ☐ Fair ☐ Crumbling ☐

Shape of Pipe/Swale (check one)

 ☐ ☐	 ☐	 ☐	 ☐
Rounded Pipe/Swale	**Rectangular Pipe/Swale**	**Triangular Swale**	**Trapezoidal Swale**

Pipe Measurements: Inner Dia. (in): d= _____ Outer Dia. (in): D= _____ Pipe Width (in): T= _____ Pipe Height (in): H= _____ Flow Width (in): h= _____*	**Swale Measurements:** Swale Width (in): T= _____ Flow Width (in): t = _____ Swale Height (in): H= _____ Flow Height (in): h= _____* Bottom Width (in): b=_____	**Is there a headwall?** Yes ☐ No ☐ **Condition:** Good ☐ Poor ☐ Fair ☐ Crumbling ☐	**Location Sketch**

Description of Flow: Heavy ☐ Moderate ☐ Trickling ☐ Dry ☐

If the outlet is submerged check yes and indicate approximate height of water above the outlet invert. h above invert (in):

Circle All Materials Present:

Odor: Yes ☐ No ☐
Optical enhancers suspected? Yes ☐ No ☐
Has channelization occurred? Yes ☐ No ☐
Has scouring occurred below the outlet? Yes ☐ No ☐

Rip rap	Sheen: Bacterial
Excessive sediment	Sheen: Petroleum
Foam	Floatables
Sanitary Waste	Algae
Orange Staining	Excessive Vegetation

Required Maintenance:
Tree Work ☐ Remove Trash/Debris ☐
Ditch Work ☐ Blocked Pipe ☐
Structural Corrosion ☐ Erosion at Structure ☐
N/A ☐ Other ☐

Comments:

Outfall I.D.: _____ **Date:** _____

Inspector: _____

Time of Inspection: _____

Street Name _____

Last rainfall event _____

WET WEATHER OUTFALL INSPECTION SURVEY

Visual Inspection:	**Yes**	**No**	**Comments (Include probable source of observed contamination):**
Color	☐	☐	
Odor	☐	☐	
Turbidity	☐	☐	
Excessive Sediment	☐	☐	
Sanitary Waste	☐	☐	
Pet Waste	☐	☐	
Floatable Solids	☐	☐	
Oil Sheen	☐	☐	
Bacterial Sheen	☐	☐	
Foam	☐	☐	
Algae	☐	☐	
Orange Staining	☐	☐	
Excessive Vegetation	☐	☐	
Optical Enhancers	☐	☐	
Other _____			

Sample Parameters	**Analytical Test Method**	**Benchmark***	**Field Screening Result**	**Full Analytical?**
Ammonia[1]	EPA 350.2/SM4500-NH3C	>50.0 mg/L		☐ Yes ☐ No
Specific Conductance[1]	SM 2510B	>2,000		☐ Yes ☐ No
Detergents & Surfactants[2]	EPA 425.1/SM5540C	> 0.25 mg/L		☐ Yes ☐ No
Fluoride[2]	EPA 300.0	>0.25 mg/L		☐ Yes ☐ No
pH[1]	EPA 150.1/SM 4500H	<5		☐ Yes ☐ No
Potassium[1]	EPA 200.7	>20 mg/L		☐ Yes ☐ No

Comments:

[1] – *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection and Robert Pitt of University of Alabama, 2004, p. 134, Table 45.

[2] – *Appendix I – Field Measurements, Benchmarks and Instrumentation*, Draft Massachusetts North Coastal Small MS4 General Permit, 2009.

APPENDIX D: IDDE EMPLOYEE TRAINING RECORD

Employee Training

Instructions:

- Keep records of employee training, including the date of the training.
- For in-person training consider using the tables below to document your employee training. For computer-based or other types of training, keep similar records on who was trained and the type of training conducted.

Training Date: 12.17.2024	
Training Description (including duration and subjects covered): IDDE, PP-GH, and SWPPP; 1.5 hours	
Trainer: Margaret Byrne, Becca Kammerer, and Leah Finn-Erb (Woodard & Curran)	
Employee(s) Trained:	**Employee Signature:**
John R. Tosi	[illegible]
James Gorman	[illegible]
Mark Stephenson	[illegible]
Liam Frazier	[illegible]
Kevin McCabe	[illegible]
Mark Travers	[illegible]
Tom Palmer	Tom Palmer

Illicit Discharge Detection and Elimination (IDDE)
Employee Training Record

Town of Dover, Massachusetts

Date of Training: December 8, 2023

Duration of Training: 70 MINUTES

Name	Title	Signature
JOHN TOSI	Super of Streets	
Mark Stephenson	Heavy Equip Op	
Andrew Wills	Highway Supt	
ROBERT BECKWITH	Eq Opp.	
Tom Palmer	Parks	Tom Palmer
Mark Travers	Parks	
Karl Warnick	Water	

Illicit Discharge Detection and Elimination (IDDE)
Employee Training Record

Town of Dover, Massachusetts

Date of Training: December 20, 2022

Duration of Training: 75 MINUTES

Name	Title	Signature
Kevin McCabe	Director	
Mark Stephenson	Operator	
BOB BECKWITH	OPERATOR	
Andrew Wills	operator	
Jim Gorman	operator	
JOHN TOSI	oper supr	
Mark Travers	operator	

Illicit Discharge Detection and Elimination (IDDE)
Employee Training Record

Town of Dover, Massachusetts

Date of Training: December 16, 2021

Duration of Training: 1 hour

Name	Title	Signature
JOHN R. TOSI	Interim Supt. of Streets	John R Tosi
Andrew Wills	Equipment Operator	Andrew Wills
Mark Stephenson	equip. operator	Mark Stephenson
James T Gorman	equip operator	James T Gorman
ROBERT BECKWITH	EQU OPERATOR	Robert H. Beckwith

Illicit Discharge Detection and Elimination (IDDE)
Employee Training Record

Town of Dover, Massachusetts

Date of Training: December 16, 2020

Duration of Training: 60 MINUTES

Name	Title	Signature
JOHN R TOZI	Interim Superintendent	
Mark Stephenson	Equip Operator	
Kevin BECKWITH	EQUIP OPRATOR	
Andrew Wills	Mechanic	
Jim Gorman	operator	

Illicit Discharge Detection and Elimination (IDDE)
Employee Training Record

Town of Dover, Massachusetts

Date of Training: DECEMBER 12, 2019

Duration of Training: 75 MINUTES

Name (PRINT)	Title	Signature
ANDREW WILLS	Mechanic/Highway	
Craig Hughes	Superintendent of Streets	
Mark Stephenson	Equip Operator	
ROBERT BECKWITH	EQUIP OPERATOR	
James Gorman	Equip Operator	
DAVID TIBERI	FIRE INSP	
[illegible]	[illegible]	
Karl Warnick	Superintendent	

APPENDIX E: OUTFALL CHARACTERISTICS AND PRELIMINARY RANKINGS

Appendix E: Outfall Characteristics and Preliminary Rankings

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		
56	Bubbling Brook	0	3	0	0	1	3	0	0	0	None	7	High Priority
57	Charles River	0	3	0	2	3	3	0	0	0	None	11	High Priority
58	Charles River	0	3	0	2	3	3	0	0	0	Tree Work Required	11	High Priority
59	Charles River	0	3	0	2	3	3	0	0	0	Remove Leaves, Excessive Vegetation	11	High Priority
60	Charles River	0	3	0	2	3	3	0	0	0	Remove Leaves, Excessive Vegetation and Sediment	11	High Priority
61	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
62	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
63	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
64	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
65	Charles River	0	0	0	2	1	3	0	0	0	Poor Pipe and Swale Condition, Ditch Work, Excessive Leaves	6	High Priority
66	Charles River	0	0	0	2	1	2	0	0	0	None	5	High Priority
67	Charles River	0	0	0	2	1	3	0	0	0	Poor Swale Condition, Ditch Work, Excessive Vegetation	6	High Priority
68	Charles River	0	0	0	2	1	2	0	0	0	None	5	High Priority
69	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
70	Trout Brook	0	3	0	2	2	1	0	0	0	None	8	High Priority
71	Trout Brook	0	3	0	2	2	1	0	0	0	None	8	High Priority
72	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
73a	Unnamed	0	0	0	0	3	3	0	3	3	None	12	High Priority
73b	Unnamed	0	0	0	0	3	3	0	3	3	None	12	High Priority
74	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
75a	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
75b	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
76	Charles River	0	0	0	2	1	3	0	0	0	Some leaves and branches in swale	6	High Priority
78	Trout Brook	0	3	0	2	1	3	0	0	0	None	9	High Priority
79	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
80	Trout Brook	0	3	0	2	3	3	0	0	0	None	11	High Priority
81	Trout Brook	0	3	0	2	3	3	0	0	0	None	11	High Priority
82	Trout Brook	0	3	0	2	3	3	0	0	0	Poor Swale Condition, Structural Corrosion, Excessive Sediment	11	High Priority

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		
83	Trout Brook	0	3	0	2	3	3	0	0	0	Poor Swale Condition, Blocked Pipe, Excessive Sediment	11	High Priority
84	Trout Brook	0	3	0	2	3	3	0	0	0	Poor Swale Condition, Ditch Work, Excessive Sediment	11	High Priority
105	Noanet Brook	0	3	0	0	1	3	0	0	0	Ditch Work, Trees, Branches, Leaves	7	High Priority
106	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
107	Charles River	0	0	0	2	1	3	0	0	0	None	6	High Priority
108	Noanet Brook	0	3	0	0	1	3	0	0	0	Ditch Work, Excess Sediment, Leaves	7	High Priority
109	Noanet Brook	0	3	0	0	1	3	0	0	0	Ditch Work, Trees, Excess Sediment, Leaves	7	High Priority
110	Charles River	0	3	0	2	1	3	0	0	0	Ditch Work, Excess Sediment	9	High Priority
111	Charles River	0	3	0	2	1	3	0	0	0	Ditch Work, Stump, Leaves	9	High Priority
112	Charles River	0	3	0	2	1	3	0	0	0	Ditch Work, Excess Sediment, Leaves	9	High Priority
113	Unnamed	0	3	0	0	1	3	0	0	0	Ditch Work, Branches and Leaves	7	High Priority
1	North Brook	0	0	0	0	1	2	0	0	0	Some branches in swale	3	Low Priority
2	North Brook	0	0	0	0	1	2	0	0	0	Some leaves in swale	3	Low Priority
3	North Brook	0	0	0	0	1	2	0	0	0	Some leaves and branches in swale	3	Low Priority
4	North Brook	0	0	0	0	1	2	0	0	0	Foam, some leaves in swale	3	Low Priority
5	North Brook	0	0	0	0	1	2	0	0	0	Algae, Bacterial Sheen, Ditch Work Required, Excessive Sediment, leaves	3	Low Priority
6	North Brook	0	0	0	0	1	2	0	0	0	Fallen trees but not blocking water flow	3	Low Priority

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		
7	North Brook	0	0	0	0	1	2	0	0	0	Couple branches in swale	3	Low Priority
8	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
8a	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
8b	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
9	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
10	North Brook	0	0	0	0	1	2	0	0	0	Ditch work, leaves, branches, excess sediment	3	Low Priority
11	North Brook	0	0	0	0	1	2	0	0	0	Ditch work, leaves, branches, excess sediment	3	Low Priority
12	North Brook	0	0	0	0	1	2	0	0	0	Excessive Sediment, Ditch Work Required	3	Low Priority
13	North Brook	0	0	0	0	1	2	0	0	0	Excessive Sediment, Ditch Work Required	3	Low Priority
14	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
15	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
16	North Brook	0	0	0	0	1	2	0	0	0	Some branches in swale	3	Low Priority
17	North Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
18	Hales Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority
19	Hales Pond	0	0	0	0	1	3	0	0	0	Ditch Work Required, Blocked Pipe	4	Low Priority
20	Hales Pond	0	0	0	0	1	3	0	0	0	Ditch Work Required	4	Low Priority
21	Hales Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority
22a	Unnamed	0	0	0	0	1	3	0	0	0	None	4	Low Priority
22b	Unnamed	0	0	0	0	1	3	0	0	0	None	4	Low Priority
23	Unnamed	0	0	0	0	1	3	0	0	0	Crumbling Pipe	4	Low Priority
24	Hales Pond	0	0	0	0	1	3	0	0	0	Ditch Work Required, Excess Sediment, Blocked Pipe	4	Low Priority
25	Unnamed	0	0	0	0	1	3	0	0	0	Rip Rap	4	Low Priority
26	Hales Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority
27	Unnamed	0	0	0	0	1	3	0	0	0	Some leaves and branches in swale	4	Low Priority
28	Unnamed	0	0	0	0	1	1	0	0	0	None	2	Low Priority
29	Unnamed	0	0	0	0	1	2	0	0	0	None	3	Low Priority
30	Unnamed	0	0	0	0	1	2	0	0	0	None	3	Low Priority

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		
31	Unnamed	0	0	0	0	1	2	0	0	0	None	3	Low Priority
32	Unnamed	0	0	0	0	1	2	0	0	0	Ditch Work Required, Excess Sediment, Blocked Pipe	3	Low Priority
33	Unnamed	0	0	0	0	1	2	0	0	0	None	3	Low Priority
34	Unnamed	0	0	0	0	1	2	0	0	0	Ditch Work Required, Excess Sediment, Blocked Pipe	3	Low Priority
35	Unnamed	0	0	0	0	1	2	0	0	0	None	3	Low Priority
36	Unnamed	0	0	0	0	1	1	0	0	0	None	2	Low Priority
37	Mill Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
38	Tubwreck Brook	0	0	0	0	1	3	0	0	0	Ditch Work Required, Excess Sediment, Blocked Pipe	4	Low Priority
39	Tubwreck Brook	0	0	0	0	1	3	0	0	0	Foam, Algae	4	Low Priority
40	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
41	Tubwreck Brook	0	0	0	0	1	3	0	0	0	Submerged in Backed Up Water, Blocked Pipe	4	Low Priority
42	Tubwreck Brook	0	0	0	0	1	2	0	0	0	Submerged in Backed Up Water	3	Low Priority
43	Tubwreck Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
44	Tubwreck Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
45	Tubwreck Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
46	Tubwreck Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
47	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
48	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
49	Mill Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
50	Mill Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
51	Mill Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
52	Mill Brook	0	0	0	0	1	2	0	0	0	None	3	Low Priority
53	Mill Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
54	Mill Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
55	Mill Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
77	Unnamed	0	0	0	0	1	3	0	0	0	Ditch Work Required, Excess Sediment, Blocked Pipe	4	Low Priority
85	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority

Appendix E: Outfall Characteristics and Preliminary Rankings

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		
86	Trout Brook	0	0	0	2	1	3	0	0	0	Excessive Sediment, Ditch Work Required	6	Low Priority
87	Trout Brook	0	0	0	2	1	3	0	0	0	Blocked Pipe, Excessive Sediment and Lawn Clippings	6	Low Priority
87a	Trout Brook	0	0	0	2	1	3	0	0	0	Blocked Pipe, Excessive Sediment and Lawn Clippings	6	Low Priority
88	Trout Brook	0	0	0	2	1	3	0	0	0	Blocked Pipe, Excessive Sediment	6	Low Priority
89	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
90	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
91	Trout Brook	0	0	0	2	1	3	0	0	0	Excessive Sediment, Blocked Pipe, Ditch Work Required	6	Low Priority
92	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
93	Trout Brook	0	0	0	2	1	3	0	0	0	Excessive Sediment, Ditch Work Required	6	Low Priority
94	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
95	Trout Brook	0	0	0	2	1	2	0	0	0	None	5	Low Priority
96	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
97	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
98	Trout Brook	0	0	0	2	1	3	0	0	0	Algae	6	Low Priority
99	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
100	Trout Brook	0	0	0	2	1	3	0	0	0	Algae	6	Low Priority
101	Trout Brook	0	0	0	2	1	3	0	0	0	Excessive Sediment, Blocked Pipe, Ditch Work Required	6	Low Priority
102	Trout Brook	0	0	0	2	1	3	0	0	0	Excessive Sediment, Blocked Pipe, Ditch Work Required	6	Low Priority
103	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
104	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
114	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
115	Trout Brook	0	0	0	2	1	3	0	0	0	Tree Work Required	6	Low Priority
116	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
117	Unnamed	0	0	0	0	1	3	0	0	0	None	4	Low Priority
118	Reserve Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority
119	Reserve Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority

Appendix E: Outfall Characteristics and Preliminary Rankings

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		
120	Reserve Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority
121	Reserve Pond	0	0	0	0	1	3	0	0	0	None	4	Low Priority
122	Reserve Pond	0	0	0	0	1	3	0	0	0	Algae	4	Low Priority
123	Trout Brook	0	0	0	2	1	3	0	0	0	Ditch Work Required, Leaves and Branches	6	Low Priority
124	Trout Brook	0	0	0	2	1	3	0	0	0	None	6	Low Priority
125	Trout Brook	0	0	0	2	1	3	0	0	0	Excessive Sediment, Leaves, Ditch Work Required	6	Low Priority
126	Trout Brook	0	0	0	2	1	2	0	0	0	None	5	Low Priority
127	Tubwreck Brook	0	0	0	0	1	3	0	0	0	Excessive Sediment, Leaves, Ditch Work Required	4	Low Priority
128	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
129	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
130	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
131	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
132	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
133	Tubwreck Brook	0	0	0	0	1	3	0	0	0	Leaves, Ditch Work Required	4	Low Priority
134	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
135	Tubwreck Brook	0	0	0	0	1	3	0	0	0	None	4	Low Priority
136	Tubwreck Brook	0	0	0	0	1	3	0	0	0	Excessive Sediment, Ditch Work Required	4	Low Priority

Appendix E: Outfall Characteristics and Preliminary Rankings

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		

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 near 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.

APPENDIX F: SVF ANALYSIS

Appendix F: SVF Analysis

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
1	Culvert	x		No	No	No	
2	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert outlet; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
3	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert inlet; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
4	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
5	Culvert	x		No	No	Yes	Inspector mapped this location as two 30" Culverts; however, given the presence of mapped catch basins vicinity this structure should be re-inspected and verified.
6	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
7	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert inlet; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
8	Culvert	x		No	No	Yes	Inspector mapped this location as Culvert; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
8a	Outfall	x		No	No	No	
8b	Outfall			Unknown	No	No	Inspection form does Not have an age for this Outfall.
9	Outfall	x		No	No	No	
10	Outfall	x		No	No	No	
11	Outfall	x		No	No	No	
12	Outfall	x		No	No	No	
13	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
14	Outfall			Unknown	Yes	No	Inspection form does Not have an age for this Outfall.
15	Outfall			Unknown	Yes	No	Inspection form does Not have an age for this Outfall.
16	Outfall	x		No	No	No	
17	Culvert	x		No	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
18	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
19	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.

Appendix F: SVF Analysis

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
20	Outfall		x	Yes	Yes	No	
21	Outfall		x	Yes	No	No	
22a	Outfall		x	Yes	No	No	
22b	Outfall		x	Yes	No	No	
23	Outfall		x	Yes	No	No	
24	Outfall		x	Yes	No	No	
25	Outfall		x	Yes	No	No	
26	Outfall		x	Yes	No	No	
27	Outfall		x	Yes	No	No	
28	Outfall	x		No	No	No	
29	Culvert	x		No	No	Yes	Inspector mapped this location as two 18" Culverts; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
30	Outfall	x		No	No	No	
31	Outfall	x		No	No	No	
32	Outfall	x		No	No	No	
33	Outfall		x	Yes	No	No	
34	Outfall	x		No	No	No	
35	Outfall	x		No	Yes	Yes	Inspector could Not locate Outfall but observed a stream Culvert in the vicinity.
36	Outfall		x	Yes	No	No	
37	Outfall		x	Yes	Yes	No	
38	Outfall		x	Yes	No	No	
39	Outfall		x	Yes	No	No	

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
40	Outfall		x	Yes	Yes	No	
41	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert but was unable to see a pipe due to standing water. Given the presence of mapped catch basins, manholes, and network piping this structure should be re-inspected and verified.
42	Outfall	x		No	No	No	
43	Outfall	x		No	No	No	
44	Outfall	x		No	No	No	
45	Outfall	x		No	Yes	No	
46	Outfall	x		No	Yes	No	
47	Outfall		x	Yes	Yes	No	
48	Outfall		x	Yes	Yes	No	
49	Outfall		x	Yes	Yes	No	
50	Outfall		x	Yes	Yes	No	
51	Outfall	x		No	Yes	No	
52	Outfall	x		No	No	No	
53	Outfall		x	Yes	Yes	No	
54	Outfall		x	Yes	Yes	No	
55	Outfall		x	Yes	Yes	No	
57	Outfall		x	Yes	Yes	No	
58	Outfall		x	Yes	No	No	
59	Outfall		x	Yes	No	No	
60	Outfall		x	Yes	No	No	
61	Outfall		x	Yes	Yes	No	

Appendix F: SVF Analysis

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
62	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
63	Outfall		x	Yes	Yes	No	
64	Outfall		x	Yes	Yes	No	
65	Outfall		x	Yes	No	No	
66	Outfall	x		No	No	No	
67	Outfall		x	Yes	Yes	No	
68	Outfall	x		No	No	No	
69	Outfall		x	Yes	No	No	
70	Outfall		x	Yes	No	Yes	Inspector unable to see a pipe but observed a possible head wall.
71	Outfall			Unknown	No	No	Inspector could Not access Outfall. Inspection form does Not have an age for this Outfall.
72	Outfall		x	Yes	Yes	Yes	Inspector could Not locate Outfall but observed a Culvert in the vicinity.
73	Culvert		x	Yes	No	Yes	Inspector mapped this location as 12" and 24" Culverts; however, given the structure location this structure should be re-inspected and verified.
74	Outfall		x	Yes	No	No	
75a	Outfall		x	Yes	No	No	
75b	Outfall		x	Yes	No	No	
76	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
77	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of adjacent catch basin and mapped piping networks this structure should be re-inspected and verified.
78	Outfall		x	Yes	No	No	
79	Outfall		x	Yes	No	No	
80	Outfall		x	Yes	Yes	No	
81	Outfall		x	Yes	No	No	

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
82	Culvert		x	Yes	No	No	
83	Outfall		x	Yes	No	No	
84	Outfall		x	Yes	No	No	
85	Outfall		x	Yes	No	No	
86	Outfall		x	Yes	No	No	
87	Outfall		x	Yes	No	No	
88	Outfall		x	Yes	Yes	No	
89	Outfall		x	Yes	Yes	No	
90	Outfall		x	Yes	No	No	
91	Outfall		x	Yes	No	No	
92	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of adjacent catch basin and mapped piping networks this structure should be re-inspected and verified.
93	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert inlet; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
94	Outfall		x	Yes	No	No	Inspector could Not access Outfall.
95	Outfall	x		No	No	No	
96	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert inlet; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
97	Outfall		x	Yes	No	No	
98	Outfall		x	Yes	No	No	
99	Outfall		x	Yes	No	No	
100	Outfall		x	Yes	Yes	No	Inspector could Not locate Outfall but observed two catchbasins in the vicinity.
101	Outfall		x	Yes	No	No	
102	Outfall		x	Yes	No	No	

Appendix F: SVF Analysis

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
103	Outfall		x	Yes	No	No	
104	Culvert		x	Yes	No	No	
105	Outfall		x	Yes	Yes	No	
106	Outfall		x	Yes	No	No	
107	Outfall		x	Yes	Yes	No	
108	Outfall		x	Yes	No	No	
109	Outfall		x	Yes	No	No	
110	Outfall		x	Yes	No	No	
111	Outfall		x	Yes	No	No	
112	Outfall		x	Yes	No	No	
113	Outfall		x	Yes	No	No	
114	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins, manholes, and piping networks in the vicinity this structure should be re-inspected and verified.
115	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
116	Culvert		x	Yes	No	No	
117	Culvert		x	Yes	No	No	
118	Outfall		x	Yes	No	No	
119	Outfall		x	Yes	No	No	
120	Outfall		x	Yes	No	No	
121	Outfall		x	Yes	No	No	
122	Outfall		x	Yes	No	No	
123	Outfall		x	Yes	No	No	

Outfall ID	Type	Under 40 Years	Over 40 Years	SVF	Could Not Locate	Re-Inspection	Notes
124	Outfall		x	Yes	No	No	
125	Outfall		x	Yes	No	No	
126	Outfall	x		No	No	No	
127	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
128	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert inlet; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
129	Outfall		x	Yes	No	No	
130	Outfall		x	Yes	No	No	
131	Outfall		x	Yes	No	No	
132	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert submerged up to its headwall; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
133	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert submerged up to its headwall; however, given the presence of mapped catch basins in the vicinity this structure should be re-inspected and verified.
134	Outfall		x	Yes	Yes	No	
135	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.
136	Culvert		x	Yes	No	Yes	Inspector mapped this location as a Culvert with the pipe submerged; however, given the presence of mapped catch basins and manholes in the vicinity this structure should be re-inspected and verified.

APPENDIX H: IDDE PROGRAM PLAN UPDATE TRACKING FORM

Revision No.	Revision Date	Section of IDDE Plan	Revision(s) Made/Reasoning
00	6/30/2019	Entire Plan	Tata and Howard created original IDDE Plan
01	06/30/2025	Entire Plan	Brought original Tata and Howard IDDE Plan into the Woodard and Curran template
		1.1	Updated language to summarize IDDE Plan Update
		1.4	Updated Table 1-1 to reflect approved 2022 Massachusetts Integrated List of Waters
		6.3	Updated Table 6-4 with the most recent benchmark field measurements
		6.2.3	Added link to 40 CFR § 136
		7.1	Added language to reflect the SVF analysis
		7.3	Added Figure 7-1
		7.4	Added Figure 7-2
		7.5	Added Updated language to reference section 8
		8	NEW SECTION: Added Abatement Plan, Figure 8-1 and Table 8-1
		Appendix C	Changed appendix to Example Field Forms
		Appendix D	Changed appendix to IDDE Employee Training Record
		Appendix E	Updated Table 5-1 to Appendix E: Outfall Characteristics and Preliminary Rankings
		Appendix F	Updated Table 7-1 to Appendix F: SVF Analysis
		Appendix G	NEW SECTION: Added Appendix for Original Dover IDDE Program Plan
		Appendix H	NEW SECTION: Added Appendix for IDDE Program Plan Update and Tracking Form

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APPENDIX G: SEDIMENT AND EROSION CONTROL ORDINANCE

No Updates.

APPENDIX H: SITE PLAN REVIEW ORDINANCE

No Updates.

APPENDIX I: SITE INSPECTION FOR EROSION CONTROL SOP

No Updates.

APPENDIX J: SEDIMENT AND EROSION CONTROL SOP

No Updates.

APPENDIX K: PARKS AND OPEN SPACES OPERATIONS AND MAINTENANCE PROCEDURES

No Updates.

APPENDIX L: BUILDINGS AND FACILITIES OPERATIONS AND MAINTENANCE PROCEDURES

No Updates.

APPENDIX M: VEHICLES AND EQUIPMENT OPERATIONS AND MAINTENANCE PROCEDURES

No Updates.

APPENDIX N: INFRASTRUCTURE OPERATIONS AND MAINTENANCE PROCEDURES

No Updates.

APPENDIX O: STREET SWEEPING PROGRAM SOP

No Updates.

APPENDIX P: WINTER ROAD MAINTENCE PROGRAM SOP

No Updates.

APPENDIX Q: MANAGING GRASS CLIPPINGS AND LEAF LITTER SOP

No Updates.

APPENDIX R: PHASE 1 PHOSPHORUS CONTROL PLAN YEAR 6 PERFORMACE EVALUATION

No Updates.

APPENDIX S: STREET DESIGN AND PARKING LOT GUIDELINES REPORT

No Updates.

APPENDIX T: GREEN INFRASTRUCTURE REPORT

No Updates.

APPENDIX U: MUNICIPAL RETROFIT REPORT – UPDATED JUNE 2023

No Updates.

APPENDIX V: SWMP REVISION LOG

Revision No.	Revision Date	Section of SWMP	Revision(s) Made/Reasoning
00	6/2019	--	--
01	06/2025	1.	Added introduction to the Town's stormwater program
		1.3	Added language to reference the Town's original SWMP
		1.6	Personnel updated to reflect current names and titles of responsible persons
		2.1	Updated the Town's Receiving Waters Table and added language to reflect that the table will be further updated in the future, if necessary
		2.3	Added language to address how the approved 2016 Massachusetts List of Integrated Waters will be incorporated into this SWMP and Impairments/TMDLs were adjusted based on the "Massachusetts Year 2022 Integrated List of Waters
		2.3.1	NEW SECTION: Added language to reflect the Town Phosphorus Control Plan
		2.3.1.1	Added language to reflect that a copy of the Separate Storm Sewer System Map will be updated annually and included in Appendix E.
		3.2.1	Removed BMP 1.6 Public Participation – Catch basin Stenciling from section
		3.1.1	Removed BMP 1.6 – Contests from section
		3.3.1.2	Added language to reflect IDDE plan updates
		3.3.1.3	Added language to reflect most recent staff training
		3.4.1.1	Updated language to reflect finalization of waste control requirements
		3.5.1.6	Updated language to reflect finalization of post construction design standards
		2.6.1.1	Updated language to reflect completion of SCM inventory/inspections
		2.6.1.3	Added language to reflect most recent staff training
		2.6.1.2	Added language to state that the DPW/Transfer Station SWPPP can be accessed at the facilities and frequency of inspections
		Appendix E	Updated appendix to reflect mapping updates
		Appendix F	Updated appendix with most recent IDDE plan
		Appendix V	NEW SECTION: Added revision log