

Year 4 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2021-June 30, 2022

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2021 and June 30, 2022 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

Impairment(s)			
<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Phosphorus
<input type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
TMDL(s)			
<i>In State:</i>	<input type="checkbox"/> Assabet River Phosphorus	<input type="checkbox"/> Bacteria and Pathogen	<input type="checkbox"/> Cape Cod Nitrogen
	<input type="checkbox"/> Charles River Watershed Phosphorus	<input type="checkbox"/> Lake and Pond Phosphorus	
<i>Out of State:</i>	<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Metals	<input type="checkbox"/> Nitrogen
			<input type="checkbox"/> Phosphorus
			Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

Year 4 Requirements

- Developed a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover, made it available as part of the SWMP, and:

- No updates were recommended
- Updates were recommended. The anticipated date or date of completion for updates is/was:

Between 1 and 10 years based on the recommendation, funding, and resources the Town has available

- Developed a report assessing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist, made it available as part of the SWMP, and:

- No updates were recommended
- Updates were recommended. The anticipated date or date of completion for updates is/was:

Between 2 and 10 years based on the recommendation, funding, and resources the Town has available

- Identified a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious cover

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide an update on previous incomplete milestones, or provide any additional details, please use the box below:

Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - This is not applicable because we do not have sanitary sewer
 - This is not applicable because we did not find any new SSOs
 - The updated SSO inventory is attached to the email submission
 - The updated SSO inventory can be found at the following website:

- Updated system map due in year 2 as necessary
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

The Stormceptor 3600 unit has been placed on the regular inspection and maintenance list.

Phosphorus (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

- Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Phosphorus Source Identification Report

- Completed the Phosphorus Source Identification Report
 - The Phosphorus Source Identification Report is attached to the email submission
 - The Phosphorus Source Identification Report can be found at the following website:

<https://www.stoneham-ma.gov/252/Stormwater>

Potential structural BMPs

- Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.

- The BMP information is attached to the email submission
- The BMP information can be found at the following website:

No structural BMPs were installed by the Town during this reporting period. The Town's Stormceptor treatment structure has been placed on the annual inspection list and specification sheets were documented in Year 3.

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

Pet waste flyers were distributed with the annual census to all residents. Proper disposal of pet waste signs are placed at parks in town. Proper disposal of leaf litter is posted on the Town's website and on the Stoneham local TV channel.

Catch basin cleaning was completed town-wide in October 2021. Miscellaneous drain line and catch basin repair/replacements were also completed throughout the Town.

The Town completed the following stormwater system improvements in this reporting period:
 - Design for Montvale Ave. culvert replacement, anticipated construction Spring 2023

- 19 Catch Basin Repairs/Rebuild

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- Yes
- No

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed during this reporting period:

Below, report on the educational messages completed during this reporting period. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

BMP: Annual Flyer - Creating a Healthy Yard

Message Description and Distribution Method:

Creating a Healthy Yard flyer message was posted on the Town's Stormwater webpage encouraging the use of organic materials over pesticides, herbicides, and synthetic fertilizers.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Stormwater webpage visits, 73 webpage visits this reporting period.

Message Date(s):

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

BMP media was changed to Webpage instead of Local Public Service Announcement as stated in the NOI. The Stormwater Webpage was used to reach additional residents and for convenience.

BMP: Industrial Facilities - Spill Prevention

Message Description and Distribution Method:

Flyer was posted on the Town's Stormwater webpage as an educational resource on how to prevent stormwater pollution during industrial operations and at industrial facilities.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Stormwater webpage visits.

Message Date(s): July 2022

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

Flyer is posted on the Stormwater webpage as of July 2022 and interactions will be tracked based on webpage visits.

BMP: Down the Drain Presentation

Message Description and Distribution Method:

MWRA Staff conducted virtual presentations focusing on wastewater treatment at DI and stormwater management to all 5th graders in Stoneham on March 30, 2021. A demo was also completed on What Not to Flush as well.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Number of students.

Message Date(s): March 30, 2021

Message Completed for: Appendix F Requirements Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes No

If yes, describe why the change was made:

This message was outside of this reporting period but is being reported in Year 4 as it was not reported last year. This public education BMP will be added to the Town's SWMP.

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) during this reporting period:

The Stormwater Management Program document is available on the town's Stormwater Management webpage.

Was this opportunity different than what was proposed in your NOI? Yes No

Describe any other public involvement or participation opportunities conducted during this reporting period:

The Town of Stoneham hosted Household Hazardous Waste Day on June 25, 2022 as a Public Participation event. The Town also typically hosts the following events for Public Participation: general roadside cleanups, High School Community Service Day, and general park cleanups. However, due to COVID-19, these events could not be held.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

This SSO section is NOT applicable because we DO NOT have sanitary sewer

Below, report on the number of SSOs identified in the MS4 system and removed during this reporting period.

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Optional: Provide additional status information regarding your map:

Connectivity updates and any unmapped structures were mapped during field investigations and the phosphorus modeling process.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

- No outfalls were inspected
- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following website:

Below, report on the number of outfalls/interconnections screened during this reporting period.

Number of outfalls screened:

Below, report on the percent of outfalls/interconnections screened to date.

Percent of outfalls screened:

Optional: Provide additional information regarding your outfall/interconnection screening:

13 outfalls were screened during wet weather in this reporting period. 37 outfalls were screened during wet weather previously under the USEPA Administrative Order issued in 2009. Outfall screening and catchment area investigations have been ongoing in accordance with the Administrative Order. Compliance Reports are submitted once per year.

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- No catchment investigations were conducted
- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following website:

Below, report on the number of catchment investigations completed during this reporting period.

Number of catchment investigations completed this reporting period:

Below, report on the percent of catchments investigated to date.

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

Supporting documents for OF003 catchment investigations are attached. Key junction manhole inspections and strategic bacteria sampling were conducted during this reporting period. Outfall screening and catchment area investigations have been ongoing in accordance with the Administrative Order. Compliance Reports are submitted once per year.

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- No illicit discharges were found
- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following website:

See Illicit Connections Inventory for report documentation of the illicit located and eliminated during this reporting period. Estimated volume is unknown.

Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed during this reporting period.

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed since the effective date of the permit (July 1, 2018).

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

15 illicit discharges have been removed since 2010. These are reported to USEPA in accordance with the Administrative Order, once per year. The illicit discharges inventory is attached to the email.

Employee Training

Describe the frequency and type of employee training conducted during this reporting period:

Good Housekeeping and IDDE Training video was recorded December 2020 and then distributed accordingly. 1 employee completed this training during this reporting period. The Town utilizes the services of a consultant to complete IDDE investigations.

MCM4: Construction Site Stormwater Runoff Control

Below, report on the construction site plan reviews, inspections, and enforcement actions completed during this reporting period.

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

[Empty text box for optional information]

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3):

As-built Drawings

Below, report on the number of as-built drawings received during this reporting period.

Number of as-built drawings received:

Optional: Enter any additional information relevant to the submission of as-built drawings:

Retrofit Properties Inventory

Below, list the permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (at least 5):

South Elementary School
Stoneham Area
Old Central School
Colonial Park Elementary School
DPW Garage and Office

MCM6: Good Housekeeping

Catch Basin Cleaning

Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins during this reporting period.

Number of catch basins inspected:

Number of catch basins cleaned:

Total volume or mass of material removed from all catch basins:

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins:

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

If any basins are found to be 50% full or more by contractors or DPW, they are reported and cleaned. The DPW CB Cleaning and Inspection app will flag catch basins which are more than 50% full for review and addition to a list of CBs needing more frequent cleaning. Catch basin cleaning material was tracked with electronic data collection for this reporting period.

Street Sweeping

Report on street sweeping completed during this reporting period using one of the three metrics below.

- Number of miles cleaned:
- Volume of material removed:
- Weight of material removed:

Stormwater Pollution Prevention Plan (SWPPP)

Below, report on the number of site inspections for facilities that require a SWPPP completed during this reporting period.

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

SWPPPs and general good housekeeping is being implemented at these facilities. Due to Covid-19 and staffing shortages at the DPW, SWPPP quarterly inspections were not completed this permit year.

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- Not applicable
- The results from additional reports or studies are attached to the email submission
- The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

COVID-19 Impacts

Optional: If any of the above year 4 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

SWPPPs and general good housekeeping is being implemented at these facilities. Due to Covid-19 and staffing shortages at the DPW, SWPPP quarterly inspections were not completed this permit year.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 5 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in

- connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 5 below:

Part V: Certification of Small MS4 Annual Report 2021

40 CFR 144.32(d) Certification

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

Name:

Brett F. Gonsalves

Title:

Director of Public Works

Signature:



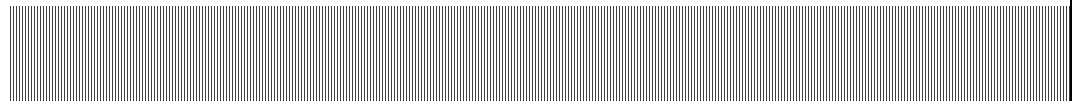
Date:

9/23/2022

[Signatory may be a duly authorized representative]

Town of Stoneham, Massachusetts
Massachusetts Small MS4 General Permit
Year 4 Annual Report
Reporting Period: July 1, 2021 – June 30, 2022

Appendix A – Outfall Re-ranking



Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Year 4 Outfall Re-Ranking Updates

Outfall ID	Re-Ranking	Outfall Located	Inspection Date	Weather	Temperature (°F)	Last Rain Event (hrs)	Rain Accumulation (in)	Closest Address / Location	Receiving Water	Contributing Land Use	Outfall Shape	Outfall Material	Dimension (in)	Flow	Standing Water	Location of Standing Water	Odor	Floatables	Deposits/Stains	Color	Clarity	pH	Sample Temperature (°F)	Salinity (ppt)	Spec. Cond. (mg/cm)	Ammonia (ppm)	Surfactants (ppm)	Total Chlorine (ppm)	Lab Sample ID	Lab Results (Cald/100ml)
DMH UNK 1A	High Priority	Located - Accessible	1/9/20 10:30 AM	Sunny	18	48	0.15	39 Lindenwood Road	Sweetwater Brook	Residential	Circular/Pipe	Corrugated Metal Pipe	12	Running	No		None	None	None	Colorless	Clear	6.97	42	1.00	1975	0.00	0.20	0.00	DMH-UNK-1A	790
OF002	High Priority	Located - Accessible	11/7/19 9:35 AM	Partly Cloudy	49	40	0.30	6 High St.	Unnamed Wetland	Residential	Open Channel	Wood	32	Gushing	No		None	None	None	Colorless	Clear	7.15	56	0.30	641	0.00	0.15	0.00	OF-2	1500
OF003	Problem	Located - Accessible	11/7/19 9:00 AM	Partly Cloudy	49	40	0.30	7 High St.	Unnamed Pond	Commercial	Circular/Pipe	Reinforced Concrete Pipe	24	Running	No		None	None	None	Colorless	Clear	7.28	53	0.30	648	0.00	0.15	0.00	OF-3	4500
OF004	Low Priority	Located - Accessible	11/7/19 10:30 AM	Partly Cloudy	51	40	0.30	Behind 98 Aspen Ln.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF005	Low Priority	Located - Accessible	11/7/19 10:30 AM	Partly Cloudy	51	40	0.30	98 Aspen Ln.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF007	Low Priority	Located - Accessible	11/7/19 11:00 AM	Partly Cloudy	51	40	0.30	220 North St.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF008	Low Priority	Located - Accessible	11/7/19 11:00 AM	Partly Cloudy	51	40	0.30	221 North St.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF009	Low Priority	Located - Accessible	11/7/19 11:00 AM	Partly Cloudy	51	40	0.30	219 North St.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF010	Low Priority	Located - Accessible	10/25/19 9:20 AM	Partly Cloudy	52	48	0.14	Behind pump station near 4 Rita Circle	Crystal Lake	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	Running	No		None	None	None	Colorless	Clear	6.26	60	0.20	466	0.00	0.20	0.00	DMH-383	76
OF011	Low Priority	Located - Accessible	10/25/19 9:15 AM	Partly Cloudy	52	48	0.14	Near pump station 4 Rita Circle	Crystal Lake	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No		None	None	None											
OF012	Low Priority	Located - Accessible	10/25/19 10:10 AM	Partly Cloudy	57	48	0.14	34 and 36 Hall Rd.	Crystal Lake	Residential	Circular/Pipe	Reinforced Concrete Pipe	18	None - Dry	No		None	None	None											
OF013	High Priority	Located - Accessible	1/9/20 10:00 AM	Sunny	18	48	0.15	Stoneham Ford	Sweetwater Brook	Commercial	Circular/Pipe	Corrugated Metal Pipe	68	Gushing	No		None	None	Rust	Colorless	Clear	8.00	41	0.60	1277	0.00	0.20	0.00	OF-13	2200
OF014	High Priority	Located - Accessible	11/7/19 9:50 AM	Partly Cloudy	49	40	0.30	5 High St.	Unnamed Brook	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	Running	No		None	None	None	Colorless	Clear	7.06	54	0.30	714	0.00	0.15	0.00	0	1200
OF016	Low Priority	Located - Accessible	10/25/19 10:55 AM	Partly Cloudy	57	48	0.14	20 Melba Ln.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No		None	None	None											
OF018	Low Priority	Located - Accessible	10/24/19 12:00 PM	Sunny	56	24	0.14	105 Central St.	Unnamed brook	Commercial	Circular/Pipe	Reinforced Concrete Pipe	18	Running	No		None	None	None	Colorless	Clear	7.06	61	0.20	541	0.00	0.10	0.00	OF-18	33
OF021	Low Priority	Located - Accessible	10/25/19 9:00 AM	Partly Cloudy	57	48	0.14	Cardinal Rd.	Unnamed Wetland	Residential	Circular/Pipe	High-Density Polyethylene	18	None - Dry	Yes	Outside Outfall	None	None	None											
OF023	High Priority	Located - Inaccessible	10/16/19 9:20 AM	Sunny	48	72	0.03	34 Lindenwood Rd	Sweetwater Brook	Residential	Circular/Pipe	Reinforced Concrete Pipe	0	Running	No		None	None	None	Colorless	Clear									
OF024	Low Priority	Located - Accessible	11/15/19 9:50 AM	Sunny	40	72	0.22	24 Pine St. (DPW)	Unnamed Wetland	Commercial	Circular/Pipe	Polyvinyl Chloride	15	None - Dry	No		None	None	None											
OF025	High Priority	Located - Accessible	10/25/19 1:00 PM	Partly Cloudy	57	48	0.14	Recreation Park off of Gerry Court	Unnamed Wetland	Open Space	Unknown	Unknown	0	Running	No		None	None	None	Colorless	Clear	7.26	60	0.30	738	0.05	0.15	0.05	DMH-815	350
OF026	Low Priority	Located - Accessible	11/15/19 11:15 AM	Sunny	40	72	0.22	Recycling Center	Unnamed Wetland	Residential	Circular/Pipe	High-Density Polyethylene	18	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF027	Low Priority	Located - Accessible	10/25/19 12:10 PM	Partly Cloudy	57	48	0.14	3 Mardin Ln.	Unnamed Brook	Residential	Circular/Pipe	Reinforced Concrete Pipe	0	None - Dry	Yes	Inside Pipe and Outside Outfall	None	None	None											
OF028	Low Priority	Located - Accessible	11/15/19 10:45 AM	Sunny	40	72	0.22	140 Franklin St.	Unnamed Wetland	Residential	Circular/Pipe	Corrugated Metal Pipe	24	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None											

Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Year 4 Outfall Re-Ranking Updates

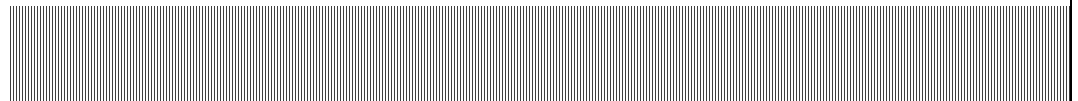
Outfall ID	Re-Ranking	Outfall Located	Inspection Date	Weather	Temperature (°F)	Last Rain Event (hrs)	Rain Accumulation (in)	Closest Address / Location	Receiving Water	Contributing Land Use	Outfall Shape	Outfall Material	Dimension (in)	Flow	Standing Water	Location of Standing Water	Odor	Floatables	Deposits/Stains	Color	Clarity	pH	Sample Temperature (°F)	Salinity (ppt)	Spec. Cond. (mg/cm)	Ammonia (ppm)	Surfactants (ppm)	Total Chlorine (ppm)	Lab Sample ID	Lab Results (Col/100ml)	
OF031	Low Priority	Located - Accessible	11/4/19 12:29 PM	Sunny	46	60	0.26	Summerhill St.	Unnamed Wetland	Residential	Circular/Pipe	Unknown	0	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None												
OF032	Low Priority	Not Located	11/15/19 11:35 AM	Sunny	40	72	0.22	28 Summit Rd.	Dike Pond	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No																
OF033	Low Priority	Located - Not Accessible	11/4/19 10:35 AM	Sunny	46	60	0.26	112 and 114 Pond St.	Doleful Pond	Residential	Unknown	Unknown	0	None - Wet	Yes	Outside Outfall	None	None	None												
OF034	Low Priority	Located - Accessible	11/4/19 9:55 AM	Sunny	44	60	0.26	10 Sparhawk Cir.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	24	Running	Yes	Inside Pipe and Outside Outfall	None	None	None	Gray	Clear	6.90	52	0.20	391	0.00	0.15	0.00	DMH 1194	52	
OF036	Low Priority	Located - Accessible	11/4/19 9:35 AM	Sunny	44	60	0.26	1 Paul Michael Way	Unnamed Brook	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No		None	None	None												
OF037	Low Priority	Located - Accessible	11/4/19 9:30 AM	Sunny	43	60	0.26	End of Paul Michael Way/Behind 10 Lynn Fells Parkway	Unnamed Brook	Residential	Circular/Pipe	Reinforced Concrete Pipe	18	None - Dry	No		None	None	None												
OF038	Low Priority	Located - Not Accessible	11/4/19 9:05 AM	Sunny	42	60	0.26	Park Terrace Ave.	Spot Pond Brook	Residential	Unknown	Unknown	0	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None												
OF040	High Priority	Located - Accessible	11/15/19 12:15 PM	Sunny	40	72	0.22	Tom's Way	Sweetwater Brook	Residential	Circular/Pipe	Corrugated Metal Pipe	40	Running	No		None	None	other	Colorless	Clear	7.29	53	1.40	2700	0.00	0.50	0.00	OF-40	650	
OF041	Low Priority	Located - Accessible	10/24/19 10:45 AM	Sunny	56	24	0.14	66 Montvale Ave. (Deliworks & Pizzeria)	Unnamed brook	Commercial	Circular/Pipe	Cast Iron Pipe	16	None - Wet	No		None	None	None												
OF042	Low Priority	Located - Accessible	10/24/19 10:40 AM	Sunny	56	24	0.14	27 Elm St.	Unnamed brook	Commercial	Circular/Pipe	Cast Iron Pipe	16	Trickle	No		None	None	None	Colorless	Clear	7.79	60	0.40	803	0.00	0.10	0.00	OF-41	50	
OF043	Low Priority	Located - Accessible	11/15/19 9:15 AM	Sunny	37	72	0.22	41 Elm St.	Unnamd Wetland	Commercial	Circular/Pipe	Polyvinyl Chloride	12	0	Yes	Inside Pipe and Outside Outfall	Musty	None	None												
OF044	Low Priority	Located - Accessible	11/15/19 9:00 AM	Sunny	37	72	0.22	74 Calthea St.	Unnamed stream	Residential	Circular/Pipe	Polyvinyl Chloride	12	None - Dry	No		None	None	other												
OF045	Low Priority	Located - Accessible	11/15/19 9:00 AM	Sunny	37	72	0.22	77 Calthea St.	Unnamed stream	Residential	Circular/Pipe	Polyvinyl Chloride	12	None - Dry	No		None	None	other												
OF046	Low Priority	Located - Accessible	11/15/19 9:10 AM	Sunny	37	72	0.22	41 Elm St.	Unnamed stream	Residential	Circular/Pipe	High-Density Polyethylene	12	None - Wet	No		None	None	None												
OF047	High Priority	Located - Accessible	11/15/19 12:30 PM	Sunny	40	72	0.22	Stoneham Ford	Sweetwater Brook	Commercial	Circular/Pipe	Polyvinyl Chloride	10	None - Dry	No		None	None	other												
OF048	High Priority	Located - Accessible	11/15/19 12:40 PM	Sunny	40	72	0.22	Stoneham Ford	Sweetwater Brook	Commercial	Circular/Pipe	Polyvinyl Chloride	10	None - Dry	No		None	None	None												
OF049	High Priority	Located - Accessible	11/15/19 12:35 PM	Sunny	40	72	0.22	Stoneham Ford	Sweetwater Brook	Commercial	Circular/Pipe	Reinforced Concrete Pipe	12	Trickle	No		Musty	None	None	Colorless	Clear	7.87	51	1.40	2770	0.00	0.60	0.00	OF-49	26	
OF050	Low Priority	Located - Accessible	10/25/19 10:35 AM	Partly Cloudy	57	48	0.14	26 and 28 Hall Rd.	Crystal Lake	Residential	Circular/Pipe	Reinforced Concrete Pipe	16	None - Dry	No		None	None	None												
OF051	Low Priority	Located - Inaccessible	10/16/19 11:16 AM	Sunny	59	72	0.03	17 Elm St. (Stoneham Animal Hospital)	Unnamed stream	Commercial	Circular/Pipe	Reinforced Concrete Pipe	15	None - Dry	No		None	None	None												
OF052	High Priority	Located - Accessible	11/15/19 12:10 PM	Sunny	40	72	0.22	Tom's Way	Sweetwater Brook	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No																
OF053	Problem	Located - Accessible	1/10/20 10:10 AM	Sunny	18	48	0.25	41 Montvale Ave.	Sweetwater Brook	Commercial	Box Culvert	Stone	28	Running	No		None	None	None	Colorless	Clear										

Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Year 4 Outfall Re-Ranking Updates

Outfall ID	Re-Ranking	Outfall Located	Inspection Date	Weather	Temperature (°F)	Last Rain Event (hrs)	Rain Accumulation (in)	Closest Address / Location	Receiving Water	Contributing Land Use	Outfall Shape	Outfall Material	Dimension (in)	Flow	Standing Water	Location of Standing Water	Odor	Floatables	Deposits/Stains	Color	Clarity	pH	Sample Temperature (°F)	Salinity (ppt)	Spec. Cond. (mg/cm)	Ammonia (ppm)	Surfactants (ppm)	Total Chlorine (ppm)	Lab Sample ID	Lab Results (Col/100ml)	
OF054	High Priority	Located - Inaccessible	10/16/19 9:55 AM	Sunny	50	72	0.03	66 Montvale Ave. (Deliworks & Pizzeria)	Sweetwater Brook	Commercial	Circular/Pipe	Corrugated Metal Pipe	24	None - Wet	Yes	Inside Pipe	None	None	None												
OF055	High Priority	Located - Accessible	11/15/19 10:25 AM	Sunny	40	72	0.22	67 Montvale Ave.	Sweetwater Brook	Commercial	Circular/Pipe	0	72	Running	No		None	None	None	Colorless	Clear										
OF056	High Priority	Located - Inaccessible	10/16/19 9:50 AM	Sunny	50	72	0.03	66 Montvale Ave. (Deliworks & Pizzeria)	Sweetwater Brook	Commercial	Elliptical	Reinforced Concrete Pipe	12	None - Dry	No		None	None	None												
OF057	High Priority	Located - Inaccessible	10/16/19 9:35 AM	Sunny	50	72	0.03	Front left corner of Lindenwood Cemetery from the entrance	Sweetwater Brook	Cemetery	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No		None	None	None												
OF058	High Priority	Located - Inaccessible	10/16/19 9:40 AM	Sunny	50	72	0.03	Lindenwood Cemetery	Sweetwater Brook	Cemetery	Circular/Pipe	Reinforced Concrete Pipe	18	None - Dry	No		None	None	None												
OF059	Low Priority	Not Located	11/7/19 11:35 AM	Partly Cloudy	51	40	0.30	9 Drury Ln.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	12	None - Dry	No																
OF060	Low Priority	Located - Accessible	11/7/19 10:20 AM	Partly Cloudy	51	40	0.30	End of Aspen Ln.	Unnamed Wetland	Residential	Circular/Pipe	Reinforced Concrete Pipe	18	None - Dry	No		None	None	None												
OF061	Problem	Located - Accessible	10/24/19 12:05 PM	Sunny	56	24	0.14	105 Central St.	Unnamed brook	Commercial	Box Culvert	Stone	36	Running	No		None	None	None	Colorless	Clear	7.24	60	0.70	1449	0.00	0.20	0.00	OF-61	5900	
OF062	Low Priority	Not Located	11/15/19 10:00 AM	Sunny	40	72	0.22	Gould Street	Unnamed Wetland	Residential				CNL	No																
OF063	Low Priority	Located - Accessible	10/24/19 11:10 AM	Sunny	56	24	0.14	29 Elm St.	Unnamed brook	Commercial	Circular/Pipe	Corrugated Metal Pipe	24	Trickle	No		None	None	None	Colorless	Clear	7.15	64	0.30	715	0.00	0.10	0.00	OF-63	34	
OF064	Low Priority	Located - Accessible	10/24/19 11:30 AM	Sunny	56	24	0.14	105 Central St.	Unnamed brook	Commercial	Circular/Pipe	High-Density Polyethylene	6	None - Dry	No																
OF065	Low Priority	Located - Accessible	10/24/19 11:40 AM	Sunny	56	24	0.14	105 Central St.	Unnamed brook	Commercial	Circular/Pipe	Cast Iron Pipe	8	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None	Colorless	Clear										
OF066	Low Priority	Located - Accessible	10/24/19 11:50 AM	Sunny	56	24	0.14	105 Central St.	Unnamed brook	Commercial	Circular/Pipe	Polyvinyl Chloride	15	None - Wet	Yes	Inside Pipe and Outside Outfall	None	None	None	Colorless	Clear										

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Appendix B – Outfall Screening



Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Year 4 Wet Weather Outfall Screening

Outfall ID	Outfall Located	Upstream Structure Located	Inspection Date & Time	Weather	Temperature (°F)	Last Rain Event (hrs)	Rain Accumulation (in)	Closest Address / Location	Receiving Water	Contributing Land Use	Outfall Shape	Outfall Material	Dimension (in)	Flow	Standing Water	Location of Standing Water	Odor	Floatables	Debris/Obst.	Color	Clarity	pH	Sample Temperature (°F)	Salinity (ppt)	Spec. Cond. (µS/cm)	Ammonia (ppm)	Sulfanamide (ppm)	Total Chlorine (ppm)	Lab Sample ID	Lab Results E. Coli (Col/100ml)
OF002	Located - Not Accessible	DMH139	7/9/2021 9:30AM	Heavy rain	65	Within 24 hrs/during day	3.46	Behind 35 Lawndale Road	Unnamed wetland	Residential	Open Channel	Wood	32	Gushing	No	NA	None	None	None	Colorless	Clear	6.95	65	0.1	192	0	0.15	0	DF002	10,416
OF003	Located - Accessible	NA	7/9/2021 8:30AM	Heavy rain	65	Within 24 hrs/during day	3.46	95 High Street	Unnamed pond at Bear Hill Golf Club	Residential / Golf Course	Circular/pipe	RCP	24	Gushing	No	NA	None	None	None	Colorless	Clear	7.38	63.8	0.3	601	0	0.2	0	DF003	3,462
OF004	Located - Not Accessible	DMH151	7/9/2021 10:15AM	Heavy rain	65	Within 24 hrs/during day	3.46	4 Aspen Lane (farther in woods)	Unnamed wetland	Residential	Circular/pipe	RCP	24	Gushing	No	NA	None	None	None	Colorless	Clear	6.88	65.5	0	77.5	0	0.2	0	DF004	16,252
OF005	Located - Not Accessible	DMH152	7/9/2021 10:40AM	Heavy rain	65	Within 24 hrs/during day	3.46	4 Aspen Lane (closer to homes)	Unnamed wetland	Residential	Circular/pipe	RCP	24	Gushing	No	NA	None	None	Oil sheen in DMH 152	Colorless	Clear	6.43	62.5	0.2	533	0	0.15	0	DF005	7,862
OF012	Located - Accessible	NA	7/9/2021 8:45AM	Heavy rain	65	Within 24 hrs/during day	3.46	36 Hall Rd.	Crystal Lake	Residential	Circular/Pipe	RCP	18	Gushing	No	NA	None	None	None	Colorless	Clear	7.64	67.5	0	45	0.1	0.15	0	DF012	10,596
OF021	Located - Accessible	NA	7/9/2021 9:45AM	Heavy rain	65	Within 24 hrs/during day	3.46	Cardinal Rd.	Unnamed Wetland	Residential	Circular/Pipe	HDPE	18	Gushing	No	NA	None	None	Rust	Colorless	Clear	6.67	67.5	0	77.8	0.15	0.1	0	DF021	8,390
OF025	Not Located	DMH815	7/9/2021 11:50AM	Heavy rain	65	Within 24 hrs/during day	3.46	Gerry Court near Baseball Field	Unnamed wetland	Residential / Commercial	Unknown	Unknown	Unknown	Gushing	No	NA	None	None	None	Colorless	Clear	6.87	67.1	0	37.3	0	0.1	0	DF025	31,050
OF026	Located - Not Accessible	CB1205	7/9/2021 12:50PM	Heavy rain	65	Within 24 hrs/during day	3.46	4 Chapel Way (Recycling Center)	Unnamed wetland	Residential / Commercial	Circular/pipe	HDPE	18	Gushing	No	NA	None	None	None	Slightly brown due to sediment runoff	Cloudy	6.63	68	0.1	222	0	0.2	0	DF026	12,734
OF027	Located - Accessible	NA	7/9/2021 10:40AM	Heavy rain	65	Within 24 hrs/during day	3.46	3 Mardin Ln.	Unnamed Brook	Residential	Circular/Pipe	RCP	Unknown	Gushing	No	NA	None	None	None	Colorless	Clear	6.67	65.7	0	23	0.05	0.1	0	DF027	8,390
OF028	Located - Not Accessible	DMH917	7/9/2021 1:20PM	Heavy rain	65	Within 24 hrs/during day	3.46	140 Franklin Street	Unnamed wetland	Residential / Commercial	Circular/pipe	CMP	24	Gushing	No	NA	None	None	None	Colorless	Clear	7.00	69.5	0	114.8	0	0.15	0	DF028	163,282
OF032	Located - Accessible	NA	7/9/2021 12:30PM	Heavy rain	65	Within 24 hrs/during day	3.46	28 Summit Rd.	Dixie Pond	Residential	Circular/Pipe	RCP	12	Gushing	No	NA	None	None	None	Colorless	Clear	6.88	67.7	0	60.6	0.05	0.2	0	DF032	68,960
OF038	Not located	DMH1257	7/9/2021 2:00PM	Heavy rain	65	Within 24 hrs/during day	3.46	Park Terrace Ave.	Spot Pond Brook	Residential	Unknown	Unknown	Unknown	Gushing	No	NA	None	None	None	Colorless	Clear	6.4	67.4	0	143	0.07	0.15	0	DF038	16,784
OF050	Located - Accessible	NA	7/9/2021 9:10AM	Heavy rain	65	Within 24 hrs/during day	3.46	26 and 28 Hall Rd.	Crystal Lake	Residential	Circular/Pipe	RCP	16	Gushing	No	NA	None	None	Sediment	Colorless	Clear	6.68	67.3	0	31.9	0.05	0.2	0	DF050	16,658

Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Historical Wet Weather Outfall Screening

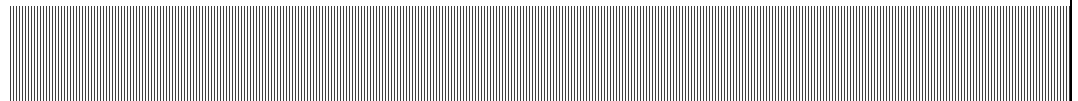
Outfall ID	Date	Ammonia [ppm]	Surfactants [ppm]	Total Chlorine [ppm]	Enterococcus [Col/100 mL]	E. Coli [Col/100 mL]	Inspection Comments
OF007	8/15/2011					10000	Unable to collect additional data due to weather data
OF008	9/8/2011	0.2	0.5	0		1600	
OF009	9/8/2011	0.2	0.5	0		1400	
OF010	8/15/2011					1700	Unable to collect additional data at these locations due to weather conditions
OF011	12/27/2012	0.5	0.5	0.0		460	
OF013	6/23/2011	0.2	0.5	0.0	1600	8700	
OF014	6/23/2011	0.1	0.4	0.0	3200	920	
OF015	10/14/2011	0.1	1	0		58000	
OF015	12/27/2012	0.0	0.0	0.0		520	
OF016	10/14/2011	0.6	0.25	0		5500	
OF018	4/19/2011						Confirmed flow from upstream headwall to DMH UNK 8 and DMH UNK 8 to OF 018 via dye test.
OF018	8/15/2011					1600	Unable to collect additional data at these locations due to weather conditions
OF022	5/23/2012						Could not sample because of weather, returned later and sampled, see form for MHUNIK-1 or Lindenwood area.
OF023	6/23/2011	0.1	0.75	0.0	3100	5800	
OF034	9/8/2011	0.1	0.75	0.4		2400	
OF036	8/15/2011					2800	Unable to collect additional data at these locations due to weather conditions
OF040	12/10/2012	0.0	0.5	0.0		2400	
OF041	11/13/2012	1.0	0.5	0.05		241960	E coli>241960
OF042	11/13/2012	0.2	0.5	0.0		490	
OF043	12/10/2012	0.0	0.5	0.0		2	
OF044	1/6/2014	0	.3	0		290	
OF045	1/6/2014	0	.25	0		33000	
OF046	10/14/2011	0.1	0.75	0		1700	
OF047	9/8/2011	0.2	0.5	0		3200	
OF048	9/8/2011	0.1	1	0		2000	
OF049	9/8/2011	0.1	0.6	0		2000	
OF051	11/13/2012	0.6	0.2	0.0		4500	
OF052	12/27/2012	0.0	0.0	0.0		19	
OF053	9/8/2011	0.2	0.5	0		14000	
OF056	12/10/2012	0.0	0.25	0.0		22	
OF058	9/8/2011	0.3	0.5	0		9200	
OF059	1/6/2014	0	.3	0		1600	
OF060	1/6/2014	0	.25	0		2500	
OF061	6/23/2011	0.3	0.75	0.1	170	1600	
OF062	4/19/2011						Streambed leading into OF 062 contains redish orange coloured iron deposits.
OF062	10/14/2011	0.8	1	0		110	
OF063	11/13/2012	0.1	0.5	0.0		35	
OF064	12/27/2012	0.0	0.5	0.0		1400	
OF065	11/13/2012	0.05	0.5	0.05		1	E coli<1
OF066	11/13/2012	0.1	0.5	0.05		25	

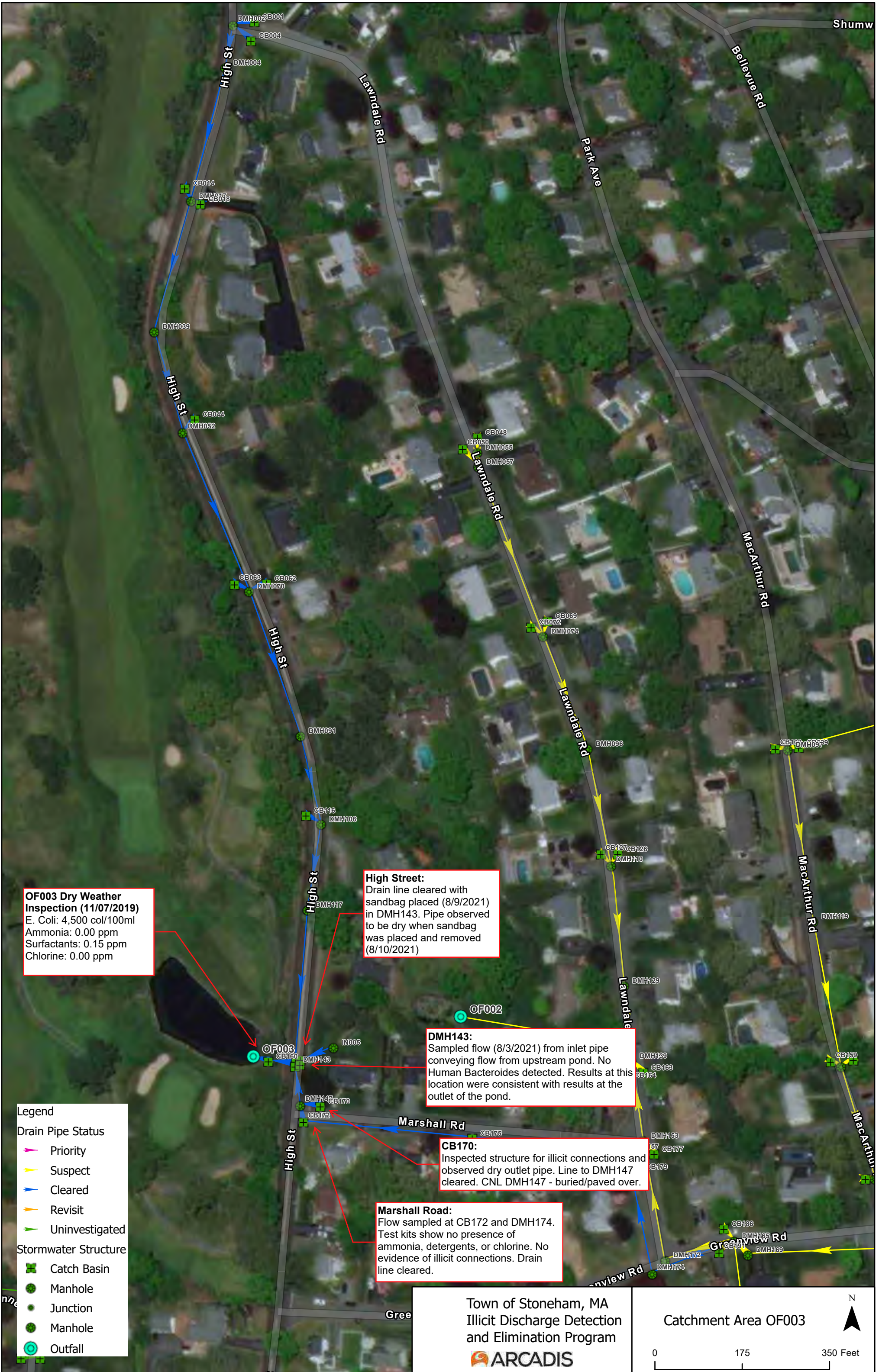
Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Historical Wet Weather Outfall Screening

Outfall ID	Date	Ammonia [ppm]	Surfactants [ppm]	Total Chlorine [ppm]	Enterococcus [Col/100 mL]	E. Coli [Col/100 mL]	Inspection Comments
OF054	7/16/2014	0.2	0.25	0.0		3800	
OF036	7/17/2014	0.2	0.5	0.0		77000	
OF018	8/13/2014	0.35	0.5	0.0		9000	
OF062	8/13/2014	1	0.125	0.0		96	

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Appendix C – IDDE Catchment Investigations





OF003 Dry Weather Inspection (11/07/2019)
 E. Coli: 4,500 col/100ml
 Ammonia: 0.00 ppm
 Surfactants: 0.15 ppm
 Chlorine: 0.00 ppm

High Street:
 Drain line cleared with sandbag placed (8/9/2021) in DMH143. Pipe observed to be dry when sandbag was placed and removed (8/10/2021)

DMH143:
 Sampled flow (8/3/2021) from inlet pipe conveying flow from upstream pond. No Human Bacteroides detected. Results at this location were consistent with results at the outlet of the pond.

CB170:
 Inspected structure for illicit connections and observed dry outlet pipe. Line to DMH147 cleared. CNL DMH147 - buried/paved over.

Marshall Road:
 Flow sampled at CB172 and DMH174. Test kits show no presence of ammonia, detergents, or chlorine. No evidence of illicit connections. Drain line cleared.

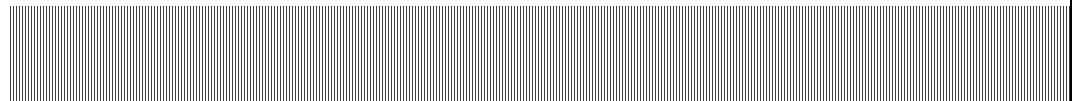
- Legend**
- Drain Pipe Status**
- ▶ Priority
 - ▶ Suspect
 - ▶ Cleared
 - ▶ Revisit
 - ▶ Uninvestigated
- Stormwater Structure**
- Catch Basin
 - Manhole
 - Junction
 - Manhole
 - Outfall

Town of Stoneham, Massachusetts
 IDDE Program - Tributary to Outfall-003
 Pipe Inspection Database
 Catchment Status: CLEARED - NO ILLICIT DETECTED

Inspection Date	Weather	Last Rainfall (hrs)	Last Rainfall Amount (in)	Air Temperature (°F)	Access Point Structure ID	Connecting Structure ID	Odors	Floating	Staining or Deposits	Flow	Sand Bag Placed	Sandbag Flow Captured	Sampled	Water Color	Water Clarity	Water Temperature (°F)	pH	Salinity (ppt)	Conductivity (µS)	Ammonia (ppm)	Surfactants (ppm)	Total Chlorine (ppm)	Bacteria Sample Taken	Human Bacteroides (CE/100ml)	Inspection Comments	IDDE Status
8/3/2021 13:10	Sunny	120	0.31	66	Pond outlet	NA	None	None	None	None	No	NA	Yes	Colorless	Clear	65.7	7.15	0.4	829	0	0.2	0	No	NA	Test kit and other parameters correlate with sample taken in DMH143. Need to review DNA bacteria results to clear line.	Cleared
8/3/2021 13:30	Sunny	120	0.31	66	CB172	CB175	None	None	None	Running	No	NA	Yes	Colorless	Clear	65.3	7.53	0.4	814	0	0.2	0	No	NA	CNL DMH147. Potentially buried or paved over. This was the next upstream structure located to trace flows from Marshall Road.	Cleared
8/4/2021 12:30	Sunny	120	0.31	60	DMH143	IN005	Odorless	None	None	Running	No	NA	Yes	Colorless	Clear	66.2	7.33	0.4	833	0	0.2	0	Yes	0	2 DNA samples taken at inlet into DMH143. No human bacteroides in line. 123,733 CE/100 mL of total Bacteroides.	Cleared
8/4/2021 12:30	Sunny	120	0.31	66	DMH143	DMH117	None	None	None	None	No	NA	No												Return for sandbag.	Cleared
8/4/2021 13:45	Sunny	120	0.31	66	DMH157	DMH174	None	None	None	Trickle	No	NA	No	Colorless	Clear								No	NA	Will sample from next upstream structure to clear catchment. Groundwater infiltration at corner of manhole and around bottom of pipe.	Cleared
8/4/2021 14:15	Sunny	120	0.31	66	DMH174	DMH165	None	None	Brown stains (iron)	Trickle	No	NA	Yes	Colorless	Clear	66.1	7.14	0.3	730	0	0.2	0	No	NA	Pipe segment flows east to west down Greenview Road. Upstream section of pipe dry in DMH165.	Cleared
8/9/2021 13:47	Partly Cloudy	72	0.61	71	DMH143	DMH117	None	None	None	None	Yes	No	Yes												Sand bag placed. Will return to check for dry/flow. Retuned on 8/10: investigation abandoned due to rain and sandbags removed.	NA - Inclement Weather
8/9/2021 14:18	Partly Cloudy	72	0.61	71	DMH039	DMH017	None	None	None	None	Yes	No	Yes												Pipe dry. Sandbag placed. Returned on 8/10: investigation abandoned due to rain	NA - Inclement Weather
8/11/2021 12:44	Sunny	48	0.96	75	DMH143	DMH117	None	None	None	None	Yes	No	No												Retuned for sandbag pickup and inspection on 8/12. Pipe dry. High St. cleared.	Cleared
8/11/2021 12:46	Sunny	48	0.96	75	CB170	DMH147	None	None	None	None	No	NA	No												Outlet pipe dry. CNL DMH147.	Cleared

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Appendix D – Illicit Connections Inventory



Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Illicit Connections Worksheet

Illicit Connections Worksheet - Cumulative
 Reporting Period: July 1, 2021 through June 30, 2022

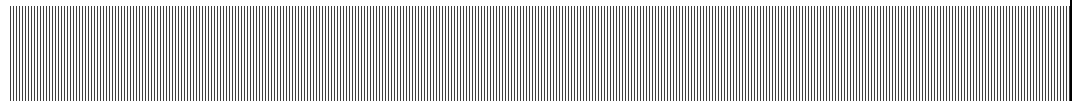
Connection Identified (OF, MH, CB ID)	Connection Address	Estimated Flow (gpd)	Actions to Remove	Date Removed	Cost of Removal	Compliance Period
DMH389	Brackett Avenue	880 (during rain event)	Removed sanitary sewer trough and replaced with a closed PVC pipe with stack and screw cap to allow for maintenance.	October 20, 2010	Illicit Discharge removed by City Forces	July 1st 2010 - December 31 st 2010
DMH415	Brackett Avenue	880 (during rain event)	Removed sanitary sewer trough and replaced with a closed PVC pipe with stack and screw cap to allow for maintenance.	December 21, 2010	Illicit Discharge removed by City Forces	July 1st 2010 - December 31 st 2010
DMH548	Washington Street at Washington Court	484	Removed sanitary sewer pipe through DMH548 and replaced with PVC pipe, which is diverted around DMH548. Sanitary sewer pipe connections into DMH548 were plugged.	October 12, 2010	Illicit Discharge removed by City Forces	July 1st 2010 - December 31 st 2010
DMH702	Ledgewood Drive	720	Removed cross connected sewer and drain pipes and correctly installed new pipe.	June 24, 2011	Illicit Discharge removed by City Forces	January 1, 2011 - June 30, 2011
Lindenwood Road Sewer Improvements		SSO events lasting 2 days during extreme events, quantity unknown	Reroute existing sanitary sewer to 36" MWRA trunk line to prevent additional SSOs.	October 20, 2011	Approximately \$25,000	July 1, 2011 - December 31, 2011
Lindenwood Road Sewer Improvements		unknown	Removed potential discharge to underdrain via cured in place pipe liner during Sanitary Sewer Rehabilitation project.	March 5, 2013	Approximately \$19,000	January 1, 2013 - June 30, 2013
DMH 922	77 Summer Street	unknown	Replaced separated joint in sewer	October 9, 2013	Approximately \$3,800	July 1, 2013 - December 31, 2013
DMH 428	Brackett Avenue	880 (during rain event)	Removed sanitary sewer trough and replaced with a closed PVC pipe with stack and screw cap to allow for maintenance.	April 16, 2011	Illicit Discharge removed by City Forces	January 1, 2011 - June 30, 2011

Town of Stoneham, Massachusetts
 Illicit Discharge Detection and Elimination Program
 Illicit Connections Worksheet

Connection Identified (OF, MH, CB ID)	Connection Address	Estimated Flow (gpd)	Actions to Remove	Date Removed	Cost of Removal	Compliance Period
Culvert	Gilmore Street	unknown	Corroded and cracked cast iron sewer pipe ran through brick, box drainage culvert. Removed and replaced sewer pipe with a cement lined ductile iron pipe, which was then wrapped in a polyethylene encasement. The culvert was rebuilt to existing conditions, and the trench was backfilled with flowable fill.	5/17 and 5/18/2011	Approximately \$40,000	January 1, 2011 - June 30, 2011
Lindenwood Road Sewer Improvements		unknown	Removed potential discharge to underdrain via cured in place pipe liner and installation of underdrain plugs during Sanitary Sewer Rehabilitation project.	9/15 - 11/15	Approximately \$45,000	July 1, 2015 - December 31, 2015
SMH1174	42 Pleasant Street	unknown	Repaired sanitary sewer pipes and reroute line around previously combined manhole	August, 2015	Approximately \$35,000	July 1, 2015 - December 31, 2015
DMH1001	Washington St at Garfield Ave.	100	Repaired sanitary sewer pipes and reroute line around previously combined manhole	June 18, 2019	Approximately \$35,000	July 1, 2018 - December 31, 2018
CB1259	36 Warren Street	unknown	Sewer lateral replaced and routed outside of the catch basin	October 3, 2018		July 1, 2018-December 31, 2018
"Vault" structure on property	41 Montvale Ave.	unknown	Abandoned drain pipe in common structure	November 26, 2019	Unknown	July 1 2019-December 31, 2019
SMH1137, SMH1125, SMH1117, SMH1120, SMH1135, SMH1191	Montvale Avenue, Main Street, and Wright Street	unknown	Sanitary sewer pipe with major defects was rehabilitated with cured-in-place pipe lining. Defective pipe leaking sanitary flows into groundwater and potentially adjacent stormwater drainage system discovered during SSES and CCTV inspections.	September 1, 2021	Approximately \$60,000	January 1, 2021 - December 31, 2021
Total		3944				

Town of Stoneham, Massachusetts
Massachusetts Small MS4 General Permit
Year 4 Annual Report
Reporting Period: July 1, 2021 – June 30, 2022

Appendix E – Sanitary Sewer Overflow Events



Town of Stoneham, Massachusetts
SSO Events Worksheet

SSO Events Worksheet - Cumulative
Reporting Period: July 1, 2021 through June 30, 2022

SSO Event	To Surface Water or to Business/Residence	Date & Time Event Discovered/Reported	Date & Time Event was Stopped	Event Location (Address)	Source of Notification (property owner, citizen report, field crew, police)	Cause of Event (vandalism, roots, grease, structural, capacity, etc.)	Responsibility (Town, homeowner, etc.)	Measures Taken to Stop Event	Date of Last SSO at this Location	Estimated Volume of Wastewater Released (gal)	Method Used to Estimate Volume	Final Disposition of SSO (ground/street, water body, etc.)	Name of Water Body, street or intersecting streets nearest SSO	ID of Nearest Downgradient Catch Basin (if release to ground/street)	Nearest Receiving Water of MS4 (if release to ground/street)	Name of Surface Water Body (if release to surface water)
3/15/2010	Residence	3/15/2010	3/20/2010	24 Cottage Street	Property Owner	MWRA trunk lines caused the Town sewer lines to surcharge	Town	Bypass with a 4" pump borrowed from MWRA a town owned sewer manhole directly to the MWRA trunk line	4/17/2007	Unknown	N/A	MWRA Trunk Sewer	Sweetwater Brook	N/A		
3/15/2010	Residence	3/15/2010	3/20/2010	26 Cottage Street	Property Owner		Town		4/17/2007	Unknown	N/A	MWRA Trunk Sewer	Sweetwater Brook	N/A		
3/15/2010	Residence	3/15/2010	3/20/2010	28 Cottage Street	Property Owner		Town		4/17/2007	Unknown	N/A	MWRA Trunk Sewer	Sweetwater Brook	N/A		
3/15/2010	Residence	3/15/2010	3/20/2010	32 Cottage Street	Property Owner		Town		4/17/2007	Unknown	N/A	MWRA Trunk Sewer	Sweetwater Brook	N/A		
3/15/2010	Street	3/15/2010	3/19/2010	SMH 2013 on West Wyoming Avenue	Field Crew	MWRA trunk lines caused the Town sewer lines to surcharge	Town	-	Unknown	Unknown	N/A	Street	Phillips Road	CB1750		
3/15/2010	Street	3/15/2010	3/17/2010	SMH 1825 on Windsor Road	Field Crew	Excessive I/I in this area during the rain event	Town	Opened bypass to eliminate basement backups	Unknown	Unknown	N/A	Street	North Avenue	N/A		
3/15/2010	Street	3/15/2010	3/17/2010	SMH 357 on Oak Street	Field Crew	MWRA trunk lines caused the Town sewer lines to surcharge	Town	-	Unknown	Unknown	N/A	Street	Magnolia Terrace	CB323		
6/15/2012	Residence to Street	6/15/2012	6/15/2015	99 Maple Street	Property Owner	Blockage between Town's sewer lines and MWRA trunk line	Town	Blockage was removed	Unknown	50 gallons	Field crew visual estimation	Street	Sweetwater Brook	N/A		
8/19/2013	Residence	8/19/2013	8/19/2013	40 Lynn Fells Parkway	Tenant	Illegal debris in sewer lateral	Property owner	Blockage was removed, illegal CB connection to sewer separated to drain by Property owner	none	0 (was cleaned out of catchbasin)	Field crew visual estimation	Ground surface	Lynn Fells Parkway	NA		
5/1/2015	Residence	5/1/2015	5/1/2015	Easement from Cliff Street to Irving Street (nearest address 8 Irving Street)	Field Crew	Root intrusion in the sanitary sewer	Town	Line was jetted to remove roots and manhole was added to Town's Critical manhole list	Unknown	40 gallons	Field crew estimated flow rate exiting manhole cover	Street	Irving Street	N/A		
5/11/2015	Business	5/11/2015	5/11/2015	42 Pleasant Street - Parking Lot	Field Crew	Silt infiltration and incorrect paper goods blocking the sewer system	Property owner	Blockage was removed, contacted property owner regarding illegal deposit of paper towels	Unknown	10 gallons	Pick holes & area of wetness	Ground surface	Pleasant Street	NA		
12/12/2015	Street	12/12/2015	12/12/2015	SMH1408A - Hill Court	Field Crew	Heavy grease buildup in sanitary sewer	Town	The sewer section was jetted with degreaser and the surcharged manhole and receiving catch basin were disinfected with chlorine	none	10 - 15 gallons	Field crew visual estimation	Street	Hill Court	Driveway of #11 and #13 Maple Street		
4/13/2016	Business	4/13/2016	4/13/2016	302 Main Street	Field Crew	Grease, rags in sewer line. Lack of maintenance of Oil/Water Separator at gas station.	Business owner	Vac/jet line, removed obstruction. Informed owner/tenant of responsibilities.	Unknown	10-20 gallons	estimated from pick hole/wet area	wet well	Main Street	NA		
4/13/2016	Business	4/13/2016	4/13/2016	302 Main Street	Field Crew	Grease, paper towels in sewer line. Lack of maintenance of Oil/Water Separator at gas station.	Business owner	Vac/jet line, removed obstruction. Informed owner/tenant of responsibilities.	4/13/2016	10 gallons	estimated from wet area around manhole cover	wet well	Main Street	NA		
3/23/2017	Surface Water	3/23/2017	3/23/2017	58 Lindenwood Road	Field Crew	Structural/collapsed pipe	Town	Collapsed section of pipe was replaced	None	10 gallons	estimated from wet area around manhole cover	Water body	Sweetwater Brook	Lindenwood Road between 53 Montvale Ave and 53 Lindenwood		
4/9/2017		4/9/2017	4/9/2017	Rita Road	Field Crew	Pump station failure	Town		None	200 gallons	estimated from wet area around manhole cover	Grass area	Rita Road	NA		
4/17/2018		4/17/2018	4/17/2018	Washington & Avon Streets	Property Owner	Blockage	Town	Emergency Crews and Ramjet dispatched to site immediately. Blockage cleared within 90 minutes	None	10 gallons	estimated in property basement	Sewage disposed back into collection system	Washington St. & Avon St.	NA	NA	NA
8/16/2018	Street	8/16/2018	8/16/2018	Melba Lane	Police	Structural/collapsed pipe	Town	Distributed sand around CB to ensure no access. Spread sand on street to limit flow overnight. Pump truck deployed. Pipe repaired 8/17/18.	Unknown	20-25 gallons	estimated from wet area on street	sewage disposal by pumping contractor	Melba Lane	NA	NA	NA
5/16/2019	Street	5/16/2019	5/16/2019	140 Franklin Street	DPW Foreman	Grease/ Non-Paper Towel Materials blocking the collection system	Town	Emergency Crews and dispatched to site immediately. Blockage cleared by jetting within 30 minutes	Unknown	Less than 10 gallons	estimated from wet area on street	Sewage disposed back into collection system	Franlin Street	NA	NA	NA

Town of Stoneham, Massachusetts
SSO Events Worksheet

SSO Event	To Surface Water or to Business/Residence	Date & Time Event Discovered/Reported	Date & Time Event was Stopped	Event Location (Address)	Source of Notification (property owner, citizen report, field crew, police)	Cause of Event (vandalism, roots, grease, structural, capacity, etc.)	Responsibility (Town, homeowner, etc.)	Measures Taken to Stop Event	Date of Last SSO at this Location	Estimated Volume of Wastewater Released (gal)	Method Used to Estimate Volume	Final Disposition of SSO (ground/street, water body, etc.)	Name of Water Body, street or intersecting streets nearest SSO	ID of Nearest Downgradient Catch Basin (if release to ground/street)	Nearest Receiving Water of MS4 (if release to ground/street)	Name of Surface Water Body (if release to surface water)
9/7/2021	Street	9/7/21 12:30 PM	9/7/21 12:40 PM	Elm Street at Duncklee Avenue	Field Crew	Improper placement of bypass pumping	Subcontractor	Piping was properly placed in sewer manhole and allowed to drain completely. Any sewage released was brushed into the sewer manhole and the street was pressure washed to direct any residual sewage back to sewer manhole.	Unknown	10 gallons	Estimated volume in bypass pumping	Sewage disposed back into collection system	Elm Street	CB560	Unnamed stream	NA
9/15/2021	Street	9/15/21 9:35 PM	9/15/21 9:36 PM	Montvale Avenue at Chestnut Street	Field Crew	Improper placement of bypass pumping	Subcontractor	Bypass pumping operations were shutdown immediately upon discovering the SSO. All sewage released was maintained within the roadway along a cold patched trench and reentered the sewer system at the downstream manhole. The road was flushed with hot water and power washed to direct all remaining sewage back to the sewer system.	Unknown	40 gallons	Estimated pump flow rate for 30 seconds	Sewage disposed back into collection system	Montvale Avenue	CB681.1	Sweetwater Brook	NA

NOTE: SSO EVENTS TO SURFACE WATERS INCLUDE ALL RELEASES WITH REASONABLE POTENTIAL TO REACH SURFACE WATERS SUCH AS RELEASES TO STREETS OR AREAS WITH STORM DRAIN CATCH BASINS.