

Year 6 Annual Report

Massachusetts Small MS4 General Permit

Reporting Period: July 1, 2023-June 30, 2024

****Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form. Also ensure any websites included on this form are to publicly accessible sites****

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, 2023 and June 30, 2024 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 (publicly available web address):

Date SWMP was Last Updated:

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

Physical copy is also available at the DPW Offices at 44 Centennial Grove Road. A copy has yet to be made available on the Town's website but the hope is that a link will be added during Year 7. In the meantime, a copy continues to be available through the Google Drive link above.

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)

Bacteria/Pathogens Chloride Nitrogen Phosphorus
 Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State: Assabet River Phosphorus Bacteria and Pathogen Cape Cod Nitrogen
 Charles River Watershed Phosphorus Lake and Pond Phosphorus

Out of State: Bacteria/Pathogens Metals Nitrogen Phosphorus

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.

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 publicly available website:

- Updated system map due in year 10 with information from completed catchment investigations
- 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:

1. The SWMP is available for review at the DPW offices. No public notice was formally issued for review, but the document is always available for public review.

2. The system map is continually being updated. Our consultant will be completing the wet weather sampling program during Year 7 and outfall mapping will be updated based on any observations.

3. For the required training, a program has been established and it is anticipated that it will be fully implemented before the end of 2024.

4. SWPPPs, O&M programs and MS4 infrastructure maintenance programs were developed in prior years and have been undergoing review and updating, based on performance and effectiveness.

5. Catchbasins are inspected by the Town's cleaning contractor. Other existing town-owned stormwater treatment structures will be inspected prior to the end of 2024.

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria
 - This is not applicable because there are no septic systems present

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

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 Town again contracted with Greenscapes for compliance with the Public Education requirements of the permit. The boxes checked above were selected based on our understanding of the information provided by Greenscapes, as detailed under MCM1 below.

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

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: Elementary School Program - Keeping Water Clean

Message Description and Distribution Method:

Program engages 5th grade students in several activities designed to raise their stormwater and water conservation awareness. Students learn about watersheds, stormwater, ground water, wastewater, how we impact these systems, and how they should be protected/maintained.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

3,001 Students
334 Volunteers and Teachers
46 Schools

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:Print Material/Magazine - Greenscapes Guide

Message Description and Distribution Method:

The Greenscapes Guide is a 26 page magazine that covers sustainable landscaping tips, stormwater management tips for homeowners, and ways to conserve water use. These guides are distributed at every school program Greenscapes conducted this year. A digital version can be found on our website, under Resources: <https://greenscapes.org/greenscapes-guide/>

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

3,000 Greenscapes Guides distributed at school programs.

Message Date(s): Various dates between September 2023 - June 2024

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: Regional Tabling Events

Message Description and Distribution Method:

Events attended by Greenscapes personnel where printed materials were passed out: Boxford Apple Festival, Salem Living Green Expo, New England Biolabs Sustainability Fair.

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Message Date(s): Various dates between September 2023 - June 2024

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: Social Media - Scoop the Poop

Message Description and Distribution Method:

Social media content informing residents the impact pet waste has on nearby watersheds.
<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 36 impressions
Instagram: 99 impressions, 14 likes

Message Date(s): August 16th, 2023

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: Social Media - Septic SMART

Message Description and Distribution Method:

Social media content providing information on proper septic tank maintenance, reminding residents to routinely pump the tank.

<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 136 impressions, 6 likes

Instagram: 41 impressions, 6 likes

Message Date(s): September 20th, 2023

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: Social Media - Yard Waste Disposal

Message Description and Distribution Method:

Social media content sharing how to properly dispose of yard waste and to never place waste in wetlands.

<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 68 impressions, 1 share

Instagram: 50 impressions, 5 likes, 1 share.

Message Date(s): October 11th, 2023

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:Social Media - What is a Storm Drain?

Message Description and Distribution Method:

Social media content informing viewers the purpose storm drains serve and the importance of clearing them when they are clogged.

<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 31 impressions

Instagram: 47 impressions, 10 likes, 1 share.

Message Date(s): October 12th, 2023

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:Social Media - Swimming Pools & Water Quality

Message Description and Distribution Method:

Social media flier to educate residents on proper pool drainage to reduce chlorinated water from entering our water ways.

<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 37 impressions

Instagram: 37 impressions, 3 likes

Message Date(s): October 18th, 2023

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:Social Media - Save your Drain

Message Description and Distribution Method:

Social media content reminding residents to never put oils, fats, or grease down their drains.
<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 33 impressions
 Instagram: 38 impressions, 3 likes

Message Date(s): November 22nd, 2023

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:Social Media - Salt Goes Where Water Flows

Message Description and Distribution Method:

Social media content that provided the dangers of road salt. Post included environmental friendly options to reduce salt in local bodies of water.
<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 45 impressions, 4 likes
 Instagram: 46 impressions, 7 likes

Message Date(s): December 14th, 2023

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 - Salt Goes Where Water Flows Flier

Message Description and Distribution Method:

Flier that provides the dangers of road salt and environmentally friendly alternatives.
<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Distributed to 90 Greenscapes Municipal members.

Message Date(s): December 14th, 2023

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:Social Media - Consider Native Plants

Message Description and Distribution Method:

Social media content sharing the benefits native species provide, requiring no fertilizer and less water.
<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Facebook: 49 impressions, 3 likes, 1 share
 Instagram: 41 impressions, 11 likes, 1 share

Message Date(s): May 24th, 2024

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:Tabling Event - Essex/Manchester STEAM Night

Message Description and Distribution Method:

Event attended by Greenscapes personnel where printed materials were provided.

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):
120 residents

Message Date(s): March 27th, 2024

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:

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 SWMP is available for review in the DPW office and its review and comments are encouraged.

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:**

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

Percent of Phase II map complete:

Optional: Provide additional status information regarding your map:

This mapping update process is ongoing and will continue throughout the permit term. 50% complete is an estimate.

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 above referenced outfall screening data is attached to the email submission
- The above referenced outfall screening data can be found at the following publicly available 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:

All of the Town's outfalls were screened for dry weather flows during a previous reporting period.

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 publicly available 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:

In previous reports it was stated that 100% of the catchments had been investigated. It is now understood that this question is related to the follow-up assessments, including wet weather sampling requirements. To correct the previously reported information, catchment investigations will be completed by the end of Year 7 for Problem Outfalls and by Year 10 for High and Low Priority Outfalls.

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 publicly available website:

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:

As has been noted in previous annual reports as well as in the IDDE Plan, the Town of Essex completed an extensive investigation into possible SSOs as part of the Town’s sewer program that was completed in the 1990s. That investigation included an illicit connection identification and removal program. Therefore, the possibility that illicit connections continue to exist is expected to be minimal, but the Town will continue to investigate illicit connections and will remove any identified.

Employee Training

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

A training program has been established and it is expected that the program will be implemented by the end of 2024.

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:

N/A

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

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3):

Website of ordinance or regulatory mechanism:

https://www.essexma.org/sites/g/files/vyhlf4406/f/uploads/essex_bylaws_-_2024_v.1_website.final__1.pdf

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:

Street Design and Parking Lots Report

Below, describe any changes made or planned to be made to local regulations and guidelines based on the report completed in Year 4:

Essex continues to evaluate its zoning and subdivision regulations based on the recommendations provided in the bylaw and regulations review that was performed by Greenscapes in Year 4. Throughout the past permit year, the focus has continued to be on the Town's stormwater bylaw and regulations. Draft stormwater regulations were developed and reviewed by the DPW Commission and select members of the conservation commission with the goal of having the regulations adopted by the end of 2024.

Green Infrastructure Report

Below, describe progress towards making green infrastructure practices allowable based on the report completed in Year 4:

See above.

Retrofit Properties Inventory

Below, list remaining permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (must maintain a minimum of 5 sites in inventory until less than 5 sites remain):

Essex is continuing to evaluate possible bmp sites. An updated list will be developed during the 4th quarter of 2024.

Below, list all properties that have been modified or retrofitted with BMPs to mitigate impervious area that were inventoried as part of 2.3.6.d of the permit and the type of BMP(s) implemented. Non-MS4 owned properties that have been modified or retrofitted with BMPs to mitigate impervious area may also be listed, but must be indicated as non-MS4.

N/A

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:

N/A

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:

N/A

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 publicly available 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.

The reported volume of material removed from catchbasins, the number of miles of roads cleaned and the volume of street sweeping residuals are estimates.

Year 7

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 7 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

- Complete investigations of catchments associated with Problem Outfalls
- Complete investigations of catchments where any information gathered on the outfall/interconnection identifies sewer input

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 7 below:

Part V: Certification of Small MS4 Annual Report 2023

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:

Michael G. Galli

Title:

Superintendent

Signature:



Date:

9/30/24

[Signatory may be a duly authorized representative]