

Year 2 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2019-June 30, 2020

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, 2019 and June 30, 2020 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>

<u>Impairment(s)</u>			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Phosphorus
<input type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
<u>TMDL(s)</u>			
<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
			<input type="button" value="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 2 Requirements

- Completed Phase I of system mapping
- Developed a written catchment investigation procedure and added the procedure to the SWMP
- Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
- Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes
- Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- Developed an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
- Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Developed written SWPPPs, included in the SWMP, for all of the following permittee owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 2 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:

There are no permittee owned or operated facilities within the MS4 where pollutants are exposed to stormwater and therefore no written SWPPPs. Written operation and maintenance procedures were developed and available for public comment on the town website prior to June 30, 2020. The procedures were

subsequently formalized shortly thereafter and are now incorporated into the SWMP. Due to COVID-19 the Town had limited resources and ability to complete Phase I mapping. Though we have made strides in mapping the closed drainage system using a new mobile collector application, the catchment delineation as well as the locations of open conveyance channels was not completed in time for the June 30th annual deadline. We had hoped to complete these mapping items in the spring of 2020 but were not able to so due to COVID-19. I am pleased to report that the catchment delineations were completed as of the time of this report and we are planning to continue to map the conveyance channels and other stormwater BMPs (if they exist) and to have this completed by June 30th, 2021.

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:
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- Provided training to employees involved in IDDE program within the reporting period
- All curbed roadways were swept at least once within the reporting period
- Updated outfall and interconnection inventory and priority ranking as needed

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual 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:

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

** 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:

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: Public Service Announcements

Message Description and Distribution Method:

Boxford Cable Access Television displays public service announcements on a variety of stormwater topics including proper septic care, pet waste, catch basin cleaning, street sweeping, salt alternatives, green stormwater infrastructure, proper fall cleanup and leaf disposal practices and other stormwater educational messages

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Messages received a total of 122,409 plays with a total run time of 325 hours 53 minutes and 37 seconds over the course of the permit year. A summary spreadsheet of the messages played is attached separately.

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: Scoop the Poop

Message Description and Distribution Method:

Pet Waste Brochure mailed to every Boxford residence with Census forms (also included in PSA messaging).

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Approximately 3,000 brochures distributed.

Message Date(s): December 2019

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: Greenscapes Guide

Message Description and Distribution Method:

Comprehensive 24 page magazine describing sustainable landscaping practices, DIY residential stormwater management projects, native plant suggestions and more

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Conservation

Measurable Goal(s):

500 magazines were delivered to the town in October 2019. Normally most would be distributed over the permit year but with the Town Hall closing due to COVID-19 only a few dozen were distributed.

Message Date(s): October 2019-February 2020

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: Do Your Part to be Septic Smart flyer

Message Description and Distribution Method:

Flyer containing information and tips for proper septic system maintenance

Targeted Audience: Residents and Businesses

Responsible Department/Parties: Health Department

Measurable Goal(s):

Health Department distributes septic maintenance flyers to all residents and businesses who seek assistance from the Health Department for septic issues (also included in PSA messaging). Approximately 24 flyers distributed in 2019/20 (due to shutdown of Town Hall due to COVID).

Message Date(s): July 2019 - February 2020

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: Resident Message - Stormwater pollution is trash, oil, cigarette butts, & dog waste

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>)
Advertisement on Facebook & YouTube.

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

12,710 Facebook and 10,812 YouTube Ad impressions reported for Boxford by Think Blue

Message Date(s): June 2020

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:

Social Media not proposed in NOI - Available to community through benefit of Merrimack Valley & State Stormwater Coalition participation

BMP: Keeping Water Clean Workshop

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 what a watershed is, what stormwater, groundwater and wastewater are, how they can negatively or positively impact these water systems, along with more details about each system and how it should be protected/maintained. Workshop presented by Greenscapes to two classrooms at the Spofford School in Boxford.

Targeted Audience: Residents (Students, teachers, parents)

Responsible Department/Parties: Conservation, Greenscapes North Shore Coalition

Measurable Goal(s):

Over 60 students parents and teachers attending

[Empty text box]

Message Date(s): November 26, 2019

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:

[Empty text box]

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:**

Updates to the Stormwater Management Plan were posted on the Town website in June of 2020. The public meeting on updates to the Stormwater Management Plan was held on July 2, 2020 (outside of the reporting period).

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:**

Boxford also participated in monthly meetings of the Merrimack Valley Stormwater Coalition held monthly September - June (2019/2020)
Boxford participated in the Greenscapes North Shore Coalition
Boxford made updates to its Stormwater Regulations and held a public meeting on February 20, 2020
Boxford Hazardous Waste Collection Day - October 26, 2019

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***Below, check all that apply.*

The following elements of the Phase I map have been completed:

- Outfalls and receiving waters
- Open channel conveyances
- Interconnections
- Municipally-owned stormwater treatment structures
- Waterbodies identified by name and indication of all use impairments
- Initial catchment delineations

Optional: Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

Through the use of a newly developed collector application, the DPW was able to more accurately map and revise some errors in the mapping of the town's system. The application allows for real-time edits in the field with a tablet, phone or other mobile device by a user authorized to make these changes. This will continue throughout the permit and will aid in other aspects of the MS4 permit system mapping as well such as conveyance channels.

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.

- 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: **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.

- 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:

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.

- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following 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:

Employee Training

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

Boxford DPW staff attended the online training sponsored by the CMRSWC on May 7, 2020. IDDE plan was updated accordingly.

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:

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

Ordinance or Regulatory Mechanism

Below, select the option that describes your ordinance or regulatory mechanism progress.

- Bylaw, ordinance, or regulations are updated and adopted consistent with permit requirements
- Bylaw, ordinance, or regulations are updated consistent with permit requirements but are not yet adopted
- Bylaw, ordinance, or regulations have not been updated or adopted

As-built Drawings

Describe the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites:

Prior to the issuance of the final Certificate of Occupancy, the Applicant shall submit to the Town Engineer a hard copy and electronic (PDF) copy As-Built Plan showing applicable features such as but not limited to: edge of pavement, curb/berm, driveways, dwellings, pump station(s), site grading (contours and spot shots), utilities, etc. Additionally, all stormwater mitigation BMPs on site such as but not limited to, catch basin rims and inverts, drain manholes, pipe sizes and slopes, detention/infiltration pond volumes, down spouts, drywells, etc. shall be clearly shown. A certification letter from the design engineer or another professional engineer shall be provided to the Engineer with the as-built plan outlining any deviations from the design plan. If any deviations exist, the engineer shall also certify that there will be no negative down-stream impacts with respect

to stormwater mitigation as a result of any discrepancies from the design.

Operation and management plan. The following minimum requirements apply. At its sole discretion the Commission may relax these requirements for small projects.

- (a) The name(s) of the owner(s) for all components of the proposed project.
- (b) A map showing the location of all stormwater management measures, including catch basins, manholes/ access lids, main, and stormwater devices.
- (c) The names and addresses of the person(s) responsible for operation and maintenance.
- (d) The person(s) responsible for financing maintenance and emergency repairs.
- (e) An inspection and maintenance schedule for all stormwater management facilities, including routine and nonroutine maintenance tasks to be performed.
- (f) A schedule for submitting written reports to the Conservation Commission describing inspection results, recommendations, and actions taken to ensure continued compliance with the Policy and permit requirements.
- (g) Stormwater management easements in recordable form shall be provided by the property owner(s) as necessary to ensure access for facility inspections and maintenance. Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the issuing authority. Easements shall be recorded with the Essex South Registry of Deeds prior to the preactivity meeting.
- (h) The owner(s) of the stormwater management system must notify the Boxford Conservation Commission of changes in ownership.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

In process to comply with year 4 permit requirements including those to meet sections 2.3.6 (b)

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

In process to comply with year 4 permit requirements including those to meet sections 2.3.6 (c)

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

The town is currently in the beginning stages of a large site improvements design at the town's elementary schools. This site plan will have significant improvements to the drainage systems. It is our intention that these modifications will have significant retro-fit LID BMPs incorporated into the design. These improvements are expected in 2021-2022.

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:

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:

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- Parks and open spaces
- Buildings and facilities
- Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- Parks and open spaces
- Buildings and facilities
- Vehicles and equipment

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:

Boxford does not have any facilities within the MS4 requiring a SWPPP

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:

Boxford implemented a Driveway Bylaw to require infiltration of all driveway runoff.

COVID-19 Impacts

Optional: If any of the above year 2 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:

The catchment delineation and complete mapping was not completed by the June 30th, 2020 deadline due to COVID-19. We had planned on making significant revisions to the map in the spring and early summer of 2020. Due to COVID-19, that was largely unable to be finalized. We were able to complete more system edits and mapping of our Catchbasins and pipe network during CB cleaning procedures and utilizing a mobile collector application. I am pleased to report that the town was able to complete the catchment delineations at the time of this report. We are expecting to map conveyance channels and other stormwater BMPs within the MS4 (if any exist) in the spring of 2021 and have these items updated in our GIS system accordingly.

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

Yes, I agree

- Inspect all outfalls/ interconnections (excluding Problem and Excluded outfalls) for the presence of dry weather flow
- Complete follow-up ranking as dry weather screening becomes available

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 uncurbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- 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

Provide any additional details on activities planned for permit year 3 below:



Part V: Certification of Small MS4 Annual Report 2020

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: Title:

Signature: Digitally signed by Christopher Olbrot
Date: 2020.09.28 10:46:55 -04'00' Date:

[Signatory may be a duly authorized representative]

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

Annual Report Submission

Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.

EPA: stormwater.reports@epa.gov

MassDEP: laura.schifman@mass.gov

Paper Signature:

If you did not sign electronically above, you can print the signature page by clicking the button below.

Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.