

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>

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

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:

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:

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)

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:

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:

We have scanned and reviewed 600 plans for BMPs. We are in the process of inspecting the BMPs and will then estimate phosphorus removal.

Solids, Oil and Grease (Hydrocarbons), or Metals**Annual Requirements***Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
- Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

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:

Not applicable.

Lake and Pond Phosphorus TMDL

Completed Legal Analysis

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:

Not applicable.

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

Not applicable.

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: Resident Message #1: Dog Waste pick up focusing on bacteria reduction (1-G)

Message Description and Distribution Method:

Create an annual message encouraging the proper management of pet waste. Disseminate to dog owners with dog license, or other appropriate time. Materials describe the proper management of pet waste, requirements for waste collection and disposal.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Increase in the # of Residents who property disposed of dog waste.

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:Resident Message #2: Nutrient reduction in yards (1-H)

Message Description and Distribution Method:

Annual message that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorus-free fertilizers.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Reduction in nutrients entering waterbodies leading to a reduction in aquatic invasive plants, thus increasing water quality.

Message Date(s): On cable TV, 6/18/20 w/ rain barrel pick up

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:Business/Commercial Message #1 to reduce sand and salt (1-A)

Message Description and Distribution Method:

This Brochure will focus on Good Housekeeping for parking lots for Business, Commercial and Industrial Properties. It will provide tips and best practices for decreasing sand and salt usage.

Targeted Audience: Business Owners

Responsible Department/Parties: Engineering

Measurable Goal(s):

Decrease in sand and salt usage resulting in improvements in water quality.

Message Date(s): Town administration mailed to with business licenses in fall 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:Developers Message # 1 Best Practices in Stormwater Management during Construction (1-C)

Message Description and Distribution Method:

This brochure focuses on best practices for open construction sites including reducing sediment leaving the site.

Targeted Audience: Developers

Responsible Department/Parties: Engineering

Measurable Goal(s):

Compliance with erosion controls in 100% of site inspections. Reduction in violations.

Message Date(s): Handed out with all building permits in 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 #3: Septic System Education (1-1)

Message Description and Distribution Method:

Will provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens, if applicable.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Reduction in bacteria in water.

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: Think Blue

Message Description and Distribution Method:

On behalf of the members of the Northern Middlesex Stormwater Collaborative, Think Blue Massachusetts ran an educational advertising campaign from May 16th to July 5th, 2019. The “Fowl Water” advertisement helps viewers visualize stormwater pollution from motor oil, pet waste, and trash become stormwater pollution.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

An increase in the number of people who understand Stormwater. We had 35,488 impressions in Tyngsborough from these ads. 17% of residents surveyed recalled seeing the ads, up from 15% in 2019 and 8% in 2018. Those who recall the ad are more likely to recognize that stormwater goes directly to local waterways, (52%) than those who do not recall the ad (32%). Those who recall the ad are more likely to describe stormwater has having “major” or “some” impact on waterways (49%) than those who do not recall

the ad (31%).

Message Date(s): May 16th to July 15th

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 was a new message made possible through a grant.

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 Plan was available on the website all year for public review. During 2019 and 2020 we updated the SWMP and created a new updated version. The Town Engineer posted this online and presented it to the Board of Selectmen and the Conservation Director presented it to the Conservation Commission.

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: 0

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:

We are working on mapping all of our town BMPs. We have scanned over 600 plans and have gone through them to look for BMPs. We have identified over 200 BMPs so far. Our next step is to inspect the BMPs in the field and then map them using GPS. This task is ongoing, but we are making great progress with assistance from a consultant and an intern.

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:

We have not had the funding to complete any outfall screenings or catchment investigations. However, we have allocated funding to complete 100% of outfall screenings in Year 3.

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:

Failed septic replacement at Cannongate condominiums; new septic being installed this year. Failed septic at 97 Westford Road resulted in an enforcement from Conservation and BOH; property is currently connecting to sewer. Mineral oil spill in Lake Mascuppic resulted in DEP enforcement. Remediation taking place under DEP. Hydraulic fluid line leak on Westford Road - no catch basins. Remediation took place under DEP. Truck fire fuel spill on Route 113. Remediation took place under DEP. Sump pump causing erosion on Mascuppic trail resulted in an enforcement. Sump pump has now been rerouted.

Employee Training

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

The Conservation Director, Town Engineer and Highway Director attended the CMRSWC IDDE Training Workshop on May 5, 2020. Materials were downloaded for future use. In addition the Town Engineer created an IDDE specific Power Point for Tyngsborough Highway Staff.

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:

Enforcement Action has been taken at the following sites:

- Cricket Lane erosion and sedimentation. Status = in compliance
- 68 Mascuppic Trail sump pump causing erosion. Status = in compliance
- 130 Sherburne Ave large scale devegetation. Satus = under enforcement.
- Heritage Hill erosion and sedimentation, stormwater ponds not built to specification therefore not meeting standards. Status = no additional building permits can be issued until site is in compliance.
- Lake Mascuppic mineral oil spill into storm drain. Status = immediate clean up complete. Long-term clean-up overseen by DEP.
- 20 Lawrence Road large scale devegetation. Status = Enforcement and stop work until permit received.
- 11 Old Tyng Road work without a permit. Status = Enforcement and stop work until permit received. Fine issued.
- 100 Business Park Drive sedimentation in wetland from failed stormwater system. Enforcement order issued Status = Immediate remediation complete. Currently monitoring for long-scale success.
- Cummings Road Forestry Activity roadway sedimentation. Status = remediated.
- Constantine Sand and Gravel Sedimentation to Flint Corner. Status = pending.

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:

We have updated our stormwater regulations to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites. We also require the completion of a long-term operation and maintenance plan. New this year are two permit categories: minor and major.

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:

No progress has been made on this item due to funding limitations.

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:

No progress has been made on this item due to funding limitations.

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:

No progress has been made on this item due to funding limitations.

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:

Cleaned multiple times.

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: [Select Units]

Weight of material removed: [Select Units]

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:

The Tyngsborough Highway Department is the only one that requires a SWPPP in Tyngsborough. The Town Engineer and Highway Senior Foreman completed a site inspection on April 24, 2020

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):

<https://www.tyngsboroughma.gov/departments/highway/stormwater/>

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:

Tyngsborough partnered with a WPI student to investigate Phosphorus sources that may be impacting the Phosphorus impairment in the Merrimack River.

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 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:

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:

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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: Date:

[Signatory may be a duly authorized representative]