

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)			
<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			
TMDL(s)			
<i>In State:</i>	<input checked="" 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:

Phase I mapping: The Town's MS4 mapping includes all Phase I components except interconnections. The Town has identified possible interconnections with MassDOT. These interconnections will be verified and added to the system mapping in Permit Year 3.

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:

A virtual training was completed by Town employees on August 18, 2020, which reviewed the overall MS4 program, illicit discharges to the drain, IDDE Program responsibilities, and reporting. An in-person training was intended to be held during Permit Year 2 but was reformatted to be remote and was delayed due to COVID-19.

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)

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 Good Housekeeping: All streets are swept at least once annually, and the Town is working to increase street sweeping to comply with permit requirements. During Permit Year 2, fifty percent of municipal streets were swept in fall 2019 in addition to the annual spring sweeping.

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:

Northborough's NOI listed water quality impairments and TMDLs for the Town's receiving waters based on the 2014 303(d) List. The Town has evaluated changes to the impairments and/or receiving waters based on the final 2016 303(d) List and enclosed the analysis herein. The enclosed document will be included in the Town's SWMP.

As a result of outfall investigations completed in Permit Year 2, 4 outfalls have been added to the outfall inventory and 5 outfalls will be removed because they are private or another drainage asset type (e.g., BMP inlet or culvert).

The changes described herein do not change the receiving waters listed in the NOI.

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:1A: Education and Outreach to Residents (Multi-Media Methods)

Message Description and Distribution Method:

Northborough is a member of the Central Massachusetts Regional Stormwater Coalition (CMRSWC), which participated in the Think Blue Massachusetts educational advertisement campaign in Permit Year 2. Think Blue Massachusetts shared a "Fowl Water" video across Facebook, Instagram, and YouTube to educate the public in member communities on stormwater runoff. The video includes references to proper management of pet waste. A post-campaign survey was distributed to measure the impact of the advertising campaign.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

In 2019, the follow-up survey indicated that 17% of respondents recalled seeing the "Fowl Water" video and were more likely to know that stormwater pollution ends up in local waterways. The 2019 campaign received 9,060 impressions across Facebook, Instagram, and YouTube for Northborough.

In 2020, the follow-up survey indicated that more than 15% of respondents recalled seeing the "Fowl Water" video and were more likely to know that stormwater pollution ends up in local waterways. The 2020 campaign received 16,660 impressions across Facebook, Instagram, and YouTube for Northborough.

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:1A-1D: Education and Outreach to All Audiences (Multi-Media Methods)

Message Description and Distribution Method:

The Northborough Engineering Department posts several educational resources on its Public Education webpage, including materials on the effects of stormwater pollution, proper fertilizer use, septic system maintenance, pet waste management, and proper disposal of grass clippings.

Targeted Audience: All Audiences

Responsible Department/Parties: DPW - Engineering

Measurable Goal(s):

Educational materials are available to all visitors of the Town website.

Message Date(s): Ongoing

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:1A: Education and Outreach to Residents (Multi-Media Methods)

Message Description and Distribution Method:

Pet Waste Education: The Dog License form from the Town Clerk includes a summary of regulations, including a reference to the "Pooper Scooper Bylaw" (Town Bylaw 2-24-090). The Town Clerk sends the MassDEP/DCR "Dog Waste and Surface Water Quality" brochure in the mail with license renewals. The Town also includes a link to the Pooper Scooper Bylaw on the Dog Licensing webpage.

Targeted Audience: Residents

Responsible Department/Parties: DPW - Engineering

Measurable Goal(s):

There were 1,547 dog licenses issued this year.

Message Date(s): Ongoing

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:Education and Outreach to All Audiences (Multi-Media Methods)

Message Description and Distribution Method:

On behalf of Northborough and other members of the Central Massachusetts Regional Stormwater Coalition, the coalition shared a messages on Twitter encouraging the proper use and disposal of grass clippings and use of slow-release fertilizers, proper disposal of leaf litter, management of pet waste, and septic system

maintenance.

Targeted Audience: All Audiences

Responsible Department/Parties: CMRSWC

Measurable Goal(s):

The CMRSWC twitter account has approximately 240 followers and averages between 100-200 impressions per tweet.

Message Date(s): Grass Clippings and Fertilizers: July 30, 2019; Proper Disposal of Leaf Litter: October 18, 2019; Management of Pet Waste: August 9, 2019; October 2, 2019; October 14, 2019; June 23, 2020; Septic System Maintenance: September 12, 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:

CMRSWC provided outreach on behalf of DPW - Engineering

BMP: Education and Outreach to Residents and Institutions (Multi-Media Methods)

Message Description and Distribution Method:

The Town's Conservation Agent was invited to present on stormwater and water quality at the Northborough Junior Woman's Club STEM Event for middle school girls and the WPI Women in Science Day Camp, but both events were canceled due to COVID-19. In addition, the Town usually staffs a booth at the annual Sanofi Corporation Environmental Fair, but the event was not held this year due to COVID-19. It is anticipated that the Town will attend these events again when possible, and continue to provide educational information to attendees.

Targeted Audience: Residents and Businesses, institutions and commercial facilities

Responsible Department/Parties: Conservation

Measurable Goal(s):

Events could not be held due to COVID-19.

Message Date(s): Events could not be held due to COVID-19.

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 Stormwater Management Plan (SWMP) and Year 1 Annual Report were publicly available on the Town's website for review and comment.

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 held the Louise Houle Annual Town Cleanup event on June 25 and June 27, 2020 where volunteers collected debris and the Department of Public Works disposed of the trash. A household hazardous waste collection day was held on October 26, 2019.

Brush collection days were held on three days in Fall 2019 where residents were encouraged to bring yard waste to the Highway Garage for proper disposal. The three brush collection days planned for spring 2020 were canceled due to COVID-19. The collection days were advertised on the Town's Public Works webpage. In future permit years, the Town anticipates accepting brush on an ongoing basis. Residents can dispose of their leaves and grass clippings Monday-Friday at the Highway Garage and this service is advertised on the Highway Division's webpage. Almost 4,000 yards of lawn waste, leaves, and brush were collected. More than 1,700 yards of wood chips and logs were also properly disposed of.

The Town's Conservation Agent regularly presents workshops to students, residents, and businesses around Northborough. However, the scheduled events for Permit Year 1 were canceled due to COVID-19 safety precautions.

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:

The Town has identified possible interconnections with MassDOT. These interconnections will be verified and added to the system mapping in Permit Year 3.

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:

No catchment investigations were completed in Permit Year 2. The Town has not identified any problem catchments.

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:

N/A

*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:

In Permit Year 2, there was one report of illegal dumping at Carney Park (386 West Main St). The items were removed and properly disposed of.

Employee Training

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

A virtual training was completed by Town employees on August 18, 2020, which reviewed the overall MS4 program, illicit discharges to the drain, IDDE Program responsibilities, and reporting. The training was intended to be held during Permit Year 2 but was reformatted to be completed remotely due to COVID-19 safety precautions.

The Town Engineer attended a training workshop sponsored by CMRSWC in May 2020 remotely via GoTo Meeting. The workshops were originally intended to be in-person but were adapted to virtual workshops due to COVID-19. The workshops trained participants on important aspects of the IDDE program, including how to recognize illicit discharges and SSOs. A summary of the training, copies of the slides, an attendee roster, and a recording of the training is available at: <https://www.centralmastormwater.org/toolbox/pages/2020-idde-workshop-ms4-assistance-grant>

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:

Northborough Wetland Regulations require as-built drawings and an O&M Plan to be submitted with requests for certificates of compliance. The Groundwater Zoning bylaw also requires as-builts to be submitted to prove regulations are being met.

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:

Preparation for the Street Design and Parking Lots Report has not yet begun as this requirement is due in Permit Year 4.

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:

Preparation for the Green Infrastructure Report has not yet begun as this requirement is due in Permit Year 4.

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:

Preparation for the Retrofit Properties Inventory has not yet begun as this requirement is due in Permit Year 4.

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: [Select Units]
- 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:

During a spring 2020 inspection, sediment build-up was found in catch basins on site. These catch basins were cleaned later in the spring.

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:

The Town's General Bylaws fulfill part of the MCM 4 and MCM 5 Construction and Post-Construction Stormwater Management requirements. Due to the delay of the MassDEP Stormwater Handbook update and in accordance with the revised schedule in the proposed General Permit modifications, the Town's regulatory mechanism will be reviewed and updated as needed for consistency with the revised General Permit requirements in Permit Year 3.

Northborough completed dry weather screening of outfalls during Permit Year 2. The data included in the annual report from this permit year should be considered draft as it is being finalized by the Town's stormwater consultant. The Town continues to implement its IDDE Program and complete dry weather outfall screening in accordance with the General Permit schedule.

Our municipality is a member of the Central Massachusetts Regional Stormwater Coalition (CMRSWC). CMRSWC was awarded an Environmental Merit Award from EPA Region 1 in September 2019. Each participating community, including Northborough, was recognized as part of the award.

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:

Discussed throughout.

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:

The Town acknowledges the General Permit Year 3 requirements and intends to complete as many activities as possible based on funding and staff availability.

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]