

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:

The above elements of Year-2 permit were completed prior to the permit year commencement. System mapping was completed in September 2019, catchment investigation procedure was developed and included in the IDDE in section 14, requirements for as-built drawings were included in the Town By-law and in the

Planning Board and Zoning Board approvals, storage of salt is located at the RTS, O&M manual has been developed and is in the review process, inventory of permittee owned facilities is included in the SWMP, written program for MS4 infrastructure is included in the IDDE program and SWPPPs have been drafted and are in the review and finalization process. The finalization of the O&M manual and SWPPPs is anticipated during the Fall/Winter of 2020/2021 due to COVID-19. The review process was postponed from the original intended time of Spring 2020 which would have been during the Year-2 permit term.

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:

<https://www.needhamma.gov/323/Stormwater-Management>
- 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:

The written Stormwater Management Program (SWMP) was completed September 23, 2019 and posted to the town website on September 27, 2019 for a public review and comment period of 60 days. Needham did not receive any public comments to the SWMP during the comment period. The SWMP is anticipated to be reviewed annually, generally in March or April of the permit year. This year, review was postponed due to COVID-19 and is being rescheduled for the Fall of 2020.

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:

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:

Needham has approved additional capital funding to hire a contractor to perform a one-time complete catch basin cleaning throughout town in a single round to facilitate the determination if there are any catch basins that are likely to require more frequent cleaning (>50% full) outside of the predetermined cleaning route. The current internal catch basin cleaning program addresses approximately 50% of town-wide catch basins per year on a rotating cleaning schedule. This effort will help to identify those catch basins that may require more frequent cleaning and/or areas that may benefit from additional mitigation efforts resulting in improved stormwater management.

Charles River Watershed 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:

An engineering analysis was performed indicating compliance with the phosphorus requirements and are included in our Phosphorus Control Plan (PCP).

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

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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:Management of Pet Waste

Message Description and Distribution Method:

Proper care and disposal of pet waste and the environmental impacts of not conforming to Needham's bylaw 3.7.7. Brochure available on website and provided to each resident with request for pet licensing/renewal as of April 2019.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Facebook (243); Brochures available at Public Works and Town Clerk for Public; Website

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:Septic System Care

Message Description and Distribution Method:

Distributed to all new applicants for septic system in town. Describes the proper care and maintenance of a septic system.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Distributed with Septic System Permits (5); Brochures available at Health Department

Message Date(s): 7/1/2019 - 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:Lawn and Garden Tips

Message Description and Distribution Method:

Proper use of chemicals such as fertilizer and pesticides. Think Blue Massachusetts posts on Facebook.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (36,048)

Message Date(s): 7/1/2019-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:Leaf Collection and Disposal

Message Description and Distribution Method:

Posted on Facebook, Twitter and on Town Website. Proper disposal and care of leaves during fall clean-up and throughout the season.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (4,245); Twitter (1,667); Website

Message Date(s): 10/30, 11/1, 11/8, 11/22

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 Fowl Water

Message Description and Distribution Method:

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

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (36,048)

Message Date(s): 7/1/2019-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:Paint Surplus Days

Message Description and Distribution Method:

Notification of RTS acceptance of paint surplus supplies to be collected for appropriate disposal.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Twitter (1,098), Facebook (1,659); 2.76 tons Oil Based paint collected and disposed.

Message Date(s): 9/18, 10/16, 8/12

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:Household Hazardous Waste Day

Message Description and Distribution Method:

Information about the hazardous materials accepted at the RTS on this annual collection day. Materials are collected and removed by a contractor for proper handling and disposal.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Twitter (2,508), Facebook (890)

Message Date(s): 10/4, 10/8, 10/11

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:Clear-a-Basin

Message Description and Distribution Method:

Communication regarding the importance of keeping catch basins clear of debris.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Twitter (6,349), Facebook (2,624)

Message Date(s): 10/9, 10/16, 10/22, 1/24, 3/30, 4/13, 6/2

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 Fowl Water

Message Description and Distribution Method:

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

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

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:Clear-a-Basin

Message Description and Distribution Method:

Communication regarding the importance of keeping catch basins clear of debris.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

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:

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 written Stormwater Management Program (SWMP) was completed September 23, 2019 and posted to the town website on September 27, 2019 for a public review and comment period of 60 days. Needham did not receive any public comments to the SWMP during the comment 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:**

Public participation opportunities for this reporting period included:
 2020 CRWA Run of the Charles (Cancelled due to COVID-19)
 4/18/19 - 6/20/2020 RTS Paint Collection
 10/12/2019 RTS Household Hazardous Waste Day
 4/29/2020 Park and Recreation Restock the Reservoir (Due to COVID-19, not done with public this year)
 11/3-24/2019 RTS Leaf Collection
 Arbor Day Tree distribution (Park and Recreation) and UTube video on how to plant a tree (Parks & Forestry)
 Spring 2020 Townwide Cleanup (with COVID-19 socially distant protocols)

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 MS4 map is reviewed annually and updated accordingly. There were no changes to the mapping area during this reporting period. The current map is located at <https://www.needhamma.gov/323/Stormwater-Management>.

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:

<https://www.needhamma.gov/323/Stormwater-Management>

*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:

<https://www.needhamma.gov/323/Stormwater-Management>

*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:

Catchment investigations are conducted as part of the current CCTV inspection program to identify illicit connections. The CCTV inspection program is an ongoing program to inspect 10% of the Town's drainage system every year. The program has proven to be successful in identifying illicit

connections and in the future will use composite sampling results to target inspection efforts.

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:

<https://www.needhamma.gov/323/Stormwater-Management>

*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:

Illicit discharges identified and were removed prior to this permit effective date.

Employee Training

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

Employee training is accomplished via recorded video training and provided to DPW divisions for employees to take once per year.

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:

Needham's Stormwater By-law states:

7.7.3.7 As-Built Drawing

Except as provided for in Section 7.7.3.4, as-built drawings stamped by a Massachusetts Registered Professional Engineer showing all stormwater management systems shall accompany the as-built Plot Plan at the completion of a project.

Additionally, Planning Board and Zoning Board decisions require an as-built to be submitted.

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:

Needham is reviewing street design and parking lot regulations and guidelines for stormwater management opportunities for year 4 of the permit term.

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:

Green infrastructure is a component of Total Watershed Management of which Needham is actively pursuing. Our commitment to Total Watershed Management is included in the SWMP. We continue to develop and encourage green infrastructure through land use and water management principles. The full report is anticipated in year 4 of the permit term.

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:

Needham contracted with the engineering firm BETA to develop an inventory of properties that have existing and proposed BMPs as part of the Watershed Management Plan. That inventory is being reviewed and investigated for viable opportunities for additional BMPs. Determinations are anticipated in year 4 of the permit term.

MCM6: Good Housekeeping

Catch Basin Cleaning

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

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

If a catch basin is reported to have been >50% full during two consecutive events, the basin will be flagged for review by the Water and Sewer Division for additional investigation as to the root cause of the excessive volume of material. Appropriate mitigation efforts will be made to augment the basin, area or drain as applicable to reduce the level of material present at the next scheduled inspection/cleaning event. As a second line of defense, the drain is inspected with CCTV and flushed of any excessive sediment. Needham also has a brook and culvert program designed to catch large amounts of sediment that may have been missed through catch basin cleaning and drain flushing efforts. Should such mitigation efforts result in no significant change in volume of material, the catch basin will be flagged for additional inspections/cleanings on a more frequent basis to be determined by the Water and Sewer Division.

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:

Additional Information

Monitoring or Study Results

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

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

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

Additional Information

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

COVID-19 Impacts

Optional: If any of the above year 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 Town of Needham was closed due to the COVID-19 pandemic for approximately 1.5 months and a rotating shift was created to minimize the spread of the virus. This resulted in a slow down of stormwater tasks. This did not eliminate any of the work items, it only reduced the rate of progress on all items.

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:

Needham confirms that our documentation will be updated to comply with all applicable permit requirements including but not limited to the year 3 requirements summarized above to the Maximum Extent Practicable.

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 Richard P. Merson
Date: 2020.09.24 10:46:47 -04'00' Date:

[Signatory may be a duly authorized representative]