

Year 5 Annual Report

Massachusetts Small MS4 General Permit

Reporting Period: July 1, 2022-June 30, 2023

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

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2022 and June 30, 2023 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name:

Title:

Street Address Line 1:

Street Address Line 2:

City:

State:

Zip Code:

Email:

Phone Number:

Stormwater Management Program (SWMP) Information

SWMP Location (publicly available web address):

Date SWMP was Last Updated:

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

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)			
<i>In State:</i>	☐ Assabet River Phosphorus	☒ Bacteria and Pathogen	☐ Cape Cod Nitrogen
	☒ Charles River Watershed Phosphorus	☐ Lake and Pond Phosphorus	
<i>Out of State:</i>	☐ 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.

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - ☐ This is not applicable because we do not have sanitary sewer
 - ☐ This is not applicable because we did not find any new SSOs
 - ☒ The updated SSO inventory is attached to the email submission
 - ☐ The updated SSO inventory can be found at the following publicly available website:
- ☒ Updated system map due in year 2 as necessary
- ☒ Provided training to employees involved in IDDE program within the reporting period
- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- ☒ Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

- ☒ Updated inventory of all permittee owned facilities as necessary
- ☐ O&M programs for all permittee owned facilities have been completed and updated as necessary
- ☒ Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- ☒ Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- ☒ Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Needham's Operations and Maintenance (O&M) Plan was developed with BETA and submitted as a draft pending comments and edits. Updates to the draft document have been provided by each division and are in the process of being incorporated and edited with anticipated final approval soon.

All maintenance and procedures for operations and maintenance of facilities are consistent with the anticipated final O&M Plan program.

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

Annual Requirements

*Public Education and Outreach**

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

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

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Needham has taken an approach to NPDES of assessing identified sub-watersheds each reporting year for:

- Potential testing locations (storm water quality)
- Identify town owned properties for communal/neighborhood infiltration systems
- Identify Park & Recreation areas to reduce impervious and promote surface infiltration
- Identify Building & Facilities areas to reduce impervious and promote surface infiltration
- Identify roadway pavements that can be narrowed or reduced
- Identify two targeted audiences for education/outreach
- Identify two participation/involvement measures to promote
- Identify operations and maintenance plans for the properties within the sub-watershed(s)

This approach is the most pragmatic approach for Needham to identifying needs and more accurately assesses varying conditions and land use within Needham that contribute to effective stormwater management.

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

☐ The street sweeping schedule is attached to the email submission

- ☒ The street sweeping schedule can be found at the following publicly available website:

<http://needhamma.gov/DocumentCenter/View/43781/HWY-Street-Sweeping-SOP-10172022?bidId=>

- ☒ 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 employed a 3rd party contractor 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 internal catch basin cleaning program includes all basins in town on a rotating cleaning schedule. As we capture sediment levels each year, recommended changes to cleaning and sweeping activities will be adjusted to address heavy sediment.

Charles River Watershed Phosphorus TMDL

- ☒ Completed the written Phase 1 Phosphorus Control Plan (PCP), including: *(select the items in the Phase 1 PCP that have been completed)*

- ☒ Planned nonstructural controls
☒ Planned structural controls
☒ O&M program for structural controls
☒ Implementation schedule
☒ Cost of implementation

The Phase 1 PCP: *(select one of the following options)*

- ☒ is attached to the email submission
☐ can be found at the following publicly available website:

Below, calculate your current phosphorus export rate by first filling out the individual phosphorus loading components (labeled [A], [B], [C], and [D]) and then computing your current phosphorus export rate using the equation provided.

Baseline phosphorus export reduction required from PCP Area, as identified in Appendix F (**lbs/year**) [A]:

2,147

- ☒ Documented the nonstructural control measures implemented during **this reporting period** and their phosphorus reduction

total phosphorus reduction from all nonstructural controls this reporting period (**lbs/year**) [B]:

20

- ☐ No nonstructural control measures were implemented
- ☒ The above referenced nonstructural control measures information is attached to the email submission
- ☐ The above referenced nonstructural control measures information can be found at the following publicly available website:

- ☒ Documented the structural control measures implemented during **this reporting period and all previous years**, including location, phosphorus reduction in mass/year, and date of last completed maintenance and inspection for each control

total phosphorus reduction from all structural controls installed this reporting period and all previous years (**lbs/year**) [C]:

27

- ☐ No structural control measures were implemented
- ☒ The structural control measures information is attached to the email submission
- ☐ The structural control measures information can be found at the following publicly available website:

Phosphorus load increase due to development incurred since 2005 in **lbs/year** [D]:

0

Current phosphorus export rate from the PCP Area in **lbs/year** [=A-(B+C)+D from above]:

3,857

- I certify under penalty of law that all source control and treatment Best Management Practices being claimed for phosphorus reduction credit have been inspected, maintained and repaired in accordance
- ☒ with manufacturer or design specification. I certify that, to the best of my knowledge, all Best Management Practices being claimed for a phosphorus reduction credit are performing as originally designed.
- ☒ All municipally owned and maintained turf grass areas are being managed in accordance with Massachusetts Regulation 331 CMR 31 pertaining to proper use of fertilizers on turf grasses

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 updated baseline phosphorus load for the Town reflective of 2022 conditions has been calculated and submitted to EPA for consideration (Memo is attached to this annual report submission detailing these calculations). The updated p-load accounts for changes due to development incurred since 2005, therefore 0 has been entered for [D].

NON-TRADITIONAL AND TRANSPORTATION MS4s ONLY- municipalities please skip this section:

Describe the planned phosphorus reduction activities on site and coordination progress with the applicable municipality:

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

As noted above, Town of Needham is taking a watershed-based approach to NPDES compliance which is reflected in the attached Phosphorus Control Plan. All attachments related to structural and non-structural BMPs included in the Phosphorus Control Plan.

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 Town of Needham General By-Laws 3.7.7 Removal of Pet Waste. Brochure available on website and provided to each resident with request for pet licensing/renewal.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Brochures available at Public Works and Town Clerk; distributed with licenses; 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 and Certificate of Completions; Brochures available at Health Department and on website.

Message Date(s): 7/13/2022, 8/12/2022, 9/13/2022, 9/30/2022, 11/10/2022, 3/27/2023, 3/29/2023, 5/3/2023, 5/18/2023, 6/23/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Leaf Collection and Disposal

Message Description and Distribution Method:

Proper disposal and care of leaves and brush during fall clean-up and throughout the season.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Website posts what is accepted at the RTS at <http://www.needhamma.gov/3104/What-We-Take>. Residents are also welcome to dispose of Leaf Collection every Sunday in November.

Message Date(s): 11/4/22, 11/25/22

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: Paint Surplus Days

Message Description and Distribution Method:

RTS acceptance of paint surplus supplies to for re-use and recycling.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook(3,485)

Message Date(s): 9/15/2022, 10/11/2022, 10/14/2022, 4/11/2023, 4/14/2023, 5/16/2023, 5/20/2023, 6/8/2023

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: 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):

Facebook (863)

Message Date(s): 10/19/2022, 10/27/2022, 11/1/2022, 11/4/2022

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):

Facebook (6,659); Instagram (35)

9/7/2022, 10/7/2022, 10/18/2022, 12/2/2022, 12/22/2022, 12/23/2022, 12/24/2022,

Message Date(s): 12/25/2022, 1/4/2023, 3/8/2023, 4/16/2023, 4/29/2023, 6/2/2023, 6/23/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Clear-a-Basin

Message Description and Distribution Method:

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

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (6,659); Instagram (35)

Message Date(s): 9/7/2022, 10/7/2022, 10/18/2022, 12/2/2022, 12/22/2022, 12/23/2022, 12/24/2022,
12/25/2022, 1/4/2023, 3/8/2023, 4/16/2023, 4/29/2023, 6/2/2023, 6/23/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Clear-a-Basin

Message Description and Distribution Method:

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

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (6,659); Instagram (35)

Message Date(s): 9/7/2022, 10/7/2022, 10/18/2022, 12/2/2022, 12/22/2022, 12/23/2022, 12/24/2022, 12/25/2022, 1/4/2023, 3/8/2023, 4/16/2023, 4/29/2023, 6/2/2023, 6/23/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Clear-a-Basin

Message Description and Distribution Method:

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

Targeted Audience: Industrial facilities

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (6,659); Instagram (35)

Message Date(s): 9/7/2022, 10/7/2022, 10/18/2022, 12/2/2022, 12/22/2022, 12/23/2022, 12/24/2022, 12/25/2022, 1/4/2023, 3/8/2023, 4/16/2023, 4/29/2023, 6/2/2023, 6/23/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Arbor Day Tree Planting

Message Description and Distribution Method:

Arbor Day tree planting and event. Residents encouraged to pick up a new sapling to plant.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (1,416), public participation event

Message Date(s): 4/23/2023, 4/25/2023, 4/28/2023

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Discharging Water in Public Way

Message Description and Distribution Method:

Importance of clean stormwater and safety and environmental hazards of discharging water to public ways.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (177)

Message Date(s): 1/10/2023

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Clean Water Notice

Message Description and Distribution Method:

Information on importance of clean stormwater.

Targeted Audience: Developers (construction)

Responsible Department/Parties: Engineering

Measurable Goal(s):

Fact sheet provided to developers looking for ways to comply with orders of conditions.

Message Date(s): 7/1/2022-6/30/2023

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Earth Day Charles River Cleanup and Town-wide Cleanup

Message Description and Distribution Method:

Opportunity for public to participate in large scale cleanup efforts to remove debris in the community.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (1,338)

Message Date(s): 4/13/2023, 4/18/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Town-wide Street Sweeping

Message Description and Distribution Method:

Notification of full town sweeping activities.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Facebook (338)

Message Date(s): 4/11/2023

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period:**

The SWMP was reviewed internally and updated accordingly. An opportunity for public comment was posted to the website and a social media post was disseminated to encourage review and comment by the public. Comments were recorded and discussed for incorporation into the revised SWMP.

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:

RTS Paint Collection

RTS Household Hazardous Waste Day

RTS Leaf Collection

Arbor Day Tree distribution (Park and Recreation) and UTube videos on how to plant a tree (Parks & Forestry)

Needham Garden Club Stormwater Presentation

Needham Harvest Fair informational table and watershed demonstration

DPW Public Forum presentation on DPW activities

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

Optional: Provide additional status information regarding your map:

Town MS4 assets are available in GIS and to the public upon request from our Engineering Division. Maps are updated during the document review process each year and are included in our SWMP, SWPPP, IDDE, O&M and Phosphorus Plans.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

- ☐ No outfalls were inspected
- ☒ The above referenced outfall screening data is attached to the email submission
- ☐ The above referenced outfall screening data can be found at the following publicly available website:

*Below, report on the number of outfalls/interconnections screened **during this reporting period**.*

Number of outfalls screened:

*Below, report on the percent of outfalls/interconnections screened **to date**.*

Percent of outfalls screened:

Optional: Provide additional information regarding your outfall/interconnection screening:

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ☐ No catchment investigations were conducted
- ☐ The catchment investigation data is attached to the email submission
- ☒ The catchment investigation data can be found at the following publicly available website:

*Below, report on the number of catchment investigations completed **during this reporting period**.*

Number of catchment investigations completed this reporting period:

*Below, report on the percent of catchments investigated **to date**.*

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

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. Needham has supplemented our in-house capabilities as needed to maintain the inspection commitment.

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- ☒ No illicit discharges were found
- ☐ The illicit discharge removal report is attached to the email submission
- ☐ The illicit discharge removal report can be found at the following publicly available website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period.***

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018).***

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

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

Employee Training

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

Employee training is available via recorded video training for employees with NPDES responsibilities in Needham to take. Managers and supervisors are tasked with ensuring the proper training of their staff members. Employee training of NPDES activities, such as inspections and BMP maintenance, occurs in the field by supervisors and/or as they have designated. Training is recorded in the attached logbook for reference.

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: 92

Number of inspections completed: 50

Number of enforcement actions taken: 0

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**

Date update was completed (due in year 3): September 19, 2018

Website of ordinance or regulatory mechanism: <https://needhamma.gov/4799/48648/Municipal-Separate-Storm-Sewer-System-MS>

As-built Drawings

*Below, report on the number of as-built drawings received **during this reporting period**.*

Number of as-built drawings received: 240

Optional: Enter any additional information relevant to the submission of as-built drawings:

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. (213)

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

Street Design and Parking Lots Report

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

The Highway Division provides maintenance and repair services to all Town-owned surface infrastructure, including 260 lane miles of roadway, 160 miles of sidewalk, 246 miles of berm grass/curbing, and several municipal parking lots. The Division oversees all roadway-related construction projects, including curb, sidewalk, and traffic signal installations, as well as street paving.

As surface infrastructure projects are developed, the Highway Division seeks opportunities for impervious pavement reduction and installation or upgrade of stormwater BMPs.

Street design and parking lot specific regulation recommendations under consideration include:

- Allow smaller road width based on traffic flow
- Allow narrower right of way width based on road type
- Require bioretention at cul-de-sac islands
- Allow country drainage and or opening in curbing to all roadside swales/bioretention
- Allow and encourage permeable sidewalks or slope sidewalks to drain to lots
- Provide provisions to reduce parking spaces numbers based on need and/or allow portions of required parking areas to remain lawn area and not be constructed until needed.
- Allow a smaller standard space (9'x18')
- Develop site design checklist to review project site constraints and require inclusion of LID techniques or infiltration

Green Infrastructure Report

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

The Assessment of Current Regulations (March 2023) was undertaken with the objective of identifying opportunities to revise municipal regulations to better support LID and green infrastructure options. The review utilized the tool developed by Mass Audubon: Bylaw Review for LID & Climate Smart, Nature-Based Solutions.

Regulations reviewed:

- ☐ Zoning By-laws of the Town of Needham (June 2020)
- ☐ Subdivision Regulations and Procedural Rules of the Planning Board (1993)
- ☐ Article 7 Stormwater (2018)

Needham has taken the resulting recommendations under advisement. Efforts are underway, to the extent practicable, to add, improve or revise current regulations that:

- protect natural resources and open space
- promote efficient, compact development patterns and infiltration
- promote smart designs that reduce overall imperviousness
- promote green infrastructure stormwater management
- encourage efficient parking

This process includes collaboration with multiple departments/divisions, boards and members of leadership to ensure continuity across operations. Any updates to by-laws and regulations will be proposed, reviewed by town council, and once approved by the responsible entity, be adopted.

Retrofit Properties Inventory

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

Walker Gordon Field
 Conservation Land on the east side of Charles River Street south of Walker Lane
 RTS
 DPW
 Reservoir B Sewage Pumping Station
 Defazio Park
 Chestnut/Lincoln St Parking Lot
 Claxton Fields
 Cricket Fields
 Daley Building
 Eaton Square Parking Lot
 Memorial Park
 Ridge Hill Garage
 St. Mary Street Water Pumping Station

Needham has developed the Watershed Management Plan to position the Town for the ultimate goal of Total Watershed Management. This plan is intended as a guidance tool in capital improvement planning. A major component of this plan is the delineation of the Town into sixteen (16) subwatersheds. The multi-year subwatershed evaluation plan prioritizes subwatershed areas and provides an opportunity to assess the varied soil types and land uses throughout the town to more effectively evaluate and tailor the resulting BMP recommendations and watershed management techniques. Recommended modifications or installations are evaluated for viability and inclusion during departmental project and the budget planning process. Subsequently, the approved projects are developed into standalone projects, or as a part of a larger capital project as practicable.

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

Walker Pond Improvements
 Category I of the improvements involved the reduction of impervious pavement and the addition of stormwater treatment through landscape filter strips and infiltration trenches.

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: 585

Number of catch basins cleaned: 585

Total volume or mass of material removed from all catch basins: 93.36 cubic yards

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

Total number of catch basins: 4,311

If applicable:

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

Needham has a three-line defense approach for maintaining its MS4 infrastructure to prevent the discharge of pollutants from the MS4 system. 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: 100.45 tons

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: 5

Describe any corrective actions taken at a facility with a SWPPP:

Per findings on inspection reports, in conjunction with regular maintenance, identified areas cleaned or repaired as needed.

Additional Information

Monitoring or Study Results

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

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

<https://needhamma.gov/4799/48648/Municipal-Separate-Storm-Sewer-System-MS>

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:

Needham has taken the approach to delineate the Town into sixteen (16) subwatersheds for comprehensive analysis of one (1) per year, at minimum, with the following goals:

- ☐ Stormwater System data collection and assessment
- ☐ Creation/Improvement of Town stormwater regulations and bylaws
- ☐ Outfall sampling and monitoring
- ☐ Improve receiving water quality
- ☐ Inventory of Town BMPs/LIDs
- ☐ Identify opportunities to implement infiltration/BMPs/LIDs
- ☐ Public Education
- ☐ Operation and Maintenance of MS4 infrastructure

The first watershed analysis was received in March 2022. The total area analyzed is approximately 954 acres with over 110 acres of impervious area including buildings, driveways, streets and parking lots. Structural recommendations provided have been evaluated for implementation and regulation changes are under review for adoption at Town Meeting once approved.

A pilot project (Walker Pond Improvements), located within the analyzed watershed, was undertaken as a multi-phased project with three (3) categories:

Category I: Contributory Area Runoff Control and Treatment - structural and nature-based measures were constructed in September 2022 promoting nutrient uptake and soil activity through the installation of drainage structures, a vegetated filter strip and public education

Category II: Water Quality Treatments - analysis of water quality underway and pond management strategy in development

Category III: Sewer Main Extension - prioritized and completed in June 2022.

The design of other structural improvements recommended was proposed in March 2023 and contracted in July 2023. Construction of approved designs is anticipated in 2024.

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. If any of the above year 5 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:

Needham has continued to face staffing challenges and the impacts of severe weather events have required the diversion of resources to respond to emergency issues. The town remains committed to the NPDES program and is actively pursuing projects to help us reach our goals in stormwater management. Needham has engaged contractors as needed and continues to comply with requirements while also looking at tools and strategies for continued improvement. The success of the completed categories of the pilot improvement project has provided further confidence in our subwatershed approach and we look forward to sharing the progress on subsequent analysis, design and construction activities as we move towards Total Watershed Management within our community.

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

Yes, I agree ☒

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt

- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 6 below:

Part V: Certification of Small MS4 Annual Report 2023

40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

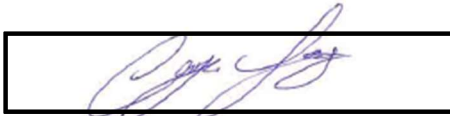
Name:

Carys Lustig

Title:

Director of Public Works

Signature:



Date:

09/28/23

[Signatory may be a duly authorized representative]