

Year 1 Annual Report

Massachusetts Small MS4 General Permit

Reporting Period: May 1, 2018-June 30, 2019

****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.

Part I: Contact Information

Name of Municipality or Organization: Town of Hanover

EPA NPDES Permit Number: MAR041036

Primary MS4 Program Manager Contact Information

Name: Victor Diniak

Title: Director of Public Works

Street Address Line 1: 40 Pond Street

Street Address Line 2: N/A

City: Hanover

State: MA

Zip Code: 02339

Email: vdiniak@hanoverdpw.org

Phone Number: (781) 826-3189

Fax Number: N/A

Stormwater Management Program (SWMP) Information

SWMP Location (web address): https://www.hanover-ma.gov/sites/hanoverma/files/uploads/hanover_stormwater_management_plan_-_june_2019.pdf

Date SWMP was Last Updated: Jun 28, 2019

If the SWMP is not available on the web please provide the physical address and an explanation of why it is not posted on the web:

Part II: Self Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4.

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 1 Requirements

- ☒ Develop and begin public education and outreach program
☒ Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
 - ☒ The SSO inventory is attached to the email submission
 - ☐ The SSO inventory can be found at the following website:☒ Develop written IDDE plan including a procedure for screening and sampling outfalls
☒ IDDE ordinance complete
☒ Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation
 - ☒ The priority ranking of outfalls/interconnections is attached to the email submission
 - ☐ The priority ranking of outfalls/interconnections can be found at the following website:☒ Construction/ Erosion and Sediment Control (ESC) ordinance complete
☒ Develop written procedures for site inspections and enforcement of sediment and erosion control measures
☒ Develop written procedures for site plan review
☒ Keep a log of catch basins cleaned or inspected
☒ Complete inspection of all stormwater treatment structures

Annual Requirements

- ☒ Annual opportunity for public participation in review and implementation of SWMP
- ☒ Comply with State Public Notice requirements
- ☒ 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
- ☒ All curbed roadways have been swept a minimum of one time per year

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

Annual Requirements

*Public Education and Outreach**

- ☒ Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☐ Provide 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)*

Phosphorus (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☒ Distribute an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorus-free fertilizers
- ☒ Distribute an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☐ Distribute 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

- ☐ Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Potential structural BMPs

- Any structural BMPs listed in Attachment 3 to Appendix F already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the phosphorus
- ☐ removal by the BMP consistent with Attachment 1 to Appendix H. Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each annual report

Use the box below to input additional details on any unchecked boxes above or any additional information you would like to share as part of your self assessment:

Structural BMPs will be tracked and estimates for nutrient removal developed in accordance with Attachment 1 to Appendix H in Year 2.

In fall of Year 2, the NSRWA on behalf of Hanover will be completing the following outreach:

- Septic maintenance press release, social media post, webpage and brochure (Appendix F and H requirement)
- Leaf litter press release, social media post, webpage and brochure (Fall messaging for Appendix H requirement).

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:

N/A

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 the reporting period:

Below, report on the educational messages completed during the first year. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

BMP: Regional Rain Barrel Sale

Message Description and Distribution Method:

Education about water conservation and the reduction of stormwater from impervious surfaces. Information about the sale went out in the North South River Watershed Association (NSRWA) E-newsletter to 6,000+ regional subscribers.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Distribute at least two educational messages within the permit term (5 years).

There were 12 rain barrels sold in Hanover.

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:

This event was developed by the NSRWA on behalf of Hanover and supplements the outreach listed on Hanover's NOI.

BMP: Gardening Green Expo

Message Description and Distribution Method:

Regional event for WaterSmart South Shore Communities that provides information on how residents can reduce stormwater pollution from better landscaping practices. Information about the event went out in the North South River Watershed Association's (NSRWA) E-newsletter four times to 6,000+ subscribers each time. The videos of the speakers were added to the NSRWA website and shared online and on Facebook. A press release went out to the town, the Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. Several Facebook posts were made on the NSRWA page.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Distribute at least two educational messages within the permit term (5 years).

There were 500 guests in attendance.

Message Date(s): March 26, 2019

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

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

If yes, describe why the change was made:

This event was developed by the NSRWA on behalf of Hanover and supplements the outreach listed on the NOI.

BMP: Greenscapes Guide

Message Description and Distribution Method:

Digital download of landscaping techniques that reduce stormwater pollutants (fertilizers, pesticides, herbicides). It was promoted online and on the NSRWA Facebook page with a reach of 2,831 people and 187 engagements (regionally).

Targeted Audience: Residents

Responsible Department/Parties: NSRWA

Measurable Goal(s):

Distribute at least two educational messages within the permit term (5 years).

There have been six downloads from Hanover at this time.

Message Date(s): May 22, 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:

This event was developed by the NSRWA on behalf of Hanover and supplements the outreach listed on the NOI.

BMP: Grass Clippings and Fertilizer Message

Message Description and Distribution Method:

Grass Clippings and Fertilizer Message posted to Hanover Connect Facebook page. Know Before You Mow and Your Not Just Fertilizing Your Lawn posted to Town Stormwater Page and on Hanover Connect Facebook page. The grass clippings Facebook post was boosted in June with a \$50 ad targeted to all WaterSmart towns with a reach of 9,678 and 266 engagements, and a \$50 ad targeted to Hanover with a reach of 3,279 and 388 engagements.

Targeted Audience: Residents

Responsible Department/Parties: NSRWA

Measurable Goal(s):

Distribute annual messaging in accordance with the Town's Phosphorus impairment.

357 web page views on Know Before You Mow! and 23 web page views on Best Mowing Practices and 19 web page views on the Stormwater page.

Message Date(s): May 22, 2019

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

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

If yes, describe why the change was made:

BMP: Pet Waste Education Article

Message Description and Distribution Method:

An article was written on The Problem of Dog Waste on the South Shore. This was sent to the Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. The Patriot Ledger wrote a feature on it from our press release, and WATD The South Shore Radio Station did an on air interview. It was posted on the NSRWA Facebook page.

Targeted Audience: Residents

Responsible Department/Parties: NSRWA

Measurable Goal(s):

Distribute annual messaging in accordance with the Town's Bacteria/Pathogens impairment and TMDL and Phosphorus impairment.

The NSRWA's Facebook post had a reach of 1,556 people and 197 engagements.

Message Date(s): June 19, 2019

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

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

If yes, describe why the change was made:

BMP: Pet Waste Education "Scoop It" Cards

Message Description and Distribution Method:

Printed "Scoop It" cards, web article, press release, and social media post. Distributed to the town clerk's

office (100), VCA Roberts Animal Hospital (100), Petsmart (100), and Petco (100).

Targeted Audience: Residents

Responsible Department/Parties: NSRWA, CDMI (Community Development Municipal Inspections Department)

Measurable Goal(s):

Distribute annual messaging in accordance with the Town's Bacteria/Pathogens impairment and TMDL and Phosphorus impairment.

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:

June 19, 2019

BMP: School Program

Message Description and Distribution Method:

Stormwater and conservation messaging - Groundwater model, watershed model and cleaning dirty water taught to 5th grade students and parent volunteers in school program. The program ran for 1 day and there were 160 students and 12 parent volunteers. A press release went out to the town, the Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. The program was also posted on the NSRWA Facebook page with a reach of 1,200 people and 44 engagements, and on the Hanover Connect Facebook page.

Targeted Audience: Residents

Responsible Department/Parties: NSRWA

Measurable Goal(s):

Annual school participation of program.

In a sample survey, 85% of the students and 80% of the parents reported having a greater understanding of where their water comes from AFTER the program, 85% of the students and 80% of the parents reported having a greater understanding of the importance of conserving water AFTER the program, and 80% of the students and parents reported having a greater understanding of how pollutants and runoff affect the quality of water AFTER the program.

Message Date(s): June 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:

Add an Educational Message

MCM2: Public Participation

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

Annual review and public comment of the SWMP. Plan posted to Town of Hanover's website on 6/29/2019.

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

Describe any other public involvement or participation opportunities conducted during the reporting period:

Annual cleanup days (April 25 through May 1, 2019), annual stream bank cleaning events with NSRWA and sponsorship of Paint and Household Hazardous Waste collection day (October 5, 2018).

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

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:

Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified since 2013.

Total number of SSOs identified:

Total number of SSOs removed:

MS4 System Mapping

Describe the status of your MS4 map, including any progress made during the reporting period:

A consulting company was contracted to utilize existing GIS data and previous outfall sampling results to map the locations of known storm drain outfalls and conduct an initial catchment delineation. Hanover has

contracted the consulting company to complete outfall screening and sampling (wet and dry) to be completed in Year 2.

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:

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

Percent of total 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:

N/A

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:

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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: [UNITS]

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.

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:

N/A

Employee Training

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

Annual IDDE implementation training. MS4 Permit meetings and education held on: 1/9/19, 3/13/19, 4/3/19, 5/30/19.

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:

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

Ordinance Development

Describe the status of the post-construction ordinance required to be complete in year 2 of the permit term:

Completed.

As-built Drawings

Describe the status of 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 required to be complete in year 2 of the permit term:

None to date.

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:

None to date.

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:

None to date.

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:

None to date.

MCM6: Good Housekeeping

Catch Basin Cleaning

Describe the status of the catch basin cleaning optimization plan:

Hanover cleans all catch basins annually. Therefore, this fulfills the requirement of an optimization plan.

If complete, attach the catch basin cleaning optimization plan or the schedule to gather information to develop the optimization plan:

- ☒ The catch basin cleaning optimization plan or schedule is attached to the email submission
- ☐ The catch basin cleaning optimization plan or schedule can be found at the following website:

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, if known.

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:

N/A

Street Sweeping

Describe the status of the written procedures for sweeping streets and municipal-owned lots:

Drafted.

Report on street sweeping completed during the reporting period using one of the three metrics below.

- ☒ Number of miles cleaned:
- ☐ Volume of material removed:
- ☐ Weight of material removed:

If applicable:

For rural uncurbed roadways with no catch basins, describe the progress of the inspection, documentation, and targeted sweeping plan:

N/A

Winter Road Maintenance

Describe the status of the written procedures for winter road maintenance including the storage of salt and sand:

Drafted.

Inventory of Permittee-Owned Properties

Describe the status of the inventory, due in year 2 of the permit term, of permittee-owned properties, including parks and open spaces, buildings and facilities, and vehicles and equipment, and include any updates:

Drafted.

O&M Procedures for Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment

Describe the status of the operation and maintenance procedures, due in year 2 of the permit term, of permittee-owned properties (parks and open spaces, buildings and facilities, vehicles and equipment) and include maintenance activities associated with each:

Hanover has hired a consulting company to complete these operation and maintenance plans, to be completed in Year 2.

Stormwater Pollution Prevention Plan (SWPPP)

Describe the status of any SWPPP, due in year 2 of the permit term, for permittee-owned or operated facilities including maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater:

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:

O&M Procedures for Stormwater Treatment Structures

Describe the status of the written procedure for stormwater treatment structure maintenance:

Drafted.

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:

N/A

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:

During this reporting period, a consulting company was contracted to inspect the Town's 25 stormwater BMPs, noting BMP type, condition and issues related to excess sedimentation, excess vegetation, soil erosion,

clogging, trash/debris, oil/grease and invasive species. The company also drafted a Constructed BMP Inspection SOP.

Additionally, the consultant company conducted facility audits at 22 town-owned facilities and evaluated the use, outdoor storage and disposal of solid and hazardous waste; landscape procedures; pet waste handling procedures; and waste management equipment.

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

Yes, I agree ☒

- Complete system mapping Phase I
- Begin investigations of catchments associated with Problem Outfalls
- Develop or modify an ordinance or other regulatory mechanism for post-construction stormwater runoff from new development and redevelopment
- Establish and implement written procedures to require the submission of as-built drawings no later than two years after the completion of construction projects
- Develop, if not already developed, written operations and maintenance procedures
- Develop an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; review annually and update as necessary
- Establish a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner
- Develop and implement a written SWPPP for maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater
- Enclose or cover storage piles of salt or piles containing salt used for deicing or other purposes
- Develop, if not already developed, written procedures for sweeping streets and municipal-owned lots
- Develop, if not already developed, written procedures for winter road maintenance including storage of salt and sand
- Develop, if not already developed, a schedule for catch basin cleaning
- Develop, if not already developed, a written procedure for stormwater treatment structure maintenance
- Develop a written catchment investigation procedure (*18 months*)

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 in the last 5 years
- 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

Provide any additional details on activities planned for permit year 2 below:

The Town of Hanover will continue to work with the North South River Watershed Association on its education and outreach. In Year 2, the NSRWA on behalf of Hanover will be completing the following outreach in addition to its yearly outreach and education efforts:

- Septic maintenance press release, social media post, webpage and brochure (Appendix F and H requirement)
- Proper management of waste materials and dumpsters press release, social media post, webpage and brochure
- Leaf litter press release, social media post, webpage and brochure (Appendix H requirement)
- Proper sediment and erosion control management press release, social media post, webpage and brochure.

Part V: Certification of Small MS4 Annual Report 2019

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]*