

# 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](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.

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#### **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.

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**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.

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**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:

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### **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:

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### **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

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### **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:

*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]*

**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:

Mapping of open conveyances and interconnects was scheduled for two people and this could not be completed due to COVID health and safety protocols,

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - ☐ This is not applicable because we do not have sanitary sewer
  - ☒ This is not applicable because we did not find any new SSOs
  - ☐ The updated SSO inventory is attached to the email submission
  - ☐ The updated SSO inventory can be found at the following website:
- ☐ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☒ Provided training to employees involved in IDDE program within the reporting period
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Updated outfall and interconnection inventory and priority ranking as needed

*Optional:* If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

The Town is restructuring their Highway Garage salt storage shed, at which time the storage of catch basin cleanings and street sweepings will be re-located to that area to prevent discharge to receiving waters.

**Bacteria/ Pathogens** (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)Annual Requirements*Public Education and Outreach\**

- ☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

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

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

**Phosphorus** (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)Annual Requirements*Public Education and Outreach\**

- ☒ Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- ☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

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

*Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

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

*Potential structural BMPs*

Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.

- ☐ The BMP information is attached to the email submission
- ☐ The BMP information can be found at the following website:

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

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

### Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

☐ Yes

☒ No

If yes, describe below, including any relevant impairments or TMDLs:

Cushing Brook (MA94-40): Category 5 – E. Coli impairment added  
Drinkwater River (MA94-21): Category 5 – Fecal Coliform and E. Coli TMDL added  
French Stream (MA94-03): Category 5 – Fecal Coliform and E. Coli TMDL added  
Indian Head River (MA94-04): Category 5 – E. Coli impairment added  
Longwater Brook (MA94-39): NEW Category 5 – E. Coli impairment  
North River (MA94-05): Category 5 – Fecal Coliform and E. Coli TMDL added



## 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: School curriculum, programs, press release, social media post**

Message Description and Distribution Method:

School Program: Stormwater and conservation messaging - Groundwater model, watershed model and cleaning dirty water taught to elementary school students and parent volunteers in school program

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Due to the Covid-19 pandemic, the school program had to go virtual. Environmental Educator Brian Taylor created videos on the school program content that teachers used with their students. The teachers also had the Watershed Jeopardy game to play with the students. All of the teachers were also given a packet of supplemental materials to go with the program.

A press release went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. There were 535 views on the school program web page. The program was also posted on the NSRWA Facebook page with a reach of 884 people and 83 engagements.

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: Press release, social media post, flyer, web page**

Message Description and Distribution Method:

Regional Rain Barrel Sale - Education about water conservation and the reduction of stormwater from impervious surfaces

Targeted Audience:

Responsible Department/Parties:

## Measurable Goal(s):

A press release to went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. Facebook posts were made on the NSRWA page and town connect pages. Information about the sale went out in the NSRWA E-newsletter to 7,800+ subscribers. There were 60 rain barrels sold with 9 sold to residents of Hanover.

Message Date(s): March 5, 2020

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

**BMP:Special event, festival, fairs**

## Message Description and Distribution Method:

Gardening Green Expo - Regional event for WaterSmart South Shore Communities that provides information on how residents can reduce stormwater pollution from better landscaping practices.

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

## Measurable Goal(s):

Due to the Covid-19 pandemic, the Gardening Green Expo had to go virtual. We put speaker videos online and we had 2,399 web page views. We took orders for rain barrels, had downloadable water saving plant lists, and also reposted last years speaker videos. We also had a drawing for a custom water saving garden design and 38 people registered for that drawing.

Message Date(s): March 12, 2020

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

**BMP:Brochures and pamphlets, social media posts**

## Message Description and Distribution Method:

Greenscapes Guide - Digital download of landscaping techniques that reduce stormwater pollutants (fertilizers, pesticides, herbicides)

Targeted Audience: Residents

Responsible Department/Parties: 

Measurable Goal(s):

Due to the Covid-19 pandemic, the Greenscapes Guide could not be handed out at Gardening Green Expo. The downloadable Greenscapes Guide was promoted online and on the NSRWA Facebook page. It was also promoted on the Hanover Connect Facebook page. There were 2 downloads from Hanover. We also held a How to Build a Rain Garden Zoom webinar with 25 attendees.

Message Date(s): June 25, 2020

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

---

**BMP:Social media posts**

Message Description and Distribution Method:

MS4 message - Fertilizer for May

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A fertilizer message was posted on the NSRWA Facebook page in June. The fertilizer message had a reach of 23,001 people and 2,183 engagements. It was also posted to the Hanover Connect Facebook page. The fertilizer message Facebook post was boosted in June with a \$50 ad targeted to Hanover with a reach of 2,207 people and 217 engagements. There were also 19 page views on the Know Before You Mow! web page, 106 page views on the Best Mowing Practices web page, and 172 page views on the Stormwater web page. We also hosted a Zoom webinar on Stormwater in May with 17 attendees.

Message Date(s): May 13, 2020

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☒Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

---

**BMP:Social media posts**

Message Description and Distribution Method:

MS4 messages - Grass Clippings in June

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A grass clippings message was posted on the NSRWA Facebook page in June with a reach of 119,638 people and 24,325 engagements. It was also posted to the Hanover Connect Facebook page. The Facebook post was boosted in June with a \$50 ad targeted to Hanover with a reach of 14,301 people and 654 engagements. There were also 19 page views on the Know Before You Mow! web page, 106 page views on the Best Mowing Practices web page, and 172 page views on the Stormwater web page.

Message Date(s): June 16, 2020

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

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

If yes, describe why the change was made:

---

**BMP: Brochures and Pamphlets, social media posts, press release**

Message Description and Distribution Method:

Pet Waste Education - Printed Scoop It cards, web article, press release, and social media posts for June

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

Due to the Covid-19 pandemic, the Pet waste Scoop It cards were not distributed to town clerk's offices, vets and businesses. An article was written on The Problem of Dog Waste on the South Shore. This was sent to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. It was posted on the NSRWA Facebook page with a reach of 67,503 people and 10,088 engagements, and on the Hanover Connect Facebook page. The Facebook post was boosted with a \$50 ad targeted to Hanover with a reach of 8,352 people and 223 engagements. There were also 453 page views on The Problem of Dog Waste on the South Shore web page, 22 page views on the Pet Waste Education page, 202 page views on the Addressing the Elephant in the Room - Dog Waste on the South Shore web page.

Message Date(s): June 2, 2020

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

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

If yes, describe why the change was made:

**BMP:Press release, social media post, web page, brochure**

Message Description and Distribution Method:

Septic maintenance - Maintenance of septic systems, corresponding with SepticSmart week in September

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A press release to went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. A Facebook post was boosted in September with a \$50 ad targeted to all WaterSmart towns with a reach of 27,648 people and 656 engagements, and a \$50 ad targeted to Hanover with a reach of 2,992 people and 181 engagements.

Message Date(s): September 18, 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:Social media posts**

Message Description and Distribution Method:

"MS4 messages - DON'T BLOW IT!Don't blow, sweep or dump grass clippings and yard waste into streets or storm drains. Social media posts for October "

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A message about leaf litter was posted on the NSRWA Facebook page in October. The Facebook post was boosted in October with a \$50 ad targeted to all WaterSmart towns with a reach of 25,444 people and 1,492 engagements, and a \$50 ad targeted to Hanover with a reach of 1,685 people and 196 engagements. There were also 106 page views on the Best Mowing Practices web page, and 172 page views on the Stormwater web page.

Message Date(s): October 18, 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:Brochure to be handed out with permits in towns**

Message Description and Distribution Method:

Proper Sediment and Erosion Control Management - Provided by Planning, Conservation, Building Department at permit request

Targeted Audience: Developers (construction)

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A brochure entitled Construction Stormwater Pollution Prevention Guide was created and delivered to the town Building Department. These brochures will be handed to the person when they receive their permit. There were 750 distributed to the town of Hanover.

Message Date(s): October 2019 and Onward

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:Press release, social media post, web page**

Message Description and Distribution Method:

Video Contest - Video submissions will help educate the public about stormwater pollution and water conservation

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

NSRWA held a WaterSmart Video Contest. Submissions were 1-3 minute videos to help educate the public by creating a fun video that highlights either stormwater pollution and how to prevent it, or ways to conserve water. We partnered with Harbor Media for the contest and they provided the guidelines as well as a cash prize for the 1st place winner. All of the videos were shared on the NSRWA and WaterSmart website pages and on social media.

Message Date(s): Summer of 2020

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

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

If yes, describe why the change was made:

This outreach was developed by the NSRWA to supplement outreach listed on the NOI.

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:**

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 this reporting period:**

Household Hazardous Waste Collection Day held at Transfer Station 8/5/2019.

## 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:

Due to COVID-19, some mapping tasks were scheduled for two people and this could not be completed due to health and safety protocols. These are scheduled to be completed in Year 3.

### **Screening of Outfalls/Interconnections**

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

- ☒ The outfall screening data is attached to the email submission
- ☐ The outfall screening data can be found at the following website:

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

Number of outfalls screened:

### **Catchment Investigations**

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

- ☐ The catchment investigation data is attached to the email submission
- ☐ The catchment investigation data can be found at the following website:

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

Number of catchment investigations completed this reporting period:

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

Percent of total catchments investigated:

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

### **IDDE Progress**



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

- ☐ The illicit discharge removal report is attached to the email submission
- ☐ The illicit discharge removal report can be found at the following website:

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

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed:  gallons/day

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

Total number of illicit discharges identified:

Total number of illicit discharges removed:

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

### **Employee Training**

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

IDDE Training was given to DPW Staff on February 11, 2020 at the DPW Facility.  
Site Plan Review and Inspection Training on January 16, 2020 at the Town Hall.

### **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:

Developments requiring site plan review from the Planning Board are required to undergo Stormwater Management Review. Plans are submitted to an engineering firm specializing in Stormwater Management Peer Reviews.

## **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:

Section 12 of the Town of Hanover Rules and Regulations Governing the Subdivision of Land state that: "Upon completion of the work, the permittee shall submit a report (including certified as-built construction plans) from a Professional Engineer (P.E.), surveyor, certifying that all erosion and sediment control devices, and approved changes and modifications, have been completed in accordance with the conditions of the approved Stormwater Permit. Any discrepancies should be noted in the cover letter."

Section 9D of the Town of Hanover Rules and Regulations Governing the Subdivision of Land state that an Operation and Maintenance Plan is required at the time of application for all projects.

### **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**

*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: 411

Number of catch basins cleaned: 411

Total volume or mass of material removed from all catch basins: 55 cubic yards

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

Total number of catch basins: 2,831

*If applicable:*

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

### **Street Sweeping**

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

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

Cleaning of all Town catch basins is performed annually in the Spring. The Town was unable to clean all catch basins this year due to COVID-19 restrictions that occurred in the Spring. Because the Town has historically cleaned all catch basins once per year, no catch basin sumps are expected to be more than 50% full.

### **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:

In Year 3, the NSRWA will be completing the following outreach (in addition to NSRWA's annual initiatives):

- Pet waste handout/mailer to go with dog licensing; distribute to residents at local veterinarian offices and local pet stores & WaterSmart website. This outreach effort was delayed this year due to COVID-19.
- Messaging involving proper management of waste materials and dumpsters to minimize contaminants from entering stormwater; distributed to businesses, institutions, and commercial facilities via a press release, social media post, web page, and brochure.
- Messaging involving proper management of waste materials and dumpsters to minimize contaminants from entering stormwater; distributed to industrial facilities via a press release, social media post, web page, and brochure.
- Messaging involving parking lot maintenance, salt storage, sweeping, catch basin cleaning, and fleet maintenance; distribute to residents via a press release, social media post, web page, and brochure.

## Part V: Certification of Small MS4 Annual Report 2020

### **40 CFR 144.32(d) Certification**

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

Name:

Title:

Signature:

Date:

*[Signatory may be a duly authorized representative]*

*Note: When prompted during signing, save the document under a new file name.*

### **Annual Report Submission**

*Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.*

EPA: [stormwater.reports@epa.gov](mailto:stormwater.reports@epa.gov)

MassDEP: [laura.schifman@mass.gov](mailto:laura.schifman@mass.gov)

### **Paper Signature:**

*If you did not sign electronically above, you can print the signature page by clicking the button below.*

Print Signature Page

*Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.*

Lock Form

# Year 3 Annual Report

## Massachusetts Small MS4 General Permit

### Reporting Period: July 1, 2020-June 30, 2021

**\*\*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, 2020 and June 30, 2021 unless otherwise requested.*

### 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:

City: Hanover

State: MA

Zip Code: 02339

Email: vdiniak@hanoverdpw.org

Phone Number: (781) 826-3189

#### Stormwater Management Program (SWMP) Information

SWMP Location (web address): <https://www.hanover-ma.gov/stormwater-management/pages/stormwater-management-plan-and-reports>

Date SWMP was Last Updated: Jun 28, 2021

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

N/A



## 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 3 Requirements

- ☒ Inspected and screened all outfalls/interconnections (excluding Problem and Excluded outfalls)
- ☒ Updated outfall/interconnection priority ranking based on the information collected during the dry weather inspections as necessary
- ☒ Post-construction bylaw, ordinance, or other regulatory mechanism was updated and adopted consistent with permit requirements

**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 3 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:

There are 12 remaining potential outfalls needed to be screened. These outfalls were attempted to be screened during Year 3, but could not be located because they may not exist or could not be located due to dense vegetation. Another attempt will be made in late fall 2021 when vegetation is less dense.

### 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:

N/A

- ☒ 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 system map due in year 2 as necessary
- ☒ 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, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

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

Annual Requirements

*Public Education and Outreach\**

- ☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

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

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

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

### Annual Requirements

#### *Public Education and Outreach\**

- ☒ Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- ☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

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

#### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

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

#### *Potential structural BMPs*

- ☐ Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.

- ☐ The BMP information is attached to the email submission
- ☐ The BMP information can be found at the following website:

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

## **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:

The Town has inspected and cleaned all 2,472 catch basins to ensure that no sump shall be more than 50 percent full in accordance with solids, oils, and grease annual requirements. Catch basins on Winter Street were cleaned twice due to loading from P.A. Landers Operations.

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

The Town cleans all their catch basins annually and no catch basins have been identified that are greater than 50 percent full.

### 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:

Three outfalls were removed from the Town's MS4 Outfall inventory (CP-55-O, 396-O, 410-O), because based on field investigations they do not exist.

## 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: School curriculum, programs, press release, social media post**

Message Description and Distribution Method:

School Program: Stormwater and conservation messaging - Groundwater model, watershed model and cleaning dirty water taught to elementary school students and parent volunteers in school program.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Due to the Covid-19 pandemic, the school program had to go virtual. Environmental Educator Brian Taylor created videos on the school program content that teachers used with their students. The teachers also had a Watershed Jeopardy game to play with the students. All of the teachers were also given a packet of supplemental materials to go with the program.

A press release to went out to the Town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. There were 371 views on the school program web page and 270 views on the NSRWA's YouTube channel. The program was also posted on the NSRWA Facebook page .

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: Press release, social media post, flyer, web page**

Message Description and Distribution Method:

Regional Rain Barrel Sale - Education about water conservation and the reduction of stormwater from impervious surfaces.

Targeted Audience:

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A press release to went out to the Town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. Facebook posts were made on the NSRWA page and town connect pages. Information about the sale went out in the NSRWA E-newsletter to 10,000+ subscribers. There were 135 rain barrels sold with 12 sold to residents of Hanover.

Message Date(s): Winter/Spring 2021

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: Special event, festival, fairs**

Message Description and Distribution Method:

Gardening Green Expo - Regional event for WaterSmart South Shore Communities that provides information on how residents can reduce stormwater pollution from better landscaping practices.

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

Due to the Covid-19 pandemic, the Gardening Green Expo had to go virtual. NSRWA had a week long event with live sessions each day as well as prerecorded speaker videos. There were 639 live attendees, as well as 1,007 YouTube viewers. NSRWA put speaker videos online and had 4,170 web page views. They took orders for rain barrels, had downloadable water saving plant lists, and also reposted last years' speaker videos. They also had a drawing for free products and prizes including a custom water-saving garden design and 115 people registered for that drawing.

Message Date(s): February 2021

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: Brochures and pamphlets, social media posts**

Message Description and Distribution Method:

Greenscapes Guide - Digital download of landscaping techniques that reduce stormwater pollutants

(fertilizers, pesticides, herbicides)

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

The downloadable Greenscapes Guide was promoted online and on the NSRWA Facebook page. It was also promoted on the Hanover Connect Facebook page. There were 118 total downloads with 8 from Hanover.

Message Date(s): 7/21/20, 5/11/21

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: Social media posts**

Message Description and Distribution Method:

MS4 message - Fertilizer for spring

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A message about fertilizer was posted on the NSRWA Facebook page in May. The "You're Just Not Fertilizing the Lawn!" post had a reach of 32,922 people and 2,697 engagements. The post was boosted in Hanover for \$50 for 10 days with a reach of 3,073 people and 161 engagements. There were also 209 page views on the stormwater web pages.

Message Date(s): 5/19/21

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: Social media posts**

Message Description and Distribution Method:

MS4 messages - Grass Clippings in June



Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A grass clippings message was posted on the NSRWA Facebook page in June. The grass clippings message had a reach of 121,097 people and 24,424 engagements. It was also posted to the Hanover Connect Facebook page. There were also 16 page views on the Know Before You Mow! web page, 101 page views on the Best Mowing Practices web page, and 209 page views on the stormwater web pages.

Message Date(s): 6/3/21

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: Brochures and Pamphlets, social media posts, press release**

Message Description and Distribution Method:

Pet Waste Education - Printed Scoop It cards, web article, press release, and social media posts for June

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

Pet waste Scoop It cards were distributed to the town clerk's office (100), VCA Roberts Animal Hospital (100), Petsmart (100) and Petco (100). A post was created and posted on the NSRWA Facebook page and on the Hanover Connect Facebook page. An article was written on Addressing the Dog Waste Problem on the South Shore. This was sent to The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. There was also a live interview done on WATD. There were 66 page views on The Problem of Dog Waste on the South Shore web page and 243 page views on the Pet Waste Education page.

Message Date(s): 10/20/20, 6/2/21, 6/17/21

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: Press release, social media post, web page, brochure**

**Message Description and Distribution Method:**

Septic maintenance - Maintenance of septic systems, corresponding with SepticSmart week in September

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

A press release on septic maintenance went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. A Facebook post was boosted in September with a \$50 ad for 10 days targeted to Hanover with a reach of 7,994 people and 321 engagements.

Message Date(s): 9/17/20

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: Social media posts****Message Description and Distribution Method:**

MS4 messages - fall leaf litter

DON'T BLOW IT! Don't blow, sweep or dump grass clippings and yard waste into streets or storm drains  
social media posts

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

A message about leaf litter was posted on the NSRWA Facebook page in October. The Don't Blow It! message had a reach of 32,252 people and 3,431 engagements. The Facebook post was also boosted in Hanover with a \$50 ad for 10 days with a reach of 3,212 people and 143 engagements.

Message Date(s): 10/16/20

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: Brochure to be handed out with permits in towns**

**Message Description and Distribution Method:**

Proper Sediment and Erosion Control Management - Provided by Planning, Conservation, Building Department at permit request.

Targeted Audience: Developers (construction)

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

A brochure entitled Construction Stormwater Pollution Prevention Guide was created and delivered to the town Building Department. These brochures are handed to people when they receive their permit.

Message Date(s): ongoing

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

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

If yes, describe why the change was made:

---

**BMP: Press release, social media post, web page****Message Description and Distribution Method:**

6" x 11" postcard was created and mailed to all of the Businesses, Institutions, Commercial Facilities and Industrial Facilities in Hanover. There was a checklist of best practices on dumpster maintenance for companies to use on the postcard. It also included an online contest for people who respond to the questionnaire.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

There were 1,480 postcards mailed in Hanover and 2 contest entries.

Message Date(s): ongoing

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

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

If yes, describe why the change was made:

---

**BMP: Water for People WMA Grant**

**Message Description and Distribution Method:**

The NSRWA also received a WMA Grant on behalf of Hanover and other WaterSmart towns. For this grant, the NSRWA produced a series of videos, an online pledge, and lawn signs on lawn watering. This campaign will continue through the end of August.

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

As of June 15, there have been 14,171 people reached and 373 engagements on Facebook in Hanover. There have also been 863 YouTube views.

Message Date(s): ongoing

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

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

If yes, describe why the change was made:

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**BMP: Fowl Water Campaign****Message Description and Distribution Method:**

Stormwater social media video campaign called "Fowl Water" that educates residents on how "stormwater pollution is trash, oil, cigarette butts, & dog waste." Campaign is run by Think Blue Massachusetts (<https://thinkbluemassachusetts.org/>) and published with advertisements on Facebook, Instagram, & YouTube.

Targeted Audience: Residents

Responsible Department/Parties: Think Blue Massachusetts

**Measurable Goal(s):**

Think Blue Massachusetts reports that 17,107 people in Hanover have been reached by this campaign through Facebook and YouTube.

Message Date(s): May 17 to July 4, 2021

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 outreach was developed by Think Blue on behalf of the Town to supplement outreach already noted on the NOI.

---

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:**

Annual review and public comment of the 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:**

The Household Hazardous Waste Collection Day was held at the Transfer Station 10/3/2020. Hanover is a part of the South Shore Recycling Cooperative.

The Town of Hanover is a member of the North and South Rivers Watershed Association.

## 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:*

The Town does not have any known interconnections.

### 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 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 outfalls/interconnections screened **to date**.*

Percent of outfalls screened:

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

There are 12 remaining potential outfalls to be screened. These outfalls were attempted to be screened during Year 3, but were not located possibly because they do not exist or they could not be located due to dense vegetation. Another attempt to locate these outfalls will be performed in the fall 2021 when vegetation should be less dense.

### **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 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:*

### **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 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:

### **Employee Training**

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

Training with DPW staff on May 24 to review Town facility and BMP conditions, review good housekeeping procedures (including proper storage of materials, maintenance of BMPs, cleaning and maintenance of catch basins) and LID. Additional stormwater training with DPW staff was provided in September 2021, after delays and safety concerns related to COVID-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:

*Optional:* Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

Developments requiring Site Plan review from the Planning Board are required to undergo Stormwater Management Review. Plans are submitted to an engineering firm specializing in Stormwater Management for peer review.

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

### **As-built Drawings**

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

Number of as-built drawings received:

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

### **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:

To be completed in Year 4.

### **Green Infrastructure Report**

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

To be completed in Year 4.

### **Retrofit Properties Inventory**



Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

To be completed in Year 4.

## MCM6: Good Housekeeping

### Catch Basin Cleaning

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

Number of catch basins inspected: 2,472

Number of catch basins cleaned: 2,472

Total volume or mass of material removed from all catch basins: 425 cubic yards

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

Total number of catch basins: 2,472

*If applicable:*

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

### Street Sweeping

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

☒ Number of miles cleaned: 116

☐ Volume of material removed: [Select Units]

☐ Weight of material removed: [Select Units]

### 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: 8

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

The Town disposed of their catch basin cleanings stockpiles that were stored at the DPW highway garage, to eliminate potential discharge from the piles into nearby waterbodies. Removed salt pile at Transfer Station to reduce salt runoff into on-site stormwater controls.

## **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 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

### **Activities Planned for Next Reporting Period**

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 4 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Develop a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover
- Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
- Identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas

### **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)

Provide any additional details on activities planned for permit year 4 below:

In Year 4, the NSRWA will be completing the following outreach (in addition to NSRWA's annual initiatives):

- Parking Lot Maintenance - The NSRWA will provide education relevant to parking lot maintenance, salt storage, sweeping, catch basin cleaning, and fleet maintenance to Hanover businesses.
- Low Impact Development Information Targeted to Developers - The NSRWA will provide education relevant to reduction of impervious surfaces, use of alternatives to paving, decentralized approach to stormwater, rain gardens, swales, and bioretention area.
- WaterSmart Public Art Raffle or Contest - The NSRWA will come up with a stormwater message for residents to coincide with either an art raffle or a public contest to spread the message.

## Part V: Certification of Small MS4 Annual Report 2021

### **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]*

# Year 4 Annual Report

## Massachusetts Small MS4 General Permit

### Reporting Period: July 1, 2021-June 30, 2022

**\*\*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, 2021 and June 30, 2022 unless otherwise requested.*

## 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:

City: Hanover

State: MA

Zip Code: 02339

Email: vdiniak@hanoverdpw.org

Phone Number: (781) 826-3189

### Stormwater Management Program (SWMP) Information

SWMP Location (web address): <https://www.hanover-ma.gov/stormwater-management/pages/stormwater-management-plan-and-reports>

Date SWMP was Last Updated: September 2022

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

N/A

## 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 4 Requirements

- Developed a report assessing current street design and parking lot guidelines and other local
- ☒ requirements within the municipality that affect the creation of impervious cover, made it available as part of the SWMP, and:

- ☐ No updates were recommended  
☒ Updates were recommended. The anticipated date or date of completion for updates is/was:

Items identified in the report described above are under consideration.

- Developed a report assessing local regulations to determine the feasibility of making green
- ☒ infrastructure practices allowable when appropriate site conditions exist, made it available as part of the SWMP, and:

- ☐ No updates were recommended  
☒ Updates were recommended. The anticipated date or date of completion for updates is/was:

Items identified in the report described above are under consideration.

- ☒ Identified a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious cover

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

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - ☒ This is not applicable because we do not have sanitary sewer
  - ☐ This is not applicable because we did not find any new SSOs
  - ☐ The updated SSO inventory is attached to the email submission
  - ☐ The updated SSO inventory can be found at the following website:
- ☒ 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:

**Bacteria/ Pathogens** (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)Annual Requirements*Public Education and Outreach\**

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



- ☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria
- \* Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

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

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

### Annual Requirements

#### *Public Education and Outreach\**

- ☒ Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- ☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

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

#### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

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

#### *Phosphorus Source Identification Report*

- ☒ Completed the Phosphorus Source Identification Report
- ☒ The Phosphorus Source Identification Report is attached to the email submission
- ☐ The Phosphorus Source Identification Report can be found at the following website:

#### *Potential structural BMPs*

- Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.

- ☐ The BMP information is attached to the email submission
- ☐ The BMP information can be found at the following website:

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

### **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 website:

- ☒ 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:

The Town cleans all their catch basins annually and no catch basins have been identified that are greater than 50 percent full.

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

### **Part III: Receiving Waters/Impaired Waters/TMDL**

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

☐ Yes

☒ No

If yes, describe below, including any relevant impairments or TMDLs:

## 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:** 16

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:School Program: Stormwater and conservation messaging**

Message Description and Distribution Method:

School Program: Stormwater and conservation messaging - Groundwater model, watershed model and cleaning dirty water taught to elementary school students and parent volunteers in school program

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

Due to continuing Covid-19 precautions, the school program was virtual this year. Environmental Educator Brian Taylor created a new series of videos that teachers used with their students. The teachers also had the Watershed Jeopardy game to play with the kids. All of the teachers were also given a packet of supplemental materials to go with the program. The schools are going to try to book a live session in the fall, depending on the state of Covid at that time. There were 504 views on the school program web page. The program was also posted on the NSRWA Facebook page with a reach of 1,412 people and 64 engagements.

Message Date(s): 2018, 2019, 2020, 2021, 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:

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#### **BMP:Regional Rain Barrel Sale**

Message Description and Distribution Method:

Regional Rain Barrel Sale - Education about water conservation and the reduction of stormwater from impervious surfaces

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

A press release to went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. Facebook posts were made on the NSRWA page and town connect pages. There was a \$50 boost of the Facebook ad that resulted in 1,807 web views, 2,099 people reached, and 219 engagements. Information about the sale went out in the NSRWA E-newsletter to 10,900+ subscribers. There were 50 rain barrels sold with 0 sold to residents of Hanover.

Message Date(s): 2018, 2019, 2020, 2021, 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: Gardening Green Expo****Message Description and Distribution Method:**

Gardening Green Expo - Regional event for WaterSmart South Shore Communities that provides information on how residents can reduce stormwater pollution from better landscaping practices.

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

**Measurable Goal(s):**

Due to continuing Covid-19 precautions, the Gardening Green Expo was virtual. We put speaker videos online and we had 3,120 web page views and 256 YouTube views. We took orders for rain barrels, had downloadable water saving plant lists, and also reposted last years' speaker videos. We also had a drawing for signed books, garden signs, gift certificates, a rain barrel, and more, and 193 people registered for that drawing.

Message Date(s): 2018, 2019, 2020, 2021, 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:

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**BMP: Greenscapes Guide****Message Description and Distribution Method:**

Greenscapes Guide - Digital download of landscaping techniques that reduce stormwater pollutants (fertilizers, pesticides, herbicides)

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

Due to continuing Covid-19 precautions, the Greenscapes Guide could not be handed out at Gardening Green Expo. The downloadable Greenscapes Guide was promoted online and on the NSRWA Facebook page. It was also promoted on the Hanover Connect Facebook page. There were 455 web page views, 54 downloads, and 1 download from Hanover.

Message Date(s): 2018, 2019, 2020, 2021, 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:

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#### **BMP:MS4 message - Fertilizer for May/June**

Message Description and Distribution Method:

MS4 message - Fertilizer for May/June

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A fertilizer message was posted on the NSRWA Facebook page in June. The fertilizer message had a reach of 43,004 people and 4,388 engagements. It was also posted to the Hanover Connect Facebook page. The fertilizer message Facebook post was boosted in June with a \$50 ad targeted to Hanover with a reach of 4,570 people and 194 engagements. There were also 14 page views on the Know Before You Mow! web page, 85 page views on the Best Mowing Practices web page, and 140 page views on the Stormwater web page.

Message Date(s): 2018, 2019, 2020, 2021, 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:

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#### **BMP:MS4 messages - Grass Clippings in June**

Message Description and Distribution Method:

MS4 messages - Grass Clippings in June

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A grass clippings message was posted on the NSRWA Facebook page in June. The grass clippings message had a reach of 15,881 people and 2,901 engagements. It was also posted to the Hanover Connect Facebook page. The grass clippings Facebook post was boosted in June with a \$50 ad targeted to Hanover with a reach of 1,671 people and 74 engagements. There were also 14 page views on the Know Before You Mow! web page, 85 page views on the Best Mowing Practices web page, and 140 page views on the Stormwater web page.

Message Date(s): 2018, 2019, 2020, 2021, 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:

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### **BMP:Pet Waste Education**

Message Description and Distribution Method:

Pet Waste Education - Printed Scoop It cards, web article, press release, and social media posts for June

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

Pet waste Scoop It cards were distributed to the town clerk's office (100), the VCA Roberts Animal Hospital (100), and Petsmart (100). 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. It was posted on the NSRWA Facebook page with a reach of 28,604 people and 2,930 engagements. A \$50 ad was targeted to Hanover ending on June 26. As of June 23, it had a reach of 1,918 people and 164 engagements. There were also 195 page views on The Problem of Dog Waste on the South Shore web page, 302 page views on the Pet Waste Education page, 195 page views on the Addressing the Elephant in the Room - Dog Waste on the South Shore web page.

Message Date(s): 2018, 2019, 2020, 2021, 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:

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**BMP:Septic Maintenance**

Message Description and Distribution Method:

Septic Maintenance - Maintenance of septic systems, corresponding with SepticSmart week in September

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A press release to went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Hanover Mariner. A Facebook ad was posted in September with a reach of 1,178 people and 59 engagements, and a \$50 ad was targeted to Hanover with a reach of 7,994 people and 321 engagements.

Message Date(s): 2019, 2020, 2021, 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:

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**BMP:MS4 Messages - HELP KEEP STORM DRAINS CLEAN**

Message Description and Distribution Method:

MS4 Messages - HELP KEEP STORM DRAINS CLEAN - Don't blow, sweep or dump leaf litter and yard waste into streets or storm drains. Social media posts for October

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A message about leaf litter was posted on the NSRWA Facebook page in October. The HELP KEEP STORM DRAINS CLEAN message had a reach of 47,120 people and 4,787 engagements. The Facebook post was boosted in October with a \$50 ad targeted to Hanover with a reach of 4,423 people and 163 engagements. There were also 85 page views on the Best Mowing Practices web page, and 140 page views on the Stormwater web page. Both messages were also posted to the Hanover Connect Facebook page.

Message Date(s): 2019, 2020, 2021, 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:

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### **BMP:Proper Sediment and Erosion Control Management**

Message Description and Distribution Method:

Proper Sediment and Erosion Control Management - Provided by Planning, Conservation, Building Department at permit request

Targeted Audience: Developers (construction)

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A brochure entitled Construction Stormwater Pollution Prevention Guide was created and delivered to all of the town departments who issue permits, including Building, Conservation, and Planning. These brochures will be handed to the person when they receive their permit. There were 750 distributed to the town of Hanover initially, and we are currently replenishing their supply.

Message Date(s): 2019, 2021, 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:

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### **BMP:Art for Water Public Art Project (August)**

Message Description and Distribution Method:

Art for Water Public Art Project (August) - We will provide a custom painted wall hanging painted by area artists to be raffled in each town and online, and there will be an education piece on stormwater and how storm drains empty unfiltered directly into our water bodies.

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

The Art for Water Public Art Project raised awareness on the fact that storm drains empty unfiltered water into our local rivers and streams. A press release and posts were used to educate the public. People could sign the pledge, make an optional donation for clean water, and enter to win one of 12 custom painted wall hangings. We boosted a Facebook ad which had a reach of 8,062 people and 468 engagements. The promotion raised, \$3,070 for clean water and we had 132 entries, 8 from Hanover.

Message Date(s): 2021, 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:

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### **BMP:Proper Management of Waste Materials and Dumpsters**

Message Description and Distribution Method:

Proper Management of Waste Materials and Dumpsters - Provide education relevant to managing and reducing waste from dumpster waste from entering stormwater

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A Best Practices Checklist for Proper Management of Waste Materials and Dumpsters was developed. This was posted on social media, was made into a downloadable file, and was posted on our WaterSmart website with 15 views so far. This was posted on South Shore business and industry Facebook groups, with a reach of 5,700+. We are working with Harbor Media to create a video which will be posted in the towns and on business and industry Facebook pages.

Message Date(s): 2021, 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:

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### **BMP:Parking Lot Maintenance**

Message Description and Distribution Method:

Parking Lot Maintenance - Salt storage, sweeping, catch basin cleaning, fleet maintenance

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A Best Practices Checklist for Parking Lot Maintenance was developed. This was posted on social media, was made into a downloadable file, and was posted on our WaterSmart website with 19 views so far. This was posted on South Shore business and industry Facebook groups, with a reach of 5,700+. We are working with Harbor Media to create a video which will be posted in the towns and on business and industry Facebook pages.

Message Date(s): 2021, 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:

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### **BMP:Low Impact Development Information Targeted to Developers**

Message Description and Distribution Method:

Low Impact Development Information Targeted to Developers - Reduction of impervious surfaces, use of alternatives to paving, decentralized approach to stormwater, rain gardens, swales, bioretention

Targeted Audience: Developers (construction)

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

This deliverable will be completed in the Summer of 2022. The permittee shall document in each annual report the messages for each audience; the method of distribution; the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program.

Message Date(s): 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:

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### **BMP:Parking Lot Maintenance**

Message Description and Distribution Method:

Parking Lot Maintenance - Salt storage, sweeping, catch basin cleaning, fleet maintenance

Targeted Audience: Industrial facilities

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

A Best Practices Checklist for Parking Lot Maintenance was developed. This was posted on social media, was made a downloadable file, and was posted on our WaterSmart website with 19 views so far. This was posted on South Shore business and industry Facebook groups, with a reach of 5,700+. We are working with Harbor

Media to create a video which will be posted in the towns and on business and industry Facebook pages.

Message Date(s): 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:

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### **BMP:Water for People**

Message Description and Distribution Method:

Water for People - WMA Grant: BRP 2021-01: Demand Management Outdoor Water Conservation Campaign

Targeted Audience: Residents

Responsible Department/Parties: North and South Rivers Watershed Association as part of the WaterSmart reg

Measurable Goal(s):

In addition to the other deliverables for the town of Hanover, the NSRWA also received a WMA Grant on behalf of the WaterSmart towns. For this grant we produced a series of videos, an online pledge, and offered FREE lawn signs. This campaign is continuing in light of recent drought conditions. As of June 20, there have been 123,777 people reached and 16,018 engagements on Facebook plus 31,449 people reached and 7,599 engagements with a Hanover specific video. There have also been 305 web views and 1,998 YouTube views.

Message Date(s): 2021, 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:

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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:**

Annual review and public comment of the 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:**

The Household Hazardous Waste Collection Day was held at the Transfer Station 10/5/2021. Hanover is a part of the South Shore Recycling Cooperative.

An annual DPW Town Cleanup Week occurred between June 20th through June 24th, 2022.

The Town of Hanover is a member of the North and South Rivers Watershed Association.

### **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:*

The Town does not have any known interconnections.

#### **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 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 outfalls/interconnections screened **to date**.*

Percent of outfalls screened:

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

There are 12 remaining outfalls that could not be located and identified. These outfalls will be located in Year 5 during catchment investigation work.

### **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 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:*

### **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 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:

### **Employee Training**

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

A training video provided by our stormwater consultant that reviewed IDDE and Good Housekeeping procedures was shown to 17 DPW staff during this reporting period.

### **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:

Developments requiring Site Plan review from the Planning Board are required to undergo Stormwater Management Review.  
Plans are submitted to an engineering firm specializing in Stormwater Management for peer review.

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

#### **Ordinance or Regulatory Mechanism**

Date update was completed (due in year 3):

### **As-built Drawings**

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

Number of as-built drawings received: 3

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

### **Retrofit Properties Inventory**

Below, list the permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (at least 5):

DPW Maintenance Garage and Storage Yard  
Sylvester School  
Cedar School  
Hanover Middle School  
Town Hall

## **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: 2,495

Number of catch basins cleaned: 2,495

Total volume or mass of material removed from all catch basins: 430

cubic yards

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

Total number of catch basins: 2,495

*If applicable:*

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



**Street Sweeping**

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

- ☒ Number of miles cleaned:
- ☐ Volume of material removed:  [Select Units]
- ☐ Weight of material removed:  [Select Units]

**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 4 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

### **Activities Planned for Next Reporting Period**

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 5 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 5 below:

## Part V: Certification of Small MS4 Annual Report 2021

### **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]*