

Year 6 Annual Report

Massachusetts Small MS4 General Permit

Reporting Period: July 1, 2023-June 30, 2024

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

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2023 and June 30, 2024 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Town of Pembroke, MA

EPA NPDES Permit Number: MAR04054

Primary MS4 Program Manager Contact Information

Name: Joseph P. Daiute

Title: Director of Public Works

Street Address Line 1: 100 Center Street

Street Address Line 2:

City: Pembroke

State: MA

Zip Code: 02359

Email: jdaiute@townofpembrokemass.org

Phone Number: (781) 709-1426

Stormwater Management Program (SWMP) Information

SWMP Location (publicly available web address): <https://www.pembroke-ma.gov/department-public-works/pages/stormwater-what-it-and-how-help>

Date SWMP was Last Updated: September 2024

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

Located at DPW Office (100 Center Street, Pembroke, MA)

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

Impairment(s)			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input checked="" type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Phosphorus
<input type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
TMDL(s)			
In State:	<input type="checkbox"/> Assabet River Phosphorus	<input checked="" type="checkbox"/> Bacteria and Pathogen	<input type="checkbox"/> Cape Cod Nitrogen
	<input type="checkbox"/> Charles River Watershed Phosphorus	<input type="checkbox"/> Lake and Pond Phosphorus	
Out of State:	<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Metals	<input type="checkbox"/> Nitrogen
	<input type="checkbox"/> Phosphorus		
<div style="border: 1px solid black; padding: 2px 10px; display: inline-block;">Clear Impairments and TMDLs</div>			

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

Annual Requirements

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

- ☒ Updated system map due in year 10 with information from completed catchment investigations
- ☐ 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:

Annual training is scheduled for Fall 2024.

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

Annual Requirements

*Public Education and Outreach**

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

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

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

Nitrogen (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) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release 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)

Structural BMPs

- ☐ Installed a structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries. The type of BMP installed is (*e.g. biofiltration*):

No BMPs were installed

- ☐ Any structural BMPs listed in Attachment 3 to Appendix F already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen 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 nitrogen removed in mass per year by the BMP were documented.

- ☒ No BMPs were installed
- ☐ The above referenced BMP information is attached to the email submission
- ☐ The above referenced BMP information can be found at the following publicly available website:

Total estimated nitrogen removed in lbs/year from the installed BMPs:

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)

Structural BMPs

- ☐ Installed a structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries. The type of BMP installed is (*e.g. biofiltration*):

No BMPs were installed

- ☐ 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.

- ☒ No BMPs were installed
- ☐ The above referenced BMP information is attached to the email submission
- ☐ The above referenced BMP information can be found at the following publicly available website:

Total estimated phosphorus removed in **lbs/year** from the installed BMPs:

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:

Two (2) new outfalls were identified and given the identifiers of O-528 and O-529. In addition, six (6) outfalls were investigated and found to be culvert structures, and thus were taken off the town's outfall inventory list. The addition of two outfalls and removal of six outfalls creates a new total outfall inventory of 123 outfalls.

In this period, MassDEP published Total Maximum Daily Load (TMDL) reports for three (3) waterbodies. Oldham Pond (MA94114; Category 5 Water) is no longer impaired for non-native fish/shellfish/zooplankton and is now impaired for Asian Clam. North River (MA94-05; Category 5) has added a pollutant impairment for Enterococcus. Indian Head River (MA94-22; Category 5) has added a non-pollutant impairment for fish passage barriers

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: 1 - School Program: Stormwater and Conservation Messaging

Message Description and Distribution Method:

Groundwater model, watershed model, cleaning dirty water, and more, taught to elementary school students and parent volunteers in school program

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

School programs are in-person now. We have a series of videos and the Watershed Jeopardy game that the teachers use before our live visit. The curriculum consists of 6 hands-on educational activity stations, plus a packet of supplemental materials to go with the program. There were 190 students who participated in the program in 3 school visits. The students also had field trip to Herring Run Park in Pembroke. In a sample survey, 58% of the students understood where their water comes from, the importance of conserving water, and how pollutants affect water quality before the program, and 91% understood the concepts after the program. A press release went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Pembroke Mariner & Express. There were 775 views on the school program web page which has the virtual videos. The program was also posted on the NSRWA Facebook page and the Pembroke Connect 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: 2 - Regional Rain Barrel Sale

Message Description and Distribution Method:

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 went out to the town, The Globe, the Patriot Ledger, Wicked Local, and the Pembroke Mariner & Express. There were 9,382 web page views. A Facebook post was made on the NSRWA page that had a reach of 14,330 people and 1,048 engagements. It was also posted on the Pembroke Connect Facebook page. There was a \$50 boost of the Facebook ad targeted to Pembroke that resulted in 9,528 people reached, and 339 engagements. Posts were also made on Instagram. Information about the sale went out in the NSRWA E-newsletter to 11,500+ subscribers. There were 81 rain barrels sold with 6 sold to residents of Pembroke.

Message Date(s): 2018, 2019, 2020, 2021, 2022, 2023, 2024

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: 3 - 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.

Targeted Audience: Residents

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

Measurable Goal(s):

Gardening Green Expo was a virtual and live event this year. We had 5 Zoom lectures with 450 attendees. The featured speaker was renowned author Doug Tallamy. The live event at Kennedy's Country Gardens had 4 live speakers, 30 vendor tables, and 400 attendees. There were multiple posts on the NSRWA Facebook and Instagram pages. There was a \$50 boosted Facebook ad that resulted in 14,653 people reached, and 624 engagements. There have been 5,869 web views and 1,574 YouTube views to date.

Message Date(s): 2018, 2019, 2020, 2021, 2022, 2023, 2024

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: 4 - Greenscapes Guide

Message Description and Distribution Method:

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. The web page has had 1,100 views to date. The post had a reach of 3,821 people and 193 engagements. It was also promoted on the Pembroke Connect Facebook page. There was a \$50 boost of the Facebook ad targeted to Pembroke that started on June 12 and will run through July 12. To date, that post resulted in 413 people reached, and 41 engagements. There were 65 downloads so far, with 5 from Pembroke.

Message Date(s): 2018, 2019, 2020, 2021, 2022, 2023, June 12 - July 12, 2024

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: 5 - MS4 Message

Message Description and Distribution Method:

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 April. The fertilizer message had a reach of 225,100 people and 3,105 engagements. It was also posted to the Pembroke Connect Facebook page. The Facebook post was boosted in April with a \$50 ad targeted to Pembroke, that ran for 30 days. That boosted ad had a reach of 3,810 people and 329 engagements. There were also 6 page views on the Know Before You Mow! web page, 92 page views on the Best Mowing Practices web page, and 481 page views on the Stormwater web page.

Message Date(s): 2018, 2019, 2020, 2021, 2022, 2023, 2024

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: 6 - MS4 Message

Message Description and Distribution Method:

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):

The grass clipping message was sent out in our E-newsletter to 12,500+ people. 58 people clicked on the link in the article that led to our Greenscapes page. That page has had 1,100 views to date. The message was posted on the NSRWA Facebook page and on the Pembroke Connect Facebook page. The NSRWA post ran on June 13, and had a reach of 403 people and 25 engagements to date.

Message Date(s): 2018, 2019, 2020, 2021, 2022, 2023, June 13, 2024

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: 7 - Pet Waste Education

Message Description and Distribution Method:

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 are being distributed to the town clerk's office (100), Pembroke Animal Hospital (100), and Blue Ribbon Veterinary Services (100). A post was created and posted on the NSRWA Facebook page and on the Pembroke Connect Facebook page. On June 20, the NSRWA post had 4,754 people reached and 797 engagements. There was a \$50 boost of the Facebook ad targeted to Pembroke that started on June 18 and will run through July 18. An article is being written on the Dog Waste Problem on the South Shore. This will be sent to The Globe, the Patriot Ledger, Wicked Local, and the Pembroke Mariner & Express. The pet waste message will also be sent out in our E-newsletter to 12, 500+ people.

Message Date(s): 2018, 2019, 2020, 2021, 2022, 2023, June 18 - July 18, 2024

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: 8 - Septic Maintenance

Message Description and Distribution Method:

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 Pembroke Mariner & Express. A post was made on the NSRWA Facebook page in September. A \$50 Facebook ad was targeted to Pembroke with a reach of 6,660 people and 307 engagements. There have been 912 web page views to date.

Message Date(s): 2019, 2020, 2021, 2022, 2023, 2024

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: 9 - Leaf Litter

Message Description and Distribution Method:

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 message had a reach of 42,956 people, and 4,233 engagements. The Facebook post was boosted with a \$50 ad targeted to Pembroke with a reach of 6,686 people and 268 engagements. There were also 98 page views on the Best Mowing Practices web page, and 481 page views on the Stormwater web page.

Message Date(s): 2019, 2020, 2021, 2022, October 2023

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

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

If yes, describe why the change was made:

BMP: 10 - Proper Sediment and Erosion Control Management

Message Description and Distribution Method:

Provided by Building department at permit request. A brochure entitled Construction Stormwater Pollution Prevention Guide was created and delivered to the Building department. These brochures will be handed to the person when they receive their permit.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

There were 500 distributed to the town of Pembroke initially, and the NSRWA is currently replenishing their supply.

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: 11 - Enter to Win a Rain Garden Seed Kit Contest with Questions

Message Description and Distribution Method:

Press release, social media post, web page. The NSRWA held a Rain Garden Seed Kit Contest with education on how to build a rain garden. The contest was posted on the NSRWA Facebook page in September. The post had a reach of 28,259 people and 2,898 engagements. The Facebook post was boosted with a \$50 ad targeted to Pembroke with a reach of 4,604 people and 201 engagements.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

There were 2,590 web page views and 236 entries, with 9 entries from Pembroke. All entrants were asked 3 multiple choice questions referring back to the information on the contest web page. The correct answers were then sent back as a response email after the person registered. We also sent links so that people could download other rain garden resources. 50 winners were chosen and sent a seed kit containing 5 types of native seeds from Blue Stem Natives.

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: 12 - Proper Management of Waste Materials and Dumpsters

Message Description and Distribution Method:

Web page, social media post, educational video, and Free Parking Lot Maintenance Checklist. The NSRWA created a Best Practices Checklist for Proper Management of Waste Materials and Dumpsters.

Targeted Audience: Businesses, Institutions, Commercial Facilities and Industrial Facilities

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

Measurable Goal(s):

This downloadable file was posted on a WaterSmart web page with 131 views and 4 downloads. We also created an educational video that was posted on our website and Facebook page. It was also posted on 16 South Shore business and industry Facebook groups, with a combined reach of 41,800+. It was also run on the Pembroke Connect Facebook page.

Message Date(s): 2022, 2023, 2024

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: 13 - Parking Lot Maintenance

Message Description and Distribution Method:

Web page, social media post, educational video, and Free Parking Lot Maintenance Checklist. The NSRWA created a Best Practices Checklist for Parking Lot Maintenance.

Targeted Audience: Businesses, Institutions, Commercial Facilities & Industrial Facilities

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

Measurable Goal(s):

This downloadable file was posted on a WaterSmart website page with 140 views to date. The NSRWA also created an educational video that was posted on our website and Facebook page. It was also posted on 16 South Shore business and industry Facebook groups, with a combined reach of 41,800+. It was also posted on the Pembroke Connect Facebook page.

Message Date(s): 2022, 2023, 2024

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: 14 - Low Impact Development Information Targeted to Developers

Message Description and Distribution Method:

Reduction of impervious surfaces, use of alternatives to paving, decentralized approach to stormwater, rain gardens, swales, bioretention. A brochure on Low Impact Development was created and delivered to the Building department in 2023. The town of Pembroke received 500 in the initial delivery.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

These will be handed out with permits. The supply is being backfilled for 2024. The NSRWA created a web page that had 98 views so far. It was also posted on the NSRWA Facebook page in June with a reach of 386 people and 24 engagements to date.

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: 15 - Sustainable Gardening - Rain Barrel Alternatives

Message Description and Distribution Method:

It's been a rainy year, which means it's a great time to consider storing all this excess water for use when the weather becomes hot and dry! Did you know that an average rain barrel can be filled by just a 1/4 inch of rain collected from your rooftop? This can be useful in cutting down your water bill and is a great resource during outdoor water bans. To learn more about rain barrels, including how to install, check out this helpful page: <https://www.mass.gov/.../rain-barrels-and-other-water....> #sustainablegardening #rainbarrels #collectrainwater

Targeted Audience: Residents

Responsible Department/Parties: Town of Pembroke

Measurable Goal(s):

Promote sustainable gardening and rain barrel usage. Advertised via Town of Pembroke, MA Government Facebook page. This message was part of the Town's sustainable gardening series.

Message Date(s): June 27, 2024

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: 16 - Greenscapes: Create a Healthy Yard

Message Description and Distribution Method:

The Town posted a pamphlet entitled "Greenscapes: Creating a Healthy Yard" on the Stormwater - What it is and How to Help - page of the Town website. This pamphlet highlights the benefits and downsides between organic and synthetic fertilization techniques.

Targeted Audience: Residents

Responsible Department/Parties: Town of Pembroke

Measurable Goal(s):

Distribute two messages to each targeted audience during the permit term.

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: 17 - Lawn and Garden Tips to Help Curb Stormwater Pollution

Message Description and Distribution Method:

The Town posted a link to Think Blue Massachusetts "Lawn and Garden Tips to Help Curb Stormwater Pollution". The online pamphlet includes tips on leaving grass clippings to fertilize your lawn naturally, how high to cut grass, and more.

Targeted Audience: Residents

Responsible Department/Parties: Town of Pembroke

Measurable Goal(s):

Distributed in accordance with the Town's Nitrogen and Phosphorus impairments.

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: 18 - Stormwater Solutions Brochure

Message Description and Distribution Method:

The Town posted a "Stormwater Solutions" brochure on the Stormwater - What it is and How to Help - page of their website, which highlights easy things residents can do in their every day lives to protect water resources.

Targeted Audience: Residents

Responsible Department/Parties: Town of Pembroke

Measurable Goal(s):

The Stormwater - What it is and How to Help - web page is always available for Pembroke residents to look at and reference.

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: 19 - Stormwater: What the Heck is it and Why Should We Care?

Message Description and Distribution Method:

The Town posted a "Stormwater: What the Heck is it and Why Should We Care?" article on the Stormwater - What it is and How to Help - web page of their website, which explains what stormwater is, and how residents can become stormwater stewards.

Targeted Audience: Residents

Responsible Department/Parties: Town of Pembroke

Measurable Goal(s):

The Stormwater - What it is and How to Help - web page is always available for residents to look at and reference.

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: 20 - Be a Leaf Hero Slide Show

Message Description and Distribution Method:

The Town posted a "Be a Leaf Hero" slide show on the Stormwater - What it is and How to Help - web page of their website, which stresses the importance of keeping leaf litter out of our waterways, as well as other stormwater leaf hero tips.

Targeted Audience: Residents

Responsible Department/Parties: Town of Pembroke

Measurable Goal(s):

The Stormwater - What it is and How to Help - web page is always available for residents to look at and reference.

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:

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 SWMP and posting of plan on Town's DPW Stormwater website and in DPW Office.

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

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

The Town hosts biannual household hazardous waste collection days, and yearly waterway clean-ups.

In the spring, the Town launched a spring cleaning series and a sustainable gardening series to promote recycling and sharing tips on reducing watering.

The NSRWA hosted a meeting with Pembroke, Hanover and Hanson stakeholders to provide an update on the Indian Head River Restoration proposal which would include potential removal of West Elm Street's Luddam's Ford and State Street/Cross Street's dams. The event was held on December 5, 2023 at Hanover Highschool.

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

Percent of Phase II map complete:

Optional: Provide additional status information regarding your map:

In Year 6, the Town refined its mapping of outfalls, catch basins, manholes, inlets, outlets, and drain pipes. Mapping of interconnections is ongoing.

Screening of Outfalls/Interconnections

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

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

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

Number of outfalls screened: 2

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

Percent of outfalls screened: 100

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

Two (2) new outfalls were identified and given the identifiers of O-528 and O-529. In addition, six (6) outfalls were investigated and found to be culvert structures, and thus were taken off the town's outfall inventory list. The addition of two outfalls and removal of six outfalls creates a new total outfall inventory of 123 outfalls. All Town Outfalls were screened, the Town has a list of structures that are in need of clearing or maintenance.

Catchment Investigations

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

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

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

Number of catchment investigations completed this reporting period: 24

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

Percent of total catchments investigated: 58

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

A total of 36 town-owned catchments were completed. Of that total, 24 were complete and 12 are incomplete pending town assistance. During investigations, EP identified two (2) additional outfalls and removed six (6) outfalls that were identified as culvert systems. This reduces the total inventory to 123 outfalls.

IDDE Progress

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

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

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

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

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

Total number of illicit discharges identified:

Total number of illicit discharges removed:

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

Employee Training

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

Annual training is scheduled for Fall 2024.

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

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

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

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3): Not completed – under review.

Website of ordinance or regulatory mechanism:

As-built Drawings

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

Number of as-built drawings received: 0

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

Street Design and Parking Lots Report

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

The Town has not made any changes.

Green Infrastructure Report

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

The Town has not made any changes.

Retrofit Properties Inventory

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

1. Transfer Station/DPW Garage/Cemetery, 387 Mattakeesett Street
2. Community Middle School, 570 School Street
3. North Pembroke Elementary School, 72 Pilgrim Road
4. Town Hall, 100 Center Street
5. Police Station, 80 Center Street

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

A new Safety Building is in the engineering design and planning phase and is to be completed next year, this project includes construction of the new combined Police and Fire Station, located at the intersection of Barker Street (Rt. 14) and Washington Street (Rt. 53) - the Town is considering stormwater design aspects of the project site and will work to identify areas to include new stormwater control measures.

MCM6: Good Housekeeping

Catch Basin Cleaning

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

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

Street Sweeping

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

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

Year 7

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

Yes, I agree ☒

- Complete investigations of catchments associated with Problem Outfalls
- Complete investigations of catchments where any information gathered on the outfall/interconnection identifies sewer input

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 7 below:

Part V: Certification of Small MS4 Annual Report 2023

40 CFR 144.32(d) Certification

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

Name:

JOSEPH DAUTE

Title:

D.P.W. Director

Signature:

Joseph Daute

Date:

9/24/24

[Signatory may be a duly authorized representative]