

**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>

<b><u>Impairment(s)</u></b>			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Phosphorus
<input type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
<b><u>TMDL(s)</u></b>			
<i>In State:</i>	<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	
<i>Out of State:</i>	<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Metals	<input checked="" type="checkbox"/> Nitrogen
			<input type="checkbox"/> Phosphorus
			<input type="button" value="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:

We did not complete mapping requirements due to COVID-19. We were scheduled to finish mapping interconnections in March - May, this did not occur. The Town of Palmer received an asset management grant from MA DEP in January, that included funds for the completion of the mapping. Due to COVID 19

this was placed on hold and will begin November 2020. This grant that will allow us to finish the required mapping of interconnections but also includes complete system mapping of all culverts, pipes, manholes, catchbasins, etc as required under phase 2 mapping.

### 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:
 

In Appendix 9 of SWMP
- 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:

### **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:

**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)

*Potential structural BMPs*

Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H 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 1 to Appendix H. 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.

- 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:

## 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: "The Big 6" Stormwater Pollutants**

Message Description and Distribution Method:

Social media post shared on the Palmer Conservation Commission's facebook page describing the six most common stormwater pollutants: Yard Waste, Pet Waste, Litter, Hazardous Household Materials, Vehicle Maintenance and Pesticides/Herbicides use. Original post from NC Clean Water Education Partnership

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

42 people reached & engagements from Palmer Conservation Commission's 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:

Added

#### **BMP: Only Rain down the Drain**

Message Description and Distribution Method:

Social media post shared on the Palmer Conservation Commission's facebook page describing illicit discharges. Original post from Larry the H2O Hero

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

49 people reached & engagements from Palmer Conservation Commission's Facebook page

Message Date(s): June 29, 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:

Added

**BMP: Resident Message - Stormwater pollution is trash, oil, cigarette butts, & dog waste.**

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>) Advertisement on Facebook & YouTube. Social media post shared on the Palmer Conservation Commission's facebook page

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

18,049 social media impressions from residents of the Town of Palmer  
Over 7 Million impressions across Massachusetts  
36 views on the Palmer Conservation Commission Facebook page

Message Date(s): July 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: Resident Message - Stormwater pollution is trash, oil, cigarette butts, & dog waste.**

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>) Advertisement on Facebook & YouTube. Social media post shared on the Palmer Conservation Commission's facebook page

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

33,188 social media impressions from residents of the Town of Palmer  
Over 13 Million impressions across Massachusetts  
52 views on the Palmer Conservation Commissions webpage

Message Date(s): June 2020; locally posted June 15, 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: Pet Waste & Scoop the Poop**

Message Description and Distribution Method:

A series of messages were issued this year to drive people to the Think Blue Connecticut River website resources on pet waste, particularly a pledge to pick up pet waste. These messages included multiple Facebook posts, pet waste instructions added to the website, and an electronic form to pledge pet waste pick up. The Town of Palmer also did electronic and direct mail distribution of post cards to dog owners with the renewal of Dog license. An additional Facebook post was added during “stay at home orders” for Covid-19 given the amount of pet waste Connecticut River Stormwater Committee members were seeing at parks, along streets, and in storm drains. All of this effort was further boosted for summer with a banner pet waste message on MassLive targeting dog owners specifically. Social media posts were shared on the Palmer Conservation Commission's facebook page.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee & PVPC

Measurable Goal(s):

Shared pet waste meme from PVPC, Think Blue Massachusetts to the Conservation Commission Facebook page on:

- August 2, 2019: 40 page views
- September 26, 2019: 33 page views
- February 3, 2020: 75 page views
- June 23, 2020: 42 page views
- June 24, 2020: 46 page views

Distributed pet waste flyer & PUP Pledge Card

- 815 copies sent out from Town Clerks office with Dog Licenses renewals
- 50-100 copies distributed at National Night Out, August 7, 2020 estimated over 200 attendees

The boosted Facebook posts from PVPC reached 15,552 people who followed through with 406 clicks.

A MassLive banner provided 175,015 impressions with 296 clicks to more information.

During Year 2, Think Blue Connecticut River pet waste page on the website had 730 page views with the analytics indicating that the average time spent by visitors on that resource page was 1 minute and 33 seconds. Of the 189 visitors who proceeded to the pick up pet waste pledge, 70% or 122 people made the commitment to pick up pet waste.

- For summer 2019 message, issued posters and Facebook post on July 30, 2019 (pledge was not yet set up)

Message Date(s):

- Time of licensing 2020, Facebook posts on January 31, February 3, February 6, and boosted post by zip code on February 10
- Electronic and direct mail distribution of post cards during February and March
- For Covid-19 messaging, Facebook post boosted by zip code on April 8
- For summer 2020 message, MassLive Banner ad from June 25 through July 24

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:

The NOI/SWMP indicated pet waste messaging only in summer months but EPA has indicated that additional messaging to dog owners “at time of licensing” is required. Messaging at time of licensing has been added in Year 2, along with additional messaging on pet waste during “stay at home” orders with the pandemic given the increased visibility of associated problems. This was to provide additional messaging.

### **BMP: Think Blue Connecticut River Website**

Message Description and Distribution Method:

The Think Blue Connecticut River website is at the core of all regional messaging about stormwater. The website at [www.thinkblueconnecticutriver.org](http://www.thinkblueconnecticutriver.org) does the following:

- Covers major areas of messaging about reducing polluted stormwater flows, including lawn and yard care, pet waste management, car care, controlling soil erosion, soaking up the rain, and septic system care
- Addresses the key 4 audiences plus educators
- Serves as the “landing place” for information on nearly all social media messaging

Targeted Audience: Residents, business/institutional/commercial, developers, and industrial

Responsible Department/Parties: PVPC staff and web site consultant

Measurable Goal(s):

1,477 people visited the Think Blue Connecticut River website during Year 2 and spent an average of 1 minute, 53 seconds on viewing a total of 3,252 pages on stormwater best practices.

Message Date(s): July 1, 2019 through June 30, 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:

The website was not mentioned in the NOI and SWMP, but with development now completed is most central to all messaging in the region.

### **BMP: Covid-19 litter**

Message Description and Distribution Method:

Connecticut River Stormwater Committee members noted at the April 6, 2020 meeting that all are seeing a

tremendous increase in three types of waste likely attributable to Covid-19 and recent stay at home orders. The waste includes: protective latex gloves and alcohol nip bottles strewn on the ground in many places, and increased pet waste either unbagged, but even bagged and left in place. The heightened concern of disease transmission likely plays a part in the uptick in this type of litter. As such, PVPC staff worked on a press release and boosted Facebook post with the key messaging being, “storm flows carry this waste to the river, and we don’t want to be swimming in it come summer.” The press release yielded a high visibility evening news segment on Channel 22/WWLP, on April 9. Social media posts were shared on the Palmer Conservation Commission's facebook page.

Targeted Audience: Residents, and business/institutional/commercial

Responsible Department/Parties: PVPC staff

Measurable Goal(s):

PVPC April 10 Facebook post: 3,450 impressions, 1,234 engagements, and 19 likes and 124 shares  
WWLP, Channel 22 news story views and blog post views could not be obtained, but these numbers are likely in the thousands or tens of thousands.

Shared the WWLP blog post from PVPC, to the Conservation Commission Facebook page on April 10, 2020 and had 74 views & 2 likes

Message Date(s): April 10, 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 Covid-19 related litter messaging was not mentioned in the NOI and SWMP, but was seen as important addition and completed as part of Year 2 messaging in the region.

### **BMP: Annual septic maintenance message**

Message Description and Distribution Method:

The Think Blue Connecticut River website contains a great resource page on septic system care that includes an infographic on maintenance. To promote the resources on this page for homeowners, the Connecticut River Stormwater Committee did a boosted Facebook post timed to coincide with EPA’s Septic Smart Week in September. Social media posts were shared on the Palmer Conservation Commission's facebook page. Original post was shared from EPA

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

21 views Think Blue Massachusetts  
27 views Think Blue CT River

Message Date(s): September 16, 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: Cigarette butts**

Message Description and Distribution Method:

Materials and messaging for this campaign to reduce cigarette butt litter were developed within the reporting period. Due to general sense that messaging would get lost in the mix given far greater public concern with the Covid-19 pandemic, actual launch of campaign messaging was postponed from Year 2 to Year 3. The campaign includes:

- Image of baby bird with cigarette butt in its mouth with message (as shown below)
- Large decals (2x3 feet) for public works vehicles throughout the region
- Web page with additional information on cigarette butt litter and link to informational video from Canadian public broadcasting
- Press release to local media
- Boosted FB post to be shared with MA Audubon and the Connecticut River Conservancy and that links to resources on Think Blue Connecticut River website

Social media posts from Think Blue Massachusetts were shared on the Palmer Conservation Commission's facebook page.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Commission, PVPC & Think Blue Massachusetts

Measurable Goal(s):

Shared messages from Think Blue Massachusetts to the Conservation Commission Facebook page on:

- February 13, 2020: 23 page views
- February 19, 2020: 33 page views
- February 20, 2020: 40 page views

Message Date(s): February 13, 2020, February 19, 2020, February 20, 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:

Additional Message

**BMP: Dumpster waste and avoiding contaminated flows message**

Message Description and Distribution Method:

Materials and messaging for this campaign on dumpster waste and avoiding contaminated flows were developed within the reporting period. Due to general sense that messaging would get lost in the mix given far greater public concern with the Covid-19 pandemic, actual launch of campaign messaging was postponed from Year 2 to Year 3. The campaign includes:

- Presentation that was to be given at March 12 Western Mass Health Officers Association/MassDEP annual spring seminar focused on environmental health
- Flyer to inform Boards of Health on proactive regulatory and educational steps to curb stormwater pollution from dumpsters
- Flyer for Boards of Health for use as part of routine interactions with retail complexes, restaurants/food establishments, and apartment complexes
- Check list for Boards of Health (developed by Town of Palmer Conservation Agent) to use when inspecting restaurants and looking at dumpsters and oil storage. Social media posts were shared on the Palmer Conservation Commission's facebook page.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

Shared Think Blue Massachusetts Post on February 14, 2020 and received 27 page views

Message Date(s): February 14, 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:

side from postponing message from Year 2 to Year 3, we learned in the process of developing the campaign that distribution of flyers directly to dumpster companies to provide to customers was not going to be a fruitful strategy. Better to work with Boards of Health to inform them and then get them to distribute the information to dumpster companies (who are allowed/permitted by boards to operate in the community) and to businesses when health agents they are doing routine inspections. The education and outreach effort became two pronged and now includes an additional flyer specifically for Boards of Health.

Given Covid-19 and the demands on Boards of Health during this time, there is agreement among committee members that the best approach will be two pronged for Year 3:

- Post information on Think Blue Connecticut River website with the two PDF documents/flyers on dumpsters, along with a checklist for Boards of Health to use when inspecting restaurants and looking at dumpsters and oil storage.

- Prepare article for MA Health Officers Association Executive Director to announce resources about dumpsters to memberships in the Western MA Public Health Association and the MA Environmental Health Association.

For now, we will put on hold the idea of individual visits with boards of health in each member community to

provide brief presentation and stress importance of this work in reducing contaminated stormwater flows.

### **BMP: Erosion and sediment control**

#### Message Description and Distribution Method:

To get some messaging out to developers for Year 2, municipal members agreed that it makes good sense to distribute a letter on municipal letterhead and an EPA brochure on erosion and sediment control to drainlayers operating within their communities. This was a strategy used by Tewksbury Public Works Director Arthur Marcos, kindly shared his draft letter language. PVPC staff developed a contact list for drain layers operating in the region, updated Mr. Marcos' letter and sent those materials along with the EPA brochure on erosion and sediment control for member use.

The Town of Palmer made use of the mailing this year, but other members have indicated they may follow through with this mailing to those operating within their respective jurisdictions in Year 3.

Targeted Audience: Developers and drainlayers specifically

Responsible Department/Parties: Conservation Commission

#### Measurable Goal(s):

9 letters were sent to locally licensed drain layers

Message Date(s): Letters sent spring 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:

Additional Messaging

### **BMP: Proper disposal of leaf litter**

#### Message Description and Distribution Method:

Messaging for this campaign was adapted from a series of four Be a Leaf Hero social media posts developed by the Cape Cod Commission and customized for the Connecticut River Stormwater Committee. The posts provide a series of tips and all tips contained a link to a more in-depth document posted on the Think Blue Connecticut River website. The in-depth document promotes better practices with leaf litter and seeks to build understanding about potential contamination of stormwater with leaf litter. Several social media posts were shared on the Palmer Conservation Commission's facebook page.

Targeted Audience: Residents & Landscapers

Responsible Department/Parties: Conservation Commission

#### Measurable Goal(s):

Social media posts were shared on the Palmer Conservation Commission's facebook page on:

- September 26, 2019: 23 page views
- September 27, 2019: 32 page views
- October 8, 2019: 25 page views
- October 16, 2019: 24 page views
- November 10, 2019: 25 page views
- November 18, 2019: 18 page views
- November 18, 2019: 21 page views
- November 25, 2019: 20 page views

Message Date(s): September 2019-November 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: Fertilizer Calculator**

Message Description and Distribution Method:

This calculator was created using guidelines from the New England Interstate Water Pollution Control Commission's Voluntary Turf Fertilizer Initiative. Residents complete the questionnaire to calculate the amount of fertilizer to apply to their lawn for their given conditions. Social media post was shared from the Neponset Stormwater Partnership on the Palmer Conservation Commission's facebook page.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

Social media posts were shared on the Palmer Conservation Commission's facebook page and received 80 views, 2 likes and 1 share.

Message Date(s): May 7, 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:

Addition

### **BMP: Importance of soil test, proper use of fertilizers, disposal of grass clippings**

Message Description and Distribution Method:

Social media post, using idea of keeping lawns safe for families. The link provided in the social media post connects to the Think Blue Connecticut River web page on lawn and yard care, which lays out important best

practices and links to useful resources, including a video by Paul Tukey, organic lawn care celebrity, as well as guides to popular lawn care chemicals and their hazards.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

PVPC had boosted Facebook posts reached 5,922 people, 110 of whom clicked to the website link for more information. Analytics indicate that the average time spent by visitors on that resource page was nearly 4 minutes. Social media posts were shared on the Palmer Conservation Commission's facebook page on June 15, 2020 and there were 44 view

Message Date(s): June 15, 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: Proper disposal of leaf litter**

Message Description and Distribution Method:

Mailing to landscapers in the region that promotes best practices and identifies locations for proper disposal of leaf litter. Best practices noted in letter are:

- Keep leaves off of driveways and roadways where they can easily wash into storm drains and contribute to higher nutrient flows during the fall season.
- Use a mulching mower. By mulching the leaves into the lawn, you avoid having to rake/blow and bag and you offer a way to manage autumn leaves while providing your client with free fertilizer. Mulched leaves put nutrients back into the ground and reduce the overall need for more soluble fertilizer products, which present greater problems for our local waterways.
- Alternatively, if your client has an existing compost pile, you can recommend that they consider allowing you to add leaves to the pile. Leaves provide a critically important element (carbon) to the composting process, making for a more soil enriching product to be used in the next growing season. Be sure compost piles are located away from streams, lakes, or storm drains as these decomposing materials and nutrients could easily leach to these water resources.

Targeted Audience: Businesses/institutions/commercial facilities

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

Mailed 27 letters to professional land care companies operating in Palmer

Message Date(s): November 4, 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: Importance of soil test, proper use of fertilizers, disposal of grass clippings**

Message Description and Distribution Method:

In-person workshop for land care companies in the region on the need for better practices based on water quality considerations, new state regulations on use of nutrients, and best practices. Updated mailing list of professional land care companies operating in Stormwater Committee member municipalities with help from regional professional association.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Workshop invitation mailing to 130 professional land care companies operating in Stormwater Committee member municipalities

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 in-person workshop had been planned for April 1 and an invitation issued to landscapers in the region. With the emergence of Covid-19 the workshop was going to be moved to the Zoom virtual meeting platform, but there was little interest expressed from landscapers. Mary Owen of UMass Extension and Hotze Wijnja of MassDAR recommended cancellation of the event as the industry was in upheaval with the pandemic. Also, the audience here was intended to be large institutions with lawns, but some difficulty in identifying these places in practice. For year 3, plan to conduct workshop and invite both these audiences.

**BMP: Annual winter deicing/salt message**

Message Description and Distribution Method:

Think Blue Massachusetts shared posts on Facebook regarding road salt application for residential, commercial, & industrial site owners on the proper storage and application rates of winter deicing material. The post focused on the problem with salt, sand and deicers getting into our water and what people can do to keep pavement safe while also keeping water clean. Original post was from the City of Cambridge DPW.

Targeted Audience:

Responsible Department/Parties:

## Measurable Goal(s):

Social media posts were shared on the Palmer Conservation Commission's facebook page and received 29 views

Message Date(s): December 9, 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:

additional message

**BMP: Palmer Stormwater Survey**

## Message Description and Distribution Method:

This short, 10-question survey was designed to gauge public knowledge regarding stormwater management in the Town of Palmer. The Conservation & Stormwater Department intends to use information collected to tailor public education and outreach initiatives.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

## Measurable Goal(s):

61 residents completed the survey.

Message Date(s): February 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:

Additional outreach

**BMP: Imagine a Day Without Water 2019**

## Message Description and Distribution Method:

Imagine a Day Without Water is a national education campaign that brings together diverse stakeholders to highlight how water is essential, invaluable, and in need of investment. Imagine A Day Without Water inundated social media with our message. Social media activities generated nearly 10 million impressions using #ValueWater and #ImagineADayWithoutWater. More information can be found at <https://imagineadaywithoutwater.org/>

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

19 views

Message Date(s): October 23, 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:

Additional messaging

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:**

Due to Covid 19 the SWMP was not reviewed during a public meeting as proposed. Instead we posted links to the SWMP on the Towns Facebook page and other community pages and gave residents a 30 day period (June 1, 2020- June 30, 2020) to provide written comment on the SWMP updates. No Comments were received.

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:**

Catch Basin Stenciling

Cleanups Shoreline: September 29, 2019 (Swift River) - Over 100 people participated in this event and we had coverage on Western MA News. Our largest clean-up to date

Household hazardous waste day

Clean-up - Roadside/General: Remote Town wide earthday clean-up April 18, 2020 with photo contest

Adopt a Catchbasin Program

Community Rain Barrel Program: CANCELLED DUE TO COVID 19

The Town of Palmer's Stormwater Coordinator participated in the Central Massachusetts Regional Stormwater Coalition (CMRSWC), the Connecticut River Stormwater Coalition (CRSC) and the Massachusetts Statewide Municipal Stormwater Coalition (Statewide Coalition). She also serves on the Education sub-committee of all three coalitions.

CMRSWC members participated in public outreach and involvement at the following public events in Year 2

of the permit:

- Holden Truck Day (July 25, 2019)
- Grafton National Night Out (August 7, 2019)
- Palmer National Night Out (August 7, 2019)
- Holden Days (August 24, 2019)
- Mass STEM Week at Framingham State University (October 22, 2019)
- Mass STEM Week at Keefe Technical High School (October 23, 2019)
- Metrowest STEM mentorship program (October 23, 2019)
- Mass STEM week showcase (October 25, 2019)
- Elementary school programs in Auburn, Dudley, Framingham, Hopkinton, and Holden
- Framingham Public Works Open House (December 7, 2019)
- MACC Annual Conference (February 29, 2020)

As a result of the COVID-19 pandemic, CMRSWC halted participation in public events from March 2020 – June 2020.

### **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:

**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:*

We had a contract with Tighe & Bond for them to conduct out outfall screening and catchment investigations, as well as additional mapping in Spring of 2020 (March-May). The proposal was for them to screen 90+ outfalls this fiscal year and the other 90+ next fiscal year. Due to COVID 19 this was delayed and is proposed to begin in November of 2020

**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:

This discharge occurred at Pump Station 5 in Bondsville (to the Swift River), which is technically outside of our MS4 area, but within 1 mile of the discharge point the Swift River meets the Ware river, which is impaired for E. Coli so the SSO was included in the report.

### **Employee Training**

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

Employees involved in the IDDE program attended training workshops sponsored by CMRSWC on May 5, 2020 and May 7, 2020 remotely via GoTo Meeting. The workshops were originally intended to be in-person but were adapted to virtual workshops due to COVID-19. The workshops trained participants on important aspects of the IDDE program, including how to recognize illicit discharges and SSOs. A summary of the training, copies of the slides, an attendee roster, and a recording of the training is available at: <https://www.centralmastormwater.org/toolbox/pages/2020-idde-workshop-ms4-assistance-grant>

Angela Panaccione attended the May 5, 2020 training and Sarah Fortune & Forris Day attended the May 7, 2020 training

### **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:

Almost all of our construction stormwater violations are a result of large scale solar arrays. The fact panels themselves are considered impervious, coupled with significant land clearing and grade changes has resulted in several blow-outs of construction stormwater BMP's. This has been an ongoing problem for years.

## **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:

The Town/of Palmer is working with model language prepared by the Pioneer Valley Planning Commission for As built and O&M requirements (including specific language on inspections that enable the development review board the ability to obtain stamped as-built drawings). The model language is provided in our updated SWMP and we anticipate adoption of this language in the coming year along with the other updates required for local stormwater management permit standards under the MS4 permit - Section 2.3.6.

### **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:

The Town/ of Palmer is on track to complete this work for Year 4 and will use several resources to help in developing the report, including EPA's technical support document entitled, "Assessing Street and Parking Design Standards to Reduce Excess Impervious Cover in New Hampshire and Massachusetts," at the following link: <https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/ImperviousAssessment.pdf>

### **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:

The Town of Palmer is on track to complete this work for Year 4 and will use several resources to help in developing the report, including MassAudubon's checklist entitled, "Supporting LID in Your Community: How to Compare Local Land Use Regulations with Best Practices" at <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm>; and guidance developed by the Pioneer Valley Planning Commission within the Green Infrastructure Toolkit at: <http://www.pvpc.org/content/green-infrastructure-toolkit>.

Among these tools, there is a 2014 checklist that consolidates guidance from three excellent checklists: the Center for Watershed Protection's Code and Ordinance Worksheet, the U.S. Environmental Protection

Agency's Water Quality Scorecard, and the Metropolitan Area Planning Council's Low Impact Development Toolkit Checklist for Regulatory Review. PVPC is planning to review and refresh this checklist in the next month.

### **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:

The Town of Palmer is on track to complete this work for Year 4 and will begin with an initial screening of properties, using an ArcGIS points based methodology developed by the Pioneer Valley Planning Commission. This initial screening will include considerations of: hydrologic soil groups, drainage areas of waters designated as Category 4a or 5 on the MA List of Integrated Waters, impervious areas larger than 1 acre, and Environmental Justice Areas. These considerations may be supplemented and fine tuned based on our local priorities. Additional investigation will be required following this initial screening to further identify the 5 priority locations.

## **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:
- 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:

SWPPP Site Inspections occurred at the WWTP, DPW Garage, Cemetery & Parks Department and the Town Hall Administration Building & Police Station in June of 2020.

## **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:

The E.Coli monitoring and source tracking program is conducted in partnership with the Chicopee 4 Rivers

Watershed Council and the Connecticut River Conservancy. Sampling occurs every other week from June to September. Each partner group monitors at different intervals and begins at different points in the season.

Volunteers are trained annually on proper sampling techniques to collect a representative sample and avoid contamination. Most groups also collect Quality Control samples to verify sampling, handling, and lab processing techniques. Most samples are lab analyzed using the Colilert system from IDEXX. Results are posted to this site within 24 hours after the sample was taken.

In Palmer we work with the Chicopee 4 Rivers Watershed Council and sample 6 sites, every other week. Those sites include: Swift River @ First Street, Ware River @ Bennett St, Forest Lake Beach, Quaboag River @ Rt 32/Rt20 crossing (Bridge Street), Quaboag River @ Rt 20 and the Quaboag River at Laviolette Field.

### **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:

Our municipality is a member of the Central Massachusetts Regional Stormwater Coalition (CMRSWC). CMRSWC was awarded an Environmental Merit Award from EPA Region 1. Each participating community, including the Town of Palmer, was recognized as part of the award. The award was presented in September 2019.

CMRSWC presented on building public awareness and the benefits of regional collaboration at the following events:

- EPA New England Soak up the Rain webinar titled “Working Together: Collaborative Stormwater Management in Central Massachusetts” (December 5, 2019)
- New England Water Environment Association Annual Conference (Jan 2020)
- Massachusetts Association of Conservation Commissions Annual Conference, presentation titled "NPDES MS4 Permit: How are Municipalities Complying with Permit Requirements?" (February 28, 2020)

CMRSWC partnered with MassDEP to sponsor two 2020 Worcester Polytechnic Institute -Water Resource Outreach Center projects: 1) “Managing Stormwater Costs” and (2) “Promoting STEM Education on Watersheds & Stormwater in MA”.

### **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:

We did not complete mapping requirements due to COVID-19. We were scheduled to finish mapping interconnections in March - May, this did not occur. The Town of Palmer received an asset management grant from MA DEP in January, that included funds for the completion of the mapping. Due to COVID 19 this was placed on hold and will begin November 2020. This grant that will allow us to finish the required mapping of interconnections but also includes complete system mapping of all culverts, pipes, manholes, catchbasins, etc.

Also we ran into issues with catch basin cleaning as well. The vacuum truck broke and was out of commission for over a month. Also the Arc Collector app we use on the Ipad will not sync with the cloud and we have

been unable to retrieve any of the records from January 2020 on. We have had tech support troubleshoot the I-pad and try to retrieve the information but were not successful. There are 27 records that will not sync so we are assuming 27 catchbasins were cleaned after January 2020.

### **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:

The Town/of Palmer is working with model language prepared by the Pioneer Valley Planning Commission for As built and O&M requirements (including specific language on inspections that enable the development review board the ability to obtain stamped as-built drawings). The model language is provided in our updated SWMP and we anticipate adoption of this language in the coming year along with the other updates required for local stormwater management permit standards under the MS4 permit - Section 2.3.6.

Additionally, in Year 3 we will be pursuing a Stormwater Enterprise in town to assist with the costs of permit administration and future capital improvements.

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

### 40 CFR 144.32(d) Certification

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

Name:  Title:

Signature:  Digitally signed by Ryan McNutt  
Date: 2020.09.28 13:18:17 -04'00' 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.*

*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.*