

Year 4 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2021-June 30, 2022

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2021 and June 30, 2022 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

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

Part II: Self-Assessment

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

Impairment(s)			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Phosphorus
<input checked="" type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
TMDL(s)			
<i>In State:</i>	<input type="checkbox"/> Assabet River Phosphorus	<input 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 4 Requirements

- Developed a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover, made it available as part of the SWMP, and:
 - No updates were recommended
 - Updates were recommended. The anticipated date or date of completion for updates is/was:

- Developed a report assessing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist, made it available as part of the SWMP, and:
 - No updates were recommended
 - Updates were recommended. The anticipated date or date of completion for updates is/was:

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

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

The Town is working with PVPC to evaluate and update Town regulations. This process is ongoing and recommendations have not yet been formalized, nor formal reports developed for street design and parking guidelines or LID barriers.

Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - This is not applicable because we do not have sanitary sewer
 - This is not applicable because we did not find any new SSOs
 - The updated SSO inventory is attached to the email submission
 - The updated SSO inventory can be found at the following website:
- Updated system map due in year 2 as necessary
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

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

-As noted below in MCM 6, catch basin inspections are proceeding slowly due to a lack of available resources. DPW will continue to seek funding and resources to meet these requirements. DPW also informally inspects multiple catch basins daily as part of routine operations and system maintenance.

-The Town-owned street sweeper was not operational much of the permit year and the DPW mechanic left employment with the Town; therefore roads were not swept during the reporting period.

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)

Nitrogen Source Identification Report

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

<https://www.longmeadow.org/1172/Municipal-Separate-Storm-Sewer-System-MS>

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:

N/A. See below.

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

-The permit does not require tracking of existing BMPs for municipalities subject to Nitrogen TMDL requirements (Appendix F, part B.I.1.c.iii). No new structural BMPs have been installed to date, but any such BMPs will be tracked as they are installed.

-The Town-owned street sweeper was not operational much of the permit year and the DPW mechanic left employment with the Town; therefore all roads were unable to be swept in accordance with the Long Island Sound Nitrogen TMDL

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

Annual Requirements

*Public Education and Outreach**

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

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Phosphorus Source Identification Report

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

<https://www.longmeadow.org/1172/Municipal-Separate-Storm-Sewer-System-MS>

Potential structural BMPs

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

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

N/A. See below.

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

-The permit does not require tracking of existing BMPs for municipalities with discharges to water quality limited waterbodies and their tributaries where phosphorus is the cause of the impairment (Appendix H, part II.I.c.iii.). No new structural BMPs have been installed to date, but any such BMPs will be tracked as they are installed.

-The Town-owned street sweeper was not operational much of the permit year and the DPW mechanic left employment with the Town; therefore all roads were unable to be swept in accordance with the impaired waters requirement

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
 - The street sweeping schedule is attached to the email submission
 - The street sweeping schedule can be found at the following website:

- Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

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

-As noted above and in more detail below in MCM 6, catch basin inspections are proceeding slowly due to a lack of available resources. DPW will continue to seek funding and resources to meet these requirements.

-The Town-owned street sweeper was not operational much of the permit year and the DPW mechanic left employment with the Town; therefore all roads were unable to be swept in accordance with the impaired waters requirement

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

The Town is a member of the Connecticut River Stormwater Committee. Additional details regarding the committee's activities, particularly education and outreach are available in the regional report on the Think Blue CT River website. <https://thinkblueconnecticutriver.org/>



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:

There have been no new changes. Previously, the Town updated its list of receiving waters to reflect the following:

- Discharges to Porter Lake that were not reflected in NOI have been added. Porter Lake is impaired for Excessive Algae (Appendix G: Total Phos.), non-native aquatic plants, and Aquatic Plants (macrophytes). Latter two are “No Monitoring Required” in Appendix G
- Longmeadow Brook is now listed as impaired for E. coli, Total Phosphorus, and Turbidity
- Connecticut River segment 34-05 is no longer considered impaired for TSS as of the publishing of the Massachusetts Year 2016 Integrated Waters List.
- All waters are listed as subject to the Long Island Sound TMDL.

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. 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 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:

Responsible Department/Parties:

Measurable Goal(s):

A total of 2,114 people visited the Think Blue Connecticut River website during Year 4 and spent an average of 36 seconds on viewing pages on stormwater best practices. Beyond the web analytics reported below on specific messages, there were the following views of the general audience pages on the Think Blue Connecticut River website, with businesses and educators each spending an average of 1.5 minutes looking at material. Residents views = 58; Businesses and Institutions views = 51; Developers views = 29; Industries views = 29; and Educators views = 39.

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:

As indicated in previous annual reports, 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: 2. Nip bottles – residents

Message Description and Distribution Method:

Materials and messaging for this campaign to reduce nip bottles litter were developed in Year 4. The

campaign, however, will be launched starting early in Year 5 to capture the largest audience possible, including students that come to the region for university studies.

PVPC staff took a staged photo of nip bottles along a stream bank that will serve as the image for this campaign and worked with Connecticut River Stormwater Committee membership to refine the message itself. The campaign includes:

- Message displayed on internal and external signs on PVRTA buses servicing the region in both English and Spanish
- Web page on Connecticut River Think Blue website with additional information on nip bottle litter
- Social media mini ad campaign that links to information on Think Blue CT River web page to be shared with large membership organizations in the region
- Press release to local media

Targeted Audience: Residents, but really all audiences in the Connecticut River Stormwater Committee region

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

To be reported in Year 5 report.

Message Date(s): To be reported in Year 5 report.

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:

Campaign has not yet started, but one adjustment made to increase reach of campaign includes translation of PVRTA bus panels ads into Spanish. Furthermore, the SWMP had indicated messaging would occur in Year 4, but we have decided to push to Year 5 to reach wider audience (when area colleges back in session).

BMP: 3. Installation of hooded catch basins to keep fuels from local surface waters

Message Description and Distribution Method:

Messaging to commercial and business owners with large parking lots involved development and distribution of a letter on the benefits of retrofitting with hooded deep sump catch basins and an offer of technical assistance from local public works officials. PVPC staff provided the draft letter to member communities to be customized and sent to local property owners.

Staff also drafted an article with similar content for publication in Business West.

Targeted Audience: Business, institutions, commercial, and industrial facilities

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

Member communities reported that the letter was sent to 31 property owners in South Hadley and 241 property owners in East Longmeadow. Agawam revised the letter into a flyer, and sent the flyer to 13,557

residents (including both households and businesses) as an insert to a publication being sent out.

Message Date(s): Letters were sent between June 1 and June 30, 2022. The article in Business West is anticipated to be published in Year 5.

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:

To optimize engagement with this audience, decided to add preparation and submission of an article to Business West. Furthermore, the work under this message will extend into Year 5 to respond to insights provided by Northampton: that letter ought to go beyond installation of hooded catch basins and recommend retrofit with planted green infrastructure facilities in parking lots. Both the letter and the article for Business West are being modified to include this additional recommendation for Year 5. Communities can opt to send out this updated letter in Year 5.

Note that to better target industrial facilities, will plan to mail updated letter directly to those industries in region that have multi-sector general permits.

BMP: 4. Low Impact Development Technologies and Strategies workshop - developers

Message Description and Distribution Method:

PVPC had several conversations with staff from the Center for Watershed Protect to prepare for a developers workshop in Western Massachusetts that would highlight new development standards in the MS4 permit and updated MA Stormwater Handbook, advance better site design practices, and promote several important new tools, including the 5 to 7 green infrastructure stormwater control measure template designs that PVPC and partner communities are developing with an engineering consultant thanks to a Section 604b grant from MassDEP. Stormwater Committee members agreed to postpone the workshop to Year 5 when it is hoped an updated Stormwater Handbook will be issued and the stormwater control measure design templates will be completed.

Targeted Audience: Developers (construction)

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

Number of people reached, including:
attending workshop
results from post workshop survey

Message Date(s): Now planned for Year 5

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 workshop had been planned for Year 4, but given that it will be important to promote new development standards as part of the workshop, it seemed important to await issuance of the draft stormwater handbook. The workshop has been postponed to Year 5.

BMP: 5. Installation of hooded catch basins to keep fuels from local surface waters – industrial facilities

Message Description and Distribution Method:

Messaging to commercial and business owners with large parking lots involved development and distribution of a letter on the benefits of retrofitting with hooded deep sump catch basins and an offer of technical assistance from local public works officials. PVPC staff provided the draft letter to member communities to be customized and sent to local property owners.

Staff also drafted an article with similar content for publication in Business West.

Targeted Audience: Industrial facilities

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

Member communities reported that the letter was sent to 31 property owners in South Hadley and 241 property owners in East Longmeadow. Agawam revised the letter into a flyer, and sent the flyer to 13,557 residents (including both households and businesses) as an insert to a publication being sent out.

Message Date(s): Letters were sent between June 1 and June 30, 2022. The article in Business West is anticipated to be published in Year 5.

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:

To optimize engagement with this audience, decided to add preparation and submission of an article to Business West. Furthermore, the work under this message will extend into Year 5 to respond to insights provided by Northampton: that letter ought to go beyond installation of hooded catch basins and recommend retrofit with planted green infrastructure facilities in parking lots. Both the letter and the article for Business West are being modified to include this additional recommendation for Year 5. Communities can opt to send out this updated letter in Year 5.

Note that to better target industrial facilities, will plan to mail updated letter directly to those industries in region that have multi-sector general permits.

BMP: 6. Proper disposal of leaf litter - residents

Message Description and Distribution Method:

PVPC reprised messaging used previously based on a Be a Leaf Hero social media posts developed by the Cape Cod Commission, but now customized for the Connecticut River Stormwater Committee.

The social media posts provide a series of tips and all tips contain a link to a page on the Think Blue Connecticut River website with more in-depth content and links. See website page at: <https://thinkblueconnecticutriver.org/be-a-leaf-hero/>. The content seeks to promote better practices with leaf litter and build understanding about potential contamination of stormwater with leaf litter.

PVPC also prepared a PDF document for member communities use on their municipal websites.

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

The Facebook ad was shown 101,008 times to 18,800 people, approximately 5 times per person, which drew 73 clicks to the website landing page.

Analytics for the Think Blue Connecticut River website, indicate that there were a total of 104 views of the Leaf Hero landing page with average time spent by visitors on that resource page at 2 minutes and 27 seconds, and 97 clicks to download posted PDF resources.

Message Date(s): Facebook ad ran from October 22 to October 29, 2021.
PVPC Facebook message was posted October 19, 2021.

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

The change to this messaging began in Year 2, where initially the plan had been for one social media post and press release. Given the other elements we have learned are important to social media messaging, especially a call to action, we also developed a Think Blue Connecticut River web page on best practices to which posts could link.

BMP: 7. Importance of soil test, proper use of fertilizers, disposal of grass clippings - residents

Message Description and Distribution Method:

A social media ad and regional Facebook post, using idea of keeping lawns safe for families, were central to messaging on lawn care in Year 4. 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. The link to Think Blue Connecticut River is: <https://thinkblueconnecticutriver.org/lawn-and-yard-care/>.

PVPC reached out to eight large garden centers in the region to see if they would be willing to share the Facebook ad on their own pages. Of those contacted, only Randall's Farm in Ludlow responded and shared the Facebook ad both on their own Facebook page and on their website. The Facebook page for Randall's Farm has 9,561 followers.

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

The Facebook ad reached 19,744 individuals who match "gardening," "home improvement," or "do it yourself" identifiers in Connecticut Stormwater Committee zip codes. Two-hundred seventy-three people

clicked on the “Learn More” button to go the Think Blue Connecticut River landing page on lawn care. Social media consultants noted that the audience tended to be older women and younger men (18 to 65 range) and that there was lots of engagement from mobile devices.

The PVPC Facebook post in the region was shared by several Stormwater Committee communities, as well as Randall’s Farm in Ludlow, which has 9,561 followers, MassAudubon Sanctuary at Arcadia, with 6,600 followers, and Connecticut River Conservancy, with 7,100 followers. Despite the many followers who likely saw these posts, the likes and shares indicated from these other organizations was limited.

Analytics for the Think Blue Connecticut River website, indicate that there were a total of 105 views on the website landing page, with average time spent by visitors on that resource page at 1 minute and 27 seconds, and 81 downloads of posted resources. The number of views indicated in the website analytics does not jibe with the social media click counts on the “Learn More” button. PVPC will confer with the social media and website consultants to determine what may be occurring so that this issue is resolved for Year 5.

Message Date(s): Facebook ad ran for 7 days, from May 31st through June 7th; PVPC posted the regional Facebook message on May 26th. Randall’s Farm shared the Facebook post on their page on June 21st, and on their website from June 15th through June 30th.

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:

Proposed work had included creating a fact sheet and social media post on the Think Blue website. Over the course of the permit term to date, the social media work became more sophisticated and work has become a bit more targeted with use of advertising that makes use of zip codes and certain terms defining users. Advertising and posts include a call to action as well to “learn more,” which aims to get people to the Think Blue website content on lawn care.

BMP: 8. Proper management of pet waste – residents

Message Description and Distribution Method:

Pet waste messaging in Year 4 was multifaceted at both the time of licensing and during the summer. All messaging is based on the “Think picking up Spike’s poop is gross? Try swimming in it,” and aimed at driving people to the pet waste pick up pledge on the Think Blue Connecticut River website.

At time of licensing

Based on a survey of municipal clerks/dog officers done in Year 3 about what might be the most effective methods for messaging through their licensing process, PVPC provided Towns an electronic message to be placed on the local licensing web page (something we learned that most municipalities now have) and an electronic postcard that could be printed and used in tandem with license distributions. To stress the importance of placing the message on dog licensing pages, PVPC sent an e-mail note with attachments to municipal clerks and licensing officers with a cc and referral to their respective Stormwater Committee representatives.

The Connecticut River Stormwater Committee had also planned to run a Facebook ad during this period, but the social media firm contracted for this work withdrew from its contract with PVPC. PVPC scrambled to find a new firm to handle social media advertising on stormwater, but locating and contracting with a new

firm did not occur until spring of Year 4.

During summer months

Summer messaging included running a Facebook ad and preparing and distributing a media release to once again drive people in the region to the pick up poop pledge on the Think Blue Connecticut River website. Given the audience reached through the Facebook ad in July—largely women over 55—the Committee’s social media consultant will post another ad to Instagram in August in an effort to test reach to a younger audience. PVPC also included pet waste information in the August edition of the Pioneer Valley Progress Report.

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

The Facebook ad reached 16,180 individuals in Stormwater Committee communities who match “pets at home” and “dog walking,” identifiers in the Connecticut Stormwater Committee zip codes. Three hundred seventy-four people clicked on the “Pledge Here” button to go to the Pick Up Poop pledge on the Think Blue Connecticut River website. Social media consultants noted that the audience tended to be women over 55 and 80% of those accessing the ad did so through mobile devices.

The August media release went to 17 news outlets including, The Valley Advocate, Daily Hampshire Gazette, WWLP, WHMP, Western Mass News, New England Public Media, Westfield News, WAMC, Country Journal, Springfield Republican, Amherst Bulletin, The Register (Ludlow & Indian Orchard), Ware River News, Agawam Advertiser News, Chicopee Register, Belchertown Sentinel, Holyoke Sun. The Register turned the media release into a lead news story on the front page of their August 24th issue, relating the media release information to the work of volunteers working to clean up local ponds. See news article at: <https://www.register.turley.com/lr-archives/LUD082422.pdf>

These efforts led to 53 new Pick Up Poop pledges in Year 4 to a total of 275. Analytics for the Think Blue Connecticut River website, indicate that there were another 183 people went to the pet waste landing page on the Connecticut River Think Blue website with average time spent by visitors on that resource page at 1 minute and 8 seconds, and 40 downloads of posted PDF resources. Note that the number of clicks in social media on the pledge did not translate to follow through pledges on the website. PVPC will work with both the web and social media consultants in Year 5 to determine if additional refinements could help.

Message Date(s):

The Facebook ad ran for 7 days, from July 29 to August 5. The media release was issued August 19. The Instagram ad has been delayed due to Facebook/ Instagram identify confirmation obstacles for the social media consultants, possibly due to the upcoming election. We anticipate clearance to run the add on Instagram before the end of September.

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 as PVPC understood that messaging under the Appendixes could be combined. EPA has indicated that additional messaging to dog owners “at time of licensing” is required. Messaging at time of licensing was added, starting 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).

BMP: 9. Proper septic system care - residents

Message Description and Distribution Method:

PVPC again timed messaging on septic system care to coincide with EPA’s Septic Smart Week, from September 20 to 24, with a Facebook ad and regional post to its Facebook page. These posts provide a link to a great infographic on septic system maintenance developed by Whatcome County Public Works and Health Department.

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

The Facebook ads were shown 5,458 times to 2,897 people whose interest matches “Septic Tank” in Connecticut Stormwater Committee zip codes. Facebook’s estimated ad recall is that 550 of them could remember the ad two days later.

The regional Facebook post drew a total of 16 “shares,” including member communities. There were a total of 142 views of the Think Blue Connecticut River website septic system landing page with people spending an average of 1 minute and 31 seconds. Analytics indicate that there were 214 clicks to download information.

Message Date(s): The Facebook ad ran between September 20 and 24, 2021

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

The NOI/SWMP indicated septic system messaging would be done in Year 3 only as MS4 permit language in Appendix H was not entirely clear on the timing of this message. EPA has since indicated that septic system messaging must occur each year and the Connecticut River Stormwater Committee has adjusted accordingly, starting in Year 2.

BMP: 10. Proper disposal of leaf litter - businesses

Message Description and Distribution Method:

This year, PVPC continued the fruitful relationship with the UMass Extension program to reach the landscaper and landcare business and commercial audience with best practices messaging on disposal of leaf litter. An article appeared at the top of the October UMass Hort Notes e-newsletter, which is geared toward professional landscapers, who make up the bulk of the audience, with additional audience segments that include entities that work with professional landscapers (distributors, materials suppliers, nurseries, etc.) as well as Master Gardener/hobbyist types.

Best practices noted in the article 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 turf areas, you avoid having to rake/blow and bag and you offer a way to manage autumn leaves while providing clients with free fertilizer. Mulched leaves recycle nutrients and reduce the overall need for applied fertilizer, which can help to reduce nutrient loading for local rivers, streams, and lakes.
- 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 reach these water resources.

Targeted Audience: Businesses/institutions/commercial facilities

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

UMass Hort Notes newsletter goes to 31,362 landscapers and associated land care businesses across Massachusetts

Message Date(s): October 2021

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

Year 4 messaging in the NOI/SWMP indicated would involve reprise and update of the Year 2 mailing to landscapers in the region that lists locations for proper disposal of commercial leaf litter. This letter or some iteration of it was issued three years in a row so aimed to do something slightly different. Year 5 program will return to use of letter with landscapers in region.

BMP: 11. Importance of soil test, proper use of fertilizers, disposal of grass clippings - businesses

Message Description and Distribution Method:

For spring messaging on best landcare practices, PVPC staff again collaborated with UMass Cooperative Extension to reach the businesses that are caring for lawns. A newsletter piece published in the May 6 Landscape Message recommended:

Lean into the spring season with better lawn care practices. Here are two great strategies:

Leave grass clippings where they fall. Of course, you want to leave things nice and neat for your clients, but let them know that grass clippings left on the lawn will decompose, returning valuable nutrients back into the soil. This will save them money by reducing the need for applied fertilizer and promote a healthier lawn. To make best use of this free, natural fertilizer: mow high according to the grass species and use of the turf, do not remove more than 1/3 of the blade per mowing event, and mow when grass is dry.

Test your client's soil. A soil test lets you know more specifically what your client's lawn and garden need for nutrients so that you don't waste time and money. UMass Extension provides soil testing services. See: <http://umass.edu/soiltest> Opt for slow-release nitrogen sources if possible, and time applications properly to best align maximum nutrient availability from applied fertilizer with favorable growth periods, to promote

maximum nutrient uptake and minimize potential loss.

Targeted Audience: Business/institutions/commercial facilities

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable Goal(s):

Newletter is e-mailed to a list of approximately 13,000 landcare professionals, as well as posted on UMass Extension's Facebook feed, which has approximately 3,200 followers.

Message Date(s): May 6

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:

Ongoing Covid-19 pandemic required adjusting from in-person workshop for Garden Center staff. To obtain access to likely most robust audience, worked with UMass Cooperative Extension to get notice out to landcare professionals.

BMP: 12. Proper management of geese – businesses

Message Description and Distribution Method:

Reprinted Year 2 letter—signed by Connecticut River Stormwater Committee Chair and Vice Chair—to property owners identified as having goose problems. The letter recommends specific strategies and resources, including signage to discourage people feeding geese and managing “residential” goose populations by undertaking a program to addle eggs and modify landscapes. Contact information for USDA Wildlife Services in Amherst, was offered as a source of technical assistance and operational management. Also included in the letter were two illustrations of landscaping along water's edge to provide idea of modifications that could help to reduce direct stormwater flows and creates barriers for goose movement from water to foraging area. For Year 4, the property owner distributions list was updated to include 31 landowners (13 in Agawam, 2 in Belchertown, 4 in Northampton, 6 in Southwick, 1 in South Hadley, 4 in Westfield, and 1 in West Springfield). As other stormwater communities note where there may be issues with geese, they will notify PVPC and additional letters to property owners can be sent on a rolling basis. For Year 4, PVPC also re-established contact with USDA to ensure no changes in information from two years ago.

Targeted Audience: Businesses/institutions/commercial facilities

Responsible Department/Parties: PVPC staff and member municipalities

Measurable Goal(s):

Letters sent to owners of 31 properties with likely ongoing goose problems (animals that are “residential” to the area and not migratory)

Message Date(s): May 16, 2022

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: 13. Fowl Water messaging through state-wide campaign

Message Description and Distribution Method:

On behalf of the members of the Connecticut River Stormwater Committee, Think Blue Massachusetts ran an educational advertising campaign from May 31 to June 17, 2022. The 30-second video entitled, “Fowl Water,” –in both English and Spanish—helps viewers visualize how stormwater runoff carrying motor oil, pet waste, and trash pollutes local waterways.

The video and social media materials (translated into the top 6 most spoken languages in Massachusetts) are available at: <https://www.thinkbluemassachusetts.org/partner-materials>

To measure the effectiveness of this campaign, Water Words that Work conducted a post campaign survey. The survey showed that 15% of residents in MA MS4 communities said they remembered the ad. Those who remember the ad are more aware of how stormwater pollutes waterways. The complete survey report is available at: ThinkBlueMassachusetts.org

Targeted Audience: Residents

Responsible Department/Parties: Think Blue Massachusetts and Water Words that Work

Measurable Goal(s):

Water Words that Work reports that within the Connecticut River Stormwater Committee region the campaign resulted in an estimated:

326,019 Facebook and Instagram impressions to English speakers

39,344 Facebook and Instagram impressions to Spanish speakers

426,607 YouTube ad impressions to English speakers

50,546 YouTube ad impressions to Spanish speakers

Message Date(s): May 31 to June 17, 2022

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

This message is a welcome addition to our program for Year 4.

Add an Educational Message

MCM2: Public Participation

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

The Stormwater Management Program is posted on the Town's website for public review and comment.

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:**

- Longmeadow DPW participated in a Longmeadow High School intern program where a student spent several hours each week working at DPW. Some of the work entailed MS4 compliance.

-During Permit Year 4, the Town completed a culvert replacement project on Longmeadow Brook at Pondsideroad Road for improved stream connectivity. The project also included expanded access and parking for the Fannie Stebbins Wildlife Refuge, which is part of the Silvio O. Conte National Fish & Wildlife Refuge.

-Longmeadow held a Community Earth Day Clean-up in which 2,460 pounds of garbage and 800 pounds of recyclables were collected.

-During Permit Year 4, DPW applied for an Asset Management Grant through the SRF Program administered by the Massachusetts Department of Environmental Protection. The Town's application was successful and we received the grant award. Work will begin in Permit Year 5 to gather data for a thorough and representative understanding of the condition and vulnerabilities of the Town's stormwater system. It will help establish a proactive stormwater system maintenance, repair and replacement program that will help with budgeting needs. Our total project cost is \$250,000 with the grant covering \$150,000, the remainder will be a \$50,000 in-kind match and a \$50,000 cash contribution.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period.***

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Optional: Provide additional status information regarding your map:

Minor edits were made during the permit year relative to connectivity updates, flow direction and adding

newly located structures that were identified in the field.

Screening of Outfalls/Interconnections

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

- No outfalls were inspected
- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following website:

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

Number of outfalls screened:

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

Percent of outfalls screened:

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

Catchment Investigations

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

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

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

Number of catchment investigations completed this reporting period:

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

Percent of total catchments investigated:

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

The Town has contracted with a consultant for training and support on conducting catchment investigations. This effort will begin in October of Year 5.

IDDE Progress

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

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

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

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

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

Total number of illicit discharges identified:

Total number of illicit discharges removed:

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

Employee Training

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

Two employees (Ryan Gasparini and Brodie Caizzi) participated in Illicit Discharge Detection and Elimination (IDDE) training for MS4 permitting via virtual Classroom on 12/16/21.

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):

No updates have been made under this permit. The bylaw was last reviewed at Annual Town Meeting in 2016.

As-built Drawings

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

Number of as-built drawings received:

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

Retrofit Properties Inventory

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

- High priority sites include:

 - Blueberry Hill Elementary School
 - Glenbrook Middle School
 - Williams Middle School
 - Wolf Swamp Elementary School
 - Parks and Recreation Department/Greenwood Children Center
 - Richard Salter Storrs Library
 - Bliss Street/Williams Road

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:

N/A

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:

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:

A paved over catch basin was found during a SWPPP inspection at the new DPW facility and the situation was corrected.

Additional Information

Monitoring or Study Results

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

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

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

COVID-19 Impacts

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

The Town is still experiencing staff shortages and turnover related to COVID-19. This impacted several requirements, including Good Housekeeping practices.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 5 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 5 below:

The Town will be embarking on MS4 related work through the Asset Management Grant through the SRF Program (mentioned above as received during the permit year). This work will include establishing a stormwater system maintenance, repair, and replacement program and may also include next steps toward developing retrofits.

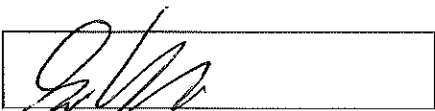
The Town has awarded a contract for a drainage system study to better understand options for improving water quality, drainage, etc. in the watershed to Laurel and Bliss Parks.

Part V: Certification of Small MS4 Annual Report 2021

40 CFR 144.32(d) Certification

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

Name: Sean Van Deusen Title: Public Works Director

Signature:  Date: 9/28/2022

[Signatory may be a duly authorized representative]

ATTACHMENTS

SSO Inventory -- Town of Longmeadow, MA

SSO Location	Discharge Statement	Date	Time start	Time End	Estimated volume	Description	Mitigation Completed	Mitigation Planned
92 Shady Knoll Drive	Outfall to receiving waters	5/3/2022	5/3/2022	5/16/2022	200 gallons	An outfall failure eroded a bank with a sewer line running through it, causing a discharge to Raspberry Brook	An emergency permit was obtained from the Conservation Commission to repair the outfall. Silt socks were installed during the active discharge and during repair to prevent solids from entering the brook. Reporting was filed with DEP.	
Behind 56 Severn Street	Discharge to wetland area contributing to Cooley Brook	7/30/2021	13:00		5 gallons	sediment in channel	used jet truck/vac truck to jet main and clear blockage; put lime down on affected area; rechecked mains	
North Interceptor Sewer Line behind 22 Wildflower Lane		6/16/2021	15:00	6/17/2021 9:00	10GPM	sewer system blockage; line blocked with rags and wipes	used jet truck/vac truck to jet main and clear blockage; put lime down on affected area; rechecked mains	
38 Twinbrook Circle		3/19/2020	12:00		<10,000 G	Sewer system blockage/collapse – nylon disinfectant wipes	yes	
32 Severn Street	Ground surface	4/6/2018	2:30	5:00	2 GPM	Pool contractor pushed dirt and stumps down bank onto the exposed cast iron sewer main	Lime placed on impacted areas	
Longmeadow St. @ Morningside Drive	Catch basin to receiving waters	10/18/2017	12:15	12:45	50 Gallons	Sewer system blockage	Jet truck jetted downstream clearing blockage	
Elm Avenue		7/30/2017	9:00		<10,000 G	Rain, broken main	Repaired the main	
Arcadia St. Siphon		4/21/2015	6:00		<10,000 G	Sewer blockage, low flow siphon	Jetted siphon from downstream, adding to quarterly flushing schedule	
231 Maple Road		11/8/2014	12:30		<10,000 G	Sewer backup	Jetted main and educated the day care / council on ageing about flushing wipes	