



C O N N E C T I C U T R I V E R

S t o r m w a t e r C o m m i t t e e

MS4 Permit Year 5
Annual Report for Public Education and Outreach
MCM 1 and additional requirements in Appendixes F and H

July 1, 2022 through June 30, 2023

September 15, 2023

Table of Contents

Introduction	1
1. Coalition Purpose and Membership	1
2. Water Quality Considerations in the Region	2
Annual Report Part II: Self-Assessment	3
1. Education and Outreach on Bacteria/Pathogens.....	3
2. Education and Outreach on Nitrogen and Phosphorous (combined).....	3
Annual Report Part IV: MCM 1 – Public Education and Outreach.....	3
1. <i>Think Blue Connecticut River</i> Website.....	3
2. Nip Bottles – Residents	5
3. Better Management of Runoff from Parking Lots (formerly installation of Hooded Catch Basins) - Businesses	8
4. LID Strategies and Technologies – Developers	10
5. Better Management of Runoff from Parking Lots (formerly installation of Hooded Catch Basins) - Industrial Facilities	11
6. Proper Disposal of Leaf Litter - Residents	12
7. Importance of Soil Test, Proper Use of Fertilizers, Disposal of Grass Clippings - Residents.....	15
8. Proper Management of Pet Waste – Residents.....	17
9. Proper Septic System Care - Residents	21
10. Proper Disposal of Leaf Litter - Businesses	23
11. Importance of Soil Test, Proper Use of Fertilizers, Disposal of Grass Clippings - Businesses	25
12. Proper Management of Pet Waste – Businesses	26

The Connecticut River Stormwater Committee annual report provides a summary of all the work undertaken during the July 1, 2022 to June 30, 2023 reporting period. Summer pet waste messaging did extend into early September. All of this work is directly applicable to all member communities' EPA annual reporting requirements.

Content has been formatted in a manner consistent with the format of the EPA annual report template for Year 5. Because the Connecticut River Stormwater Committee is a regional partnership program, these sections are written from a "regional" perspective rather than municipality-by-municipality. Additional details of community-specific efforts are reported in each municipality's annual report.

In communication with PVPC, who facilitates the coalition, EPA has endorsed and encouraged a regional Annual Reporting approach whereby Connecticut River Stormwater Committee member communities can satisfy the Public Education and Outreach reporting requirement (within MCM 1 and Appendixes F and H) by referencing the coalition's annual report with a url link in their own annual report.

Introduction

1. Coalition Purpose and Membership

The Connecticut River Stormwater Committee is an intergovernmental compact of 19 municipalities, the University of Massachusetts-Amherst, and the Pioneer Valley Planning Commission organized to work cooperatively in meeting US EPA Municipal Separate Storm Sewer System Permit (“MS4 Permit”) requirements for stormwater education and outreach. Facilitated and staffed by the Pioneer Valley Planning Commission, the Committee also works together to meet other permit compliance activities where appropriate and needed. Work for the group is funded through annual dues paid by each member, including PVPC, and through occasional grants. Member communities are shown in Table 1 below.

Table 1: Connecticut River Stormwater Committee Member Communities

Member Community	Committee Representatives and Departments
Agawam	Tracy DeMaio and Mike Albro, Department of Public Works
Belchertown	Sarah Fortune and Stephanie Sansoucy, Conservation Department
Chicopee	Quinn Lonczak, Department of Public Works
East Longmeadow	Bruce Fenney and Mark Berman, Department of Public Works
Easthampton	Dan Murphy, Department of Public Works
Granby	Dave Derosiers, Highway Department
Hadley	Scott McCarthy, Department of Public Works, and Carolyn Brennan, Town Administrator
Holyoke	Kris Baker, Department of Public Works
Longmeadow	Tim Keane, Department of Public Works
Ludlow	Jim Goodreau, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Palmer	Matthew Morse, Department of Public Works
South Hadley	Melissa LaBonte, Department of Public Works
Southampton	Randall Kemp, Highway Department
Southwick	Randall Brown and Jon Goddard, Department of Public Works
Springfield	Vacant
West Springfield	Connor Knightly, Department of Public Works
Westfield	Joe Kietner and Casey Berube, Department of Public Works
Wilbraham	Tonya Basch and Dena Grochmal, Department of Public Works
University of Massachusetts - Amherst	Terri Wolejko, Environmental and Hazardous Materials Management Services Department, and Neils LaCour, Campus Planning Department

2. Water Quality Considerations in the Region

All Connecticut River Stormwater Committee communities are subject to additional MS4 permit requirements in Appendix F based on waters that are tributaries to the Long Island Sound, which has an approved TMDL for nitrogen.¹ Some member communities are also subject to additional MS4 permit requirements based on the following:

- Lakes and ponds with approved TMDLs for phosphorous (additional requirements within Appendix F of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to phosphorous (additional requirements within Appendix H of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to bacteria or pathogens (additional requirements within Appendix H of the MS4 permit)
- Waterbodies and their tributaries that are impaired for water quality due to solids (total suspended solids) (additional requirements within Appendix H of the MS4 permit)

It is important to note that the MS4 permit stipulates that certain additional requirements for public education and outreach messaging in the appendixes can be combined where appropriate. Specifically, Appendix H part I and II as well as Appendix F part A.III, A.IV, A.V, B.I, B.II and B.III.

¹ TMDL = identifies the Total Maximum Daily Load of nitrogen that can be discharged, in this case to Long Island Sound, without significantly impairing the health of the Sound.

Annual Report Part II: Self-Assessment

1. Education and Outreach on Bacteria/Pathogens

- √ Annual Message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- √ Disseminated educational material to dog owners at time of issuance or renewal of dog license, or other appropriate time
- √ Provided information to owners of septic systems about proper maintenance

See in sections below numbered: 8, 9, and 12

2. Education and Outreach on Nitrogen and Phosphorous (combined)

- √ 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

See in sections below numbered: 6, 7, 10, and 11

Annual Report Part IV: MCM 1 – Public Education and Outreach

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 audiences: Residents, business/institutional/commercial, developers, and industrial

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

Measurable goal(s): A total of 5,625 people visited the *Think Blue Connecticut River* website during Year 5 and spent an average of 19 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:

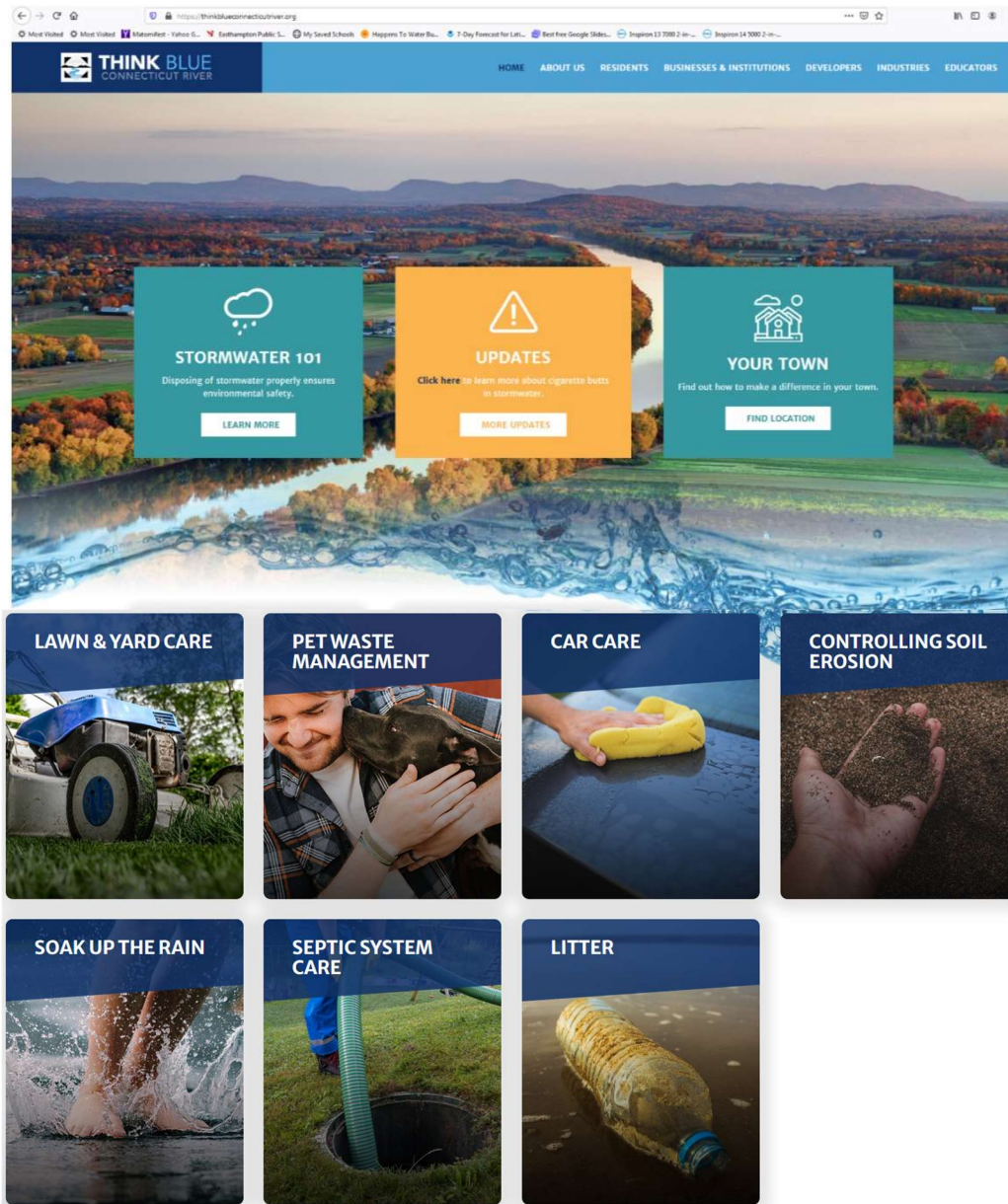
Residents views = 89; Businesses and Institutions views = 69; Developers views = 49; Industries views = 39; and Educators views = 37.

Message dates: July 1, 2022 through June 30, 2023

Message completed for: Appendix F requirements Appendix H requirements

Was message different than what proposed in your NOI/SWMP? 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 it has been central to all messaging in the region, providing additional information and resources on key topics.



2. Nip Bottles – Residents

Message description and distribution method: Connecticut River Stormwater Committee members identified messaging on nip bottles as a priority at the start of the permit term. As such, the group conducted a robust, multi-faceted messaging campaign with materials developed in Year 4. Connecticut River Stormwater Committee members launched the campaign to reduce nip bottles litter was launched in Year 5 in order to capture the largest audience possible, including students that come to the region for university studies.

The campaign included the following:

- Message displayed on internal and external signs on PVRTA buses servicing the region in both English and Spanish, including 6 exterior queen panels with two running out of each PVRTA garage (UMass, Springfield, and Northampton) Panels were switched during January break from UMass to include one additional panel out of the other two garages. All panels included a QR code to link to more information on the *Connecticut River Think Blue* website (See images below.)
- Web page on *Connecticut River Think Blue* website with additional information on nip bottle litter to which all messaging provided links (See image below.)
- Social media mini ad campaign targeted to zip codes in member municipalities on Facebook and Instagram that linked to information on *Connecticut River Think Blue* web page (See image below.)
- Press release to local media, which yielded at least three news stories in print and televised media. (See image below.)



Messages above ran on the sides of PVRTA buses in the region along with smaller – sized messages in bus interiors from early October 2022 to early February 2023.

THINK SMALL DOESN'T MATTER? LITTLE THINGS ADD UP.

Help keep our waters clean...put your nip in the trash.



While miniature in size, plastic nip bottles are creating monumental problems. Often tossed out of car windows, nip bottles accumulate along roadways and wash with the next rainfall or snowmelt into nearby rivers and streams. The Connecticut River Conservancy's Source to Sea Clean Up has collected more than of these small plastic bottles over the past 5 years. Local citizen efforts in Agawam, Easthampton, and other locations have also collected thousands of littered nip bottles.

In more urban locations, discarded nip bottles are carried by flows into nearby storm drains. Public works officials in the Pioneer Valley region indicate that roadside storm drains in certain locations regularly fill with nip bottles.

Plastics litter in any form are a problem for cities and towns. Storm pipes can get clogged and local waterways become polluted. The Connecticut River Conservancy website notes, "

When plastic enters the river, it breaks up into tiny pieces, but never fully degrades. As a result, our waterways become polluted with large quantities of what is known as "microplastic." Over time, these particles make their way to the large floating garbage patches in our oceans. Along the way, wildlife may become entangled in it or try to eat it, which can lead to death.

The fix is simple. Toss nip bottles into the trash bin. Note that given their small size, they are not recyclable in the Pioneer Valley region as they jam sorting machinery.

Interested in learning more? See more information at the following links:

A study that found that plastics pollution changes the growth and development of juvenile shortnose sturgeon, a federally endangered fish found in parts of the Connecticut River:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4051353/>

Daily Hampshire Gazette article about efforts on nip bottles in Easthampton: www.gazettenet.com/Easthampton-installs-nip-bin-to-help-with-the-city-s-surplus-of-the-littered-item-45220635

Container Recycling Institute's award to John W. "Jack" Coughlin, Jr. for his local and state-wide litter activism: [https://www.container-recycling.org/index.php?](https://www.container-recycling.org/index.php?option=com_content&view=article&id=723&Itemid=1298)

[option=com_content&view=article&id=723&Itemid=1298](https://www.container-recycling.org/index.php?option=com_content&view=article&id=723&Itemid=1298)

The element above is the information provided on the Think Blue Connecticut River website. All messaging for the nip bottle campaign included a link to this website page.



**THINK SMALL
DOESN'T MATTER?**

**LITTLE THINGS
ADD UP.**

LEARN MORE.

The element above is the message that ran on Facebook and Instagram with the “Learn More” button connecting to more information on the Think Blue Connecticut River website.



SPRINGFIELD, Mass. (WWLP) – They may be small in size, but miniature liquor bottles or “nips” are becoming a huge problem in western Massachusetts.

Volunteers help to clean CT River for annual “Source to Sea” event

The Connecticut River Stormwater Committee, facilitated by the Pioneer Valley Planning Commission, just reported alarming numbers from its “Source to Sea Cleanup” efforts. Over 16,000 nips have been recovered from the Connecticut River over the past five years, but experts say there could be more.

“And that’s the floor,” said Pat Beaudry of the PVPC.

“We want to remind folks that while these bottles are small, the magnitude with which they’re being improperly disposed of is causing big problems,” said Patrick Beaudry, manager of public affairs for the Pioneer Valley Planning Commission.



WESTERN MASS – Got a nip of Fireball in your pocket or purse? Local officials are urging you to dispose of that bottle responsibly.

The Connecticut River Stormwater Committee – with members from 19 communities – is seeking cooperation from the public in disposing of plastic nip bottles properly.

The committee reports The Connecticut River Conservancy’s Source to Sea Cleanup has collected more than 16,566 of these small plastic bottles over the past five years. The Connecticut River Conservancy website notes, “When plastic enters the river, it breaks up into tiny pieces, but never fully degrades.”

Patrick Beaudry of the Pioneer Valley Planning Commission (PVPC) said the number only represents “the tip of the iceberg.”

“The real goal is an awareness campaign,” he added.

CITIES & TOWNS

A3
Monday, March 6, 2023
gazettenet.com

ENVIRONMENT

Little bottles are causing big problems

Conservancy group has collected 16K nip bottles from Connecticut River in 5 years

By MADDIE FABIAN
For the Gazette

Plastic litter in any form poses a problem for storm pipes and waterways, but right now the Connecticut River Stormwater Committee is focusing its efforts on small nip liquor bottles.

When improperly discarded, the bottles, however small, have large

environmental impacts.

Just in the past five years, more than 16,000 nip bottles have been recovered from the Connecticut River by the Connecticut River Conservancy, and thousands more have been collected by local citizen efforts in Easthampton and other municipalities.

“We want to remind folks that while these bottles are small, the magnitude with which they’re being improperly disposed of is causing big problems,” said Patrick Beaudry, manager of public affairs for the Pioneer Valley Planning Commission.

Often accumulating along roadways after being tossed out of car windows, plastic nip bottles are carried into nearby storm drains and waterways by rainfall or snowmelt. And due to their small size, when recycled in Massachusetts the bottles jam sorting machinery. So, the only proper way to dispose of a nip bottle is to throw it into the trash can.

The CT River Stormwater Committee, facilitated by the PVPC, is made up of 19 Massachusetts communities and the University of Massachusetts. Right now, the committee is engaged in public outreach ef-

orts to encourage the public to throw nips into their trash bins rather than littering or recycling the bottles.

“We want everyone to understand the scale of this problem,” Beaudry said. “The more the public knows, we believe, the more they’ll have the opportunity to do the right thing.”

Once nips make their make into waterways, they break down into what are called “microplastics,” which are extremely small fragments of plastics that are often ingested by wildlife or carried into large floating garbage patches in the ocean.

“They are a long-term challenge to our ecosystem, so the sooner we get a handle on this, the better,” said Beaudry.

Across the state, several municipalities have already banned the sale of nip bottles in an attempt to control litter on the streets and pollution of rivers, lakes and the ocean.

Other townwide efforts to curb the harmful effects of nip bottles focus on cleanup. In May 2021, Easthampton installed a “nip bin” where residents can drop off nip bottles collected from roadsides, walkways and other public areas.

A press release widely distributed throughout the region elicited news coverage on nip bottles through both televised and print media sources.

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):

PVTA bus messages

Exterior signs, estimated by PVTA to provide 1,465,974 impressions

Interior signs, estimated by PVTA to provide 90,264 impressions

Total impressions during period messages run = 1,556,238

Facebook and Instagram message

Reached 69,888 people in the region, with 1,084 clicks and 63 shares

Think Blue Connecticut River web page on litter / nip bottles

Visits = 868 with average time spent viewing information at 2 minutes and 34 seconds

Message dates:

PVTA bus ads - early October 2022 to early February 2023

Facebook and Instagram ads – December 20 to January 1 = 12 days

Press release issued – December 20, 2022

Was message different than what proposed in your NOI/SWMP? Yes No

If yes, describe why the change was made: One adjustment made to increase reach of campaign includes translation of PVTA bus panels ads into Spanish. Furthermore, the SWMP had indicated messaging would occur in Year 4, but the messaging was pushed to Year 5 in order to reach a wider audience (when area colleges back in session).

3. Better Management of Runoff from Parking Lots (formerly installation of Hooded Catch Basins) - Businesses

Message description and distribution method: Messaging to this audience has been further developed from Year 4 to Year 5. In Year 4, a letter went to municipalities for use with large parking lot owners that recommended retrofits of conventional catch basins with deep sump hooded catch basins. This year, the Committee decided to broaden the messaging to include promotion of low impact development retrofit approaches. As such, an updated letter went to Connecticut River Stormwater Committee members for use in reaching out to property owners with large parking lots. Also, an op-ed piece was written and then published by Business West, the most prominent publication in the region. Some members also posted this article on their municipal stormwater page.

Stormwater Solutions for Parking Lots

BY JOSEPH KIETNER AND RANDAL BROWN

Through stormwater-management improvements to large parking areas, business owners can improve drainage, enhance the appeal and look of properties, and help to reduce contaminated storm flows to local rivers, streams, and lakes in the Pioneer Valley.

We, along with our colleagues in the Connecticut River Stormwater Committee, a regional coalition of 19 municipalities and UMass Amherst that is staffed by the Pioneer Valley Planning Commission, recommend that business and commercial property owners with large parking areas consider making improvements and retrofits to improve how storm flows are collected and treated.


There are two primary options for consideration when thinking about parking-lot stormwater improvements:

1. Retrofit or replace existing catch basins with deep sump hooded catch basins. In most parking lots, a curb and gutter system directs rainfall into catch basins, which are essentially boxes below ground that connect to the storm sewer system. Deep sump hooded catch basins are designed to capture sand and other sediment, litter, and floatables, including oil and grease. The four- to six-foot-deep sump provides an area for sediments to settle.

By capturing sediment and other pollutants, deep sump hooded catch basins can improve stormwater quality compared to older catch basins that do not have sumps or hoods. A study conducted in New York City demonstrated that deep sump hooded catch basins increased the capture of floatables (trash and oil and grease) by 70% to 80% over regular catch basins without hoods, and greatly extended the cleaning interval without a decrease in performance.

2. Retrofit the parking lot with vegetated areas where soil and plants can soak up rainfall. Vegetated areas in parking lots can be designed to receive and soak up flows. Any overflow from these areas can then be directed to existing parking-lot catch basins. Not only do such retrofits improve water quality, but trees and other plants along with soils can help reduce the superheating effects of large paved areas during summer months. Such facilities also make properties more visually attractive.

If your property is located in a municipality with a stormwater enterprise fund or stormwater utility fee, improvements may also be eligible for stormwater fee credits. Check with your local public works department.

To make stormwater improvements easier, the Connecticut River Stormwater Committee, along with the Pioneer Valley Planning Commission and Waterstone Engineering, have developed a library of green infrastructure stormwater-control design templates that can be sized to specific drainage areas. This library of design templates serves as an important tool. In addition to maintenance guidance, it includes key information on sizing, estimated cost, and pollutant loading reduction for each type of facility. See www.thinkblueconnecticutriver.org for more information. 

Joseph Kietner is chair of the Connecticut River Stormwater Committee and Stormwater coordinator for the city of Westfield, and Randal Brown is vice chair of the Connecticut River Stormwater Committee and Public Works director for the town of Southwick.

To reach owners of large parking lots, the Connecticut River Stormwater Committee placed the following opinion piece 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): Business West has a readership of some 30,000. See the following link to the publication's readership demographics: <https://businesswest.com/wp-content/uploads/2018/06/READERSHIP.pdf>

While communities are working to get letters out in the coming weeks, the following municipalities have already sent updated letters to large parking lot owners within their jurisdictions (number denotes number of parking lot owners reached):

Belchertown – 65

Easthampton – 53

East Longmeadow – 4 (also included mention of available credits)

Message dates: Op-ed published June 26, 2023

Letters: Sent late June 2023

Was message different than what proposed in your NOI/SWMP? 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 messaging here in both the article and the additional letter prepared in Year 5 went beyond idea of recommending installation of hooded catch basins to also recommend retrofits with planted green infrastructure facilities in parking lots.

4. LID Strategies and Technologies – Developers

Message description and distribution method: On behalf of the Connecticut River Stormwater Committee, PVPC partnered with the Center for Watershed Protection and the Neponset River Watershed Association to develop and coordinate four training workshops for the development / construction community. The aim of the workshops was to provide construction-focused stormwater pollution prevention information to companies who engage in land-disturbing activities in participating towns.

Workshops were held live on-line in June and promoted through stormwater networks in the region and through statewide organizations, including the Homebuilders Association of Massachusetts and NAIOP, the Commercial Real Estate Development Association. The series has also been edited by the Center for Watershed Protection as an on-demand, self-paced series available through the Neponset Stormwater Partnership [website](#). These trainings were made possible through an MS4 Municipal Assistance Grant provided to PVPC by MassDEP. One of the resources highlighted at the training workshops included a green infrastructure stormwater management facility library of specifications developed by Rob Roseen of Waterstone Engineering with guidance from Connecticut River Stormwater Committee members under a MassDEP 604b grant to PVPC. See: https://thinkblueconnecticutriver.org/wp-content/uploads/2023/05/PVPC-GI-Design-Standards_FINAL-2023.04.25.pdf

Targeted audience: Developers

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s):

65 people attended virtual workshops

Post workshop survey that indicated that 76% of attendees received information from the training that strengthened their knowledge or provided them with new tools to do their job.

32 people downloaded the library of a green infrastructure stormwater management facility specifications.

Message dates: June 2023

Was message different than what proposed in your NOI/SWMP? Yes No

If yes, describe why the change was made: The workshop had been planned for Year 4, but we had hoped that the new development standards from the draft Massachusetts Stormwater Handbook could be part of the workshop if postponed to Year 5. Also, the one workshop identified in the SWMPP became a series of four workshops thanks to the MS4 Assistance Grant provided by MassDEP.

5. Better Management of Runoff from Parking Lots (formerly installation of Hooded Catch Basins) - Industrial Facilities

Message description and distribution method: Given the refinements in #3 above, the message to industrial facility managers was also broadened, in this case to include lined green infrastructure facilities. Letters signed by the Committee Chair and Co-chair went to all 140 multi-sector general permit holders in member communities.

Targeted audience: Industrial facilities

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s):

Letters sent to all 140 multi-sector general permit holders in member communities

Message dates: June 2023

Was message different than what proposed in your NOI/SWMP? Yes No

If yes, describe why the change was made: The letter had been planned initially for Year 4, but was sent in Year 5.

6. Proper Disposal of Leaf Litter - Residents

Message description and distribution method: PVPC updated messaging used previously based on *Be a Leaf Hero* social media posts developed by the Cape Cod Commission, but now customized for the Connecticut River Stormwater Committee. For Year 5, messaging included slides displayed by local cable access television stations, a regionally posted social media message, and a flyer for posting on member webpages. All three messaging elements promoted linking to a series of tips and more in-depth content on the *Think Blue Connecticut River* website. The flyer included a link to locations for proper disposal of leaves and yard waste. 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 updated a PDF document for member communities use on their municipal websites.

Note too that an attempt was made to run a paid social media ad in October, but social media consultants reported the message was rejected because it was deemed a "social issue." This is similar to problems encountered in other pre-election periods.



Above are the two slides provided to cable access television stations in the region.

Targeted audience: Residents

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s):

Local cable access television message went to 17 stations in the region.
Regional Facebook message drew 12 shares.

Analytics for the *Think Blue Connecticut River* website page on Be a Leaf Hero, indicates that there were a total of 213 views of the Leaf Hero landing page with average time spent by visitors on that resource page at 3 minutes and 25 seconds, and 193 clicks to download posted PDF resources.

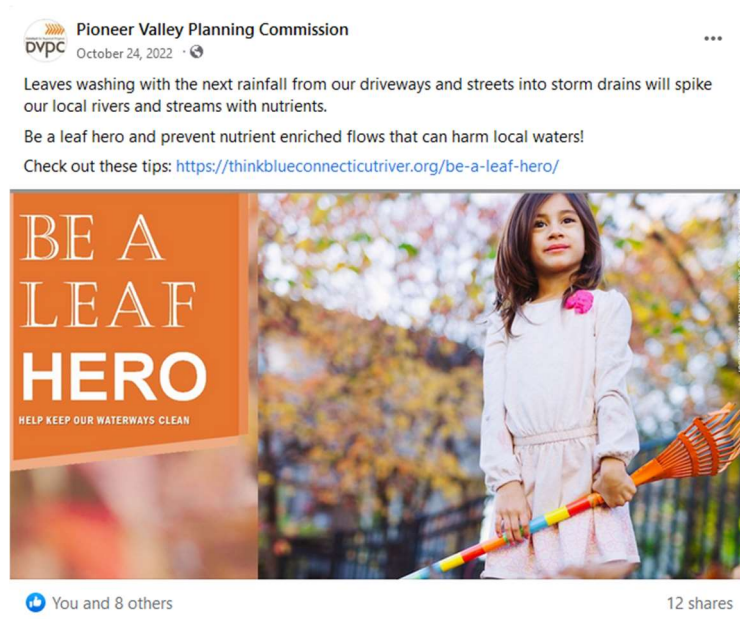
Message dates:

Local cable access television message - aired during several weeks starting mid October to early November.
PVPC Facebook message - posted October 24

Message completed for: Appendix F requirements ✓ Appendix H requirements ✓

Was message different than what proposed in your NOI/SWMP? Yes ✓ No

If yes, describe why the change was made: Messaging on leaf litter made use of local cable access television rather than paid advertising to local radio and then augmented this messaging with a flyer and regionally posted social media all of which included a “call to action.”



Above is the regional PVPC Facebook post that was liked and shared by others in the region.

CLEAN WATER
BEGINS WITH YOU



KEEP FALLEN LEAVES OUT OF STREETS

Leaves raked or blown into streets will leach nutrients into stormwater runoff and contribute to pollution in our local waterways. Leaf litter can also plug storm drains and increase flooding issues.

Better options:

- Mulch leaves in place with your lawnmower to put valuable nutrients back into the soil
- Gather leaves and other "yard waste" into a compost pile and let overwinter and decompose for use as fertilizer next growing season
- Dispose of your leaves locally. Find out where at :

<https://thinkblueconnecticutriver.org/wp-content/uploads/2022/10/Muni-disposal-resources-Leaves-updated-10-16-22.pdf>



BE A LEAF HERO

For more tips and information visit:

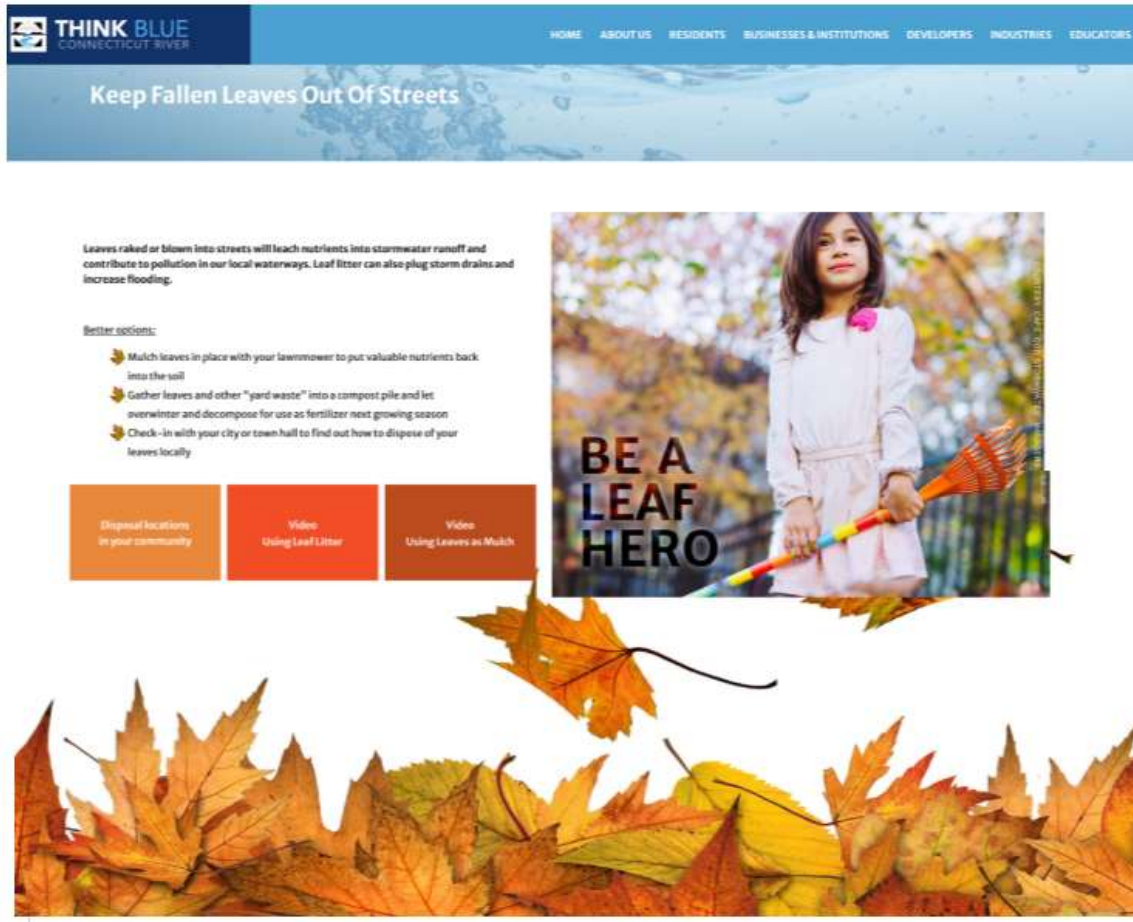
www.thinkblueconnecticutriver.org/be-a-leaf-hero

ADAPTED COURTESY CAPE COD STORMWATER MANAGERS GROUP

What is Stormwater Pollution?

It's the toxic mix of bacteria, chemicals, metals, nutrients and other contaminants that washes over pavement and other impervious surfaces and flows down storm drains to our waterways.

This flyer, which includes a link to a list of locations for proper disposal of leaves, was provided for members to post on municipal websites.



Above is the Think Blue Connecticut River website landing page on leaf litter, where social media clicks take the audience to additional information, including a list of disposal locations in Stormwater Committee communities and two instructional videos.

7. Importance of Soil Test, Proper Use of Fertilizers, Disposal of Grass Clippings - Residents

Message description and distribution method: A 30-second radio message ran for 3 weeks in April with a total of 216 messages aired in the region on WRSI, WHMP, and Lazer 99.3. The radio message read as follows:

It's lawn care season!

So remember, what you put on your lawn and garden can wash with the next rainstorm to our rivers and lakes.

Here's two tips for better lawn care:

- *One: Test your soil! Find out what your lawn needs before spending money on product. UMass Extension offers testing.*

- *Two: Leave grass clippings where they fall! When mowing, this will put nutrients back into your lawn naturally.*

Healthy lawns, healthy waters.

Brought to you by the Connecticut River Stormwater Committee.

Learn more at [Think Blue Connecticut River.org](https://thinkblueconnecticutriver.org)

In addition, a paid social media message ran on Facebook and Instagram and continued to promote the idea of keeping lawns safe for families. The “Learn More” 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 soil testing services at the University of Massachusetts – Amherst. The link to *Think Blue Connecticut River* is: <https://thinkblueconnecticutriver.org/lawn-and-yard-care/>.



The above paid Instagram and Facebook message ran for 10 days in June.

Targeted audience: Residents

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): The radio message reached a total estimated audience of 65,000 people per week.²

Facebook and Instagram ads reached 58,529 individuals who match “gardening,” “home improvement,” or “do it yourself” identifiers in Connecticut Stormwater Committee zip codes. One thousand twenty five people clicked on the “Learn More” button to go the *Think Blue Connecticut River* landing page on lawn care. Social media consultants note that there is a greater diversity of click rates for the 25+ age demographics and a more even gender split compared to previous stormwater messages, which generally skewed toward women.

Analytics for the *Think Blue Connecticut River* website page on lawn care, indicate that there were a total of 1035 views on the website landing page, with average time spent by visitors on that resource page at 1 minute and 54 seconds, and 47 downloads of posted resources.

Message dates: Radio ad ran for 3 weeks in April
Paid Facebook and Instagram message ran for 10 days, from June 12 to June 22

Message completed for: Appendix F requirements ✓ Appendix H Requirements ✓

Was message different than what proposed in your NOI/SWMP? Yes No ✓

If yes, describe why the change was made: N/A

8. Proper Management of Pet Waste – Residents

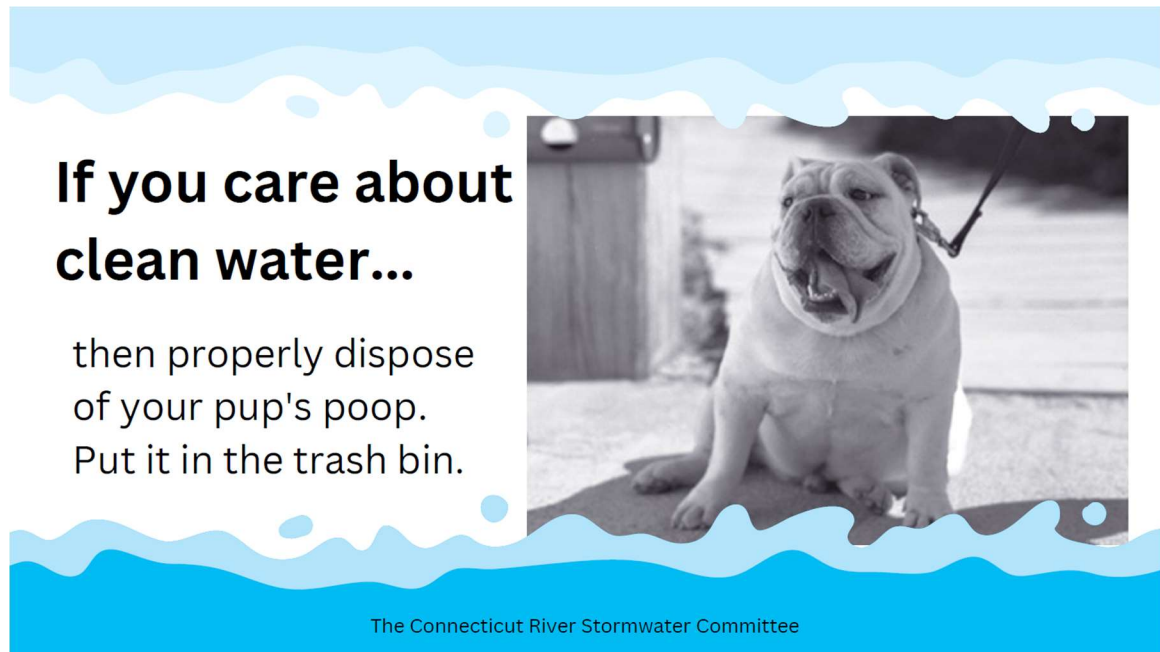
Message description and distribution method: Pet waste messaging in Year 5 occurred at time of licensing and during the summer. Messaging is based on the “Think picking up Spike’s poop is gross? Try swimming in it,” and aimed at driving people to the pet waste pick up pledge on the *Think Blue Connecticut River* website. Paid placement social media messages at both time of licensing and summer targeted people in Connecticut Stormwater Committee zip codes who had identifiers that match “pets at home” and “dog walking.”

At time of licensing

Messaging included a slide for use by local cable access television stations, a paid social media message, and an e-mail message to municipal clerks/dog officers providing materials for use in the licensing process. Materials provided to municipal clerks and licensing officers was based on a survey done in Year 3 about what might be the most effective methods for

² This is based on the weekly Cume from Nielsen (the estimated number of people who listened to a radio station over the course of a week). For WLZX (Lazer 99.3 from Springfield), the weekly cume is 34,700; WRSI (93.9 The River) – 22,600; and WHMP – 8,400.

messaging through their licensing process. The cable access message was simplified based on feedback from cable tv stations on the fall leaf litter messages. This message also focused specifically on communicating that pet waste *should be put in a trash bin*. Public works officials on the committee had stressed the importance of this point because they are frequently finding bagged pet waste in catch basins.



If you care about clean water...

then properly dispose of your pup's poop. Put it in the trash bin.

The Connecticut River Stormwater Committee

The above message was provided to 17 local cable access television stations in the region.



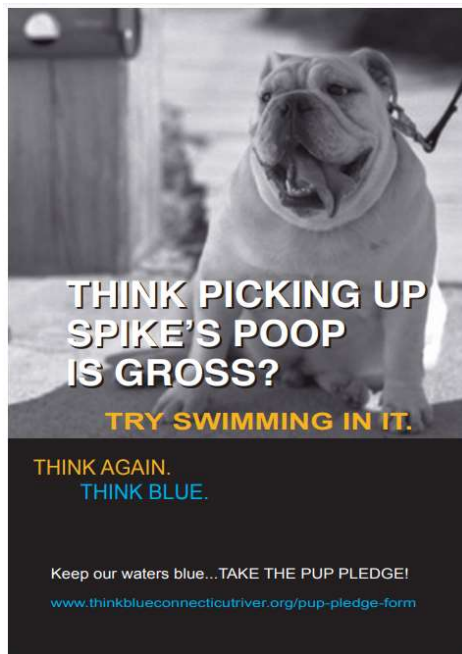
Did you know that there are about 47,000 dogs in the Pioneer Valley, and that together, they produce about 17.5 tons of animal waste a day?

Dog waste does not act as an effective fertilizer. Stormwater runoff can wash dog waste into ponds, lakes, streams and drinking water supplies, causing outbreaks of *E. coli* and other bacteria harmful to both people and wildlife. It can contaminate parks, athletic fields and places where children play.

We all need to pick up and properly dispose of our pet's waste in the trash can. Join all the dog owners in your neighborhood who are showing they care and take the PUP (Pick up Poop) Pledge at:

www.thinkblueconnecticutriver.org/pup-pledge-form/

PVPC provided the above electronic message to be placed on municipal dog licensing web pages in member communities.



JOIN PIONEER VALLEY DOG OWNERS BY TAKING THE PUP (PICK UP POOP) PLEDGE!

Here in the Valley, we have about 47,000 dogs that together produce more than 17.5 tons of waste per day. Dog poop left on the ground — or thrown down a storm drain— washes with the next rainfall straight to our rivers and lakes. The cumulative impacts of improper waste disposal make our local waters unsafe. Show that you care and take the PUP Pledge to help keep our waters BLUE.

TAKE THE PUP (Pick Up Poop) PLEDGE!



SCAN ME

Follow the web link, or scan the QR code to access the pledge.

www.thinkblueconnecticutriver.org/pup-pledge-form

Messaging was slightly modified as shown above to also serve members communities as a postcard for distribution with dog licenses.

Summer

Summer messaging involved running paid placement on Facebook and Instagram around the Labor Day weekend.

Targeted audience: Residents

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s):

During time of licensing

Local cable access television message went to 17 stations in the region.

Paid social media messaging on Facebook and Instagram reached 41,936 people in Stormwater Committee communities with 1,028 individuals clicking on the “Pledge” button to go to the Pick Up Poop pledge on the *Think Blue Connecticut River* website.

Summer

Paid social media messaging on Facebook and Instagram reached 53,264 people in Stormwater Committee communities with 943 individuals clicking on the “Pledge” button to go to the Pick Up Poop pledge on the *Think Blue Connecticut River* website.

Analytics for the *Think Blue Connecticut River* website, indicate that there were another 195 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 2 minutes and 4 seconds.



Above is the paid social media message that ran on Facebook and Instagram. The pledge button links to the form on the Think Blue Connecticut River website.

Message dates:

During time of licensing

Facebook ad ran for 12 days, from February 22 to March 6

The cable access message went to 17 local stations

Summer

The social media message ran on Facebook and Instagram for seven days, from September 5 through 12. The aim had been to have the message run before and during the Labor Day weekend, but approvals from Facebook and Instagram were slow in coming.

Message completed for: Appendix F requirements ✓ Appendix H requirements ✓

Was message different than what proposed in your NOI/SWMP? Yes ✓ No

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).

If yes, describe why the change was made: To provide additional messaging.

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 18 to 25, 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 ad reached 47,536 people whose interest matches “Septic Tank” in Connecticut Stormwater Committee zip codes. There were 838 clicks on the ad’s “Learn More” button which links to the *Think Blue Connecticut River* website septic system landing page.

The regional Facebook post drew a total of 8 “shares,” including member communities.

There were a total of 782 views of the *Think Blue Connecticut River* website septic system landing page with people spending an average of 1 minute and 48 seconds. Analytics indicate that there were 199 clicks to download information.

Message dates: The Facebook ad ran between September 18 and 25, 2022

Message completed for: Appendix F requirements Appendix H requirements ✓

Was message different than what proposed in your NOI/SWMP? 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 adjusted accordingly, starting in Year 2.



Above is the ad that ran on Facebook during Septic Smart week.



Above is the regional Facebook post.

10. Proper Disposal of Leaf Litter - Businesses

Message description and distribution method: This year, PVPC issued a letter to reach the landscaper and landcare business and commercial audience with best practices messaging on disposal of leaf litter. Signed by the Committee Chair and Co-chair, the letter promoted several key best practices:

- 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): Letter – sent to 145 landscaping companies in the region

Message dates: Letter – sent October 17, 2022

Message completed for: Appendix F requirements ✓ Appendix H requirements ✓

Was message different than what proposed in your NOI/SWMP? Yes No ✓

If yes, describe why the change was made: N/A



C O N N E C T I C U T R I V E R

S t o r m w a t e r C o m m i t t e e

October 17, 2022

Hello professional landscaper,

Town of Agawam
Town of Belchertown
City of Chicopee
Town of East Longmeadow
City of Easthampton
Town of Granby
Town of Hadley
City of Holyoke
Town of Longmeadow
Town of Ludlow
City of Northampton
Town of Palmer
Town of South Hadley
Town of Southampton
Town of Southwick
City of Springfield
Town of West Springfield
City of Westfield
Town of Wilbraham
University of
Massachusetts
Pioneer Valley
Planning Commission

As you may know, many communities here in the Pioneer Valley are subject now to more stringent federal stormwater permit requirements. This permit requires communities to reduce contaminated storm flows to local rivers, streams, and lakes.

Why should you care as a professional landscaper?

Many lawn care practices can contribute to storm flows that are especially high in nutrients. Improper use and disposal of fertilizers, leaves, and grass clippings, can put nitrogen and phosphorous into these storm flows that enter local waters.

Under the Clean Water Act, we have made important strides toward fishable and swimmable waters, but we still have some distance to go. Do your part and learn more about best land care practices. To be sure, these are shifts in practice that will involve your client as well. To that end, our group has posted information for property owners on better management practices. See: www.thinkblueconnecticutriver.org/be-a-leaf-hero/ For your work this fall, you might start by considering the following:

- 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.

Thank you for considering these better land care practices for leaf litter. We will continue to reach out to you as part of our stormwater permit compliance work.

Our facilitator, Patty Gambarini at the Pioneer Valley Planning Commission, would be happy to hear from you about your thoughts on ways to improve leaf litter practice in the region. What are your needs around this? Please contact her at: pgambarini@pvpc.org.

Sincerely,

Joseph Kietner, Committee Chairman
Stormwater Coordinator, City of Westfield

Randal Brown, Committee Vice Chair
Public Works Director, Town of Southwick

Above is the letter sent in October to 145 landscaping companies in the region.

11. Importance of Soil Test, Proper Use of Fertilizers, Disposal of Grass Clippings - Businesses

For spring messaging on best landcare practices, PVPC prepared an updated letter that went to 145 landscaping companies operating in the region. The letter, signed by the Connecticut River Stormwater Committee Chair and Co-chair, continued to emphasize two important strategies:

1. 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.

2. 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>
If a soil test shows your client's lawn needs nutrients, go for slow-release fertilizers. These products more effectively deliver what plants need and don't wash off as easily as chemical fertilizers. Also, take the time to understand how much and when and where to apply fertilizers.

Targeted audience: Business/institutions/commercial facilities

Responsible department/parties: PVPC staff and Connecticut River Stormwater Committee members

Measurable goal(s): Letter – sent to 145 landscaping companies in the region

Message dates: Letter - sent April 20, 2023

Message completed for: Appendix F requirements Appendix H Requirements

Was message different than what proposed in your NOI/SWMP? Yes No

If yes, describe why the change was made: N/A

12. Proper Management of Pet Waste – Businesses

Message description and distribution method: An article was written and distributed to Business West for publication. When the article did not get published in the September 4 issue, PVPC worked for publication through other news outlets. WWLP covered the messaging on its digital news feed, pointing to resources on the Think Blue Connecticut River website, including a design template for a humorous 12x18” sign, quotes for sign production and hardware, and a pet waste message for business to share on social media.

Targeted audience: Businesses/institutions/commercial facilities

Responsible department/parties: PVPC staff and member municipalities

Measurable goal(s): WWLP, Channel 22 News, is an NBC affiliate with a large audience in Western Massachusetts. For more information see: <https://www.wwlp.com/about-us/>

Message dates: September 12, 2023

Message completed for: Appendix F requirements ✓ Appendix H Requirements ✓

Was message different than what proposed in your NOI/SWMP? Yes ✓ No

If yes, describe why the change was made: For Year 5, the SWMP indicated that municipalities would send out a letter to property owners with problem pet waste locations. Identifying these properties proved problematic and would have involved high levels of effort and large mailings for member communities. Running an article seemed a more reasonable alternative in reaching this audience.



At left is the 12x18” sign design template offered as a resource for use by businesses in the region.

