



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 Annual Report
for Public Education and Outreach
MCM 1 and additional requirements in Appendixes F and H

July 1, 2020 through June 30, 2021

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The Connecticut River Stormwater Committee annual report provides a summary of all the work undertaken during the July 1, 2020 to June 30, 2021 reporting period. 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 3. 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	Steve Williams, Department of Public Works and Erica Cross, Conservation Department
Chicopee	Quinn Lonczak, Department of Public Works
East Longmeadow	Bruce Fenney and Tom Christensen, Department of Public Works
Easthampton	Dan Murphy, Department of Public Works
Granby	Dave Derosiers, Highway Department
Hadley	Chris Okafor, Department of Public Works
Holyoke	Michael McManus and Robert Peirent, Department of Public Works
Longmeadow	Craig Markham and Tim Keane, Department of Public Works
Ludlow	Jim Goodreau, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Palmer	Angela Panaccione, Conservation Department
South Hadley	Melissa LaBonte, Department of Public Works
Southampton	Randall Kemp and Joesette Picard, Highway Department
Southwick	Randall Brown and Jon Goddard, Department of Public Works
Springfield	Kevin Chaffee, Planning/Conservation Department
West Springfield	Jim Czach and Jesse English, Department of Public Works
Westfield	Casey Berube and Joe Kietner, Department of Public Works
Wilbraham	Tonya Basch and Dean Grochmal, Department of Public Works
University of Massachusetts - Amherst	Neils LaCour and Terri Wolejko

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.

3. Social Media Challenges

The Year 3 permit period presented certain challenges on educational messaging through social media that could not have been foreseen. The rampant spread of misinformation and election security concerns translated to far greater restrictions, making it far more difficult to message on social media. Facebook algorithms became so restrictive that PVPC could no longer boost educational posts by zip code. PVPC hired a consultant for help and initially worked with the social media consultant to set up a Facebook business account to place ads. That approach also did not prove workable so social media messaging for the Connecticut River Stormwater Committee moved to Google ads. For the most part, messaging did not rely completely on social media so where efforts were delayed, messages got out to audiences via other pathways as is indicated in the reporting below.

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: 9, 10, and 13

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: 7, 8, 9, 11, 12, and 13

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

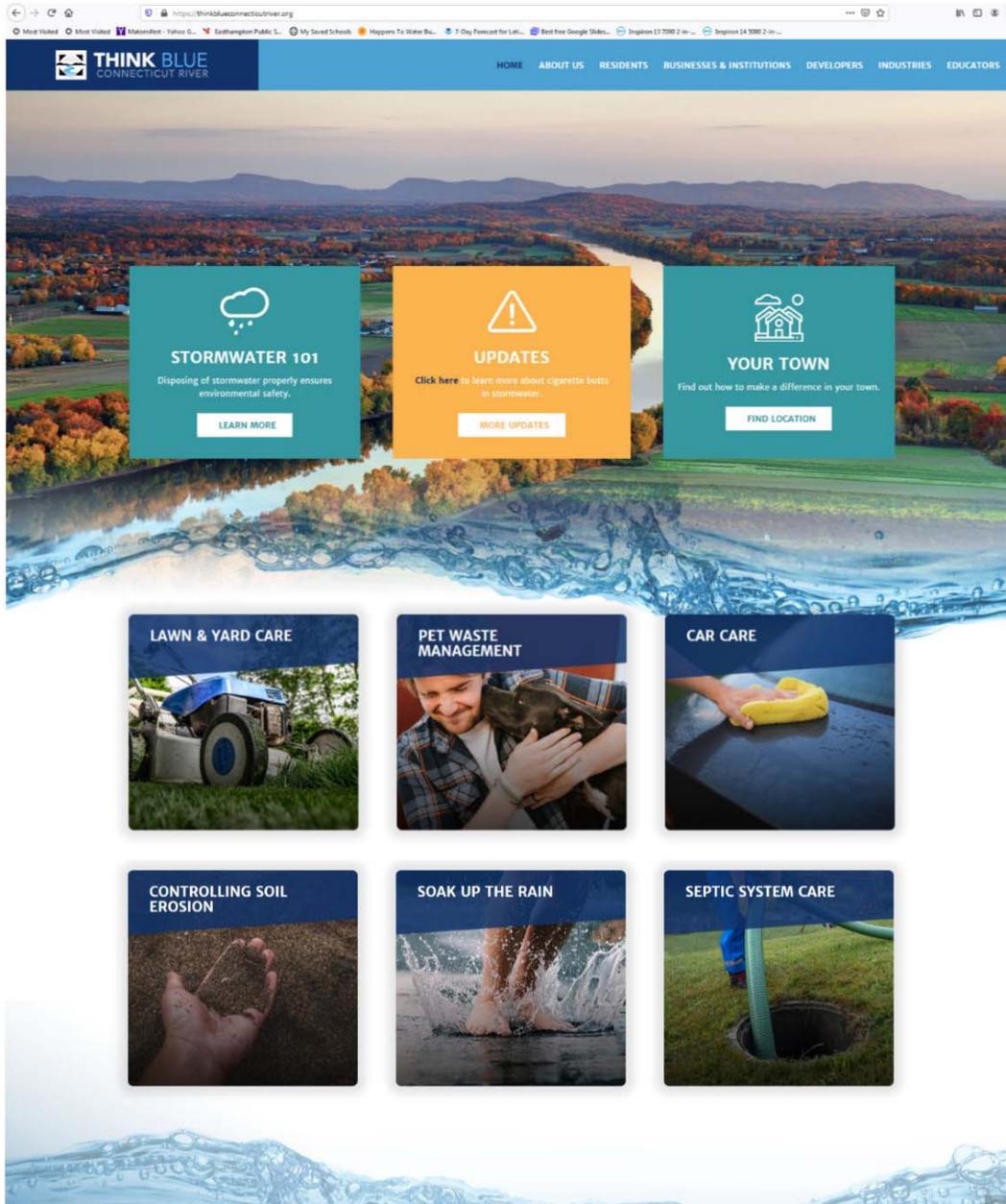
Measurable goal(s): A total of 3,196 people visited the *Think Blue Connecticut River* website during Year 3 and spent an average of 1 minute, 38 seconds on viewing a total of 3,940 pages on stormwater best practices.

Message dates: July 1, 2020 through June 30, 2021

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 with development now completed is most central to all messaging in the region.



2. Cigarette butts – residents

Message description and distribution method: Materials and messaging for this campaign to reduce cigarette butt litter were developed in Year 2. Due to a general sense among members that messaging would get lost in the mix given far greater public concern with the Covid-19 pandemic, actual launch of campaign messaging occurred in Year 3. At the heart of the campaign is an image of a baby bird with a cigarette butt in its mouth. PVPC obtained permission for use of this image through a photographer who is associated with the Florida Audubon Society. The campaign includes:

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

While many communities successfully displayed the DPW truck decals, there were important lessons learned. In some cases, the decals were too large for certain trucks. One idea for the future is to print two sizes of decals. Also, some stormwater committee members found that once they had decals in hand, they did not have support for putting the decals on trucks. Some then used the decals to make banners or signs that got posted in public locations.

The *Think Blue Connecticut River* web location for more information is at:

<https://thinkblueconnecticutriver.org/wp-content/uploads/2020/07/cigarette-butt-bird.pdf>



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

<p><small>Business</small></p> <h3>Butt out! Connecticut River Stormwater Committee wants cigarette butts out of waterways</h3> <p><small>Updated Aug 03, 2020; Posted Aug 03, 2020</small></p>  <p><small>This image urging smokers not to carelessly discard cigarette butts where they might end up in waterways will go on local public works vehicles. (photo provided)</small></p> <p><small>By Jim Kinney jkimney@repub.com</small></p> <p>Cigarette butts — either casually flicked aside or dumped on the ground from a full ashtray — that end up on streets or parking lots eventually wash into storm drains where they flow to streams and rivers where they pose a danger to birds, fish and other animals.</p>	<p>Connecticut River Stormwater — a group made up of 20 local towns and cities along with the University of Massachusetts at Amherst — has launched a public awareness campaign. It will feature decals on municipal trucks bearing an image taken by Florida Audubon member Karen Mason showing a bird feeding cigarette butts to its babies.</p> <p>"Fish mistake cigarette butts for food. Birds mistake butts for food," said Patty Gambarini, principal environmental planner at Pioneer Valley Planning Commission which convenes and does administrative work for the Watershed Committee.</p> <p>And of course, all the things that make cigarettes bad for people — nicotine and other substances — make them bad for wildlife, Gambarini said.</p> <p>"We are still seeing a lot of cigarette butts," she said. " People who still smoke ... just flick it away and don't think of it as litter."</p> <p>A single butt can contaminate between 500 and 1,000 liters of water with compounds like nicotine and heavy metals, according to the news release. The filter is made of a non-biodegradable form of plastic called cellulose acetate, which deteriorates and disperses as plastic microfibers.</p> <p>The Source to Sea Clean Up will keep track of the numbers of butts and of e-cigarette and vaping waste said Stacey Lennard of the Connecticut River Conservancy and organizer of the cleanup.</p>
<p><i>The Springfield Republican newspaper picked up on the Committee's press release with publication of the article shown above on August 3, 2020.</i></p>	

Measurable goal(s):

Decals on Public Works vehicles and public spaces had a roughly estimated 40,000 views per month in each community. Stormwater Committee members counted views of decals using a simple Excel calculator tool that PVPC developed based on methodology from the outdoor advertising sector (see calculator tool in table next page). Several members commented that the calculator seems to yield high numbers.

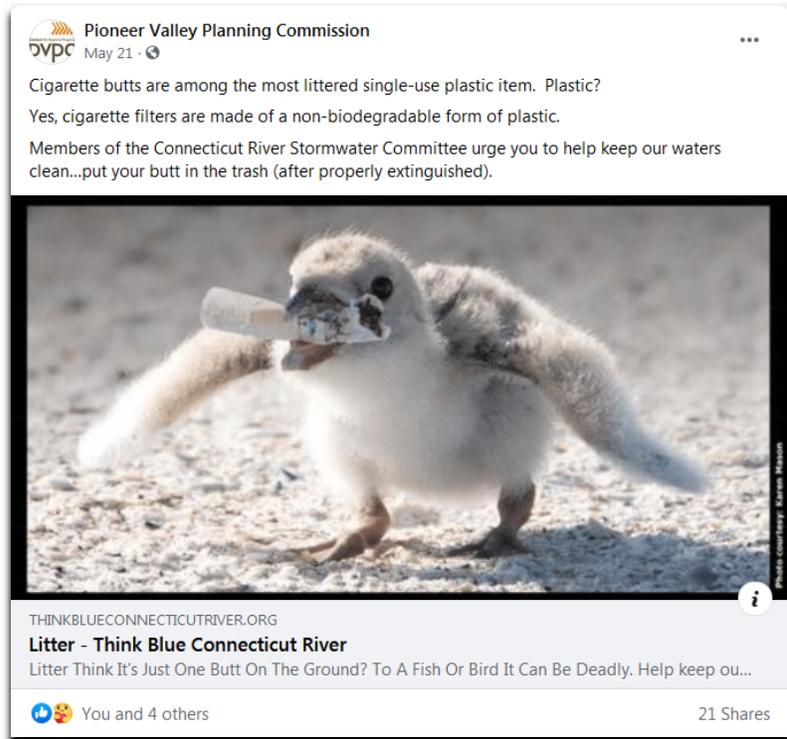
The Facebook advertisement reached 17,720 people identified as “smokers” and was shown 31,937 times; 152 smokers clicked on the link to check out the landing pages and there were 62 reactions. Facebook estimates that 4,330 viewers recall the campaign advertisement.

The posting on PVPC’s Facebook page shows 20 shares that include Stormwater Committee members, the Connecticut River Conservancy, and Massachusetts Audubon Society’s Arcadia Sanctuary.

The Springfield Republican, which printed an article and followed with an editorial estimates its audience at 83,000 readers.

Name of Community	Example Municipality			
Number of Fleet Vehicles with Decals	Example number			
	Total Fleet Hours per Month	Passing Vehicles per hour*	Impressions per Hour**	Monthly Totals
Parked (in public) ***	0	300	450	0
Driving Intertate or US Highway	0	450	675	0
Driving surface street	0	800	1200	0
Total Impressions this Month	—	—	—	0
* Based on number of cars per mile (15 / highway; 40 / surface street as per ARD White Paper) ** Based on vehicle load factor of 1.5 passengers per vehicle (transformative-mobility.org) *** Includes pedestrian impressions Monthly totals = total fleet hours per month * impressions per hour				

The table above shows a simple tool created by PVPC for counting impressions. This counter draws on methodology from the outdoor advertising industry.



The posting on PVPC’s Facebook page included 21 shares that included Stormwater Committee members, the Connecticut River Conservancy, and Massachusetts Audubon Society’s Arcadia Sanctuary.

Message dates: The press release to local media was published in the Springfield Republican in their Business Section on August 3, 2020, and then picked up as an editorial in the same paper on August 6, 2020. See editorial at right.

Decals were displayed throughout Year 3 in each member municipality.

Facebook ad ran for 9 days, from May 20 to 28, 2021

PVPC's Facebook post went up on May 21, 2021.

Was message different than what proposed in your NOI/SWMP?

Yes No

If yes, describe why the change was made: Postponed to Year 3 and rather than messaging through use of PVTA bus panels, decided to message with large decals on public works vehicles throughout the region, which was supplemented with press release, Facebook messaging, and *Think Blue Connecticut River* website information on cigarette butts.





Decals of cigarette butt messaging were placed on DPW vehicles throughout the region.

3. Dumpster waste and avoiding contaminated flows - businesses

Message description and distribution method: Materials and messaging for this campaign on dumpster waste and avoiding contaminated flows were developed in Year 2, but strategy further evolved in Year 3 given constraints presented with messaging to Boards of Health during a pandemic. Rather than try to meet regionally or individually, strategy pivoted to notifying Boards of Health about the issue and availability of flyers through the membership of the Massachusetts Health Officers Association. The campaign included:

- Update to the *Think Blue Connecticut River* Website to include:
 - Flyer to inform Boards of Health on proactive regulatory and educational steps to curb stormwater pollution from dumpsters
 - Flyer for Boards of Health for use as part of routine interactions with retail complexes, restaurants/food establishments, and apartment complexes
 - Check list for Boards of Health (developed by Town of Palmer Conservation Agent) to use when inspecting restaurants and looking at dumpsters and oil storage
- An article prepared for the Massachusetts Health Officers Association (MHOA). Initially planned for publication in MHOA's newsletter, MHOA sent the article as a special e-mail blast to their 650 members. They also sent the information with a request for distribution to members of the Massachusetts Environmental Health Association (MEHA), Massachusetts Association of Health Boards (MAHB), and Western Massachusetts Public Health Association (WMPHA).
- A presentation that was to be given at Western Mass Health Officers Association/MassDEP annual spring seminar focused on environmental health was not used in the end, but remains at the ready once the pandemic subsides.

Targeted audience: Business, institutions, and commercial facilities

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

Measurable goal(s): An e-mail about *Think Blue Connecticut River* resources on dumpsters for Boards of Health went to the full membership of the Massachusetts Health Officers Association, 650 people.

Analytics from the *Think Blue Connecticut River* website show a total of 84 people retrieved PDF resources posted on dumpster waste.

Message dates: The article went to the 650 members of the MHOA on March 24, 2021.

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

If yes, describe why the change was made: Aside from postponing message to Year 3, we learned in the process of developing the campaign that distribution of flyers directly to

dumpster companies to provide to customers was not going to be a fruitful strategy. Better to work with Boards of Health to inform them and then get them to distribute the information to dumpster companies (who are allowed/permitted by boards to operate in the community) and to businesses when health agents are doing routine inspections. The education and outreach effort became two pronged and now includes an additional flyer specifically for Boards of Health.

Given Covid-19 and the demands on Boards of Health during this time, the committee pursued a two pronged approach for Year 3:

- Post information on *Think Blue Connecticut River* website with the two PDF documents/flyers on dumpsters, along with a checklist for Boards of Health to use when inspecting restaurants and looking at dumpsters and oil storage.
- Prepare article for MA Health Officers Association Executive Director to announce resources about dumpsters to memberships in the Western MA Public Health Association and the MA Environmental Health Association.

With the continuation of the pandemic into Year 3 programming, communities recommending holding off on individual visits with boards of health. It is hoped that visits might occur at a time when the pandemic is not demanding so much attention from local boards of health.



One flyer is designed to inform Boards of Health on proactive regulatory and educational steps to take to curb stormwater pollution from dumpsters.



Another flyer is designed for Boards of Health use with dumpster users as part of routine interaction with retail complexes, restaurants & food establishments, and apartment complexes.

4. New MS4 development standards and erosion and sediment control - developers

Message description and distribution method: PVPC staff hosted a *Think Blue Connecticut River* table at the day-long virtual Western Massachusetts Developers' Conference held on October 21, 2020. The 3-d virtual booth featured hyperlinks to key documents, video, and websites, along with an opportunity for attendees to chat and collect documents for their "swag bags" from booths. The booth was organized as follows with links to resources:

About Us – link to Think Blue CT River <https://thinkblueconnecticutriver.org/about-us/>

Erosion & Sediment Control Resources

1. Rhode Island Handbook Excerpt on Project Phasing
2. EPA Construction Industry Brochure
3. Site Inspection Checklist for Use by Pioneer Valley Municipalities

New Stormwater Management Standards Resources

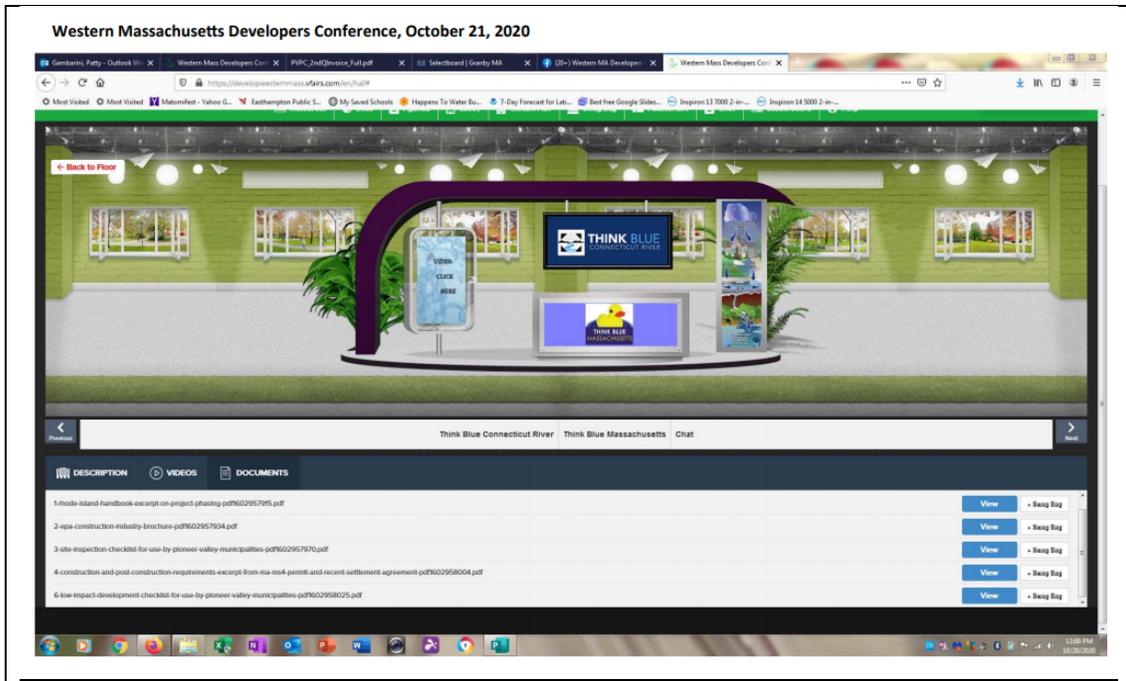
4. Construction and Post Construction Requirements Excerpt from MA MS4 Permit and Recent Settlement Agreement
5. Video Presentation on MS4 Permit from Sept. 10, 2020 Valley Development Council Meeting
6. Low Impact Development Checklist for Use by Pioneer Valley Municipalities

Chat with Us

The *Think Blue Connecticut River* booth was well attended by developers with a total of 71 visiting the virtual booth. Through participation in this conference, PVPC now has a list of the developers who attended the conference, which will prove helpful for future outreach.

Targeted audience: Developers

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



At the Think Blue Connecticut River virtual booth, developers could enter and chat with PVPC staff. They could also view and collect Think Blue resources for their “swag bag.”

Measurable goal(s): Following are statistics from the Western MA Developers Conference.

Think Blue Connecticut River Booth Summary	
Total Visits	71
Documents Viewed	68
Videos Viewed	7
Document	Views
1-rhode-island-handbook-excerpt-on-project-phasing-pdf1602957915.pdf	11
2-epa-construction-industry-brochure-pdf1602957934.pdf	14
3-site-inspection-checklist-for-use-by-pioneer-valley-municipalities-pdf1602957970.pdf	16
4-construction-and-post-construction-requirements-excerpt-from-ma-ms4-permit-and-recent-settlement-agreement-pdf1602958004.pdf	13
6-low-impact-development-checklist-for-use-by-pioneer-valley-municipalities-pdf1602958025.pdf	14
Video	Views
PVPC MS4 Permit Presentation	7
Tab	Clicks
Think Blue Massachusetts	6
Think Blue Connecticut River	5

Message dates: October 21, 2020

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

If yes, describe why the change was made: Due to the Covid-19 pandemic, this messaging was moved to Year 3 and done virtually as a booth as offered by the Conference.

5. Fleet maintenance to avoid spills and leaks – industrial facilities

Message description and distribution method: This message is aimed at ensuring that industrial operators with vehicle fleets take care to manage vehicles so as to avoid spills and leaks. PVPC staff adapted the *Think Blue Massachusetts* flyer developed by Water Words that Work for the *Think Blue Connecticut River* region. After several attempts to acquire MSGP permittees through various on-line sources, PVPC obtained the list of MSGP permittees in Massachusetts directly from EPA Region 1 staff. PVPC staff mailed the flyer to all 126 MSGP permittees in the region on April 16, 2021.

Targeted audience: Industrial facilities

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

Measurable goal(s): Mailing to 126 MSGP permittees in the region.

Message dates: April 16, 2021.

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

If yes, describe why the change was made: Postponed to Year 3 given likelihood of message getting lost in the mix during all the information around Covid-19 best practices and the struggle for industrial facilities to continue operations during the pandemic.



FLEET MAINTENANCE

PREVENT LEAKS AND SPILLS TO REDUCE POLLUTED FLOWS FROM YOUR SITE

Based on our research, your industrial facility is covered by a Multi-Sector General Permit. Under this type of permit, your facility needs to have a Stormwater Pollution Prevention Plan that shows the steps you will take to reduce stormwater pollution.

Fleet maintenance is one important area of consideration for this plan. Gasoline, oil, and grease from vehicles and equipment can wash into storm drains. Water that enters storm drains eventually ends up in our lakes, rivers, and streams. Once pollutants reach these waterways, they can harm fish and other wildlife. This pollution can even make our water unsafe to drink.

Worst Management Practices



Don't leave chemicals and other materials uncovered and open to the elements. Dumpster lids and drains shouldn't be left open. Don't defer maintenance on vehicles and other equipment.

Best Management Practices



Inspect your vehicles and equipment for leaks regularly. Store materials indoors, and use drip pans to catch fluids and keep a cleanup kit nearby in case a spill occurs. Clean up spills immediately.

For more information on how your business can help stop water pollution, visit our website at www.thinkblueconnecticutriver.org/

PVPC staff adapted the Think Blue Massachusetts flyer to serve the communities of Think Blue Connecticut River.

6. Proper disposal of leaf litter - residents

Message description and distribution method: Messaging for this campaign was adapted from a series of four *Be a Leaf Hero* social media posts developed by the Cape Cod Commission, which PVPC 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.

Initial efforts to run 4 boosted Facebook posts failed, so the Committee's consultant ran one ad on Google instead. PVPC did run the 4 leaf litter posts as part of its regional Facebook page, but these could not be boosted by zip code as had been done previously due to new restrictions. Shares on these posts included stormwater committee member municipalities and the Massachusetts Audubon Society's Arcadia Sanctuary in the region.

PVPC had also prepared a door hanger for member communities to print and distribute in areas where leaf litter is problematic. While most communities did not make use of door hangers in Year 3 given the continuation of the Covid-19 pandemic, one community did hand out the door hangers at their transfer station.

Targeted audience: Residents

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

Measurable goal(s):

Google ad that had a total of 78,056 impressions and which drew 110 clicks to the website landing page.

There were 244 views of the Leaf Hero landing page with analytics indicating that the average time spent by visitors on that resource page was an average of 3 minutes and 10 seconds. There were a total of 192 clicks to download posted PDF resources.

Message dates: Google ad ran from October 28 to November 4; PVPC Facebook posts began on October 29 and ran through November 4.

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 change to this messaging began in Year 2, where initially the plan had been for one social media post and press release. Given the cohesion of these social media messages as a whole, the Connecticut River Stormwater Committee decided to run the full series, instead of a media release, and developed a *Think Blue Connecticut River* web page on best practices to which all posts could link.



Pioneer Valley Planning Commission

October 29, 2020 · 🌐



Leaf litter leaches nutrients into storm runoff and pollutes nearby rivers, streams, lakes, and ponds.

<https://thinkblueconnecticutriver.org/be-a-leaf-hero/>



👍 You and 7 others

8 Shares

👍 Like

💬 Comment

➦ Share

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

Message description and distribution method: Social media ad and post, using idea of keeping lawns safe for families. The link provided in the social media post connects to the *Think Blue Connecticut River* web page on lawn and yard care, which lays out important best practices and links to useful resources, including a video by Paul Tukey, organic lawn care celebrity, as well as guides to popular lawn care chemicals and their hazards. Link to *Think Blue Connecticut River* is: <https://thinkblueconnecticutriver.org/lawn-and-yard-care/> PVPC also provided members with a flyer to distribute locally. As they were able, committee members put flyers in Town Hall or Building Inspection Services.

Targeted audience: Residents

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



Facebook advertisement that ran for 6 days in June of Year 3.

Measurable goal(s): The Facebook ad reached 38,160 individuals in Stormwater Committee communities who match “gardening,” “home improvement,” or “do it yourself” identifiers. Of this number, Facebook estimates that 7,200 people will recall the ad. Ninety-nine people clicked on the “Learn More” button to go the *Think Blue Connecticut River* landing page on lawn care.

The Facebook post in the region was shared by several Stormwater Committee communities, helping to drive the number of views on the website landing page to a total of 161 with analytics indicating that the average time spent by visitors on that resource page was 1 minute and 42 seconds. There were a total of 132 downloads on the posted PDF resources.

Message dates: Facebook ad ran for 6 days, from June 25th to June 30th; PVPC posted the regional Facebook message on June 23.

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: Proposed work had included creating a brochure. Instead, work entailed improving the *Think Blue Connecticut River* web page on lawn care so that information and resources are all more readily available during Covid-19.



8. Proper management of pet waste – residents and businesses

Message description and distribution method: Pet waste messaging in Year 3 was multifaceted at both the time of licensing and summer messaging. 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.

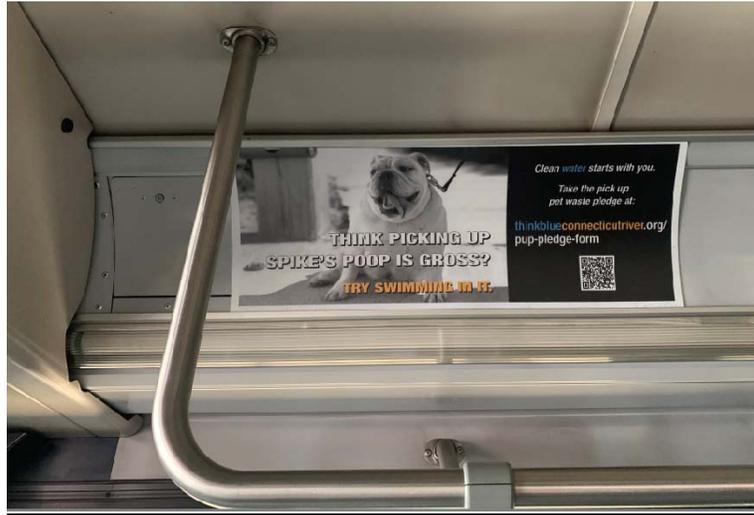
Before time of licensing messaging, PVPC surveyed municipal clerks/dog officers to understand what might be the most effective methods for messaging through their licensing process. Based on the responses, PVPC provided a variety of tools directly to municipal clerks to help them in getting out the pet waste message during time of licensing, including flyers in different sizes based on envelope sizes used in corresponding with dog owners, and an electronic message to be placed on the local licensing web page (something we learned that most municipalities now have). While several communities made use of the flyers, PVPC noted that uptake of the electronic element (shown in image below) on local licensing web pages in Year 3 was limited across member communities. The lesson learned to be advanced in Year 4, will be for committee members to make the push directly with their clerks/dog officers in making better use of this element at time of licensing.

Elements for Year 3 also included a social media ad on Google at time of licensing.



Electronic element created for municipal dog licensing web pages.

For summer messaging, internal and external ads have been running on the PVTA buses in the region. This investment is aimed at covering both the residential and business audience in Year 3. PVTA bus ads ran on buses operating out of three different garages in the region: Springfield Garage, Northampton Garage, and UMass Garage. There were a total of 6 panels run on the outside of buses and 12 panels in the interiors. To supplement the summer messaging on pet waste, a Facebook ad will run just after Labor Day, in early September.



Panels ran on both the interior and exterior of buses for three months in the Pioneer Valley.

Targeted audience: Residents and Businesses (for Year 3)

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

Measurable goal(s): The Google ad placed at time of licensing reached 19,227 people identified as dog owners in targeted communities with 34 people clicking through to the pet waste pick up pledge. It is not clear yet whether this poorer performance in Year 3 compared to Year 2 has to do with the difference between Google and Facebook or advertising versus boosting posts by zip code (with 4 Facebook posts boosted by zip code in Year 2, we reached 15,552 people who followed through with 406 clicks).

PVTA estimates that the bus panels displayed through a three-month period have produced more than 1.5 million impressions.

Numbers from the supplemental Facebook ad are not yet available.

During Year 3, *Think Blue Connecticut River* pet waste page on the website had 700 page views with the analytics indicating that the average time spent by visitors on that resource page was 2 minutes and 3 seconds. Of the total 390 people who clicked on the pet waste pledge, there were about 100 new people who made the commitment to pick up pet waste in Year 3. PVPC's social media consultant has recommended a few adjustments to the pledge form to help increase likelihood of people pledging: better explain why important to pledge, and how data requested will be used. These changes have been made for Year 4.

Message dates:

- Time of licensing, Google ad ran for 11 days, February 8 through 19, 2021
- PVTA bus ads ran late June to September 2021
- Facebook ad ran week of September 13 through 17, 2021

Message completed for: Appendix F requirements Appendix H requirements

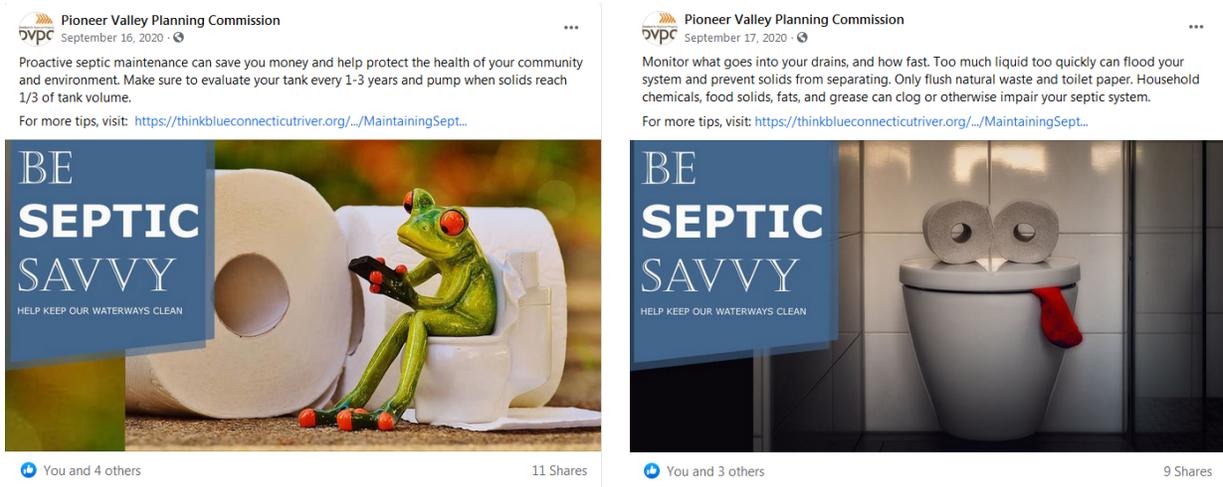
Was message different than what proposed in your NOI/SWMP? Yes No
The NOI/SWMP indicated pet waste messaging only in summer months as PVPC understood that messaging under the Appendixes could be combined. EPA has indicated that additional messaging to dog owners "at time of licensing" is required. Messaging 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 with two posts on 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. Unfortunately, these posts could not be boosted given the difficulties with Facebook prior to the national election, but member communities with septic system users were encouraged to share posts on their local Facebook sites.

PVPC also reissued a draft letter for distribution by Boards of Health to septic system owners. Several communities used this letter in Year 2, and another community used the letter in Year 3. Others noted that it remains difficult for Boards of Health to help with such messaging give the Covid-19 pandemic. It is important to note too that among the Connecticut River Stormwater Committee, there are several member communities that are highly urbanized with no properties presumed to be using septic systems for sanitary waste disposal.



PVPC developed and distributed two Facebook posts for Year 3 on Septic Systems to coincide with EPA’s Septic Smart Week in September.

Targeted audience: Residents

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

Measurable goal(s): Facebook posts drew a total of 20 “shares.” There were a total of 42 views of the *Think Blue Connecticut River* website septic system landing page with people spending an average of 50 seconds. Of that total, 32 people clicked to the septic system infographic to learn more.

Message dates: September 16 and September 17, 2020

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 has adjusted accordingly, starting in Year 2.

10. Proper disposal of leaf litter - businesses

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

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

Targeted audience: Businesses/institutions/commercial facilities

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

Measurable goal(s): Mailing to 150 professional land care companies operating in Stormwater Committee member municipalities

Message dates: October 30

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

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

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

Message description and distribution method: Rather than continue with idea of hosting stand-alone workshop for land care companies in the region (which would likely draw only a few professionals), PVPC staff coordinated with UMass-Amherst Cooperative Extension to “piggyback” by presenting messaging at the "Virtual Spring Kickoff for Landscapers Education Program 2021” on March 26, 2021. The aim was to reach the businesses that are caring for lawns in the Connecticut River region and across Massachusetts. PVPC spoke about the condition of rivers and streams, the ongoing work to reduce stormwater pollutions, the water quality implications of lawn care nutrients, and the importance of better practices. Better practice messaging for landscapers focused on two practices that Cooperative Extension staff advised would be most resonant:

- Test your client’s soil before applying any fertilizers
- Mulch mow grass clippings into the lawn in order to help soil retain moisture and to recycle nutrients, which can help reduce need for future fertilizer applications

Slides from the presentation are shown below.

Targeted audience: Business/institutions/commercial facilities

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

Measurable goal(s): 80 lawn care professionals from across MA attended the session

Message dates: March 26

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: Ongoing Covid-19 pandemic required adjusting from in-person workshop to virtual and to obtain access to likely most robust audience, worked with UMass Cooperative Extension to join planned program they were giving.

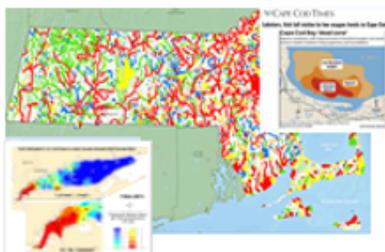
Land care, stormwater, & local rivers, streams, and lakes



Fatty Gambellini, Pioneer Valley Planning Commission

1

- Many waters "impaired"
- Phosphorus impacts in lakes – algal blooms
- Nitrogen in coastal waters – low DO, fish kills



2

- Cities and towns must reduce polluted flows based on federal and state stormwater permit
- Stormwater coalitions organized to help advance practices



3

Lawn care and water quality

- Lawn care can contribute to storm flows that are especially high in nutrients
- Fertilizers, improper disposal of grass clippings, and other yard waste can put N and P into these flows



4

- Important shifts required in client expectations
- Property owners in some parts are starting to ask questions of their land care professionals



5

Two steps

- Test your client's soil before applying anything
- Mulch mow grass clippings into the lawn
 - Helps soil retain moisture
 - Recycles nutrients, which can help reduce need for future applications



6



Contact: Fatty Gambellini, Pioneer Valley Planning Commission
fgambellini@pvpc.org | www.thinkbluetoconnecticutriver.org/

7

Slides above were part of presentation made at UMass Cooperative Extension "Virtual Spring Kickoff for Landscapers Education Program 2021."

12. Proper management of pet waste – businesses

See number 8 above. Also, Google analytics from the *Think Blue Connecticut River* website also indicate that businesses and institutions continued to access “There is no Poop Fairy,” materials produced in Year 2, with 72 downloads of the template and the quotes provided to produce the sign.

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 using the 30-second video entitled, “Fowl Water.” The “Fowl Water” advertisement helps viewers visualize how stormwater runoff carrying motor oil, pet waste, and trash pollutes local waterways. Each campaign entailed sponsored video on Facebook and Instagram and pre-roll advertisements on YouTube. See the video at: <http://bit.ly/tbm-fowl-water>

To measure the effectiveness of this campaign, Water Words that Work conducted an on-line panel survey of residents in areas where advertisements ran. Highlights from that survey include the following:

Post Campaign Survey Highlights

At the close of the advertising campaign, we surveyed Massachusetts residents in the areas where the campaign ran:

- 16% of residents surveyed recalled seeing the ads, down from 17% in 2020, but within the survey margin of error
- Those who recall the ad are more likely to recognize that stormwater goes directly to local waterways (50%) than those who do not recall the ad (36%).
- Those who recall the ad are more likely to describe stormwater has having “major” or “some” impact on waterways (53%) than those who do not recall the ad (27%).

The full survey is available at:

https://5f19efc0-6724-487e-8188-1ad9d05d4ac5.filesusr.com/ugd/e78125_f42fdf228ee24360a4c569be2bfcf8f7.pdf

Targeted audience: Residents and businesses/institutions/commercial facilities

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:

211,881 Facebook and Instagram impressions
471,252 YouTube ad impressions
83,101 Spanish language impressions

Message dates: May 17 to June 4, 2021

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

If yes, describe why the change was made: This message is a welcome addition to our program for Year 3 and will be part of the region's SWMP update.