

<p>Year 2 Annual Report</p> <p>Massachusetts Small MS4 General Permit</p> <p>Reporting Period: July 1, 2019-June 30, 2020</p>

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

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2019 and June 30, 2020 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Town of Northbridge

EPA NPDES Permit Number: MAR041144

Primary MS4 Program Manager Contact Information

Name: James Shuris, P.E., MBA

Title: Director of Public Works & Town Engineer

Street Address Line 1: P.O. Box 88

Street Address Line 2: 11 Fletcher Street

City: Whitinsville

State: MA

Zip Code: 01588

Email: jshuris@northbridgemass.org

Phone Number: (508) 234-0816

Stormwater Management Program (SWMP) Information

SWMP Location (web address): www.northbridgemass.org

Date SWMP was Last Updated: 30 June 2020

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

It is located on the Town of Northbridge website at www.northbridgemass.org

Part II: Self-Assessment

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

Impairment(s)			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Phosphorus
<input checked="" type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
TMDL(s)			
In State:	<input type="checkbox"/> Assabet River Phosphorus	<input type="checkbox"/> Bacteria and Pathogen	<input type="checkbox"/> Cape Cod Nitrogen
	<input type="checkbox"/> Charles River Watershed Phosphorus	<input type="checkbox"/> Lake and Pond Phosphorus	
Out of State:	<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Metals	<input type="checkbox"/> Nitrogen
			<input type="checkbox"/> Phosphorus
			<input type="button" value="Clear Impairments and TMDLs"/>

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

Year 2 Requirements

- ☒ Completed Phase I of system mapping
- ☒ Developed a written catchment investigation procedure and added the procedure to the SWMP
- ☒ Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
- ☒ Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes
- ☒ Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- ☒ Developed an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
- ☒ Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
 - Developed written SWPPPs, included in the SWMP, for all of the following permittee owned or
 - ☒ operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Many of these requirements/SOPs and procedures have been provided to the Town of Northbridge via CMRSWC and/or THINK BLUE for educational, training sessions or workshops. COVID-19, lack of sufficient personnel, and a town-wide spending freeze at the end of FY 2020 continues to have a tremendous

impact, both financially and operationally in accomplishing MS4 Year 2 requirements. As a result, the Town of Northbridge relies heavily on the CMRSWC for all training, workshops, educational, written procedures for Year 2 requirements and the like. Refer to the Town of Northbridge SOPs 1 through 22 (templates which are currently being updated) provided by the CMRSWC and/or THINK BLUE and training/workshop sessions with Fuss & O'Neill.

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☐ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - ☐ This is not applicable because we do not have sanitary sewer
 - ☒ This is not applicable because we did not find any new SSOs
 - ☐ The updated SSO inventory is attached to the email submission
 - ☐ The updated SSO inventory can be found at the following website:
- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☒ Provided training to employees involved in IDDE program within the reporting period
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Updated outfall and interconnection inventory and priority ranking as needed

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

COVID-19, lack of sufficient personnel, and a town-wide spending freeze at the end of FY 2020 continues to have a tremendous impact, both financially and operationally in accomplishing MS4 Year 2 requirements. As a result, the Town of Northbridge relies heavily on the CMRSWC and/or THINK BLUE for all training, workshops, educational, written procedures for Year 2 requirements and the like.

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

Annual Requirements

*Public Education and Outreach**

- ☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

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

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

COVID-19, lack of sufficient personnel, and a town-wide spending freeze at the end of FY 2020 continues to have a tremendous impact, both financially and operationally in accomplishing MS4 Year 2 requirements. As a result, the Town of Northbridge relies heavily on the CMRSWC for all training, workshops, educational, written procedures for Year 2 requirements and the like. COVID-19 continues to have a tremendous impact both financially and operationally in accomplishing MS4 Year 2 requirements. As a result the Town of Northbridge relies heavily on the CMRSWC and/or THINK BLUE for all training, workshops, educational, written procedures for Year 2 requirements and the like.

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

Annual Requirements

*Public Education and Outreach**

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

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Potential structural BMPs

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

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

COVID-19 continues to have a tremendous impact both financially and operationally in accomplishing MS4 Year 2 requirements. As a result the Town of Northbridge relies heavily on the CMRSWC and/or THINK BLUE for all training, workshops, educational, written procedures for Year 2 requirements and the like.

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

COVID-19 continues to have a tremendous impact both financially and operationally in accomplishing MS4 Year 2 requirements. As a result the Town of Northbridge relies heavily on the CMRSWC for all training,

workshops, educational, written procedures for Year 2 requirements and the like.

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☒ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
- Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50
- ☒ percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

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

COVID-19 continues to have a tremendous impact both financially and operationally in accomplishing MS4 Year 2 requirements. As a result the Town of Northbridge relies heavily on the CMRSWC and/or THINK BLUE for all training, workshops, educational, written procedures for Year 2 requirements and the like.

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

See above.

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

☐ Yes

☒ No

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period**: 5

*Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.*

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

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>)
Advertisement on Facebook & YouTube. Social Media Impressions from Residents

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

45,114 from the www.thinkbluemassachusetts.org/ms4-communities website "Campaign Results" section.
There were over 13 Million Impressions across the United States.

Message Date(s): June 2019 "Campaign Results"

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

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

If yes, describe why the change was made:

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

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>)
Advertisement on Facebook & YouTube.

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

45,114 from the www.thinkbluemassachusetts.org/ms4-communities website "Campaign Results" section.
There were over 13 Million Impressions across the United States.

Message Date(s): June 2020

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

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

If yes, describe why the change was made:

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

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>)

Advertisement on Facebook & YouTube.

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

45,114 from the www.thinkbluemassachusetts.org/ms4-communities website "Campaign Results" section.
There were over 13 Million Impressions across the United States.

Message Date(s): June 2020

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

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

If yes, describe why the change was made:

BMP:Annual message - Proper lawn maintenance

Message Description and Distribution Method:

Think Blue Massachusetts shared posts on Facebook in the spring encouraging the proper use and disposal of grass clippings and encouraged the proper use of slow-release fertilizers.

Targeted Audience: Businesses, institutions and commercial facilities; Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

45,114 from the www.thinkbluemassachusetts.org/ms4-communities website "Campaign Results" section.
There were over 13 Million Impressions across the United States.

Message Date(s): Nov 1, 2019; April 28 & 30, 2020; May 14 & 22, 2020

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

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

If yes, describe why the change was made:

BMP: Annual leaf litter message - Leaf litter & brush collection

Message Description and Distribution Method:

Think Blue Massachusetts shared posts on Facebook in Fall to encourage proper disposal of leaf litter.

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

The Think Blue Massachusetts Facebook account has approximately 300 followers and averages approximately 3,000 reaches per month.

Message Date(s): Sep 26 & 27, 2020; Oct 1, 8, & 11, 2020

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

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

If yes, describe why the change was made:

BMP: Annual winter deicing/salt message

Message Description and Distribution Method:

Think Blue Massachusetts shared posts on Facebook regarding road salt application for residential, commercial, & industrial site owners on the proper storage and application rates of winter deicing material

Targeted Audience: Businesses, institutions and commercial facilities; Industrial; Residential

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition

Measurable Goal(s):

The Think Blue Massachusetts Facebook account has approximately 300 followers and averages approximately 3,000 reaches per month.

Message Date(s): Nov 14, 2019; Dec 5, 9, 13, 17, 18, 16, & 24, 2019; Jan 7, 2020

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

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

If yes, describe why the change was made:

BMP:[

Message Description and Distribution Method:

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Message Date(s):

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

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

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

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

The Stormwater Management Plan (SWPP) is on the Town's website for public review, comment and involvement.

In addition CMRSWC members participated in public outreach and involvement at the following public events in Year 2 of the permit:

- Holden Truck Day (July 25, 2019)
- Grafton National Night Out (August 7, 2019)
- Palmer National Night Out (August 7, 2019)
- Holden Days (August 24, 2019)

- Mass STEM Week at Framingham State University (October 22, 2019)
- Mass STEM Week at Keefe Technical High School (October 23, 2019)
- Metrowest STEM mentorship program (October 23, 2019)
- Mass STEM week showcase (October 25, 2019)
- Elementary school programs in Auburn, Dudley, Framingham, Hopkinton, and Holden
- Framingham Public Works Open House (December 7, 2019)

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

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

Describe any other public involvement or participation opportunities conducted **during this reporting period**:
The Stormwater Management Plan (SWPP) is on the Town's website for public review, comment and involvement.

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

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

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

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

Number of SSOs identified: 0

Number of SSOs removed: 0

MS4 System Mapping

Below, check all that apply.

The following elements of the Phase I map have been completed:

- ☒ Outfalls and receiving waters
- ☐ Open channel conveyances
- ☐ Interconnections
- ☐ Municipally-owned stormwater treatment structures
- ☒ Waterbodies identified by name and indication of all use impairments
- ☐ Initial catchment delineations

Optional: Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

Screening of Outfalls/Interconnections

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

- ☐ The outfall screening data is attached to the email submission
- ☐ The outfall screening data can be found at the following website:

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

Number of outfalls screened: 0

Catchment Investigations

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

- ☐ The catchment investigation data is attached to the email submission
- ☐ The catchment investigation data can be found at the following website:

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

Number of catchment investigations completed this reporting period: 2

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

Percent of total catchments investigated: 0

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

IDDE Progress

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

- ☐ The illicit discharge removal report is attached to the email submission
- ☐ The illicit discharge removal report can be found at the following website:

None.

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

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

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

Total number of illicit discharges identified: 0

Total number of illicit discharges removed: 0

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

Employee Training

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

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

MCM4: Construction Site Stormwater Runoff Control

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

Number of site plan reviews completed: 6

Number of inspections completed: 6

Number of enforcement actions taken: 0

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

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

Ordinance or Regulatory Mechanism

Below, select the option that describes your ordinance or regulatory mechanism progress.

- ☐ Bylaw, ordinance, or regulations are updated and adopted consistent with permit requirements
- ☒ Bylaw, ordinance, or regulations are updated consistent with permit requirements but are not yet adopted
- ☐ Bylaw, ordinance, or regulations have not been updated or adopted

As-built Drawings

Describe the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites:

The submission of as-built drawings is under the jurisdiction of the Planning Department as specified in their regulations for all new residential, commercial, industrial and site development projects.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

None.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

None.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

None.

MCM6: Good Housekeeping

Catch Basin Cleaning

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

Number of catch basins inspected: 60

Number of catch basins cleaned: 60

Total volume or mass of material removed from all catch basins: 165 cubic yards

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

Total number of catch basins: 750

If applicable:

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

We increase the frequency of inspections and cleaning. Based our experience and due to our increased street sweeping and our bagged leaf pick-up program our catch basin sumps are usually below the 50% full benchmark.

Street Sweeping

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

☒ Number of miles cleaned: 83

☐ Volume of material removed: 57 cubic yards

☐ Weight of material removed: 92 tons

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- ☐ Parks and open spaces
- ☐ Buildings and facilities
- ☐ Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- ☐ Parks and open spaces

- ☐ Buildings and facilities
- ☐ Vehicles and equipment

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed: 0

Describe any corrective actions taken at a facility with a SWPPP:

SOPs templates have been provided by the Central Massachusetts Regional Storm Water Coalition and will be used in Year 3 to input respective descriptions/locations and to inventory all Permittee-Owned Properties.

Additional Information**Monitoring or Study Results**

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

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

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

Additional Information

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

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

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

- EPA New England Soak up the Rain webinar titled “Working Together: Collaborative Stormwater Management in Central Massachusetts” (December 5, 2019)

- New England Water Environment Association Annual Conference (Jan 2020)
 - Massachusetts Association of Conservation Commissions Annual Conference, presentation titled "NPDES MS4 Permit: How are Municipalities Complying with Permit Requirements?" (February 28, 2020)
- CMRSWC partnered with MassDEP to sponsor two 2020 Worcester Polytechnic Institute -Water Resource Outreach Center projects: 1) "Managing Stormwater Costs" and (2) "Promoting STEM Education on Watersheds & Stormwater in MA".
- Attached please find additional documents pertaining to the Year 2 Annual Report as follows:
- MS4 Stormwater Bylaw/Ordinance Audit Update (20-pages).
 - CMRSWC Summary of Coalition Activities - July 1, 2019 - June 30, 2020 (7-pages).
 - Do Your "Doody" for Clean Water Advertisement (1-page).
 - CMRSWC Fiscal Year 2020 Educational Advertisement Campaign Report (2-pages).
 - CMRSWC Fiscal Year 2019 & 2020 Educational Advertisement Campaign Report (2-pages).
 - CMRSWC Standard Operating Procedures List (5-pages).

COVID-19 Impacts

Optional: If any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

COVID-19, lack of sufficient personnel, and a town-wide spending freeze at the end of FY 2020 continues to have a tremendous impact, both financially and operationally in accomplishing MS4 Year 2 requirements. As a result, the Town of Northbridge relies heavily on the CMRSWC and/or THINK BLUE for all training, workshops, educational, written procedures for Year 2 requirements and the like. Looking ahead to MS4 Year 3 requirements and with appropriate funding (i.e. no spending freeze), and with additional personnel and/or contract services we will strive to make positive outcomes related to meet each of the MS4 minimum requirements.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 3 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Inspect all outfalls/ interconnections (excluding Problem and Excluded outfalls) for the presence of dry weather flow
- Complete follow-up ranking as dry weather screening becomes available

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted

- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary

Provide any additional details on activities planned for permit year 3 below:

COVID-19, lack of sufficient personnel, and a town-wide spending freeze at the end of FY 2020 continues to have a tremendous impact, both financially and operationally in accomplishing MS4 Year 2 requirements. As a result, the Town of Northbridge relies heavily on the CMRSWC and/or THINK BLUE for all training, workshops, educational, written procedures for Year 2 requirements and the like. Looking ahead to MS4 Year 3 requirements and with appropriate funding (i.e. no spending freeze), and with additional personnel and/or contract services we will strive to make positive outcomes related to meet each of the MS4 minimum requirements.

Although we checked YES above, we will do our best to comply with Year 3 requirements with the understanding that limited personnel and financial resources as well as COVID-19 continue to have a tremendous impact on our progress.

Part V: Certification of Small MS4 Annual Report 2020

40 CFR 144.32(d) Certification

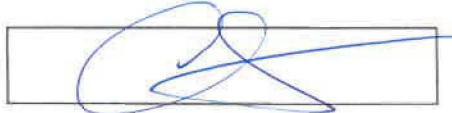
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage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

Name:

Adam Gaudette

Title: Town Manager

Signature:



Date:

9.24.2020

[Signatory may be a duly authorized representative]

MS4 STORMWATER BYLAW / ORDINANCE AUDIT UPDATE



CENTRAL
MASSACHUSETTS
REGIONAL
STORMWATER
COALITION

Steering Committee Meeting
September 2, 2020

Overview of Scope

Task 1

- Identify Existing Bylaws and Ordinances
- Deliverable: Inventory / Links (Table 1)

Task 2

- Bylaw/Ordinance Components Audit
- Compliance with MS4 Permit
- Deliverable: General Components and Compliance Review (Tables 2 and 3)

Task 3

- Recommendations
- Implementation considerations
- Deliverables: Recommendations Memo and Workshop(s)



Documented Components

Bylaw/ordinance and regulation (if applicable) name and document URL

Year/date bylaw/ordinance was adopted

Year/date regulations were adopted

Year/date bylaw/ordinance and regulation were revised (if applicable)

If a local stormwater permit is required (i.e. in addition to wetlands protection act permits from Conservation, development permits from Planning Boards, or building permits)

If a local stormwater enterprise has been authorized

Approval authority for bylaw/ordinance (e.g. Town Meeting, City Council)

Applicable authority for administering bylaw/ordinance (e.g. Conservation, DPW, Board of Selectmen, Sewer Commissioners, etc.)

If the municipality has a stormwater webpage



Status of Deliverables

- ✓ Inventory of Bylaws/Ordinances Complete
- ✓ Compliance Review Complete
- ✓ Draft Recommendations Memo Submitted
- ✓ Steering Committee Meeting Update

- TBD: Workshop(s) to be Scheduled

Stormwater Permit Requirements for Bylaws/Ordinances

MCM 3: Illicit Discharge Detection & Elimination

- “adequate legal authority to: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions.”

MCM 4: Construction Site Stormwater Runoff Control

- “ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes.”

MCM 5: Stormwater Management in New Development and Redevelopment

- 1 acre disturbance
- LID
- Mass SW Standards
- Retain Volume on-Site
- Remove TSS
- Remove Phosphorus

Bylaw / Ordinance Inventory & Components

Status of Bylaw/Ordinance Development

**MCM 3:
No Illicit Discharge
Bylaw/Ordinance**

**MCMs 4 & 5:
No Stormwater Management
Bylaw/Ordinance**

Dudley

Dudley

Hopedale

Hopedale

Southbridge

Northborough

West Boylston

Rutland

Refer to Table 1: Existing Stormwater Bylaw and Ordinance Links

Range of Authorized Enforcement Agency



Director of Public Works	Town/City Engineer
Planning Board	Conservation Commission
Highway Department	Board of Health
Land Use Enforcement Officer	Stormwater Committee

Refer to Table 2: Existing Stormwater Bylaw and Ordinance General Information

Range of Land Disturbance Thresholds

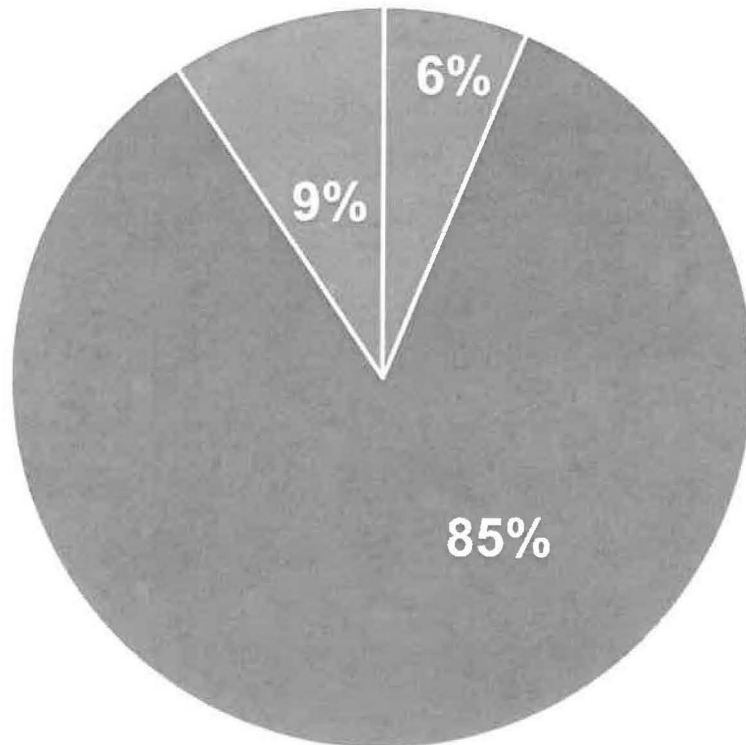
1 acre	All subdivisions, site plan review
40,000 SF	Increase imperviousness to > 50% of parcel
20,000 SF	Disturbance of volume greater than 1,500 CY
5,000 SF	Increase in floor area, vehicle traffic, persons
Project occurs in a critical area or hot spot	Projects clearing 50% of parcel (trees)
Addition of 30% impervious area	Land disturbance in sloped areas (15% slope)



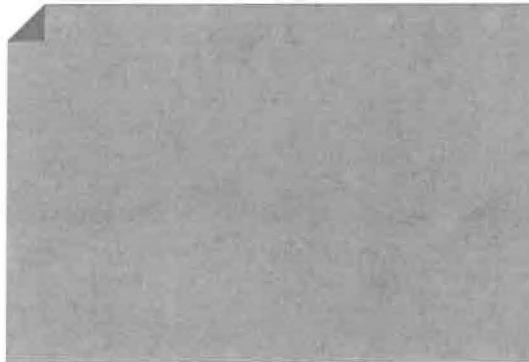
Bylaw/Ordinance and Compliance Findings

Compliance Review Findings - Overall

Overall Stormwater Bylaw/Ordinance Compliance



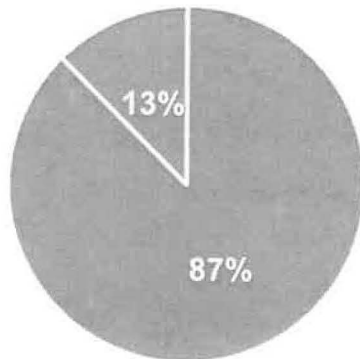
■ Full Compliance (85%) ■ Partial Compliance (9%) ■ Noncompliance (6%)



Refer to Table 3: Existing Stormwater Bylaw and Ordinance Compliance Review

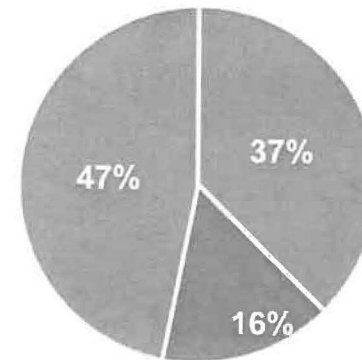
Compliance Review Findings - MCMs

MCM 3: IDDE Compliance



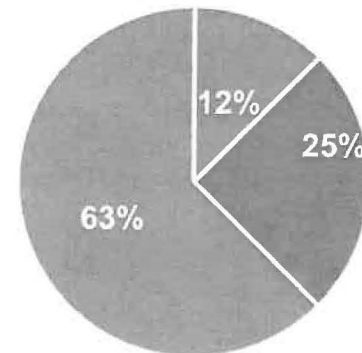
■ Full Compliance (87%) ■ Partial Compliance (0%) ■ Noncompliance (13%)

MCM 4: Construction Site Stormwater
Runoff Controls Compliance



■ Full Compliance (37%) ■ Partial Compliance (16%)
■ Noncompliance (47%)

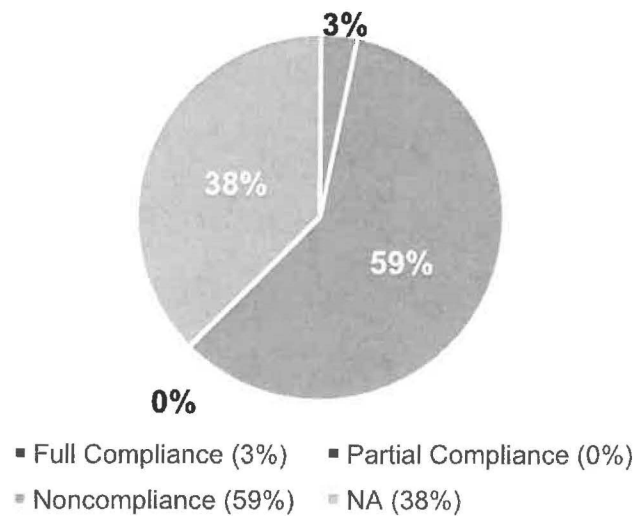
MCM 5: Stormwater Management in New &
Redevelopment Compliance



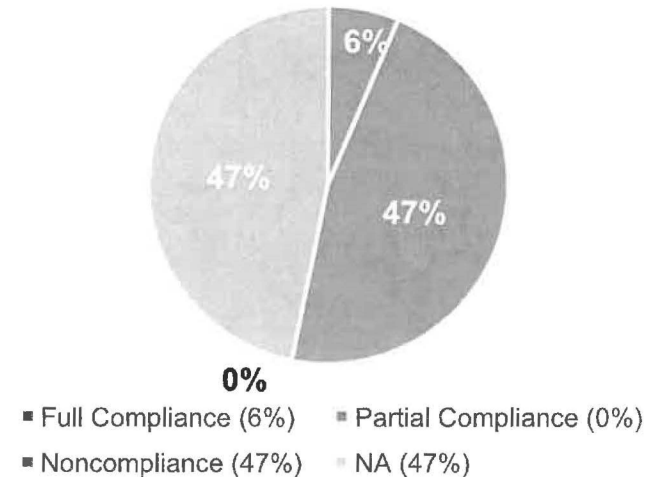
■ Full Compliance (12%) ■ Partial Compliance (25%)
■ Noncompliance (63%)

Compliance Review Findings – Impaired Waters

Appendix F: Requirements for Discharges to Impaired Waters with an Approved TMDL



Appendix H: Requirements Related to Discharges to Certain Water Quality Limited Waterbodies



Bylaw/Ordinance and Regulations Recommendations

Document Structure

Separate existing bylaws/ordinances may be combined to create one Stormwater Management Bylaw/Ordinance

Communities with Singular Comprehensive Bylaw

• Ashland	• Charlton
• Fitchburg	• Lunenburg
• Paxton	• Shrewsbury
• Spencer	• Sturbridge
• Upton	• Uxbridge

Document Structure

Bylaw/Ordinance

- Legal Authority

Rules & Regulations

- Technical Requirements
- Procedures

Guidance Materials

- Examples & Details
- BMPs

Bylaws/Ordinances that have procedural and/or technical language should consider moving such language to the Stormwater Regulations

Communities with Procedural/Technical Language in Bylaw or Ordinance

• Framingham	• Grafton
• Lunenburg	• Millbury
• Natick	• Oxford
• Palmer	• Upton
• Westborough	

Authorized Enforcement Agency

Consideration should be given to either naming a person with an official Town role as AEA or establishing a “Stormwater Committee” to serve as the AEA comprised of at least one person (position) with an official Town role.

Communities with a Board or Commission as the AEA

• Ashland	• Ayer
• Charlton	• Framingham
• Grafton	• Hopkinton
• Leominster	• Lunenburg
• Millbury	• Natick
• Northborough	• Palmer
• Paxton	• Rutland
• Shrewsbury	• Southborough
• Spencer	• Sterling
• Upton	• Uxbridge
• Westborough	

Additional Recommendations



Guidance documents should be referenced from Regulations



Definitions for Private vs. Public ownership of drainage systems



Review the existing thresholds for projects requiring a Stormwater Permit and update accordingly.



Urbanized Area vs. whole municipality

Implementation Considerations



Form a Stormwater Bylaw and/or Regulations Task Force



Review related bylaws and regulations for potential opportunities to streamline the site plan submittal and review process



Document findings related to the feasibility of making Green Infrastructure, infiltration practices, etc. allowable



Development of fact sheets, checklists and other educational materials

Thank You

Kathryn B. Edwards, PE
Project Manager
Kate.Edwards@arcadis.com

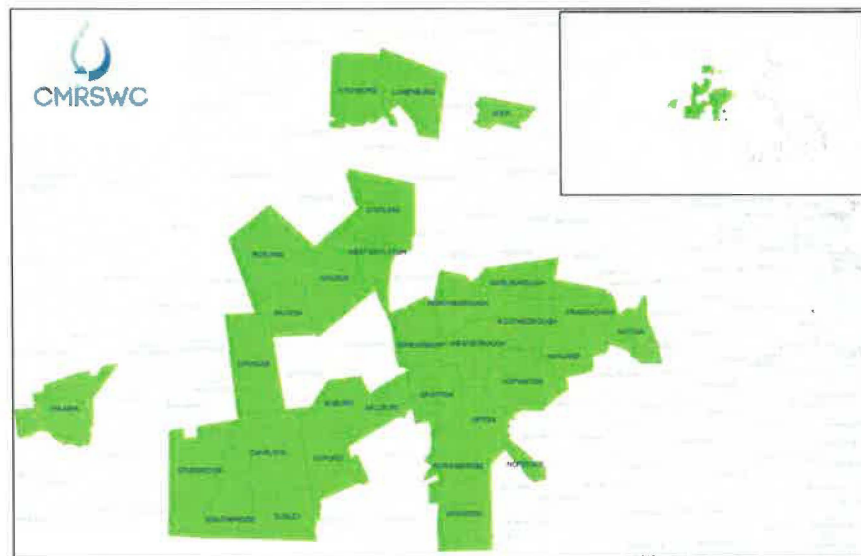
Evan Raffi, EIT
Water Engineer
Evan.Raffi@arcadis.com

Arcadis U.S., Inc.
500 Edgewater Drive, Suite 511
Wakefield, MA 01880

Central Massachusetts Regional Stormwater Coalition Summary of Coalition Activities Year 2 of 2016 MS4 Permit (July 1, 2019 – June 30, 2020)

The Central Massachusetts Regional Stormwater Coalition (CMRSWC) is a group of 30 communities working together to address municipal stormwater management. As neighbors, the communities share stormwater systems, surface water resources, and the need to ensure the long-term protection of these resources. The regional initiative benefits each community by providing a framework and tools for a successful and sustainable stormwater management program. The CMRSWC also helps its communities meet requirements of the 2016 General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4 permit).

The CMRSWC has had some changes this year. The Towns of Ayer and Hopedale joined the coalition and the Town of Leicester left the coalition.



CMRSWC is a member of the Massachusetts Coalition for Water Resources Stewardship (MCWRS). MCWRS filed an appeal of the 2016 MS4 permit and participated, on behalf of municipalities, in mediation. As a result of the mediated settlement, the EPA proposed modifications to the permit in April 2020. On May 11, 2019, the CMRSWC co-chairs submitted a letter to EPA to support for proposed permit modifications which allow more flexibility for Towns and Cities to customize their stormwater management programs to best meet the needs and constraints of their community while still complying with the Clean Water Act and permit requirements.

Steering Committee

The CMRSWC Steering Committee held eight meetings during this reporting cycle. The CMRSWC Annual Meeting was held on November 14, 2019 at the Blackstone Heritage Corridor Visitor Center in Worcester, MA. EPA and MassDEP representatives were guest speakers. Members of CMRSWC also attended and actively participated in the Massachusetts Statewide Municipal Stormwater Coalition.

Assistance with Year 2 Permit Requirements

Minimum Control Measures 1 and 2 – Public Education and Outreach; Public Involvement and Participation

The CMRSWC provided the following services to assist member communities with meeting the Year 2 requirements of Section 2.3.2 and Section 2.3.3 of the 2016 MS4 permit.

1) Website, Newsletters, & Social Media

CMRSWC maintains the website and a twitter account (@MAStormH2O) which has 239 followers, an increase of 40 followers from the previous year.

2) Public Events & School Programs

CMRSWC members have conducted outreach at numerous public outreach events throughout the year including local fairs, school programs, after-school programs, and public works open houses. CMRSWC members often use one of the coalition's three EnviroScape® models to provide hands-on, interactive demonstrations of the sources and effects of water pollution and ways to prevent pollution.

CMRSWC members conducted outreach and stormwater education at the following public events in Year 2 of the permit:

- Holden Truck Day (July 25, 2019)
- Grafton National Night Out (August 7, 2019)
- Palmer National Night Out (August 7, 2019)
- Holden Days (August 24, 2019)
- Mass STEM Week at Framingham State University (October 22, 2019)
- Mass STEM Week at Keefe Technical High School (October 23, 2019)
- Metrowest STEM mentorship program (October 23, 2019)
- Mass STEM week showcase in Boston (October 25, 2019)
- Elementary school programs in Auburn, Dudley, Framingham, and Holden
- Framingham Public Works Open House (December 7, 2019)
- MACC Annual Environmental Conference (March 1, 2020)



CMRSWC Steering Committee member Joe Laydon from the Town of Grafton with the EnviroScape at Grafton's National Night Out on August 7, 2019.

As a result of the COVID-19 pandemic, CMRSWC halted public outreach and stormwater education from March 2020 – June 2020.

3) Regional and National Workshops & Webinars

CMRSWC presented at an EPA New England Soak up the Rain webinar on December 5, 2019. The webinar was titled "Working Together: Collaborative Stormwater Management in Central Massachusetts". The webinar showcased how CMRSWC works with participating towns using creative and cost-effective techniques to address Small Municipal Separate Storm Sewer Systems (MS4) permit requirements. There were 136 attendees. The recording is available on the EPA's website (<https://www.epa.gov/soakuptherain/soak-rain-new-england-webinar-series>) and the slides are posted on CMRSWC's website.

The CMRSWC co-presented at the National 303(d)/TMDL webinar hosted by New England Interstate Water Pollution Control Commission (NEIWPCC) on January 9, 2020. The webinar was titled "Think Blue" and focused on social Media Outreach. The webinar showcased the Think Blue Massachusetts public education and outreach program. There were 133 attendees. The recording is available on NEIWPCC's website (<https://neiwpcc.org/our-programs/pollution-control/tmdl/303d-tmdl-webinars/>).

CMRSWC presented at the 2020 Massachusetts Association of Conservation Commissions Annual Environmental Conference on March 1, 2020. The Workshop focused on challenges the MS4 permit poses for many towns & cities. The presentation highlighted what communities were required to have already completed, what communities need to complete in the next year, and what long-term requirements communities need to prepare for. The presentation addressed some local strategies and regional initiatives, by using case studies from Framingham & Palmer to show how various municipalities managed Year 1 permit requirements and how they adapted their Stormwater Management Plans (SWMPs) for out-year requirements.

4) Think Blue Massachusetts public education and outreach campaign



Think Blue Massachusetts is a statewide stormwater public education campaign to generate awareness among businesses and residents of the effects of stormwater pollution on waterways and wetlands and encourage people to do their part to reduce pollution from stormwater runoff. The campaign was developed in 2018 by the Statewide Coalition, with support from the CMRSWC.

On behalf of the members of the CMRSWC, Think Blue Massachusetts ran an educational advertising campaign on Facebook and YouTube from June 23, 2019 – July 12, 2019 and May 16, 2020 - June 5, 2020. There were over **2.1 Million** impressions in Central Massachusetts. Reports which provide metrics by municipality that can be used for Year 2 reporting were distributed.

Some of the highlights from the FY20 campaign:

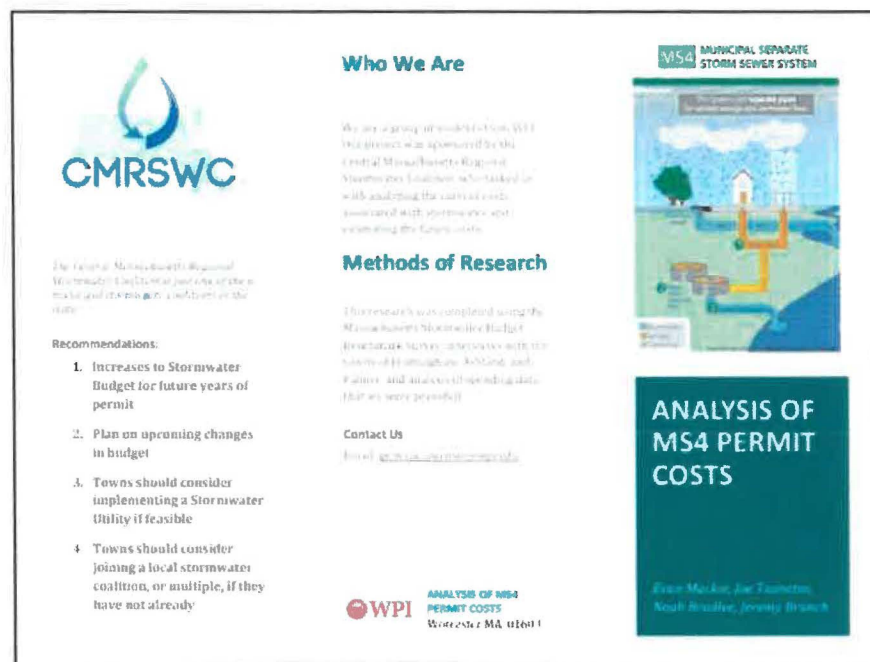
- 17% of residents surveyed recalled seeing the ads, up from 15% in 2019 and 8% in 2018.
- Those who recall the ad are more likely to recognize that stormwater goes directly to local waterways (52%) than those who do not recall the ad (32%).

- Those who recall the ad are more likely to describe stormwater as having “major” or “some” impact on waterways (49%) than those who do not recall the ad (31%).

5) Worcester Polytechnic Institute Water Resource Outreach Center

Worcester Polytechnic Institute's (WPI) Massachusetts Water Resource Outreach Center (WROC) is dedicated to assisting Central and Eastern Massachusetts municipalities and watershed associations with their water resource needs through student project collaboration. CMRSWC has been working with the WPI-WROC and MassDEP on projects since 2012.

CMRSWC and MassDEP sponsored two 2020 WPI-WROC projects: 1) “Managing Stormwater Costs” and (2) “Promoting STEM Education on Watersheds & Stormwater in MA”. Each project was assigned to a multi-disciplinary team of four WPI juniors. The students worked full-time on the projects with their advisors and sponsors during “D” term (March – April 2020). Because of COVID-19, this year’s projects were done virtually. Students final projects are available at: <https://wp.wpi.edu/wroc/projects/projects-by-term/spring-2020-wroc-projects/>.

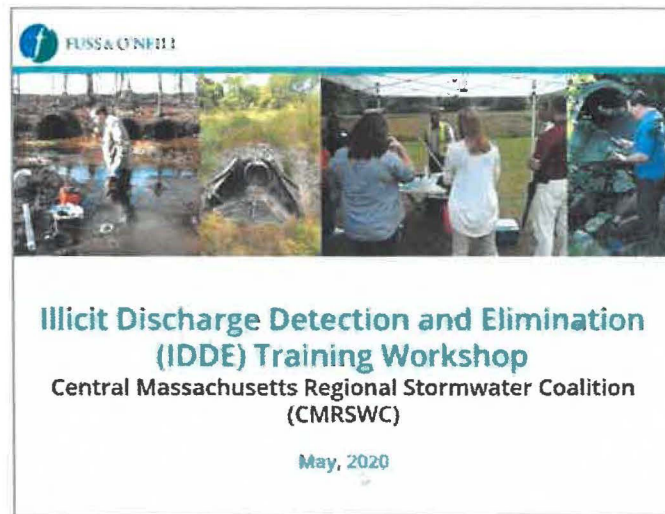


Minimum Control Measure 3 – Illicit Discharge Detection and Elimination

1) Annual IDDE Training

CMRSWC was awarded a MS4 Municipal Assistance grant from MassDEP to conduct IDDE training workshops. Fuss & O'Neill conducted training workshops for municipal employees of MS4-regulated communities on implementing IDDE program requirements. The training workshops were held on May 5, 2020 and May 7, 2020 remotely via GoTo Meeting. The workshops were originally intended to be in-person but were adapted to virtual workshops due

to COVID-19. The training provided at these workshops satisfies the MS4 Permit requirements for annual IDDE training as outlined in Section 2.3.4.11 of the MS4 Permit.



A video, summary, & sign-in sheets are available at:

<https://www.centralmstormwater.org/toolbox/pages/2020-idde-workshop-ms4-assistance-grant>

2) GIS Update

One of CMRSWC's original goals was to assist member communities with stormwater mapping. From 2012 thru 2020, CMRSWC contracted PeopleGIS to integrate existing mapping into a single web-based GIS system for the purpose of sharing and evaluating stormwater data. After careful consideration and outreach to communities, the CMRSWC Steering Committee decided to discontinue the mapping program through the coalition with PeopleGIS, effective June 30, 2020. In March 2020, CMRSWC sent a letter to members regarding "Your Community's Stormwater Map" to make members aware of the change, provide instructions on how to attain your existing data from PeopleGIS, and offering assistance to help with the transition, if needed.

Minimum Control Measure 4 & 5 – Construction and Post-Construction BMPs

1) Bylaw Audit

Updated stormwater bylaws are required to meet new permit requirements by June 2021. CMRSWC members are in various stages of completing the updates. CMRSWC has hired Arcadis to provide a review and recommendations regarding stormwater bylaws/ordinances and regulations. The tasks include:

- Identify current stormwater bylaws/ordinances
- Review & assess compliance of existing stormwater bylaws/ordinances
- Presentation(s) on findings and recommendations
- Final memorandum on recommendations

2) Written SOPs for Construction & BMP Inspections

CMRSWC has SOPs for Construction Site Inspections, Erosion & Sediment Control, and Inspecting Constructed BMPs which include inspection forms available on the CMRSWC website at: <https://www.centralmstormwater.org/toolbox/pages/standard-operating-procedures>

Minimum Control Measure 6 – Pollution Prevention & Good Housekeeping

1) SOP Training

As part of Minimum Control Measure 6, Good Housekeeping, the MS4 Permit requires that municipalities establish written standard operating procedures and facilities inventories for their buildings and facilities, parks and open space, and vehicles and equipment. Fuss & O'Neill conducted training workshops for municipal employees on implementing the revised Standard Operating Procedures (SOPs) developed for CMRSWC. The SOPs provide a template for communities to establish the written plans and procedures that are required components of the MS4 Permit in Year 2. The training workshops were held on April 28, 2020 and April 30, 2020 remotely via GoTo Meeting. The workshops were originally intended to be in-person but were adapted to virtual workshops due to COVID-19. 28 municipal employees from 18 CMRSWC communities participated in the training.



A summary, templates, & a presentation are available at:
<https://www.centralmstormwater.org/toolbox/pages/standard-operating-procedures>

2) SWPPP Training

The MS4 Permit requires that municipalities establish Stormwater Pollution Prevention Plans (SWPPPs) for maintenance garages, transfer stations, public works yards, and other waste-handling facilities with exposure to stormwater. Fuss & O'Neill conducted training workshops for municipal employees on developing SWPPPs. The workshops utilized the existing SWPPP template created for CMRSWC to guide participating member communities in developing their required SWPPPs and develop an understanding of the site-specific information they should be including in the SWPPP. The training workshops were held on June 16, 2020 and June 18, 2020 remotely via GoTo Meeting. Additional workshop sessions were hosted by the

Southeastern Regional Stormwater Coalition on June 17 and 18, 2020 which were open to all communities through a MassDEP MS4 Municipal Assistance Grant. Follow-up “office hours” sessions were hosted on June 23, 2020 and June 25, 2020 to allow municipal employees to ask follow-up questions after having had time to begin implementing the material discussed during the workshops, or to follow-up on any other Year 2 requirements. 12 CMRSWC communities participated in the training.

A summary, templates, & a presentation are available at:

<https://www.centralmastormwater.org/toolbox/pages/stormwater-pollution-prevention-plan-template>

Budget Survey

Due to overwhelming requests from various Cities & Towns, CMRSWC in coordination with the Statewide Coalition prepared a budget benchmark survey hoping the information will be useful to:

- (1) Help Cities & Towns assess whether they are staffed appropriately, funded suitably and compensated fairly;
- (2) Understand current budgetary needs for MS4 compliance by looking at costs associated with permit compliance over the past two years, and future costs for the next 3-5 years; and
- (3) Understand the diverse MS4 systems of various Cities & Town's and their funding mechanisms for permit compliance.

Given MS4 systems and areas are vastly different across Cities & Towns, this comprehensive survey explores system sizes, staffing needs and current funding shortfalls. The information gathered in this survey will be shared with cities & towns that participated. A total of 43 municipalities completed the survey statewide, 19 from CMRSWC. The survey results were analyzed by WPI and a [final comprehensive report](#) was produced with several recommendations to support increases to stormwater funding across the commonwealth.

Awards

CMRSWC was awarded an Environmental Merit Award from EPA Region 1. Each member community was recognized as part of the award. The award was presented in September 2019.

At New England Water Environment Association's (NEWEA) 2020 award ceremony, one of CMRSWC's founders and former chairs, Robin Craver, was awarded the Paul Keough Award in recognition of leadership and efforts to communicate to the public the need to protect the water environment. CMRSWC co-chair, Kerry Reed, received the Golden Raindrop Award for making notable contributions to the stormwater field.



(L-R) CMRSWC Co-chairs Tom Gregory, John Woodsmall, Robin Craver, and MassDEP Commissioner Martin Suuberg at the EPA Region 1 Environmental Merit Award ceremony.

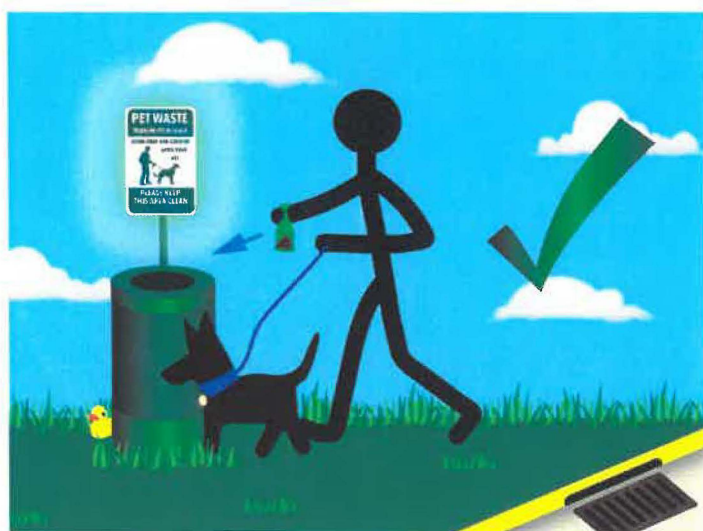
Your
Logo Here



Do Your "Doody" for Clean Water

You hate stepping in it. And fish hate swimming in it, too! Dogs produce a lot of waste which, if not disposed of properly, can end up in our waterways. Do your part to keep our waters and public areas clean and healthy! Bag your pet's waste and throw it in a trashcan..

DO



DON'T



Did you know that the average dog can produce nearly a pound of waste each day?

- Pet waste left on lawns and in public spaces is not only gross. It can be quite harmful too.
- Pet waste contains twice as much bacteria as human waste!
- If left in your yard, pet waste can kill grass and other plants.
- Adults and children who come in contact with it can get sick.
- When pet waste washes into storm drains and waterways, it can make the water unhealthy for people and wildlife.
- Pet waste in waterways can even cause algae to grow, making the water turn an unpleasant green color.

Do your "doody" in both public areas and in your yard.

To learn more, visit the www.ThinkBlueMassachusetts.org



Central Massachusetts Regional Stormwater Coalition

Fiscal Year 2020 Educational Advertisement Campaign Report

On behalf of the members of the Central Massachusetts Regional Stormwater Coalition, Think Blue Massachusetts ran an educational advertising campaign from May 16th to June 5th, 2020. The "Fowl Water" advertisement helps viewers visualize stormwater pollution from motor oil, pet waste, and trash become stormwater pollution.

We selected Facebook and Instagram sponsored video and YouTube pre-roll advertisements because these channels offer superior "bang for the buck" to cable and broadcast television. They provide granular reporting that helps demonstrate what was accomplished.

This effort helps coalition members meet their requirements to "document in each annual report the messages for each audience; the method of distribution; the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program."

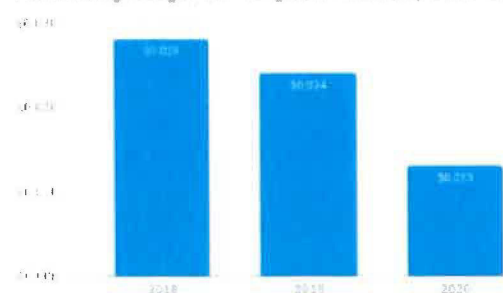


View the ad at <http://bit.ly/tbm-fowl-water>

Advertising Budget

Our advertising budget for the campaign worked out to approximately 1.3 cents per resident. Campaign budgets have been falling year over year:

Advertising Budget Per Targeted Resident, 2018-2020



This year's campaign occurred during the COVID-19 lockdowns. The silver lining is that our advertising placement costs were lower and our message was shown to a semi-captive audience.

Post Campaign Survey Highlights

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

- 17% of residents surveyed recalled seeing the ads, up from 15% in 2019 and 8% in 2018.
- Those who recall the ad are more likely to recognize that stormwater goes directly to local waterways (52%) than those who do not recall the ad (32%).
- Those who recall the ad are more likely to describe stormwater as having "major" or "some" impact on waterways (49%) than those who do not recall the ad (31%).

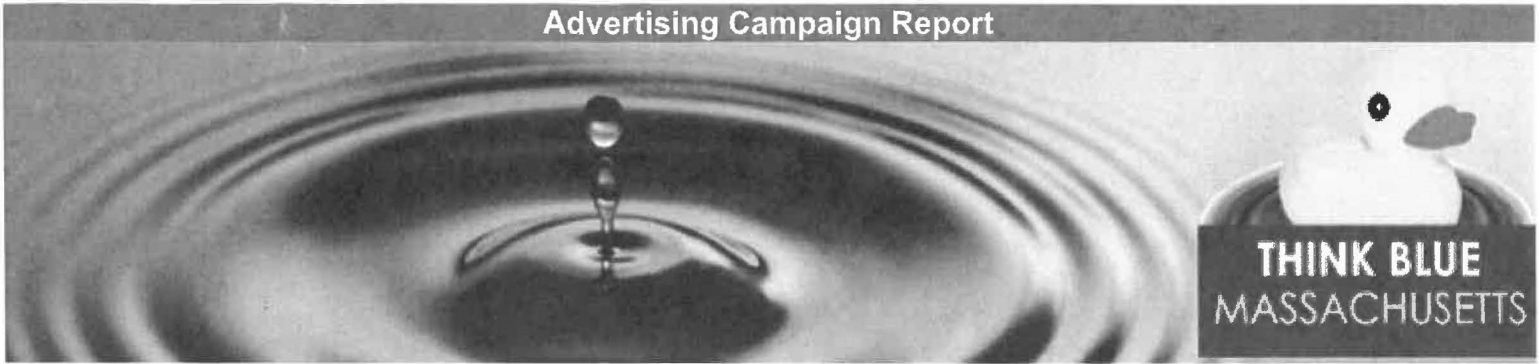
Full survey results are available at www.thinkbluemassachusetts.org

FY 2020 Campaign Performance

Facebook and Google provided us with aggregate information for the region served by the stormwater coalition. We have allocated the impressions among each city on a proportional basis, using U.S. Census estimates of the population of each municipality.

Your municipality can use these numbers as your measurable goal for MCM1 in your Year 2 annual report.

Town	Facebook/Instagram Impressions	YouTube Ad Impressions	Total
Ashland	24,062	23,767	47,829
Auburn	21,958	21,689	43,647
Charlton	18,579	18,351	36,931
Dudley	16,009	15,813	31,821
Fitchburg	55,455	54,774	110,229
Framingham	99,188	97,971	197,160
Grafton	25,617	25,302	50,919
Holden	25,994	25,675	51,669
Hopkinton	24,781	24,477	49,258
Leicester	15,455	15,266	30,721
Lunenburg	15,866	15,672	31,538
Marlborough	54,021	53,358	107,379
Millbury	18,809	18,578	37,387
Natick	49,143	48,540	97,683
Northborough	8,382	8,279	16,660
Northbridge	22,696	22,418	45,114
Oxford	8,278	8,177	16,455
Palmer	16,697	16,492	33,188
Paxton	6,621	6,540	13,161
Rutland	11,999	11,852	23,851
Shrewsbury	51,509	50,877	102,386
Southbridge	22,966	22,684	45,651
Southborough	13,794	13,625	27,418
Spencer	7,732	7,637	15,369
Sterling	11,109	10,973	22,082
Sturbridge	13,076	12,916	25,992
Upton	10,868	10,735	21,603
Uxbridge	19,119	18,885	38,004
West Bolyston	11,143	11,007	22,150
Westborough	26,029	25,710	51,739
	726,957	718,039	1,444,996



Central Massachusetts Regional Stormwater Coalition

Fiscal Year 2019 & 2020 Educational Advertisement Campaign Report

On behalf of the members of the Central Massachusetts Regional Stormwater Coalition, Think Blue Massachusetts ran an educational advertising campaign from June 23 to July 12th, 2019. The “Fowl Water” advertisement helps viewers visualize stormwater pollution from motor oil, pet waste, and trash become stormwater pollution.

We selected Facebook and Instagram sponsored video and YouTube pre-roll advertisements because these channels offer superior “bang for the buck” to cable and broadcast television. They provide granular reporting that helps demonstrate what was accomplished.

This effort helps coalition members meet their requirements to “document in each annual report the messages for each audience; the method of distribution; the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program.”



View the ad at <http://bit.ly/tbm-fowl-water>

Advertising Budget

Our advertising budget for the campaign worked out to approximately 2.4 cents per resident, which we divided evenly between Facebook/Instagram and YouTube.

Post Campaign Survey Highlights

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

- 15.25% of survey respondents recalled seeing the video (up from 8% in FY2018)
- Those who recalled seeing the video were more likely to correctly answer that stormwater pollution ends up in local waterways (comparable to FY2018)
- Those who recalled seeing the video rated polluted runoff as a more serious threat to waterways than those who didn't recall seeing the video (Comparable to FY2018)

Full survey results are available at www.thinkbluemassachusetts.org

Facebook and Google provided us with aggregate information for the region served by the stormwater coalition. We have allocated the impressions among each city on a proportional basis, using U.S. Census estimates of the population of each municipality.

FY 2019 Campaign Performance

Your municipality can use this number as your measurable goal for MCM1 in your Year 1 annual report.

Town	Facebook/Instagram Ad Impressions	YouTube Ad Impressions	Total:
Ashland	3,754	9,974	13,728
Auburn	3,425	9,102	12,528
Charlton	2,898	7,702	10,600
Dudley	2,497	6,636	9,133
Fitchburg	8,651	22,987	31,638
Framingham	15,473	41,116	56,589
Grafton	3,996	10,619	14,615
Holden	4,055	10,775	14,830
Hopkinton	3,866	10,272	14,138
Leicester	2,411	6,407	8,818
Lunenburg	2,475	6,577	9,052
Marlborough	8,427	22,393	30,820
Millbury	2,934	7,797	10,731
Natick	7,666	20,371	28,037
Northborough	1,308	3,474	4,782
Northbridge	3,541	9,408	12,949
Oxford	1,291	3,432	4,723
Palmer	2,605	6,921	9,526
Paxton	1,033	2,744	3,777
Rutland	1,872	4,974	6,846
Shrewsbury	8,035	21,352	29,387
Southbridge	3,583	9,520	13,103
Southborough	2,152	5,718	7,870
Spencer	1,206	3,205	4,411
Sterling	1,733	4,605	6,338
Sturbridge	2,040	5,420	7,460
Upton	1,695	4,505	6,200
Uxbridge	2,983	7,925	10,908
West Bolyston	1,738	4,619	6,357
Westborough	4,061	10,790	14,850
	113,405	301,340	414,745

FY 2020 Campaign Performance

Your municipality can use this number as your measurable goal for MCM1 in your Year 2 annual report.

Town	Facebook/Instagram Ad Impressions	YouTube Ad Impressions	Total:
Ashland	15,152	10,859	26,011
Auburn	13,827	9,910	23,737
Charlton	11,699	8,385	20,084
Dudley	10,081	7,225	17,306
Fitchburg	34,920	25,026	59,946
Framingham	62,459	44,763	107,222
Grafton	16,131	11,561	27,691
Holden	16,368	11,731	28,099
Hopkinton	15,605	11,184	26,788
Leicester	9,732	6,975	16,707
Lunenburg	9,991	7,160	17,152
Marlborough	34,017	24,379	58,396
Millbury	11,844	8,488	20,332
Natick	30,945	22,178	53,123
Northborough	5,278	3,783	9,060
Northbridge	14,292	10,243	24,534
Oxford	5,213	3,736	8,949
Palmer	10,514	7,535	18,049
Paxton	4,169	2,988	7,157
Rutland	7,556	5,415	12,971
Shrewsbury	32,435	23,246	55,681
Southbridge	14,462	10,364	24,826
Southborough	8,686	6,225	14,911
Spencer	4,869	3,489	8,358
Sterling	6,996	5,014	12,009
Sturbridge	8,234	5,901	14,135
Upton	6,844	4,905	11,748
Uxbridge	12,039	8,628	20,668
West Bolyston	7,017	5,029	12,046
Westborough	16,391	11,747	28,137
	457,765	328,070	785,835



CENTRAL MASSACHUSETTS REGIONAL STORMWATER COALITION

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Standard Operating Procedures

The MS4 permit outlines a significant amount of information that needs to be included in a community's Stormwater Management Plan (SWMP). The following SOPs are templates that can be used by communities to comply with permit requirements, mostly for Minimum Control Measure 6 - Good Housekeeping and Pollution Prevention.

All SOPs were developed with the intent of making them broadly applicable to MS4 communities both within CMRSWC and throughout the Commonwealth. The SOPs are in editable templates that allow municipalities to customize them, as needed.

CMRSWC conducted training workshops for municipal employees on implementing the revised SOPs. The 2020 SOP workshops focused on the following:

- Thorough review of each of the SOP templates.
- “Virtual inspections” during which site photos were used to facilitate discussion among participants of what to look for during facility inspections and how to interpret various situations—both good and bad—that might be observed during facility inspections.
- Additional support and focus on specialized requirements associated with TMDLs and impaired waters in their MS4.

Click on the links below for a PDF of each SOP narrative and any inspection forms associated with it. A Word version of the SOPs is located below the PDFs.

Please use discretion when using these forms, and make sure that you are familiar with the Disclaimers that apply to all CMRSWC products.

- SOP 1: Dry Weather Outfall Inspection
- SOP 2: Wet Weather Outfall Inspection
- SOP 3: Catch Basin Inspection and Cleaning
- SOP 4: Spill Response and Cleanup
- SOP 5: Construction Site Inspection
- SOP 6: Erosion and Sedimentation Control
- SOP 7: Fuel and Oil Handling
- SOP 9: Inspecting Constructed BMPs
- SOP 10: Locating Illicit Discharges
- SOP 11: Oil/Water Separator Maintenance
- SOP 12: Storage and Use of Pesticides and Fertilizer

- SOP 13: Water Quality Screening with Field Kits
- SOP 14: Municipal Vehicle Washing
- SOP 15: Private Drainage Connections
- SOP 16: Streets and Parking Lots

- SOP 17: Hazardous Materials Storage and Handling
- SOP 18: Winter Road Maintenance
- SOP 19: Operations and Maintenance of Parks and Open Spaces
- SOP 20: Operations and Maintenance of Municipal Buildings and Facilities
- SOP 21: Operations and Maintenance of Municipal Vehicles and Equipment
- SOP 22: Construction Site Stormwater Runoff Control

Word Versions

- Index of all SOPs
- SOP 1: Dry Weather Outfall Inspection
- SOP 1: Dry Weather Outfall Inspection Form
- SOP 2: Wet Weather Outfall Inspection
- SOP 2: Wet Weather Outfall Inspection Form
- SOP 3: Catch Basin Inspection and Cleaning
- SOP 3: Catch Basin Inspection Form
- SOP 4: Spill Response and Cleanup
- SOP 4: Massachusetts Spill Response and Cleanup Contact List
- SOP 5: Construction Site Inspection
- SOP 5: Construction Inspection Form
- SOP 6: Erosion and Sedimentation Control
- SOP 6: Erosion and Sedimentation Control Inspection Form
- SOP 7: Fuel and Oil Handling
- SOP 7: Fuel Delivery SOP Checklist
- SOP 9: Inspecting Constructed BMPs
- SOP 9: Constructed BMPs Inspection Form
- SOP 10: Locating Illicit Discharges
- SOP 10: Illicit Discharge Incident Tracking Sheet
- SOP 11: Oil/Water Separator Maintenance
- SOP 11: Oil/Water Separator Quarterly Checklist

- SOP 12: Storage and Use of Pesticides and Fertilizer

- SOP 13: Water Quality Screening with Field Kits
- SOP 13: Water Quality Screening Form
- SOP 14: Municipal Vehicle Washing
- SOP 15: Private Drainage Connections
- SOP 15: Private Drainage Inspection Form
- SOP 15: Sump Pump Inspection Form
- SOP 16: Streets and Parking Lots
- SOP 16: Street Sweeping Log
- SOP 17: Hazardous Materials Storage and Handling
- SOP 18: Winter Road Maintenance
- SOP 19: Operations and Maintenance of Parks and Open Spaces
- SOP 19: Inventory of Municipal Parks and Open Spaces
- SOP 20: Operations and Maintenance of Municipal Buildings and Facilities
- SOP 20: Inventory of Municipal Buildings and Facilities
- SOP 21: Operations and Maintenance of Municipal Vehicles and Equipment
- SOP 21: Inventory of Municipal Vehicles and Equipment
- SOP 22: Construction Site Stormwater Runoff Control
- SOP 22: Erosion and Sedimentation Control Inspection Report

[Culvert Structural Assessment](#)

[Disclaimers](#)

[Enviroscape Wetland/Flood Plain User Guide](#)

[IDDE Template & Resources](#)

[Mapping Equipment](#)

[Members Only*](#)

[Operation & Maintenance Plan Template](#)

[PeopleGIS Online Platform](#)

[Public Education - Think Blue Massachusetts](#)

Standard Operating Procedures

Stormwater Management Toolbox

Stormwater Pollution Prevention Plan Template

Training Presentations

Webinars

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