

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

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

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

Part I: Contact Information

Name of Municipality or Organization: City of Beverly

EPA NPDES Permit Number: MAR041181

Primary MS4 Program Manager Contact Information

Name: Roland Adams

Title: GIS Coordinator/Stormwater Coordinator

Street Address Line 1: 191 Cabot Street

Street Address Line 2:

City: Beverly

State: MA

Zip Code: 01915

Email: radams@beverlyma.gov

Phone Number: (978) 605-2354

Stormwater Management Program (SWMP) Information

SWMP Location (web address): <http://www.beverlyma.gov/departments/engineering/ms4>

Date SWMP was Last Updated: July 2019

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

Part II: Self-Assessment

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

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

The written program for MS4 infrastructure maintenance has not been completed. MS4 infrastructure is maintained on a as need basis.

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:

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:

In addition to the Greenscapes "Do Your Part, the Septic Smart Post", the Health Department sends DEP

Septic System Guide whenever a system is constructed, modified or repaired.

Lake and Pond Phosphorus TMDL

Completed Legal Analysis

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:

NA

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

[Empty box for self-assessment information]

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:

Changes to outfalls: Summary of outfalls by receiving water. Longham Reservoir sub basin is not impaired, therefore, outfalls are not listed.

MS4 Outfalls:

Danvers River	11
Bass River	25
Beverly Harbor	20
Salem Sound	10
Wenham Lake	5

Federal Outfalls:

Danvers River	2
Bass River	23
Beverly Harbor	26
Salem Sound	45
Wenham Lake	9

Beverly Outfalls:

Danvers River	15
Bass River	78
Beverly Harbor	30
Salem Sound	56
Wenham Lake	2

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: 11

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:[Greenscapes Guide]

Message Description and Distribution Method:

Comprehensive 24 page magazine, describing sustainable landscaping practices, DIY residential stormwater management projects, native plant suggestions and more!

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Municipal Staff

Measurable Goal(s):

500 delivered to municipal staff October 2019, available online at www.greenscapes.org/greenscapes-guide/

Message Date(s): Oct-19

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:

Originally to be distributed in FY19. Digital version made available Summer 2019.

BMP:[Greenscapes "Water Smart" Post]

Message Description and Distribution Method:

Social media post with sustainable lawn watering tips and some common misconceptions about outdoor water usage.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Municipal Staff

Measurable Goal(s):

Shared with 75 municipal staff July 2019. Posted on GNSC Facebook May 2020.

Message Date(s): July 2019, May 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:[Greenscapes "Fall Calendar" Post]

Message Description and Distribution Method:

Social media post including an illustrated yard waste calendar and check list.

Targeted Audience: Residents

Responsible Department/Parties:

Measurable Goal(s):

Shared with 75 municipal staff Sept 2019. Posted on GNSC Facebook May 2020

Message Date(s): Sept 2019, May 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:[Greenscapes "Keep Drains Clear" Post]

Message Description and Distribution Method:

Social media post describing the importance of keeping storm drains clear of yard debris and trash.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Municipal Staff

Measurable Goal(s):

Shared with 75 municipal staff October 2019. Posted on GNSC Facebook May 2020

Message Date(s): Oct 2019, May 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:["Global Water Access" Post]

Message Description and Distribution Method:

Social media post containing an infographic with facts and figures about global access to clean water and common water pollutants.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Municipal Staff

Measurable Goal(s):

Shared with 75 municipal staff January 2019. Posted on GNSC Facebook May 2020

Message Date(s): Jan 2020, May 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:[EPA "Do Your Part, Be Septic Smart" Post]

Message Description and Distribution Method:

Social media post containing information and tips for proper septic system maintenance.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Municipal Staff

Measurable Goal(s):

: Shared with 75 municipal staff April 2020. Posted on GNSC Facebook May 2020.

Message Date(s): April 2020, May 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:[Greenscapes "Unflushables" Post]

Message Description and Distribution Method:

Social media post containing information on "what not to flush" and how to avoid common wastewater system issues.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition & Municipal Staff

Measurable Goal(s):

Shared with 75 municipal staff April 2020. Posted on GNSC Facebook May 2020.

Message Date(s): April 2020, May 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 name here]

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:

BMP:[Greenscapes 101 Webinar & Videos]

Message Description and Distribution Method:

Greenscapes staff delivered a virtual presentation on residential stormwater management, the importance of natural solutions in combatting stormwater/water resource management, and made suggestions for at-home projects that interested residents could explore. Projects included using native grass species, converting a lawn into a water-friendly garden, and more. The webinar was recorded, and posted on the Greenscapes website.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition

Measurable Goal(s):

35 "attended" webinar. Recordings shared with 75 municipal staff June 6, 2020 and posted on Greenscapes website at www.greescapes.org/resources-videos/

Message Date(s): Webinar held 4-29-20. Recordings posted and shared 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:[ThinkBlueMA "Fowl Water" Video]

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video defines stormwater and explains the impact that pollution like trash, oil, cigarettes and dog poop can have on stormwater and our waterways. Video available at <https://www.thinkbluemassachusetts.org/> , www.greescapes.org/resources-videos/ and spread as an advertisement on Facebook, Instagram, & YouTube

Targeted Audience: Residents

Responsible Department/Parties: ThinkBlueMA, Greenscapes North Shore Coalition

Measurable Goal(s):

Total of 1,228,467 impressions recorded in the combined 24 Greenscapes communities (665,620 views on Facebook & Instagram, 562,847 views on Youtube)

Message Date(s): May 16th 2020 - June 5th 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:

Not described in original NOI. Supplemental to expected resident outreach.

BMP:[Kitchen Counter Experiment Video Series]

Message Description and Distribution Method:

Episodes 1 & 2 of the "Kitchen Counter Experiment Series" were created in the spring of 2020, in an attempt to replace missed school programming, caused by the Covid-19 pandemic. The videos are exploratory experiments that cover material such as "what not to flush" and the benefits of natural/chemical free fertilizers.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition

Measurable Goal(s):

210 views on Vimeo

Message Date(s): Apr-20

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:

Not described in original NOI. Supplemental to expected resident outreach.

BMP:[Miscellaneous Greenscapes Tabling Events]

Message Description and Distribution Method:

Hamilton Garden Expo, Salem Sound Liquid Lecture Series, MVPC Monthly Meetings. Did not attend farmers markets, as in years past, due to covid-related restrictions.

Targeted Audience: Residents

Responsible Department/Parties: Greenscapes North Shore Coalition

Measurable Goal(s):
Varied

Message Date(s): July 2019 - March 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:

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:

Stormwater Committee Meeting August 6, 2019
SWMP posted on City/Engineering web site

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:

Stormwater Committee Meetings
SWMP to be posted on City/Engineering web site

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:

The City mapping utilizes the ESRI Network Trace function, allowing the City to trace flow from outfall up the system to manhole or down the system from manhole to outfall. Mapping continually up-dated as "As-Builts" received.

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:	189
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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: 0

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:

Catchment investigation to start year 3.

IDDE Progress

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

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

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

Number of illicit discharges identified: 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: 1

Total number of illicit discharges removed: 1

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

Year 1 illicit discharge identified and removed.

Employee Training

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

CDM/Smith 4 hour training session with key City Engineering and DPS employees.

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: 15

Number of inspections completed: 38

Number of enforcement actions taken: 0

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

[Empty text box for optional information]

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:

Refer to site plan review procedures.

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:

No action at this time

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:

No action at this time

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:

No action at this time

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: 0

Number of catch basins cleaned: 0

Total volume or mass of material removed from all catch basins: 0 [Select Units]

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

Total number of catch basins: 0

If applicable:

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

Street Sweeping

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

- Number of miles cleaned: []
- Volume of material removed: [] [Select Units]
- Weight of material removed: 617.7 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: 30

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

O&M at Cummings Center

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:

The City has purchased an Enterprise Software System and is currently implementing the system. A module of the system will be tracking site plan reviews, inspections, contractor compliance and reporting data.

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:

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:

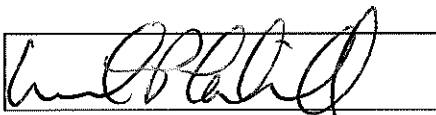
[Empty rectangular box for providing additional details on activities planned for permit year 3]

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: MICHAEL P. CATHE Title: MAYOR

Signature:  Date: 9/23/2020
[Signatory may be a duly authorized representative]