

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

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

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

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

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

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here:

Impairment(s)

Bacteria/Pathogens
 Chloride
 Nitrogen
 Phosphorus
 Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State:

Assabet River Phosphorus
 Bacteria and Pathogen
 Cape Cod Nitrogen
 Charles River Watershed Phosphorus
 Lake and Pond Phosphorus

Out of State:

Bacteria/Pathogens
 Metals
 Nitrogen
 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 4 Requirements

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

June 30, 2023

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

February 8, 2022

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

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

City is actively reducing parking lot pavement where applicable. Ran analysis on pervious vs impervious throughout Beverly. Refining drainage areas to large roadways and parking areas to gain a better understanding of City drainage and infrastructure. City developed Draft LID Design Guidelines and LID

Design scoresheet.

Members of the Greenscapes North Shore Coalition reviewed all municipal regulations related to impervious cover creation. The Greenscapes team used the MA Audubon bylaw review tool to evaluate all of the regulations in the context of green infrastructure feasibility and compiled a detailed report of their findings, which also includes recommended improvements for each regulation reviewed. With guidance and input from municipal staff, timelines for implementation of recommended language were established on a case-by-case basis. The full report and community specific recommendations can be found here: https://greenscapes.org/wp-content/uploads/2022/08/MS4-Grant-Report-FINAL_reduced.pdf

In connection with the bylaw review efforts conducted by the Greenscapes Coalition, two educational webinars were also conducted. The first webinar was held at the onset of the review process and introduced the project scope while detailing the value of encouraging LID practices in municipal codes. This webinar yielded 70 attendees. The second webinar, held following the completion of the review process, was hosted by EPA's Soak Up the Rain and discussed the project results and lessons learned. This webinar had

Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - This is not applicable because we do not have sanitary sewer
 - This is not applicable because we did not find any new SSOs
 - The updated SSO inventory is attached to the email submission
 - The updated SSO inventory can be found at the following website:

- Updated system map due in year 2 as necessary
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

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

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 Greenscape's Septic Posts, the Health Department sends a MassDEP Septic System Guide whenever a system is constructed, modified, or repaired.

Chloride

- Completed the Salt Reduction Plan due in Year 3, updated if necessary
 - The Salt Reduction Plan is attached to the email submission
 - The Salt Reduction Plan can be found at the following website:

Annual Requirements

Public Education and Outreach

- Included an annual message in November/ December to private road salt applicators and commercial industrial site owners on the proper storage and application rates of winter deicing material, along with the steps that can be taken to minimize salt use and protect local waterbodies

Please fill out the following information on salt usage over Year 4 of the permit. Be sure to include units for amount of salt:

Type(s) of salt applied:

Amount of salt applied:

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:

Not applicable.

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

Annual Requirements

*Public Education and Outreach**

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

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Nitrogen Source Identification Report

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

Potential structural BMPs

Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen removal by the BMP was

- estimated consistent with Attachment 1 to Appendix H. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated nitrogen removed in mass per year by the BMP were documented.
 - The BMP information is attached to the email submission
 - The BMP information can be found at the following website:

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:

Not applicable.

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

Annual Requirements

*Public Education and Outreach**

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

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Phosphorus Source Identification Report

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

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:

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:

Not applicable.

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Please see optional description below.

- 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:

The City is developing a street sweeping schedule in the City's asset management system. A work plan and schedule will be shown next year.

Charles River Watershed Phosphorus TMDL

- Defined the scope of the Phosphorus Control Plan (PCP). *Please select one of the following:*
- The PCP scope is the entire area within our jurisdiction within the Charles River Watershed
 - The PCP scope is the urbanized area portion of our jurisdiction within the Charles River Watershed

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:

Not applicable.

NON-TRADITIONAL AND TRANSPORTATION MS4s ONLY- municipalities please skip this section:

- Estimated the current impervious area of permittee owned property, determined the Land Use information for permittee owned property, calculated the phosphorus removal in pounds per year for any structural BMP owned by the permittee in accordance with Appendix F Attachment 3, and recorded the date of last maintenance activity for all structural BMPs for which phosphorus removal is calculated
- The above information is attached to the email submission
 - The above information can be found at the following website:

Lake and Pond Phosphorus TMDL

- Defined the scope of the Lake Phosphorus Control Plan (LPCP). *Please select one of the following:*
- The PCP scope is the entire area within our jurisdiction discharging to the impaired waterbody
 - The PCP scope is the urbanized area portion of our jurisdiction discharging to the impaired waterbody
- Calculated baseline phosphorus, allowable phosphorus load, and phosphorus reduction requirement

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:

Not applicable.

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

The city has implemented a software program with a permitting and tracking system.

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

The city has implemented a software program with a permitting and tracking system.

The system tracks site plan reviews, inspections, contractor compliance and reporting data, as well as all city-wide facilities that have stormwater BMPs. Every parcel with wetlands has been identified. The city also added an asset management module that is under development.

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:

Number of outfalls:

Danvers River 30

Longham Reservoir 81*

Bass River 146

Beverly Harbor 72

Salem Sound 112

Wenham Lake 9

Miles River 12

**Longham Reservoir has no impairments*

Part IV: Minimum Control Measures

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

MCM1: Public Education

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

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

BMP: Elementary School Program - Keeping Water Clean

Message Description and Distribution Method:

Program engages 5th grade students in several activities designed to raise their stormwater and water conservation awareness. Students learn about what a watershed is, what stormwater, groundwater and wastewater are, how they can negatively or positively impact these water systems, along with more details about each system and how it should be protected/maintained.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

2,166 students, 370 teachers and parents, 30 schools

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: Video - "Fowl Water"

Message Description and Distribution Method:

The 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.greenscapes.org/resources-videos/ and spread as an advertisement on Facebook, Instagram, & YouTube

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

237,249 impressions on Facebook/Instagram
351,249 impressions on YouTube

Message Date(s): *May 31, 2022 - June 17th, 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

This is valuable information that became available.

BMP: Workshop - Planning Tools to Promote Natural Resource Stewardship

Message Description and Distribution Method:

Hosted by members of the PIE-Rivers Partnership, this free virtual workshop discussed the latest trends in promoting LID and other forms of Green Infrastructure in North Shore communities.

Targeted Audience: *Residents +*

Responsible Department/Parties: *PIE Rivers Partnership, Greenscapes Coalition*

Measurable Goal(s):

82 Participants

Message Date(s): *November 9, 2021*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Print Material/Rack Card - Storm Drain Info

Message Description and Distribution Method:

The Greenscapes storm drain rack card, originally printed in 2016, was modified for easy office printing and distribution. The original can be found here:

<https://greenscapes.org/wp-content/uploads/2017/01/Greenscapes-Rack-Card-2014-final.pdf>

Targeted Audience: *Residents +*

Responsible Department/Parties: *Greenscapes Coalition, Municipal Staff*

Measurable Goal(s):

Message Date(s): *Sent to Greenscapes network January 24, 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Public Lecture - Coastal Communities Talk Water

Message Description and Distribution Method:

This free community event at the Cabot Theater in Beverly MA, featured guest speakers from Salem Sound Coastwatch, the Ipswich River Watershed Association, Green Beverly, Sustainable Marblehead and the EPA, who covered various topics related to water quality, water quantity and general watershed stewardship. Printed materials were also being passed out by Greenscapes personnel.

Targeted Audience: *Residents +*

Responsible Department/Parties: *Greenscapes Coalition*

Measurable Goal(s):

150 Attendees

Message Date(s): *March 10, 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Printed Material (Magazine) - Greenscapes Guide

Message Description and Distribution Method:

The Greenscapes Guide, a 26-page magazine that covers sustainable landscaping tips, DIY stormwater management for homeowners and more, was distributed at every school program that Greenscapes conducted this school year.

Targeted Audience: *Residents +*

Responsible Department/Parties: *Greenscapes Coalition*

Measurable Goal(s):

3,000 guides distributed throughout the North Shore

Message Date(s): *Various dates between September 2021 - June 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: In-Person Exhibit - Culture House

Message Description and Distribution Method:

Salem Sound Coastwatch, a contributing partner to the Greenscapes Coalition, was a resident exhibitor at Salem Culture House, a pilot project that created a community space in Salem's Old Town Hall. At the exhibit, SSCW staff ran two hand-on activities that taught visitors about their connection to their watershed. Greenscapes materials were on display and passed out.

Targeted Audience: *Residents +*

Responsible Department/Parties: *Greenscapes Coalition, Municipal Staff*

Measurable Goal(s):

924 Attendees

Message Date(s): *April 20 - April 23, 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Miscellaneous Social Media

Message Description and Distribution Method:

Social media content related to stormwater management, wastewater and groundwater protection, water conservation, pet waste, septic system maintenance and sustainable lawn care are always available on the Greenscapes social media pages and on the Greenscapes website.
<https://greenscapes.org/resources-socialmedia/>

Targeted Audience: *Residents +*

Responsible Department/Parties: *Greenscapes Coalition*

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: Miscellaneous Tabling Events

Message Description and Distribution Method:

Events attended by Greenscapes personnel where printed materials were passed out: Middleton Earth Day, Tri-Town Spring Expo, Boxford Applefest, Topsfield Strawberry Fest, Ipswich STEAM Showcase, Beverly Earth Day, Salem Farmer's Market, Earth Week at the Peabody Essex Museum

Targeted Audience: *Residents +*

Responsible Department/Parties: *Residents +*

Measurable Goal(s):

Message Date(s): *Various dates between September 2021 - June 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Middle School Educational Seminar

Message Description and Distribution Method:

The City conducted a three-day Middle School stormwater educational seminar with Greenscapes.

Targeted Audience: *Residents +*

Responsible Department/Parties: *City Engineering and Public Services Departments, and Greenscapes*

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: City Council Meeting Stormwater Video

Message Description and Distribution Method:

The City created a stormwater video describing the history and current status of Beverly stormwater projects, presented at a City Council meeting. The video is available on the City Stormwater website.

Targeted Audience: *Residents, Businesses and Commercial Facilities, Developers*

Responsible Department/Parties: *City Engineering and Public Services Departments*

Measurable Goal(s):

Message Date(s): *May 16, 2022*

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

To provide a more effective message to enhance understanding of City stormwater programs

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 Committee Meetings are currently paused as a result of the impacts of the COVID pandemic on the committee. It is currently being reorganized and restructured.

The SWMP is posted and publicly available on the City/Engineering website.

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:**

Public involvement opportunities, including the SWMP, are posted on the City/ Engineering website.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

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

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

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Optional: Provide additional status information regarding your map:

GIS is continuously updated to incorporate new findings or changes in drainage. This includes privately-constructed, owned/operated, and maintained infrastructure. The City has been leveraging this data to build out the Central Square Community Development software which included the development of "Stormwater Facility" licensing structure for every private facility that has stormwater device long-term O&M requirements. The City mapping utilizes the ESRI Network Trace function, allowing the City to trace flow from outfalls up the system to manholes or down the system from manhole to outfall. Mapping is continually updated as as-builts are 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. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

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

Dry-weather outfall screening was completed in 2021. Will complete screening 4 interconnections and one additional recently-discovered outfall in Year 5.

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

Number of outfalls screened:

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

Percent of outfalls screened:

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

Completed 461 outfalls out of 466 outfalls/potential interconnections (99% of locations screened).

Catchment Investigations

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

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

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

Number of catchment investigations completed this reporting period:

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

Percent of total catchments investigated:

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

Refer to attached memorandum on inspections and investigations.

IDDE Progress

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

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

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

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

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

Total number of illicit discharges identified:

Total number of illicit discharges removed:

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

Employee Training

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

CDM Smith provides an annual training session with key City Engineering and Department of Public Services (DPS) employees. This year's workshop was held on June 22, 2022.

MCM4: Construction Site Stormwater Runoff Control

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

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

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

Some of the inspections completed have multiple inspections on a single record, hence, the actual number of inspections is much greater than 60.

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

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3):

October 2021

As-built Drawings

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

Number of as-built drawings received:

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

Three as-builts were received for open projects that were completed and closed out within this reporting period. As-builts are planned to be incorporated into the City's GIS and stormwater infrastructure records, which are updated on a semi-annual basis.

Retrofit Properties Inventory

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

Permittee-owned property/land user: 1) C/O Beverly Airport Comm., 2) Beverly Airport Commission, 3) Civil Defense Department, 4) Ward Two Playground, 5) Beverly Airport, 6) City Compost Facility, 7) North Beverly Elementary School, 8) McKeown School, 9) Memorial Building, 10) Golf and Tennis Club

MCM6: Good Housekeeping**Catch Basin Cleaning**

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

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

Catch basins are cleaned as needed. The City will continue to clean and monitor future cleanings and inspections to determine if there are frequency issues or there is a loading problem.

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:

Stormwater Pollution Prevention Plan (SWPPP)

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

Number of site inspections completed:

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

The City coordinates to make repairs to erosion control methods on an as-needed basis. Corrective actions also include adjustments so that piles of materials on sites are covered, spill preventions systems are in place, and the sites are properly maintained and protected to minimize erosion and sediment migration.

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):

<https://www.salemsound.org/waterQuality.html> Salem Sound Coastwatch conducted bacteria testing from 2003 to 2021

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:

From June to August, water samples are taken from streams and outfall pipes as they empty out onto coastal beaches. All samples are tested for Enterococcus.

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 purchased an Enterprise Software System and is currently implementing the system. Central Square Technologies has been deployed to track all permits and licenses with the Community Development Module, including site plan reviews, inspections, contractor compliance, and reporting data. This has been developed to more effectively track MS4 stormwater activities. Additionally, all code enforcement cases have started being tracked utilizing this system. All sites with stormwater devices and annual maintenance requirements are tracked. The City added an asset management module which is in the development phase. The City is taking a proactive approach of informally/verbally educating contractors, developers and engineers of increased requirements of improved design, installation and long-term maintenance of stormwater facilities. The City built and developed a city-wide stormwater network in the ESRI ArcGIS environment to include all public and privately-owned catch basins and drainage facilities. The ESRI online collector app is used to collect catch basin cleaning data, outfall inspection and sampling data, and catchment investigations data. This provides critical reporting and analytics for the city's records. Also, the city developed a tracking mechanism for all City-wide facilities that have stormwater BMPs, in addition to stormwater impacts. The City identified every parcel with wetlands. In addition, an enforcement officer was hired to monitor construction site activities, as well as to perform house-to-house inspections. Although the purpose of house-to-house inspections is to identify and remove I/I from the sewer system, the inspections also provide opportunities to identify illicit connections to the drainage system.

COVID-19 Impacts

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

COVID-19 and the volatility of the market have resulted in turnover and City planning implications. Despite those impacts, the MS4 program has continued to move forward with meeting the permit 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 5 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

Annual Requirements

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

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

The City is developing a significant asset management platform (Enterprise Asset Management Suite) tracking operational and maintenance activities on an asset-by-asset basis, condition, repair/inspection history, and any O&M-specific documentation. This will help with long-term capital planning, management and improvements.

The City also hired an enforcement officer to conduct house-to-house inspections (providing opportunities to identify illicit connections) and to monitor construction site activities, with the specific purview of erosion and sediment migration compliance, as well as long-term stormwater maintenance and upkeep for public and private developments.

Part V: Certification of Small MS4 Annual Report 2021

40 CFR 144.32(d) Certification

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

Name:

Eric Barber

Title: City Engineer

Signature:



Date:

9/27/22

[Signatory may be a duly authorized representative]

Note: When prompted during signing, save the document under a new file name.

Annual Report Submission

Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.

EPA:

MassDEP:

Paper Signature:

If you did not sign electronically above, you can print the signature page by clicking the button below.

Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.