

Year 1 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: May 1, 2018-June 30, 2019

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.

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:

Fax 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 and an explanation of why it is not posted on the web:

Part II: Self Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4.

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 1 Requirements

- Develop and begin public education and outreach program
- Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
 - The SSO inventory is attached to the email submission
 - The SSO inventory can be found at the following website:
- Develop written IDDE plan including a procedure for screening and sampling outfalls
- IDDE ordinance complete
- Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation
 - The priority ranking of outfalls/interconnections is attached to the email submission
 - The priority ranking of outfalls/interconnections can be found at the following website:
- Construction/ Erosion and Sediment Control (ESC) ordinance complete
- Develop written procedures for site inspections and enforcement of sediment and erosion control measures
- Develop written procedures for site plan review
- Keep a log of catch basins cleaned or inspected
- Complete inspection of all stormwater treatment structures

Annual Requirements

- Annual opportunity for public participation in review and implementation of SWMP
- Comply with State Public Notice requirements
- 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
- All curbed roadways have been swept a minimum of one time per year

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

Annual Requirements

*Public Education and Outreach**

- Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- Provide 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)*

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

Annual Requirements

*Public Education and Outreach**

- Distribute 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
- Distribute an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Distribute 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

- Increase 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)

Use the box below to input additional details on any unchecked boxes above or any additional information you would like to share as part of your self assessment:

The Town has not had any SSOs in the past. They are just beginning to add public sewer in the Town with the first mile recently installed.

The Town has completed an inventory of Town owned BMPs and plans to complete inspection of these in Year 2.

The annual fall message is planned to be distributed in the fall of Year 2.

During Year 1 street and parking lot sweeping standard operating procedures were developed and are currently being implemented. The Town sweeps all streets and public lots annually in the Spring and other areas, as needed. The Town is evaluating the current street and parking lot cleaning to determine which streets and parking lots may require a change in cleaning frequency

In addition to the Year 1 activities and the planned Year 2 activities, the Town is undergoing a conversion from septic to sewer at a cost of 47 million dollars. During Year 1 the Town has installed one mile of sewer in the downtown area in preparation for Phase I of the sewer installation which is planned to begin in June 2020. The design of the wastewater treatment plant is at 60% complete and the design of the wastewater collection system is at 85%. The transition to public wastewater collection and treatment is targeted to reduce pollution from the aging septic systems.

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 the reporting period:

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

BMP:1A - Brochures for Residences and Businesses

Message Description and Distribution Method:

The Town developed flyers on general stormwater pollution prevention tips. These flyers were left on the counters of the DPW facility.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Prepare and distribute all resident appropriate stormwater management messages annually. The flyers were put out for distribution on June 21, 2019 and three copies were taken by June 30, 2019

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:1B - Website Updates for General Public

Message Description and Distribution Method:

The Town's Department of Public Works and Natural Resources website includes links to the EPA NPDES MS4 website and the MassDEP Stormwater website. The website update includes a link to the SWMP as well as a contact for the public to issue a comment on the SWMP.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Promote stormwater awareness by posting updated stormwater activities and articles. Track hits with goal of increasing hits annually.

Message Date(s): updated 7/11/2019

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:1C - Brochures for Developers

Message Description and Distribution Method:

The Town developed flyers for construction site stormwater controls. These flyers were emailed to contractors that apply for permits with the Planning Board.

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW Operations Manager/Planning Dept

Measurable Goal(s):

Prepare and distribute appropriate stormwater control messages to local development community every 2 years

Message Date(s): message prepared in June 2019 and distributed on various dates as permit applications were received

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:1D - Brochures for Industrial Facilities

Message Description and Distribution Method:

The Town developed flyers with information on proper storage and disposal methods for industrial facilities. The Town plans to distribute these flyers to facilities classified as industrial in PY2.

Targeted Audience: Industrial Facilities

Responsible Department/Parties: DPW Operations Manager

Measurable Goal(s):

Prepare and distribute appropriate stormwater management messages targeting industrial operations every 2 years

Message Date(s): to be distributed starting in Year 2

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:

Moved distribution to Year 2 from Year 1 due to time and effort required to complete list of industrial facilities

BMP:1E - Brochures for Dog Owners and Residents

Message Description and Distribution Method:

The Town developed flyers with facts and tips on proper pet waste management. The Town will distribute these flyers at the Town Clerk office with the dog licenses starting in Summer of 2019. This message is also distributed as part of the enhanced BMP requirements of Appendix F.A.III

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations/ Town Clerk

Measurable Goal(s):

Update annually and distribute with dog license information

Message Date(s): Planned activity for Year 2

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:1G - Seasonal Messages

Message Description and Distribution Method:

The Town developed brochures to distribute in the spring, summer, and fall. The spring flyer encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers. The summer flyer encourages proper pet waste management. The fall flyer encourages proper disposal of leaf litter. The spring flyer was put on the DPWNR office counter from June 21, 2019 to June 30, 2019. The summer flyer is currently on the counters, and the fall flyer will be made available on the counter during the fall season in Year 2. During Year 1, 2 spring flyers were taken from the counter. This message is also distributed as part of the enhanced BMP requirements of Appendix F.A.IV.

Targeted Audience: Residential/ Business/ Commercial/ Institutions

Responsible Department/Parties: DPW Operations Manager

Measurable Goal(s):

Supplement public education efforts with three annual timed messages on proper grass clipping, fertilizer, pet waste, and leaf litter management. Messages will also be posted to the town's website starting in Year 2.

Message Date(s): Various dates as listed above

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:1H - Stormwater TV Broadcasts for General Public

Message Description and Distribution Method:

The DPWNR Director provided updates to the Board of Selectman on the stormwater permit and on components of projects on: July 11, 2018, August 1, 2018, October 3, 2018, February 6, 2019, and May 1, 2019.

Targeted Audience: General Public

Responsible Department/Parties: DPWNR Director/ Board of Selectmen

Measurable Goal(s):

Continue to provide cable coverage of quarterly stormwater updates at BOS meetings

Message Date(s): Various dates as listed above

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 the reporting period:

As part of the Public Involvement and Participation Program the Town has provided a number of opportunities for the public to participate and implement the SWMP. During Year 1, a sub-committee of the Orleans Improvement Association helped design a new stormdrain manhole cover which contains the Town logo and the inscription "No Dumping - Drains to Waterways".

The SWMP was posted on July 11, 2019 and to date no comments were received from the public.

The Orleans Marine and Fresh Water Quality Committee has conducted a number of fresh and marine water quality sampling events. Sampling at the Nauset Estuary and Cape Cod Bay stations occurred on July 3, 2018, July 17, 2018, August 1, 2018, August 15, 2018, and August 30, 2018. A total of 28 volunteers participated in the five day sampling events. Sampling at the Pleasant Bay Stations occurred on July 3, 2018, July 17, 2018, August 1, 2018, August 15, 2018, and August 30, 2018. A total of 38 volunteers participated in these sampling events. The data from this sampling is submitted for processing to the UMass Dartmouth School of Marine Science and Technology (SMAST) as part of the Massachusetts Estuaries Project.

The Town continued to host the joint household hazardous waste collection event with the Town of Eastham. The spring event was hosted by Eastham on May 19, 2019 and the fall event was hosted by Orleans on September 22, 2018.

The annual Nauset Beach clean-up event occurred on April 27, 2019 and had approximately 45 volunteers. The DPWNR provided a 30 cubic yard dumpster to collect the waste and properly disposed of it.

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

Describe any other public involvement or participation opportunities conducted during the reporting period:

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

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:

Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified since 2013.

Total number of SSOs identified:

Total number of SSOs removed:

MS4 System Mapping

Describe the status of your MS4 map, including any progress made during the reporting period (phase I map due in year 2):

Of the Phase I updates the Town currently has the outfalls, receiving waters identified (including impaired waterbodies), initial catchment delineations, and Town owned stormwater BMPs. Of the Phase II updates the Town currently has the pipes, catch basins, and manholes mapped and needs to finish interconnections and catchment delineations.

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:

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

Percent of total outfalls 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.

- 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:

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:

Number of illicit discharges removed:

Estimated volume of sewage removed:

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.

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 the reporting period:

During Year 1, the employee training for the illicit discharge detection and elimination and good housekeeping and pollution prevention programs were conducted on June 5, 2019 and included staff from the Water, Building and Facilities, DPWNR, Transfer, and Harbormaster departments.

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:

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

Ordinance Development

Describe the status of the post-construction ordinance required to be complete in year 2 of the permit term:

An amendment to Chapter 88, Drainage & Erosion & Sediment Control, of the Town's bylaw was approved at Town Meeting on May 13, 2019.

As-built Drawings

Describe the status of 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 required to be complete in year 2 of the permit term:

An amendment to Chapter 88, Drainage & Erosion & Sediment Control, of the Town's bylaw was approved by Town Meeting on May 13, 2019. The amendment requires as-built drawings to be submitted no later than two years after completion and includes requirements for planned long term operation and maintenance practices.

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 progress has been made in the Year 1 reporting year.

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 progress has been made in Year 1.

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 progress has been made in Year 1.

MCM6: Good Housekeeping

Catch Basin Cleaning

Describe the status of the catch basin cleaning optimization plan:

During Year 1 a written catch basin inspection and cleaning standard operating procedure was developed and is

If complete, attach the catch basin cleaning optimization plan or the schedule to gather information to develop the optimization plan:

- The catch basin cleaning optimization plan or schedule is attached to the email submission
- The catch basin cleaning optimization plan or schedule can be found at the following website:

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, if known.

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:

Street Sweeping

Describe the status of the written procedures for sweeping streets and municipal-owned lots:

During Year 1, written street and parking lot sweeping standard operating procedures were developed and are currently being implemented.

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

- Number of miles cleaned:
- Volume of material removed: [UNITS]
- Weight of material removed:

If applicable:

For rural uncurbed roadways with no catch basins, describe the progress of the inspection, documentation, and targeted sweeping plan:

Winter Road Maintenance

Describe the status of the written procedures for winter road maintenance including the storage of salt and sand:

During Year 1, written winter road maintenance standard operating procedures were developed and are currently being implemented. The past winter was a light year and 448 tons of salt was used. The Town has implemented optimization efforts including using Compu-Spread technology to minimize use of salt.

Inventory of Permittee-Owned Properties

Describe the status of the inventory, due in year 2 of the permit term, of permittee-owned properties, including parks and open spaces, buildings and facilities, and vehicles and equipment, and include any updates:

The Town has a preliminary inventory of Town owned properties and plans to update this in Year 2.

O&M Procedures for Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment

Describe the status of the operation and maintenance procedures, due in year 2 of the permit term, of permittee-owned properties (parks and open spaces, buildings and facilities, vehicles and equipment) and include maintenance activities associated with each:

The Town plans to develop the O&M procedures during Year 2.

Stormwater Pollution Prevention Plan (SWPPP)

Describe the status of any SWPPP, due in year 2 of the permit term, for permittee-owned or operated facilities including maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater:

The Town will evaluate the Town owned properties and determine if any will require a SWPPP, and complete the SWPPP if necessary.

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:

O&M Procedures for Stormwater Treatment Structures

Describe the status of the written procedure for stormwater treatment structure maintenance:

During Year 1, written BMP inspection and maintenance standard operating procedures have been developed and will be implemented in Year 2.

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:

The Orleans Marine and Fresh Water Quality Committee has conducted a number of fresh and marine water quality sampling events, as reported under Public Participation above. The data from this sampling is submitted for processing to the UMass Dartmouth School of Marine Science and Technology (SMAST) as part

of the Massachusetts Estuaries Project.

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:

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 2 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

- Complete system mapping Phase I
- Begin investigations of catchments associated with Problem Outfalls
- Develop or modify an ordinance or other regulatory mechanism for post-construction stormwater runoff from new development and redevelopment
- Establish and implement written procedures to require the submission of as-built drawings no later than two years after the completion of construction projects
- Develop, if not already developed, written operations and maintenance procedures
- Develop an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; review annually and update as necessary
- Establish a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner
- Develop and implement a written SWPPP for maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater
- Enclose or cover storage piles of salt or piles containing salt used for deicing or other purposes
- Develop, if not already developed, written procedures for sweeping streets and municipal-owned lots
- Develop, if not already developed, written procedures for winter road maintenance including storage of salt and sand
- Develop, if not already developed, a schedule for catch basin cleaning
- Develop, if not already developed, a written procedure for stormwater treatment structure maintenance
- Develop a written catchment investigation procedure (*18 months*)

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 in the last 5 years

- 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

Provide any additional details on activities planned for permit year 2 below:

Part V: Certification of Small MS4 Annual Report 2019

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:

Title:

Signature:

Date:

[Signatory may be a duly authorized representative]