

**Year 3 Annual Report**  
**Massachusetts Small MS4 General Permit**  
**Reporting Period: July 1, 2020-June 30, 2021**

*\*\*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, 2020 and June 30, 2021 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: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

**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 3 Requirements

- Inspected and screened all outfalls/interconnections (excluding Problem and Excluded outfalls)
- Updated outfall/interconnection priority ranking based on the information collected during the dry weather inspections as necessary
- Post-construction bylaw, ordinance, or other regulatory mechanism was updated and adopted consistent with permit requirements

*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 3 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:

### 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 system map due in year 2 as necessary
- 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, 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:

Permittee owned treatment structures were identified in PY3 but not inspected due to COVID-19 related staff shortages. Inspections of permittee owned treatment structures is planned for PY4.

## **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:

BOH septic system education is linked on the Town's web page to <https://www.mass.gov/guides/caring-for-your-septic-system>.

## **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)

*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 Town sweeps all municipal streets and parking areas once per year and targets problem areas for a second sweeping of municipal streets and parking areas as budget allows. In PY3 22% of the roads were swept in the fall of 2020 and all roads were swept in Spring of 2021.

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

### Annual Requirements

#### *Public Education and Outreach\**

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

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

#### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

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

#### *Potential structural BMPs*

- Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.
- The BMP information is attached to the email submission
  - The BMP information can be found at the following website:

*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 Town sweeps all municipal streets and parking areas once per year and targets problem areas for a second sweeping of municipal streets and parking areas as budget allows. In PY3 22% of the roads were swept in the fall of 2020 and all roads were swept in Spring of 2021.

Town owned stormwater treatment structures were added to the Stormwater System Map. Only 1 BMP is located in the phosphorus impaired watershed to Ashumet Pond.

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

Town owned BMPs were also added to the Stormwater System Map and are posted online at: <https://mashpeema.gov/public-works/stormwater-management-program>.

### 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:

During Permit Year 3 the outfall inventory was updated to include one new outfall on the Santuit River, bringing the total to 17 outfalls. The updated Stormwater System map showing the outfall locations is posted online at: <https://www.mashpeema.gov/public-works/stormwater-management-program>.

The outfall priority ranking table was updated to include the new outfall.

## 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:Multimedia Methods for Residents**

Message Description and Distribution Method:

The Town of Mashpee maintains a stormwater webpage with educational information for residents. Educational topics include the proper use of slow-release fertilizers, pet waste management, leaf litter management, and proper care of septic systems. These material were used to meet the requirements per Appendix H for discharge to waters impaired for phosphorus and discharges to waters impaired for bacteria and nitrogen.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

The website was visited 149 times from 135 unique addresses in PY3. This is more than double from PY2.

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:Multimedia Methods for Businesses**

Message Description and Distribution Method:

The Town of Mashpee maintains a stormwater webpage with education information for businesses on topics such as managing grease waste, cleaning up spills, preventing pollution, and winter deicing.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

The website was visited 149 times from 135 unique addresses in PY3. This is more than double from PY2.

Message Date(s): The messages are available all year on the Town's website

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:Multimedia Methods for Construction Developers**

Message Description and Distribution Method:

The Town of Mashpee maintains a stormwater webpage with educational information for construction developers on erosion and sediment control and BMP maintenance.

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW/ Environmental Oversight Committee

Measurable Goal(s):

The website was visited 149 times from 135 unique addresses in PY3. This is more than double from PY2.

Message Date(s): The messages are available all year on the Town's website

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:Multimedia Methods for Industrial Facilities**

Message Description and Distribution Method:

The Town of Mashpee has very few industrial facilities. However, the Town maintains a stormwater webpage with educational information for automotive facilities on practicing good housekeeping and pollution prevention.

Targeted Audience: Industrial facilities

Responsible Department/Parties: DPW/ Environmental Oversight Committee

Measurable Goal(s):

The website was visited 149 times from 135 unique addresses in PY3. This is more than double from PY2.



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:

### MCM2: Public Participation

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

The Mashpee Stormwater Task Force met in September 9, 2020 and reviewed the SWMP BMPs and reporting metrics. No changes were suggested.  
  
Mashpee's Year 3 Stormwater Management Program was presented to the Planning Board at a public meeting on September 2, 2020.

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

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

Mashpee residents participated in a regional Household Hazardous Waste Program on multiple dates in August and October, 2020 and April and June, 2021.  
  
Volunteers participated in the Mashpee River Cleanup held on April 3, 2021.

### 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:*

During Permit Year 3 the outfall inventory was updated to include one new outfall on the Santuit River, bringing the total to 17 outfalls. Permittee owned BMPs were also added to the map in PY3. An updated Stormwater System map showing the outfalls, BMP locations and initial catchment areas is attached. There are no known interconnections to other MS4s.

### **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:

*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:*

No dry weather flow was identified for the new outfall.

### **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:

No dry weather flow was identified and there are no identified problem catchments.

### **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:

Board of Health and the DPW confirmed that no illicit discharge were identified since the effective date of the permit.

### **Employee Training**

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

Annual PY3 IDDE training was completed in 2021 via remote learning for DPW staff.

Annual PY3 SWPPP and SPCC training was completed in person on June 8, 2021.

During PY3 all Natural Resource Department seasonal and full time DNR waterways assistants received training from the University of Massachusetts Dartmouth School of Marine Science in water quality nutrient sampling. This training was in the use and calibration of YDI ProSolo DO/ CT meters, Winkler DO sampling, membrane filtration, and Secchi Depth readings. This training occurs yearly in compliance to the Mashpee

Comprehensive Watershed Nitrogen Management Plan's annual nutrient sampling.

### **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:

There were no special permit site plans reviewed during the reporting other than one that was withdrawn.

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

#### **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:

As-built drawings and ensuring the long term operation and maintenance of stormwater systems for new construction are already included in the Stormwater Management Bylaw and Site Plan Review.

#### **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 to date

#### **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 to date

### **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 to date

## **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:

### **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:
- 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:

No deficiencies or corrective actions were identified during the reporting period.

### **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 following report is attached: Water Quality Improvements Associated with Mashpee Shellfish Aquaculture: Effectiveness in Reducing Water Column Nutrient Concentrations in Popponeset and Waquoit Bays ; Howes et. al.

#### **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:

Mashpee currently cleans all catch basins annually. The DPW is planning to use a volumetric average to estimate the total amount of material removed from catch basins and confirm that it, on average, is less than 50% of the catch basin sump volume. These estimates will be tracked from year to year and the program or tracking method will be adjusted as needed.

In PY3 22% of the roads were swept in the fall of 2020 and all roads were swept in Spring of 2021.

Mashpee Department of Natural Resources waterways staff were trained on utilizing water quality sampling equipment including YSI multi parameter water quality sondes, and nutrient sampling. The yearly training is required to complete the Mashpee Comprehensive Watershed Nitrogen Management Plan's annual nutrient sampling.

### **COVID-19 Impacts**

*Optional:* If any of the above year 3 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 4 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

- Develop a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover
- Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
- Identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas

### **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)

Provide any additional details on activities planned for permit year 4 below:

The Town acknowledges Permit Year 4 requirements listed above and will complete as many activities as possible based on funding and staff availability.



## 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:  Title:

Signature:  Date:

*[Signatory may be a duly authorized representative]*