

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: <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 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:

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:

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:

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:

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:

The Town does not have structural BMP's to inspect at this time. However, the Town is planning and has designed multiple projects that incorporate BMP's. The Monk's Park stormwater project will treat 6.4 Acs of runoff and will target nitrogen that the Town can monitor. This is considered a pilot project in theory but for our DPW maintenance staff this is a pilot project in maintaining green infrastructure. The Town is also into the Alternatives Analysis stage of the CWMP process and has identified structural BMPs as one of our alternatives. This is the step forward needed to make this push from a CIP standpoint. The Town is also working with APCC to design structural BMPs at 2 different boat ramps.

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

The Town of Bourne turned over several staff including the previous Stormwater Manager, Conservation Agent Samuel Haines. Both the Town Administrator and Asst Town Administrator have moved on as well as the Town Planner, IT Director, DPW Director, and several Health and DPW staff. The funding for the MS4 program will be moved to the Engineering Department budget as of July 1, 2022. A formal consultant, Environmental Partners (EP), has been brought on for Year 5 planning and the Nitrogen Source Identification Report will be completed by December 2022. EP will also provide training to DPW going forward and will be doing BMP inspections.

Part III: Receiving Waters/Impaired Waters/TMDL

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

- Yes
- No

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

Part IV: Minimum Control Measures

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

MCM1: Public Education

Number of educational messages completed during this reporting period:

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:Dog Waste

Message Description and Distribution Method:

The Town has supplied residents with dog waste bags and pamphlets, being consistent with the past few years.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Positive feedback and people seeking out all of them in order for us to order more.

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:Erosion Controls

Message Description and Distribution Method:

Erosion Control pamphlet describing erosion controls and runoff during construction handed out with building permit applications.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Positive feedback and less violations during construction.

Message Date(s): Year round

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: Yard waste & runoff

Message Description and Distribution Method:

Educational pamphlets for removing grass and leaves from your property. Also pamphlets on fertilizer controls and effects on the environment.

Targeted Audience: Residents and Business community

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

None

Message Date(s): Year round

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: Septic Maintenance

Message Description and Distribution Method:

Pamphlet on the importance of septic maintenance with the Board of Health permits

Targeted Audience: Residents

Responsible Department/Parties: Health Department

Measurable Goal(s):

Septic O&M reports

Message Date(s): Year round

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:

[Empty text box for describing changes]

BMP: Think Blue YouTube (BBNEP)

Message Description and Distribution Method:

On behalf of the members of the Buzzards Bay Stormwater Collaborative, Think Blue Massachusetts ran an educational advertising campaign from May 31st to June 17th, 2022. The "Fowl Water" (In both English and Spanish) video helps viewers visualize stormwater pollution in their community.

Town	Facebook/Insta (En)	Facebook/Insta (Sp)	YouTube (En)	Impressions	YouTube (Sp)	Impressions
Bourne	14,217	1,210	8,451			1,554

Targeted Audience: Residents

Responsible Department/Parties: External Contractor

Measurable Goal(s):

Views

Message Date(s): May 31, 2022 thru 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:

[Empty text box for describing changes]

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 Town has made the SWMP available online and discussed input during the CWMP planning process.

[Empty rectangular box]

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

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

The Wastewater Advisory Committee (WAC) was created during the CWMP process to discuss Alternatives and the WAC, partly based on the SWMP, decided Stormwater structural BMPs was one of two of the best alternatives to officially include in our CWMP.

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:

Mapping has been ongoing in Bourne. As our PeopleGIS mapping is populated with inspections, our interconnections get better every year. We are mostly complete with the piping and are 99% complete with outfalls and inlets.

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:

[Empty rectangular box]

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:

Buzzards Bay National Estuary Program (BBNEP) has done an incredible service to the Town of Bourne and surrounding towns. Our MOA has them doing IDDE, mapping, and inspections. Work is attached.

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:

See BBNEP statistics attached in "Bourne Summary" attachment

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:

The Town did not identify any illicit discharges in Year 4.

Employee Training

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

Employees were trained in Year 4 by BBNEP.

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:

The Town recently reviewed a 5.5 acre 172 unit multi-use complex and approved it under our new Stormwater Bylaw.
Enforcement was all verbal and brought into compliance before violations.

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

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3):

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:

Multiple projects requiring as-builts during Year 4 were still under construction. As Bourne saw an influx in projects during COVID-19, many projects will come to completion in the next year or so.

Retrofit Properties Inventory

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

- 1.) Bourne Town Hall - 24 Perry Ave
- 2.) Community Center - 239 Main St
- 3.) Bourne High and Middle Schools - 70 Trowbridge Rd
- 4.) Bourne DPW - 35 Ernest Valeri Rd
- 5.) Monument Beach Marina - 0 Emmons Rd
- 6.) Pocasset Fire Station - 317 Barlows Landing Rd
- 7.) Buzzards Bay Fire Station - 130 Main Street
- 8.) Intersection of Barlows Landing and Shore Rds
- 9.) Gray Gables Beach Parking Lot- 11 Gilder Rd
- 10.) Sagamore Beach Parking Lot - 56 Sagamore Rd

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:

The Town has problem areas and the Vacuum truck operator visits these yearly and as-needed. We have new staff operating this equipment and once they are trained on PeopleGIS we will be following this with data collection.

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:

The Town is currently in the process of hiring a consultant to inventory town facilities and create SWPPP's as necessary.

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.savebuzzardsbay.org/bay-health/bourne/>

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:

Buzzards Bay Coalition (BBC) with support from the Town of Bourne, monitors water quality in Bourne's embayments. We will be using this data to get a general sense of water quality but is not specificall tied to stormwater.

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 Town was not required to use as much sand during snow operations as in the years past. This was apparent during the calculations of removal.

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:

Staff turn over was severe in Bourne during Year 4. The Town had a bit of a holding pattern as several staff members were brought up to speed. DPW staff will be trained on the GIS and stormwater vacuum trucks and catch basin cleaning also. Mainly, Year 5 is already planning to become very productive compared to Year 3 and 4.

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:

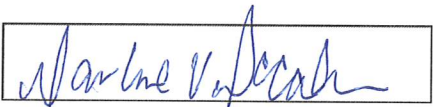
The MS4 budget is already obligated to be spent. \$50,000 will be spent on BBNEP for IDDE, mapping, and inspections, PeopleGIS for mapping, and Environmental Parnters to complete delinquent Year 4 work and the same work for Year 5.

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: Marlene McCowan Title: Town Administrator

Signature:  Date: 9.28.22

[Signatory may be a duly authorized representative]