



MASHPEE'S STORMWATER MANAGEMENT PROGRAM

JUNE 2019



In September 2018, Mashpee submitted a Notice of Intent ("NOI") (e.g. permit application) to the U.S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection. The NOI is a form that outlines the measures the Town will take over the next five years to comply with state and federal regulatory requirements to manage stormwater runoff.

What is Stormwater?

Stormwater is runoff from rainwater or snowmelt from paved streets, lawns, parking lots, and sidewalks and is conveyed by the catch basins, pipes, outfalls, and culverts that make up Mashpee's stormwater drainage system and may drain to local rivers, lakes and ponds. Stormwater runoff can become polluted by typical pollutants such as trash, oil, fertilizer, sediment, sand, and bacteria.

The more impervious surface, the more stormwater runoff and therefore the greater impact to local waterbodies. Clean stormwater runoff from natural areas is an important source of recharge to the groundwater; replenishing drinking water wells and supplying base flow to lakes, ponds, springs, brooks and wetlands.



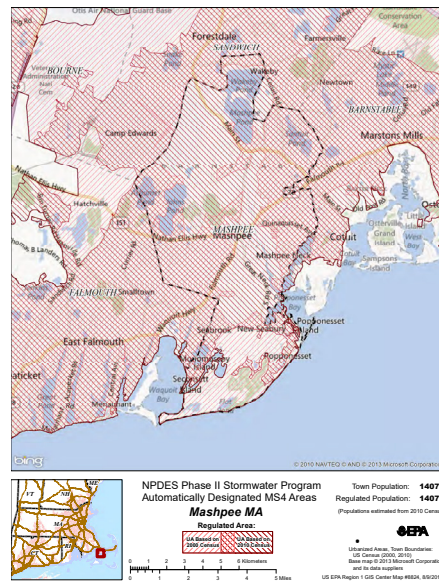
Town of Mashpee
Santuit River Culvert

How is Stormwater Regulated?

In 1990, through the National Pollutant Discharge Elimination System (NPDES) under Section 319 of the Clean Water Act, the U.S. EPA began to regulate stormwater from “medium” and “large” municipal separate storm sewer systems (MS4s), construction activities disturbing 5 acres of land or greater, and ten categories of industrial activities. In 1999, EPA instituted the Phase II Rule, extending coverage of the NPDES stormwater program to certain “small” MS4s and construction activities disturbing 1 or more acres of land. Mashpee is classified by EPA as one of these “small” MS4s and is one of the 253 communities in Massachusetts that are legally required to manage stormwater under the Environmental Protection Agency (EPA)'s Phase II Stormwater program.

The goal of this program is to minimize the impacts to water resources from municipally-owned stormwater systems, which includes storm drain pipes, swales, catch basins, detention ponds and outfalls. Under the EPA NPDES Phase II rule, Mashpee is required to develop and implement a Stormwater Management Program (SWMP) that reduces stormwater pollution, protects the water quality of Mashpee's lakes, ponds, rivers and wetlands and satisfies the requirements of the Clean Water Act.

Mashpee is only required to regulate stormwater in the urbanized area of Town, shown in pink on the inset map shown above. The Town must file a Notice of Intent (NOI) with EPA by October 1, 2018, and finalize the SWMP by June 30, 2019.



FOR MORE INFORMATION, PLEASE CONTACT
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What is Mashpee Doing to Manage Stormwater?

Mashpee has long recognized the importance of protecting its natural resources and has established zoning bylaws and health regulations to address stormwater runoff from development, manages municipal facilities to prevent pollution and manages the stormwater system to optimize drainage. Mashpee also provides the public with opportunities to reduce pollution such as recycling and Town clean-up events.

Mashpee has established a Stormwater Management Task Force, and retained the firm of Tighe & Bond, Inc. to develop and implement a town-wide Stormwater Management Plan (SWMP) in order to full comply with the new NPDES permit and to continue to mitigate the impacts of stormwater runoff within the Town. The Task Force Members include representation by the Town Administrator, Department of Public Works, Natural Resources, Environmental Oversight Committee, Conservation Commission, Planning Department, and Board of Health.

Stormwater Management Program: the Six Minimum Control Measures

The SWMP includes specific requirements under six specific areas as well as requirements to meet Total Maximum Daily Loads (TMDLs) and Impaired Waterbody Requirements.

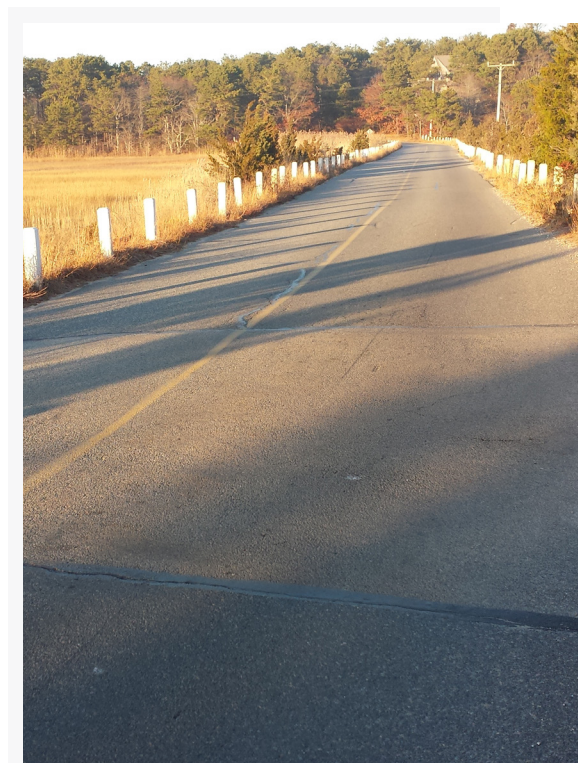
1. **Public Education and Outreach** – Municipalities are required to provide educational material about stormwater to four audiences (residents, industry, businesses/commercial, and construction). The purpose of the educational material is to provide the targeted audience information about stormwater and how their actions may impact it. The permit requires two separate messages distributed to each audience during the five-year permit term.
2. **Public Participation** – Municipalities are required to at least annually provide an opportunity for the public to participate in the development/implementation of their stormwater management program. Notices must comply with local and state public notice requirements.
3. **Illicit Discharge Detection and Elimination** – Municipalities are required to find and eliminate sources of pollution from their drainage system. The permit requires a proactive rather than a reactive approach. Municipalities are expected to systematically look in their drainage system for pollution sources and remove them. Part of this requirement includes development of system wide drainage system map.
4. **Management of Construction Site Runoff** – Municipalities are required to have a bylaw requiring management of stormwater discharges from construction sites that disturb one or more acres of land. Local code should include requirements for projects to implement sediment and erosion control practices.
5. **Management of Post Construction Site Runoff (New Development and Redevelopment)** – Municipalities are required to have a bylaw that regulates stormwater runoff from new development and redevelopment projects that disturb one or more acres of land. The goal of this measure is to manage stormwater where it falls and retain it on site. This control measure encourages the use of low impact development techniques and requires the retention or treatment of runoff on site using green infrastructure practices.
6. **Good Housekeeping in Municipal Operations** – Municipalities are required to implement good housekeeping practices in municipal operations such as those related to vehicle and equipment, open space, buildings and infrastructure maintenance. The permit requires at least annual street sweeping and optimization of catch basin cleaning. Development of pollution prevention plans are required at waste management facilities and maintenance garages not already regulated by another EPA NPDES permit.

ADDITIONAL PERMITTING INFORMATION AVAILABLE AT:
[HTTP://WWW3.EPA.GOV/REGION1/NPDES/STORMWATER/MS4_MA.HTML](http://www3.epa.gov/region1/npdes/stormwater/ms4_ma.html)

What Water Resources are Critical to Protect and Why?

Town of Mashpee discharges to the Popponesset Bay and Waquoit Bay Watersheds. Seven rivers, seven ponds and three bays are located within or adjacent to Mashpee. Some surface waters in Mashpee are classified with water quality impairments including low dissolved oxygen, nutrients and phosphorous. Other waters have established Total Daily Maximum Loads, or TMDLs for fecal coliform, and nitrogen. Regardless of the pollutant source, urbanized areas in Mashpee contribute to these water bodies, and therefore Mashpee will need to implement stormwater best management practices that specifically address reducing sources of bacteria, nitrogen and phosphorous.

This will be accomplished by targeted public education to homeowners, businesses and the construction industry, and Mashpee will continue to eliminate outfalls or treat stormwater discharges within the impaired watersheds. Mashpee has developed a concept layout for a public education website called, “Water Matters to about Mashpee” to help meet the public education requirements.



Town of Mashpee
Country drainage on Monomoscoy Road

How Much Will This Program Cost Mashpee?

The costs for Mashpee to implement the SWMP is approximately \$48,000 per year, with some year-to-year variability over the next 5 years. The costs may be lower depending on the use of in-house resources. These costs do not include drainage system maintenance (e.g. sweeping or catch basin cleaning, etc.), correction of illicit discharges, or design and construction of stormwater management facilities.

What New Measures will Mashpee Need to Implement?

In addition to targeted public education, Mashpee will need to expand its Illicit Discharge Detection and Elimination (IDDE) Program, review and potentially revise local stormwater bylaws, and expand its municipal good housekeeping and pollution prevention program to include other municipal sites and facilities in Mashpee where activities and maintenance operations have pollution potential. Members of the Stormwater Task Force have specific responsibilities for implementing each of the six Minimum Control Measures, and Tighe & Bond is available to assist in implementation.

What is the SWMP First Year Implementation Schedule?¹

Completion Due Date	Requirement	Task	Permit Section for Reference
10/1/2018	Notice of Intent (NOI)	Prepare and Submit NOI for Permit Coverage 90 Days from permit effective date.	Appendix E
6/30/2019	Prepare Stormwater Management Plan (SWMP)	Develop/update written SWMP	1.10.a & 1.10.2
6/30/2019	Illicit Discharge Detection and Elimination (IDDE)	Complete written IDDE procedures and rank outfalls for IDDE investigation. Document Sanitary Sewer Overflows to the MS4 during the past 5 years	2.3.4.6 & 2.3.4.7 2.3.4.4.b
6/30/2019	Construction Site Runoff Control	Create Written procedures for inspecting construction sites for proper sediment controls and conducting site plan reviews.	2.3.5
6/30/2019	Catch Basin Cleaning	Develop and implement a catch basin cleaning schedule with a goal of ensuring no catch basin is more than 50% full. Document catch basins inspected and cleaned, including total mass removed and proper disposal.	2.3.7.a.iii.b
6/30/2019	Street Sweeping	Sweep streets (rural and uncurbed exceptions apply) a minimum of once a year in the spring. Each annual report shall include number of miles cleaned and volume or mass of material removed.	2.3.7.iii.c
6/30/2019	Winter Road Maintenance	Develop and implement winter road maintenance procedures including use and storage of salt and sand, minimize the use of salts, ensure that snow is not disposed into waters.	2.3.7.ii.e
6/30/2019	Stormwater Infrastructure Maintenance	Inspect all stormwater treatment structures (excluding catch basins) at least annually and conduct maintenance as necessary.	2.3.7.1.d.vi

1. Table from EPA: <https://www3.epa.gov/region1/npdes/stormwater/ma/ma-ms4-checklist-1st-yr-req.pdf>

What Funding Sources are Available to Implement the SWMP?

- Stormwater Budget (Department of Public Works budget line item)
- State Grants: 604b, 319, MVP, PARC (competitive source)
- Federal Grants: Hazard Mitigation Grant Program (competitive source)
- Stormwater Utility Program (future funding source)