



MaineDOT

Maine Department of Transportation
Municipal Separate Storm Sewer Systems General Permit
Annual Report PY2
September 2015



Post Construction Stormwater BMP

Table of Contents

Introduction and Summary

Minimum Control Measures (MCM)

MCM 1: Public Education and Outreach on Stormwater Impacts

- BMP 1.1 Raise awareness among employees and contractors
- BMP 1.2 Motivate employees and contractors
- BMP 1.3 Train employees and contractors on reducing polluted stormwater runoff

MCM 2: Public Involvement and Participation

- BMP 2.1 Public notice requirements
- BMP 2.2 Coordinate with regulated communities

MCM 3: Illicit Discharge Detection and Elimination

- BMP 3.1 Verify watershed based stormwater system mapping in high priority watershed
- BMP 3.2 Continue dry weather inspections of outfalls in urban impaired stream watersheds
- BMP 3.3 Continue to implement strategy for detecting illicit discharges to open ditch systems
- BMP 3.4 Continue to implement illicit discharge detection and elimination procedure policy
- BMP 3.5 Continue system to track potential illicit discharges

MCM 4: Construction Site Stormwater Runoff Control

- BMP 4.1 Continue to implement soil erosion and water pollution control Plan (SEWPCP)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

- BMP 5.1 Implement a program to address stormwater runoff from new development and redevelopment projects
- BMP 5.2 Include a combination of structural and non-structural BMPs
- BMP 5.3 Inspect and maintain BMPs

MCM 6: Pollution Prevention and Good Housekeeping in Facility Operations

- BMP 6.1 Continue to inventory potential pollutant sources
- BMP 6.2 Continue to implement procedures for maintenance of stormwater BMPs at facilities
- BMP 6.3 Continue employee training program to prevent and reduce stormwater pollution
- BMP 6.4 Continue parking lot and street sweeping program
- BMP 6.5 Continue program to clean catch basins and other stormwater structures
- BMP 6.6 Continue program to repair or upgrade stormwater conveyances
- BMP 6.7 Continue to implement stormwater pollution prevention plans for vehicle maintenance facilities

Introduction and Summary

In accordance with Part IV. J. 1. of the General Permit for the Discharge of Stormwater from MaineDOT and MTA Municipal Separate Storm Sewer Systems (MS4) MaineDOT provides this report for Permit Year 2.

In April 2015 Maine DEP Land Resource Regulation staff reviewed MaineDOT's PY1 annual report and on May 4, 2015 notified MaineDOT that all Minimum Control Measures (MCM) had been met except MCM 3 because the MaineDOT stormwater infrastructure mapping was not available online outside the MaineDOT firewall. MaineDOT's stormwater infrastructure is mapped in ArcGIS and MapViewer as a layer but the catch basin layer is not yet viewable to others. MaineDOT's understanding is that the permit does not require the mapping to be available online and that paper maps meet the requirements of MCM 3 in the permit. The MaineDOT continues to make progress in achieving the measurable goals identified in the MaineDOT Stormwater Program Management Plan (SPMP), described below. A copy of the MaineDOT SPMP is on file at the Maine DEP Office in Augusta.

MaineDOT conducts quarterly visual water quality monitoring at three MaineDOT vehicle maintenance facilities located in regulated MS4 areas: Scarborough, Yarmouth, and Bangor. Visual Monitoring Forms are completed and kept on file, with the SWPPP, at the facilities with copies in the Surface Water Quality Unit files in Augusta.

In the next reporting cycle MaineDOT will make improvements to its infrastructure maps by continuing to confirm outfall locations and direction of flow between catch basins, and making that information available to DEP and others via ArcGIS or MapViewer.

MaineDOT has not made any changes to the goals identified in the SPMP.

This report includes a description of the actions completed for the measurable goals of each BMP identified in the MaineDOT SPMP for each Minimum Control Measure in the General Permit. BMPs for all of the MCMs were completed successfully.

MCM 1. Public Education and Outreach on Stormwater Impacts

Goals

1. Raise awareness among employees and contractors that polluted stormwater runoff is the most significant source of water quality problems for Maine's waters.
2. Motivate people to use BMPs to reduce polluted stormwater runoff.
3. Reduce polluted stormwater runoff as a result of increased awareness and use of BMPs.

BMP 1.1 Raise awareness among employees and contractors by providing training on reducing polluted stormwater runoff.

MaineDOT provides erosion and sedimentation control training to employees and contractors annually. In MaineDOT Regions 1 and 4, which encompass regulated MS4 areas, 52 employees attended training on soil erosion and sedimentation control within the last 12 months. A test is given at the end of training sessions and all attendees passed the test. All attendees correctly described sources of stormwater pollution, proper maintenance of BMPs, and proper spill response. In April and June 2015, respectively, a presentation on MS4 awareness and responsibilities was given to Maintenance supervisors in MaineDOT Regions 1 and 4; there were approximately 40 attendees at each session.

Additionally, MaineDOT assists the Maine DEP to provide the Basic and Advanced Erosion and Sedimentation Control training class to contractors each year. Between October 2014 and April 2015, MaineDOT Environmental Office staff presented ESC training to a total of 312 attendees, over 19 sessions.

In December 2014 MaineDOT Surface Water Quality Unit personnel gave a stormwater presentation to 33 MaineDOT Environmental Office employees at their annual ENV Office meeting; and in March 2015 a stormwater and MS4 (MCM5) compliance presentation was given to the MaineDOT Highway designers.

BMP 1.2 Motivate staff and contractors to utilize BMPs that minimize stormwater pollution.

MaineDOT requires employees and contractors to use erosion and sedimentation control BMPs to minimize the effects of stormwater runoff. All MaineDOT projects that have soil disturbance are required to have a Soil Erosion and Water Pollution Control Plan (SEWPCP) reviewed and approved by an authorized MaineDOT Environmental Office staff person. MaineDOT's Best Management Practices for Erosion and Sedimentation Control Manual is posted on MaineDOT's webpage. MaineDOT provides training on erosion and sedimentation control at least twice a year to ensure employees and contractors are continually motivated to use the appropriate erosion and sedimentation control BMPs on their projects.

MaineDOT's Local Roads Director and Bureau of Maintenance and Operation's Highway Maintenance Engineer provided extensive input and review of the Maine Winter Maintenance BMP Manual published cooperatively between ISWG and BASWG. Maine Local Roads is cosponsoring a roundtable discussion in September 2015.

BMP 1.3 Provide training on reducing polluted stormwater runoff.

See BMP 1.1 and 1.2 above. Additionally, MaineDOT is a member of the Nonpoint Source Training and Resource Center Advisory Committee which meets biannually to address stormwater training. MaineDOT also participates as instructors for Maine DEP's Basic and Advanced Erosion Control Practices training sessions for the Volunteer Contractor Certification Program providing training to approximately 900 contractors each year.

MCM 2. Public Involvement and Participation

Goals

Involve the MaineDOT community including various Bureaus or facilities in both the planning and implementation process of improving water quality and reducing water quantity via the stormwater program.

BMP 2.1 Public notice requirements

MaineDOT holds public meetings for construction projects and publishes meeting information, including the location, date, and time of the meeting, in local newspapers serving the project area. Attendance varies greatly; attendance and public comments are recorded and kept on file.

BMP 2.2 Coordinate with regulated communities

In December 2014, MaineDOT Surface Water Quality Unit personnel sent the MaineDOT Capital Work Plan to the regulated MS4 municipal stormwater coordinators by email using the list provided by the Maine DEP MS4 stormwater coordinator.

MaineDOT maintains regular contact with the regulated MS4 municipalities by participating in the Greater Portland Interlocal Stormwater Working Group (ISWG), the Bangor Area Stormwater Working Group (BASWG), and the York County Stormwater Work Group.

MaineDOT provided funding to ISWG and BASWG in support of their education and outreach activities. In 2015 MaineDOT contributed \$1000 to Think Blue Maine's Ducky Campaign; \$1000 to BASWG's stream clean-up campaign (\$750 for water and \$250 for t-shirts for the volunteers); and \$2000 to the 2015 Maine Stormwater Conference.

MCM 3. Illicit Discharge Detection and Elimination

Goals

Develop, implement, and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges in MaineDOT's stormwater systems.

BMP 3.1 Verify watershed based mapping of the stormwater system in highest priority watershed within the UA.

In June 2015 MaineDOT conducted field verification of catch basins, ditches, and their outfalls in the Penjajawoc Stream watershed. MaineDOT plans showing direction of flow between catch basins and outfall locations are kept on file.

BMP 3.2 Conduct coordinated dry weather inspections of outfalls in urban impaired stream watersheds.

MaineDOT petitioned regulated MS4 municipalities to conduct coordinated dry weather inspections. On May 15, 2015 MaineDOT petitioned the City of Bangor to inspect a section of Stillwater Avenue and the town of Veazie to inspect one outfall on State Street both located in the Penjajawoc Stream watershed; and the town of Scarborough to inspect a section of Gorham Road in the Red Brook watershed. Aerial photos showing the UIS watershed and the MaineDOT stormwater infrastructure were included in the email. On the same day MaineDOT also sent emails to the members of the York County Stormwater Group, and the MS4 contacts for the municipalities of Lewiston, Auburn, Lisbon, and Sabattus notifying them of our permit requirement to petition the regulated MS4 communities to conduct coordinated dry weather inspections and inviting them to contact us regarding UIS watersheds or other high priority watersheds.

On June 19, 2015 MaineDOT conducted a dry weather inspection of one outfall in the Penjajawoc Stream watershed on State Street in Veazie with the town of Veazie's stormwater consultant and two outfalls on Stillwater Avenue in Bangor without representation from the city. There were no illicit discharges.

MaineDOT and town of Scarborough stormwater contact rescheduled the coordinated dry weather inspection of Gorham Road outfalls in the Red Brook watershed in Scarborough several times in July and August 2015 but did not get to inspect the outfalls prior to the filing deadline of the 2015 annual report. MaineDOT and the Scarborough representative will inspect these outfalls within the next twelve months.

BMP 3.3 Continue to implement MaineDOT's strategy for detecting illicit discharges to open ditch systems within the two highest priority watersheds.

MaineDOT inspects open ditch systems in high priority watersheds at the same time as dry weather inspections of catch basin outfalls.

On June 18, 2015 the City of Bangor notified MaineDOT that the city's consultants, doing field work to update the Penjajawoc Stream Watershed Management Plan, noted erosion on the MaineDOT maintenance facility on Mt. Hope Avenue which has the potential to discharge to a ditch in the Penjajawoc Stream Watershed. On June 19th, following dry weather inspections of outfalls in the area, we inspected our facility on Mt. Hope Avenue. The notification from the City and the June 19th inspection information were forwarded to the MaineDOT SWQU Engineer and the MaineDOT vehicle maintenance facility manager. In July, a sedimentation basin was constructed to contain eroding sediments on site.

BMP 3.4 Continue to implement illicit discharge detection and elimination procedure policy.

The MaineDOT Bureau of Maintenance and Operation's Illicit Discharge Detection and Elimination Policy specifies the steps to take upon discovery of an illicit discharge. The policy is implemented statewide, not just in the regulated MS4 areas.

BMP 3.5 Continue system of tracking potential illicit discharges.

The MaineDOT Illicit Discharge Detection and Elimination Policy contains a section on tracking potential illicit discharges. Potential illicit discharges are reported up the supervisory chain and to the MaineDOT Environmental Office Surface Water Quality Unit and logged for tracking and reporting purposes.

MCM 4. Construction Site Stormwater Runoff Control

Goals

Continue to implement and enforce MaineDOT's program to reduce pollutants in stormwater runoff from construction activities that result in a land disturbance of one acre or more.

BMP 4.1 Continue to implement soil erosion and water pollution control plan requirements.

MaineDOT continues to implement and enforce an Erosion and Sedimentation Control Program to reduce pollutants in stormwater runoff from its construction activities. MaineDOT's Standard Specification 656 requires a Soil Erosion and Water Pollution Control Plan (SEWPCP) to be developed by project contractors; the SEWPCPs are reviewed and approved by MaineDOT Surface Water Quality Unit staff prior to the start of construction. Inspections are done at various times throughout construction until completion of the project and stabilization of the construction area. As part of a stormwater Memorandum of Agreement with Maine DEP, MaineDOT implements the SEWPCP requirement for all projects that have soil disturbance, including those with less than an acre of land disturbance and outside regulated Urbanized Areas.

MCM 5. Post-Construction Stormwater Management in New Development and Redevelopment

Goals

1. Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that have an acre or more of land disturbance.
2. Include a combination of structural and non-structural BMPs.
3. Develop an inspection program including inspection of BMPs at least once during the first year of installation.

BMP 5.1 Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that have an acre or more of land disturbance.

MaineDOT's Stormwater Program addresses stormwater runoff from new development and redevelopment projects through a Memorandum of Agreement between the Maine

DEP, the MaineDOT, and the MTA. All MaineDOT projects with land disturbance, regardless of size or location, are reviewed by MaineDOT Surface Water Quality Unit staff for compliance with the stormwater MOA requirements. Projects located in regulated MS4 areas are further reviewed to determine if the amount of disturbance will be more or less than one acre. New Construction or redevelopment projects with an acre or more of disturbance and a direct discharge of stormwater to the MS4 or to waters of the State have stormwater BMPs incorporated into the project.

BMP 5.2 Include a combination of structural and non-structural BMPs.

New Development and redevelopment projects located within regulated MS4 areas that require stormwater treatment in accordance with the permit will include structural and non-structural BMPs.

In the previous 12 months, MaineDOT started construction on one redevelopment project that meets this criteria: replacement of the Sarah Mildred Long Bridge in Kittery. Stormwater treatment will consist of two grassed underdrained soil filters.

The South Portland Connector project from Maine Mall Road to Route 1 is in the regulated MS4 area but did not trigger the one acre disturbance threshold; however because it is in the Red Brook watershed, an urban impaired stream, MaineDOT installed a series of compost blanket structural BMPs at critical locations along the project at a cost of \$45,000.

BMP 5.3 Develop an inspection program including inspection of BMPs at least once during the first year of installation.

The new stormwater BMPs (underdrained soil filters) for the bridge replacement in Kittery have not been constructed yet. The project construction is scheduled to be completed in June 2018; the stormwater BMPs will be inspected the first year after their construction.

The South Portland Connector project compost blankets were installed in the summer of 2015 and will be inspected within the next twelve months.

Existing stormwater BMPs in Yarmouth (cover photo) and Bangor were inspected in 2015 and no corrections were needed at these sites.

MCM 6. Pollution Prevention and Good Housekeeping in Facility Operations

Goals

MaineDOT's goals are to prevent or reduce pollutant runoff from MaineDOT's roads, other infrastructure, and facilities through the development and implementation of an Operation and Maintenance Program.

BMP 6.1 Continue to inventory potential pollution sources and associated operations conducted in, on, or associated with facilities, buildings, roads, and travelways that have the potential to cause or contribute to stormwater or surface water pollution.

Potential sources of pollutants for MaineDOT operations include maintenance garages, roads, and park and ride lots.

MaineDOT maintenance garages may include storage and use of gasoline and diesel fuel, oil, hydraulic fluids, radiator fluid, brake fluid, and other related vehicle maintenance fluids; vehicle washing operations; sand/salt storage; and stockpiled materials.

Roads maintained by MaineDOT include the interstate and those sections of State and State Aid roads that are outside the State Urban Compact boundaries. These areas are swept each spring to remove winter sand/salt deposits. Catch basins are inspected and cleaned on a regular schedule, managed by MaineDOT Bureau of Maintenance and Operations.

There are four park and ride lots within the regulated MS4 areas that are maintained by MaineDOT. Each lot was swept this past spring to remove winter sand.

BMP 6.2 Continue maintenance of stormwater BMPs.

MaineDOT inspects stormwater BMPs in the regulated MS4 areas on a regular basis, as noted in individual BMP inspection files. Maintenance is performed as necessary as determined by the inspections. MaineDOT has a stormwater BMP inspection and maintenance database that includes an inspection form specific to the type of BMP, noting the time of year (spring or fall) inspections are due, and a specific list of items to check for each type of BMP. Inspections are conducted by MaineDOT SWQU personnel, or consultants with expertise in inspecting stormwater BMPs. Maintenance is done by M&O staff, SWQU staff, or contracted specialist, depending on the type of maintenance needed.

BMP 6.3 Continue employee training program to reduce stormwater pollution from facilities.

All MaineDOT maintenance facility staff receive on-site Green Book training on a monthly basis. The Green Book is a MaineDOT environmental practices guidebook for M&O staff which covers topics such as hazardous waste handling, spill response, floor drain management, and management of waste from vehicle and equipment maintenance. Each monthly session focuses on a different Green Book topic. A copy of the Green Book was included as Appendix B in the PY1 annual report submitted to DEP in September 2009. Maintenance facility staff also receive erosion and sedimentation control training at least annually (see BMP 1.1).

BMP 6.4 Continue parking lot and street sweeping program.

MaineDOT's Bureau of Maintenance and Operations has a program in place for sweeping roads and parking lots within the MaineDOT areas of responsibility. Each year over 7,500 miles are swept statewide by MaineDOT; this includes miles that were swept by MaineDOT maintenance crew and by hired contractors. The material is disposed of in accordance with all applicable state and federal laws and regulations.

BMP 6.5 Continue program to clean catch basins and other stormwater structures.

MaineDOT's Bureau of Maintenance and Operations has a program in place to regularly inspect, clean, maintain, repair, and replace catch basins and other stormwater structures. This data is collected and recorded in MaineDOT's MATS database. The Maintenance program records data statewide, not limited to the regulated MS4 Urbanized Areas.

BMP 6.6 Continue program to repair or upgrade stormwater conveyances.

MaineDOT's Bureau of Maintenance and Operations assesses stormwater infrastructure for maintenance needs including repairs and replacements every other year. MaineDOT's Project Development Office assesses the need for stormwater infrastructure replacements or upgrades at the time projects are planned.

BMP 6.7 Continue to implement stormwater pollution prevention plans for vehicle maintenance facilities within the regulated MS4 areas.

MaineDOT has three vehicle maintenance facilities located in regulated MS4 areas: Bangor, Scarborough, and Yarmouth. Each of these vehicle maintenance facilities has a SWPPP that is updated as changes occur.

In 2015, MaineDOT inspected these Maintenance facilities and updated the SWPPPs and site plans to reflect the current site conditions, stormwater infrastructure, and contact information.

In June 2015 the Bangor Maintenance Facility had an area of erosion of material to an on-site ditch which is connected to the Mt. Hope Avenue ditch. In July 2015 a sedimentation basin was constructed to contain any eroded material on site.

MaineDOT vehicle maintenance facility staff receive ESC training annually, ENV training (multiple topics) annually, MS4 awareness training bi-annually, and on-site Green Book training monthly.