

Maine Turnpike Authority

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VIA E-MAIL

September 15, 2014

Mr. David Ladd
Municipal and Industrial Stormwater Coordinator
Bureau of Land and Water Quality
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

SUBJECT: Maine Turnpike Authority
Stormwater Program Management Plan (SPMP)
Maine DEP Permit # MER043001
Annual Report for Permit Year 1 (July 2013 through June 2014)

Dear David:

On behalf of Maine Turnpike Authority (MTA), I am pleased to submit this Annual Report for Permit Year 1 (PY1), which satisfies the requirements in *Part IV(J)* of the Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharges from Maine Department of Transportation (MaineDOT) and MTA Municipal Separate Storm Sewer Systems (MS4s).

This Annual Report describes MTA's program of Best Management Practices (BMPs) accomplished and status of Measurable Goals (MGs) for each of the six Minimum Control Measures (MCMs) presented in MTA's SPMP (dated December 2, 2013) for PY1 (defined as July 2013 to June 2014). In summary, MTA has successfully met the PY1 requirements as outlined in the SPMP.

BACKGROUND

In accordance with *Part IV(A)* of the MPDES MS4 General Permit, MTA's SPMP was developed for the purpose of establishing, implementing and enforcing a stormwater management program to reduce the discharge of pollutants from MTA's roadways, drainage areas and facilities within Urbanized Areas (UAs) to the maximum extent practicable to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act (CWA). For each of the MCMs, MGs have been established to evaluate the designated BMPs. These MGs have been assigned an implementation schedule and/or milestones for implementation of applicable BMPs.

The SPMP has not been modified or updated since its submittal to the Maine DEP; therefore, a copy of the SPMP is not included with this report. No correspondence requiring action has been received from Maine DEP regarding the submitted SPMP. No monitoring data or other information was



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required by the MS4 permit in PY1.

In accordance with *Part IV(J)(1)* of the MPDES MS4 General Permit, this Annual Report provides a summary of achievements and completed goals for PY1 for each MCM in the subsections below. MTA enforces these MCMs through contract documents and has developed a Construction Project Environmental Compliance (CPEC) Program to ensure compliance with MS4 MGs and other stormwater requirements. The CPEC Program is summarized in **MCMs 4, 5 and 6**, but also includes **MCM 1** requirements (e.g., incorporating Stormwater Awareness and BMP Adoption Plans into project-specific documents for MTA contractors and employees alike).

MCM 1 – Public Education and Outreach on Stormwater Impacts: The SPMP training program was conducted for MTA Maintenance personnel and Engineering inspectors to address pollution reduction in stormwater runoff. The stormwater training program, which is combined with Spill Prevention, Control and Countermeasures (SPCC) topics and Erosion and Sedimentation Control (ESC) practices, was performed in May 2014 by regulatory specialists from GZA GeoEnvironmental, Inc. and MTA. The training was attended by approximately 90 MTA employees. Prior to conducting training, the combined SPCC/Stormwater/ESC training curriculum was updated circa April 2014 to reflect the following information:

- MS4 2013 changes (e.g., additional UA, etc.); and
- Updated maintenance tracking forms.

In addition to these updates, MTA SPCC/Stormwater/ESC training sessions held in 2014 also re-emphasized the training updates from the prior permit, which included (but were not limited to) the following:

- Introduction of MTA's MS4 UIS strategy, which identified Goosefare Brook and Hart Brook as MTA's two designated highest priority watersheds with considerations of other UIS watersheds (e.g., Long Creek, Capisic Brook, Red Brook, etc.);
- MTA's Mobile SPCC Plan, which includes procedures regarding refueling of mobile equipment, such as mowers, loaders and other heavy equipment (i.e., avoid and minimize refueling within UA and Urban Impaired Streams (UIS) watersheds);
- Recent updates to MTA's CPEC program, including GIS-based post-construction Operations and Maintenance (O&M) Plans and updated BMP inspection forms for maintenance activities;
- Requirements within the Long Creek watershed and other areas where watershed management plans (WMPs) are emerging;
- Quarterly and annual reporting associated with MTA's Annual MOA Report, including routine O&M, recertification, etc.; and
- Maintenance (e.g., sweeping, catch basin cleanouts, outfall inspections, etc.) as per MTA's MS4 UIS Strategy.

Also as part of **MCM 1**, MTA has updated their Stormwater Awareness Plan and Targeted BMP Adoption Plan to reflect the current permit cycle. Both of these Plans were provided as handouts during training and discussed to ensure that all MTA employees are aware of the three goals of this MCM in PY1 through PY5:

1. To raise awareness that polluted stormwater runoff is the most significant source of water quality problems in Maine's waters;
2. To motivate people to use the BMPs which reduce polluted stormwater runoff; and

3. To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.

The training sessions described above, which included in-class test/examination and a workshop session, provided an opportunity to assess process and impact indicators associated with the Stormwater Awareness and Targeted BMP Adoption Plans developed by MTA. The following summary of process and impact indicators has been prepared based on information collected during training sessions for MTA employees in attendance.

Process Indicators for PY1:

- Number of 3-hour training sessions conducted: **6**
 - One session at each of the following MTA maintenance facilities: York, Kennebunk, Crosby/South Portland, Gray, and Gardiner; and
 - One make-up session at MTA headquarters (HQ).
- Number of MTA employees attended: **90**

Impact Indicators for PY1:

- Average test score for the SPCC/stormwater/ESC training sessions: **94%**
- Percentage of MTA employees able to identify the goals of the Stormwater Awareness and BMP Adoption Plans: **96% = 86 out of 90 attendees**
- Percentage of MTA employees able to identify (and differentiate between) a structural and non-structural BMP: **78% = 70 out of 90 attendees**
- Percentage of MTA employees who demonstrated applied knowledge of BMP-specific information (i.e., silt fence must be installed prior to disturbing land, hay mulch must be placed at the end of each day, etc.): **74% = 67 out of 90 attendees**
- Percentage of MTA employees able to identify sources of stormwater pollution: **99% = 89 out of 90 attendees**

In addition to the impact indicators above, MTA employees were also evaluated on their knowledge of the following best practices:

- Percentage of MTA employees able to identify the most important criteria when selecting a mobile refueling site (i.e., consider public safety and protection of the environment, avoid refueling within or near Urbanized Area and Urban Impaired Streams, etc.): **98% = 88 out of 90 attendees**
- Percentage of MTA employees who demonstrated applied knowledge of illicit discharges (i.e., vehicle fluids released from a patron vehicle that flow into a nearby catch basin, antifreeze spill from an automobile accident toward a storm drain, etc.): **89% = 80 out of 90 attendees**
- Percentage of MTA employees able to identify the proper action when an illicit discharge is detected: **99% = 89 out of 90 attendees**

The impact indicators in PY1 provide the background data that will be the basis for insight into the progress and effectiveness of the annual stormwater training sessions throughout the current 5-year permit cycle.

Analysis of MTA employee knowledge of best practices was performed to assess the impact indicators in PY1. Test scores indicate that MTA employees are knowledgeable in applying their training in the field and that the annual stormwater training is effective.

With respect to the Stormwater Awareness and Targeted BMP Adoption Plans, it is also important to note that MTA's CPEC Program requires contractors conducting work on projects located within UA to receive and review a copy of both Plans, as well. MTA also requires all contractors to submit training certificates for the delegated on-site responsible party (OSRP) on MTA contracted projects located within UAs to ensure they are adequately trained and knowledgeable in ESC from Maine DEP's Non-Point Source (NPS) Training Program or an equivalent program. More information on MTA's CPEC Program is included in summaries for **MCMs 4 through 6**.

MCM 2 – Public Involvement and Participation: The MTA's public notice policy and public meetings that were scheduled during PY1 complied with the Maine Freedom of Access Act. MTA maintains a list of public meetings attended by MTA and/or their designees (e.g., counsel, consultants, etc.) and can provide a copy of this list to Maine DEP upon request.

MTA continues to maintain close communication with MS4 communities and their respective Stormwater Coordinators, primarily through participation in the Greater Portland Interlocal Stormwater Working Group (ISWG) and recent statewide MS4 meetings convened by DEP and Maine Municipal Association (MMA). Additionally, MTA has continued to be closely involved with the evolving management requirements of UIS watersheds both within and outside of UA. MTA also continues to communicate periodically with host municipalities regarding watershed management planning efforts within MTA's ROW.

In addition to these watershed-based efforts, MTA also was involved and participated in the following efforts in fulfillment of **MCM 2** in PY1:

- MTA personnel (or their designee) have attended and participated in multiple public meetings, seminars, and conferences related to stormwater, including five (5) ISWG meetings, two (2) stormwater meetings for the York County MS4 cluster, and hosted a third York County MS4 meeting;
- A stormwater program overview presentation was given to the MTA Board in May of 2014;
- Continued to provide a link from MTA's website to Cumberland County Soil and Water Conservation District's (CCSWCD's) yardscape program;
- Displayed "Think Blue" Ducky stickers at MTA facilities in highly visible areas such as toll booths and service plazas; and
- Attended statewide salt management round table meetings to remain abreast of follow-up discussions and subcommittee activities.

MCM 3 – Illicit Discharge Detection and Elimination (IDDE): The UA within MTA's ROW was mapped during the previous 5-year permit cycle using 2000 Census Bureau data. MTA's existing MS4 maps, which include unique identifiers and flow arrows for conveyances (including open ditches), is supplemented by tabular data that contains the construction information for each outfall and catch basin, as well as the proximate receiving surface waterbody.

MTA continues to use tracking forms to capture dry weather inspection and catch basin cleanout information, which are available upon request to Maine DEP. In PY1, MTA completed the process of identifying the additional UA, added as a result of the 2010 Census Bureau data, that requires stormwater infrastructure mapping. In PY2, MS4 maps and tracking forms will be updated to reflect the additional infrastructure located within the expanded areas.

Also in the previous 5-year permit cycle, MTA's IDDE SOP was reviewed and updated to include MTA's open ditch systems to ensure that illicit discharge detection in these systems would be implemented appropriately, not only in MTA's two highest priority UIS watersheds, but within all of MTA's UA.

In PY1, MTA reached out to local MS4 Stormwater Coordinators in MTA's two highest priority watersheds to develop a coordinated dry weather inspection program. An MTA representative met with each municipality's MS4 Coordinator to review outfall inspection techniques as well as the IDDE maps and tracking forms for MTA's ROW in the watershed and discussed possible locations for coordinated inspections in PY2. The meeting regarding Goosefare Brook in Saco was held on May 15, 2014, with Angela Blanchette, City of Saco Engineer, and the meeting regarding Hart Brook in Lewiston was held on May 27, 2014 with Justin Early, City of Lewiston Project Engineer.

MTA has a prioritized dry weather inspection program that includes inspection and cleanout, if needed, of Catch Basins (CBs), Outfalls¹ (OFs), and Discharge Points² (DPs) within the entire UA. Priority is given to Long Creek, Goosefare Brook, and Hart Brook watersheds; however, maintenance crews also inspect and cleanout, if needed, the remaining stormwater infrastructure in the UA every year in an effort to be proactive. Due to weather conditions this summer, not all UA stormwater infrastructure was inspected prior to the submission of this report; however, maintenance crews intend to complete this work in the next few weeks.

MTA Highway Maintenance employees, who have been trained annually to identify, document and report all “discharges that do not consist entirely of stormwater” to MTA's Environmental Services Coordinator, conducted inspections and cleanouts in PY1.

- Priority was given to conducting dry weather inspections of outfalls that discharge to the two highest priority watersheds (Hart Brook and Goosefare Brook) consistent with MTA's Priority UIS strategy.
- No illicit discharges or non-stormwater discharges were identified, however, three spills within UA occurred in PY1, which were reported to Maine DEP and cleaned up immediately before potential illicit discharges were permitted to reach stormwater infrastructure or waters of the State.
 - August 8, 2013: A man-lift hydraulic hose failure on Payne Road in Scarborough underneath the bridge leading to Exit 44 resulting in approximately 10 gallons of hydraulic oil being released to the paved surface which was promptly cleaned up and disposed of under the direction of the Maine DEP's spill response personnel.
 - March 27, 2014: A patron vehicle accident at the northbound Mile Marker (MM) 79 at the Androscoggin River Bridge in Lewiston resulted in approximately 20 to 25 gallons of motor oil, antifreeze, and transmission fluid being released to the paved bridge which were promptly cleaned up and disposed of under the direction of the Maine DEP's spill response personnel.
 - June 13, 2014: A patron truck accident at southbound MM 33.25 in Saco resulting in approximately 300 to 500 gallons of engine oil and transmission fluid being released to the right shoulder soil, vegetation, and surface water which was promptly cleaned up and disposed of under the direction of the Maine DEP's spill response personnel.
- Sediments were removed from catch basins with priority given to (1) those located within UIS watersheds, specifically Hart Brook and Goosefare Brook; and (2) those located within the median of MTA's ROW, as sediments tend to accumulate more rapidly in these median

¹ MTA's IDDE maps identify catch basin outlets as outfalls.

² Discharge points are areas where runoff from MTA's ROW may either enter a receiving waterbody or another permitted MS4 system (i.e., municipal or MaineDOT stormwater conveyance).

conveyances. Sediments were disposed of in accordance with an existing Memorandum of Understanding with Maine DEP.

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MCM 4 Construction Site Stormwater Runoff Controls: For many years, MTA has implemented MS4 elements to control stormwater runoff from construction sites (e.g., require contractors' OSRP to be trained by Maine DEP's Non-Point Source (NPS) program and provide appropriate certification; inspect and document BMPs for construction performed by MTA employees; etc.). In PY1, MTA continued to maintain these requirements, as well as those construction-related requirements associated with Chapter 500 and the MOA. These measures included the application of MaineDOT's BMP/ESC Manual to all projects regardless of the one acre threshold thus often exceeding the requirements of this MS4 permit.

MTA reports annually to Maine DEP regarding construction projects and associated BMPs (structural and non-structural) as part of the Annual MOA report, which was most recently submitted to Maine DEP in September 2014. Although the MOA report is not limited to MTA ROW within UA, active construction projects in PY1 that disturbed one acre or more within UA were documented using MTA's CPEC Program, which includes inspection documents, stormwater requirements and other environmental compliance considerations.

MTA continues to rely on binding contract language to ensure that contractors comply with the construction-related BMPs/requirements of (1) Chapter 500; (2) applicable portions of the MOA; (3) Maine Construction General Permit (CGP); and (4) the MS4 permit. MTA employees and contractors are trained extensively on construction site stormwater runoff controls and are required to conduct weekly inspections and maintain inspection documentation for review when performing construction that disturbs land (even less than one acre). In PY1 the CPEC program was updated to address new permit language in *Part IV(H)(4)(a)* regarding reduction of pollutants in stormwater runoff including discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. Furthermore, in the previous 5-year permit cycle MTA implemented the CPEC Program, which required the projects listed above to be inspected as follows:

- Prior to construction (e.g., photographs taken, temporary BMPs in place, etc.);
- On a weekly basis during construction by a qualified MTA representative (e.g., Inspector or Engineer) along with the contractor's OSRP, who is appropriately trained;
- When transitioning from construction to post-construction (i.e., prior to submitting the Notice of Termination [NOT] for the CGP); and
- As part of CPEC Program audits.

The CPEC Program provides a mechanism to ensure that stormwater requirements and other environmental regulatory obligations, including inspections and corrective actions, are considered and documented during construction and appropriate actions are taken for reducing pollutants in stormwater from construction activities. Subsequently, no significant corrective actions were required for these projects where multiple Maine DEP permits may apply (i.e., MS4, CGP, and Ch500/MOA).

MCM 5 Post-Construction Stormwater Management in New Development and Redevelopment: Similar to MCM 4, MTA has previously implemented MS4 elements related to post-construction stormwater management for new development and redevelopment to minimize water quality impacts (i.e., training employees on long term O&M practices, etc.). In PY1, MTA continued to maintain these requirements, as well as post-construction standards associated with Chapter 500 and the MOA throughout MTA's ROW regardless of whether or not there is a direct discharge to the waters of the State. MTA provides a summary of these annual O&M practices to Maine DEP in the Annual MOA Report, which was most recently submitted to Maine DEP in September 2014.

To ensure that adequate long-term O&M is continued for newly constructed and/or repaired BMPs, MTA develops and implements a project-specific post-construction O&M plan for each construction project as part of the CPEC Program. These O&M plans include a GIS-based site plan and inspection tracking form that are used by Highway Maintenance personnel to conduct quarterly inspections for the first year after final stabilization. Following the first year, newly constructed BMPs are

incorporated into MTA's IDDE maps and tracking forms, and included in the annual infrastructure inspections completed by MTA's general engineering consultant, for long-term inspection and maintenance. Highway Maintenance personnel have been certified by Maine DEP's NPS Program (as reported in MTA's Annual MOA Report); these qualified personnel are also trained internally to implement the CPEC Program, specifically these post-construction O&M plans. O&M plans are maintained in the CPEC binder and are available to Maine DEP upon request for all projects undertaken by MTA.

MCM 6 – Pollution Prevention (P2) and Good Housekeeping for Community/Facility Operations: As discussed under MCM 1, MTA employees continued to be trained in stormwater P2 and ESC practices, as well as good housekeeping practices. MTA's training program also incorporates construction and post-construction inspection and O&M requirements.

Consistent with previous years, street sweeping was given priority and was conducted within all UA. As in previous years, priority was given to the UIS watersheds. Sweeping is conducted at least once each year on linear areas and multiple times each year in peripheral areas, such as interchanges, toll plazas, park-and-ride lots and other facilities. Specifics on sweeping and other P2/good housekeeping measures are tracked as part of the Annual MOA Report.

As mentioned in MCM 3, MTA continues to operate its annual CB cleanout and OF inspection program consistent with previous years, which ensures that CBs are cleaned out, OFs are inspected and collected sediments are disposed of appropriately. A list of maintenance activities completed on conveyances and structures is generated from these annual inspections within UA to supplement the comprehensive annual inspection of MTA's infrastructure that is conducted by a qualified engineer contractor.

Although MTA does not operate any vehicle maintenance facilities within UA, MTA continues to implement the following measures relative to the objectives of MCM 6:

1. SPCC Plans with integrated Stormwater Pollution Prevention Measures for all MTA Highway/Equipment Maintenance Garages that address the proper use, storage and disposal of petroleum products, as well as non-petroleum products and other hazardous materials;
2. To supplement spill response and prevention measures in the facility-specific SPCC Plans, MTA has developed and implemented a Mobile SPCC Plan for all MTA ROW, and specifically addresses more stringent practices within UA;
3. The integrated stormwater pollution prevention measures incorporated in these SPCC and Pollution Prevention Plans address vehicle and equipment storage practices, maintenance and refueling;
4. Post-construction requirements have been developed and implemented for newly installed structural BMPs include an O&M plan and schedule to ensure long-term maintenance;
5. Construction and post-construction inspection requirements have been implemented for all projects (even those less than 1 acre of disturbed area) in accordance with the Chapter 500 MOA; and
6. MTA maintains an existing road-killed wildlife policy.

CONCLUSION

In accordance with the MPDES General Permit *Part IV(J)*, this Annual Report presents a summary of significant goals achieved during the first year (July 2013 through June 2014) of implementation of the MTA's SPMP including an evaluation of BMPs and MGs established for the six MCMs. If you have any questions concerning this Annual Report of MTA's MS4 SPMP, please do not hesitate to call me at (207) 871-7771, ext. 359.

Respectfully,



John M. Branscom
Environmental Services Coordinator for
Maine Turnpike Authority

cc: Timothy Kipp; GZA GeoEnvironmental, Inc.
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