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MAINE TURNPIKE AUTHORITY

2012 PROGRESS REPORT ON IMPLEMENTATION OF THE STORMWATER MEMORANDUM OF AGREEMENT



Prepared by:
Maine Turnpike Authority



Submitted:
July 2013



think blue

clean water starts with you!

Stormwater Protection in Maine

I. INTRODUCTION

The purpose of this Progress Report is to comply with the requirements in the Stormwater Memorandum of Agreement (MOA) currently dated November 14, 2007 and adopted by the Maine Department of Environmental Protection (DEP), Maine Department of Transportation (MaineDOT) and Maine Turnpike Authority (MTA). This report summarizes MTA's compliance with the MOA requirements in 2012. Additional information and data on construction projects and activities (e.g., training, certification, etc.) accomplished in 2012; projects and activities anticipated in 2013; and a list of staff or designees who provided oversight with respect to erosion and sedimentation control and stormwater control are maintained on file at MTA.

During the interagency review meeting in September 2012 with DEP and MaineDOT, the differences between the annual reports from MTA and MaineDOT were discussed. Therefore, this report has been revised to provide consistency between the annual reports for the two State Transportation Agencies and to comply with requests to reduce the report. Although the supporting MOA documentation for 2012 projects has been removed, these records continue to be updated and maintained by MTA and are available upon request.

II. 2012 CONSTRUCTION PROJECTS

As required by MTA General and Special Provision 656 – Temporary Soil Erosion and Water Pollution Control, all MTA construction projects with earth disturbance are required to install, maintain, inspect and document erosion control requirements, which are tracked as part of MTA's Construction Project Environmental Compliance (CPEC) Program. Erosion control measures are selected from, and installed consistent with, the MaineDOT Best Management Practices (BMP) for Erosion and Sedimentation Control Manual.

In 2012, with the exception of the open-road tolling project in New Gloucester and redevelopment at the Gray Maintenance Facility, MTA construction efforts continued to focus on bridge repair/maintenance projects, pavement rehabilitation and other small linear projects, as seen in **Table 1**.

Although Basic Standards apply to all of these projects, many of the bridge repair projects did not involve earth-disturbing activities. **Table 1** presents a summary of 2012 projects relative to MOA requirements, such as:

- In 2012, all MTA projects were located within an existing travel corridor;
- In 2012, four (4) of MTA's linear projects were located within Urban Impaired Stream (UIS) watersheds, but were either considered part of redevelopment or were not large enough to trigger General Standards threshold requirements (as per MOA Section 3.B.1 and Chapter 500 Section 4.B.1 and Section 4.B.3.e); and
- In 2012, Maine Construction General Permit (MCGP) coverage was obtained for sites with Limits of Disturbance (LOD) equal to or greater than 1 acre.

Although General Standard BMPs were not required to be designed or installed to meet Chapter 500/MOA requirements for any of the 2012 projects, MTA maintains a list of other permanent stormwater BMPs installed as part of construction projects managed under the MOA in 2012, such as:

- Rip rap downspouts and/or slope stabilization for bridge rehabilitation projects; and
- Culvert inlet/outlet protection and/or stone ditch protection for the smaller linear projects, including pavement rehabilitation projects with drainage upgrades.

MTA's Highway Maintenance Department also completed several small construction projects, which were only required to incorporate Basic Standards; however, an inventory of permanent BMPs installed on these projects are also maintained as part of MTA's CPEC Program, which includes inspections and tracking post-construction operations and maintenance (O&M).

III. MAINTENANCE OPERATIONS

MTA's Highway Maintenance Department continues to track O&M tasks accomplished in 2012 along MTA right-of-way (ROW). The most common maintenance activities accomplished in 2012 included sweeping of paved (impervious) surfaces from Kittery to Augusta, including roadways, toll plazas, service plazas, crossovers, maintenance yards, and commuter parking lots. MTA continues annual inspections of the catch basins and associated culverts (i.e., outfalls) along the ROW; repairs and catchment cleanouts are subsequently performed as needed within MTA ROW. Similar to previous years, between 50 and 70% of the catch basins required cleaning; sediments removed are managed in accordance with established DEP protocols for waste management and beneficial reuse.

Consistent with previous years, Highway Maintenance crews use weekly summary reports and transfer the data relating to storm water or soil and erosion control activities to a quarterly O&M Summary Table to document MOA compliance. The Environmental Services Coordinator conducts:

- A periodic review of the O&M Summary Tables at each Highway Maintenance Facility to track progress throughout the year;
- Joint quarterly inspections of each Highway Maintenance Facility to address stormwater and erosion control issues with the Foremen to supplement their monthly inspections;
- Audits of construction projects with Foremen to review the post-construction O&M Plan requirements for permanently installed BMPs as part of MTA's CPEC Program; and
- Annual training on stormwater, erosion/sedimentation control and spill prevention topics for both MTA's Highway Maintenance and Engineering personnel.

In addition to the daily maintenance operations completed by MTA's Highway Maintenance Department, a thorough inspection of the Turnpike ROW is conducted each year by an engineering contractor. This inspection (generally referred to as the "Annual Inspection") covers pavement, cut sections, embankments, bridges, roadway lighting, drainage structures, signs, pavement markings, toll plazas, utility buildings, service areas, maintenance areas and other facilities. Upon completion of the inspection, MTA receives a report that provides advice and recommendations as to the proper maintenance, repair, and operation of the Turnpike during the ensuing fiscal year.

In 2012, MTA continued to implement the CPEC program, which is a stormwater-based compliance program established by MTA in 2010 to ensure stormwater-related activities and other environmental considerations are documented and filed in a single binder for each construction project from Project Development (e.g., planning, permitting, design, etc.) through Post-Construction, when projects are inspected by Highway Maintenance Foremen as part of the O&M Plans for recently completed projects. The CPEC Program helps to ensure compliance with not only Chapter 500/MOA requirements, but also Maine's Pollutant Discharge Elimination System (MEPDES) Program permits, such as the Municipal Separate Storm Sewer System (MS4) permit, the Maine Construction General Permit (MCGP) and other applicable permits.

IV. CONSTRUCTION PROJECTS PLANNED FOR 2013

As previously mentioned, MTA efforts in 2012 continued to focus on bridge repair/maintenance projects, pavement rehabilitation, and smaller scale linear projects with operations and maintenance components, as opposed to the larger Turnpike Widening effort that was completed in 2004. In 2013, MTA will continue to primarily focus on bridge repair/rehabilitation with additional projects involving pavement rehabilitation/resurfacing. These projects that will be managed in accordance with the existing MOA are summarized in **Table 2**; this table was provided to DEP on February 15, 2013¹. As seen in **Table 2**, all projects are located within an existing travel corridor and are not expected to exceed the threshold triggers for impervious cover or developed area, except:

- Contract 2013.07 – Exit 80 Reconstruction is located within an UIS watershed (Hart Brook) in Lewiston and is expected to add 20,000 sq. ft. or more of impervious area;
- Redevelopment of the existing impervious area allow the project to qualify for the exception in Chapter 500 Section 4(B)(3)(e) as per the MOA; and
- In order to meet the General Standard requirements for this site, installation of the following Chapter 500 BMPs are anticipated to exceed the necessary treatment for this project:

¹ MTA requested a meeting with DEP/Mike Mullen to discuss the status of the MCGP, which occurred on 2/15/13 when the list of 2013 projects was provided to DEP in accordance with DEP's request (during the 2012 Interagency Review meeting) for MTA and MaineDOT to provide a list of anticipated projects to DEP at the beginning of each calendar year (i.e., annually in January or February).

Exit 80 Reconstruction: Proposed BMP Installation	Impervious Area Treatment	Developed Area Treatment
Forested Buffer (SB on-ramp)	15%	8%
Meadow Buffer (near park-n-ride)	27%	14%
Meadow Buffer (NB ramps)	32%	17%
Grassed Swale (600' along SB ramp)	55%	29%
TOTAL CALCULATED TREATMENT	129%	68%
Chapter 500 Redevelopment Standard	>75%	>50%

Implementation of the CPEC program is expected to continue in 2013 for these projects to ensure and document compliance with Chapter 500/MOA requirements and other environmental considerations. For example, a post-construction O&M Plan will be prepared and implemented for these BMPs to facilitate long term function and treatment.

MTA's Highway Maintenance Department has no specific plans to perform any new construction projects, which involve BMPs beyond the Chapter 500 Basic Standards. Any anticipated construction projects to be performed by MTA Highway Maintenance are likely to be improvements to existing infrastructure and are anticipated to have limited land disturbance at the existing facilities.

IV. STORMWATER MOA OVERSIGHT

Stormwater MOA compliance and oversight is provided by the following MTA personnel, most of which are professional engineers and/or certified by the DEP's Non-Point Source Training Program:

MTA Personnel	MTA Job Title
John Branscom	<i>Environmental Services Coordinator</i>
Peter Merfeld, P.E.	<i>Chief Operations Officer</i>
<i>MTA Engineering Personnel</i>	
Steve Tartre, P.E.	<i>Director of Engineering and Building Maintenance</i>
Scott Warchol	<i>Project Administrator</i>
Jeff Nadeau	<i>Engineer/Project Administrator</i>
Ralph Norwood	<i>Engineer</i>
Scott Lachance	<i>RO/Engineering Tech</i>
J. Ryan Leavitt	<i>Senior Resident Engineer</i>
Scott McConihe	<i>Inspector</i>
Gerry Ouellette	<i>Inspector</i>
Jody Dyke	<i>Inspector</i>

MTA Personnel (continued)	MTA Job Title
<i>MTA Highway Maintenance Personnel</i>	
William Wells	<i>Director of Highway & Equipment Maintenance</i>
Brian Taddeo, P.E.	<i>Highway Maintenance Engineer</i>
Roger Mathews	<i>Highway Division Supervisor</i>
Andy Perry	<i>Highway Division Supervisor</i>
Dale Cook	<i>Foreman at Gardiner and Litchfield Highway Maintenance Facility</i>
Rick Dionne	<i>Foreman at Auburn Highway Maintenance Facility</i>
Gary Montague	<i>Foreman at Gray Highway Maintenance Facility</i>
Bill Thompson	<i>Foreman at South Portland (Crosby) Highway Maintenance Facility</i>
Jim Sotir	<i>Foreman at Kennebunk Highway Maintenance Facility</i>
Joe Violette	<i>Foreman at York Highway Maintenance Facility</i>

In addition to these MTA staff, several engineering consulting contractors provide additional technical and professional services to MTA regarding stormwater and erosion control maintenance, inspection, design, planning, permitting and compliance.

V. CONCLUSION

Although the format of MTA's 2012 Annual MOA Report has changed, MTA continues to apply the same engineering design and building practices for construction projects to successfully meet the requirements of the current Stormwater MOA. MTA management continues to be committed to post-construction operations and maintenance, and increased education for its employees. MTA carefully manages stormwater and erosion control issues to protect the environment and comply with the current MOA.

TABLES

Table 1 – 2012 Project Summary

Table 2 – 2013 Project Summary

TABLE 1
REVIEW OF 2012 MTA PROJECTS
Based on MaineDOT ENV Ch 500/MOA Flowchart
(See NOTE 1)

Contract Number	Contract Type	Description of Work	Located within UIS?	Amount of New Impervious Cover (IC) or Developed Area (DA)	Existing Corridor	Applicable Standards ¹	Additional Info	MOA Reportable ³
2012.01	Resurfacing	MM 30-35 Biddeford Pavement Rehabilitation, Drainage improvements, Guardrail upgrades and other work including Bridge repairs at Saco River	Yes (Thatcher Brook)	No changes expected	Yes	Basic ²	LOD 1.8 acres Portions in MS4 UA	No, <20,000 SF of new IC < 5 acres of developed area
2012.02	Resurfacing	Pavement Rehabilitation, Drainage improvements, guardrail upgrades and other work including improving the clear zone with tree removal and re-ditching from approximately MM92 to 98 and Pavement Rehabilitation for West Gardiner Toll Plaza.	No	No changes expected	Yes	Basic ²	LOD 0.93 acres actual / 3.2 acres estimated	No, <1 acre of new IC < 5 acres of developed area
2012.03	Bridge Repair & Rehabilitation	Furbush Road Bridge Rehabilitation	No	No changes expected	Yes	Basic ²	LOD 2.59 acres	No, <1 acre of new IC < 5 acres of developed area
2012.04	Bridge Repair & Rehabilitation	Chandler Mill Rd Bridge Rehabilitation	No	No changes expected	Yes	Basic ²	LOD 2.32 acres	No, <1 acre of new IC < 5 acres of developed area
2012.05	Bridge Repair & Rehabilitation	Presumpscot River Bridge Repair (Falmouth Spur)	No	No changes expected	Yes	Basic ²	LOD 3.51 acres Portions in MS4 UA	No, <1 acre of new IC < 5 acres of developed area
2012.06	Bridge Repair & Rehabilitation	Leighton Road, Mountain Road Falmouth & Hunts Hill, Gray (Bridge Repair #1)	No	No changes expected	Yes	Basic ²	LOD 1.02 acres Portions in MS4 UA	No, <1 acre of new IC < 5 acres of developed area
2012.07	Bridge Repair & Rehabilitation	Bridge Painting various locations	N/A	Not applicable	Yes	Basic ²	-	N/A
2012.08	Bridge Repair & Rehabilitation	Mousam River in Kennebunk, Saco Interchange Bridge (Bridge Repair#2)	Yes (Goosefare Brook)	No changes expected	Yes	Basic ²	LOD 1.1 acres Portions in MS4 UA	No, <20,000 SF of new IC or < 5 acres of developed area
2012.09	Resurfacing	Auburn Exit 75 Acceleration lane	No	Less than 1 acre of new IC	Yes	Basic ²	LOD 2.15 acres Portions in MS4 UA	No, <1 acre of new IC < 5 acres of developed area
2012.12	Bridge Repair & Rehabilitation	Bridge Repair #3 Central St. Hallowell	No	No changes expected	Yes	Basic ²	LOD 0.5 acres	No, <1 acre of new IC < 5 acres of developed area
2012.13	Other	New Gloucester Barrier Toll Plaza Open Road Tolling Conversion	No	No changes expected (redevelopment of existing area)	Yes	Basic ²	LOD 3.14 acres	No, <1 acre of new IC < 5 acres of developed area
2012.14	Other	Gray Maintenance	No	No changes expected (redevelopment of existing area)	Yes	Basic ²	LOD < 1.0 acres	No, <1 acre of new IC < 5 acres of developed area
2012.17	Bridge Repair & Rehabilitation, Resurfacing	Pavement Rehabilitation Interchange 42 Scarborough, Interchange 42 Bridge repairs Scarborough, Pavement Rehabilitation Interchange 45 South Portland.	Yes (Red Brook, Long Creek)	No changes expected	Yes	Basic ²	LOD 4.8 acres Portions in MS4 UA	No, <20,000 SF of new IC or < 5 acres of developed area
2012.18	Other	Biddeford Wetland Mitigation (Miles York Farm)	N/A	No changes expected	Yes	Basic ²	LOD 19 acres	No, <20,000 SF of new IC or < 5 acres of developed area
2012 Solicitations								
2012.50	Other	Lewiston Hotel Demo for Park & Ride Lot	Yes (Hart Brook)	No changes expected (redevelopment of existing area)	Yes	Basic ²	LOD 0.52 acres Portions in MS4 UA	No, <20,000 SF of new IC or < 5 acres of developed area
2012.51	Other	Cumberland Septic Emergency repair	No	No changes expected	Yes	Basic ²	LOD 0.06 acres	No, <1 acre of new IC < 5 acres of developed area
2012.52	Bridge Repair & Rehabilitation	Exit 102 Bridge Hit #2	No	No changes expected	Yes	Basic ²	LOD 0.0 acres	No, <1 acre of new IC < 5 acres of developed area
2012.53	Other	Bridge Hit Auburn Interchange	No	No changes expected	Yes	Basic ²	LOD 0.0 acres	No, <1 acre of new IC < 5 acres of developed area
2012.55	Bridge Repair & Rehabilitation	Piscataqua River Bridge "Shoring"	N/A	No changes expected	Yes	Basic ²	LOD 0.0 acres	N/A

NOTES:

1 - Applicable Standards refer to Chapter 500 Stormwater Management as it applies through MaineDOT's ENV OFFICE "DEP Stormwater Rule Compliance Flowchart"

2 - "Basic Standards" applies unless 1 acre or more of new impervious OR > 5 acres of developed area are anticipated.

3 - "MOA Reportable" indicates that the project may require Ch 500 BMPs beyond Basic Standards (e.g., General Standards to the Extent Practicable with DEP Consultation) as per the current MOA and Flowchart above.

UIS = "Urban Impaired Stream" as listed in Chapter 502; **UA** = "Urbanized Area" regulated by MEPDES MS4 permit

"Developed Area" excluding area that within one calendar year of being disturbed is returned to a condition with the same drainage pattern that existed prior to the disturbance and is revegetated, provided the area is not mowed more than once per year.

TABLE 2
REVIEW OF 2013 MTA PROJECTS
Based on MaineDOT ENV Ch 500/MOA Flowchart
(See NOTE 1)

Contract Number	Contract Type	Description of Work	Located within UIS?	Amount of New Impervious Cover (IC) or Developed Area	Existing Corridor	Applicable Standards ¹	Additional Info	MOA Reportable ³
2013.01	Resurfacing	York to Ogunquit Paving - MM 7-13 & Interchange 7 Pavement Rehabilitation	No	No changes expected	Yes	Basic ²	LOD = 0.5 acres	No , <1 acre of new IC or < 5 acres of developed area
2013.02	Resurfacing	Litchfield Paving MM 88 to 92.8 Mill & Fill Pavement rehabilitation & Guardrail upgrades MM 85 to 92.8	No	No changes expected	Yes	Basic ²	LOD = 0.5 acres	No , <1 acre of new IC or < 5 acres of developed area
2013.03	Resurfacing	Interchange 44 Pavement Rehabilitation, Scarborough	Yes, partially in Red Brook	Less than 20,000 sq ft of new IC expected	Yes	Basic ²	LOD = 0.95 acres	No , <20,000 SF of new IC or < 5 acres of developed area
2013.04	Bridge Repair & Rehabilitation	Saco River Bridge - lead paint removal, structural steel girder repairs, bearing replacement, concrete abutment and pier repairs, and application of protective coatings. Nonesuch River - concrete culvert repairs, epoxy injection crack repairs, and riprap installation. Potters Brook - concrete culvert repairs, epoxy injection crack repairs, and riprap installation.	No	No changes expected	Yes	Basic ²	LOD = 0.5 acres In MS4 UA	No , <1 acre of new IC or < 5 acres of developed area
2013.05	Bridge Repair & Rehabilitation	Replacing the Old Lisbon Road bridge superstructure. Work includes concrete deck and steel girder replacement, concrete substructure modifications and repairs, approach work and paving, guard rail, and bridge rails.	No - 0.3 miles north of Hart (Dill) Brook watershed	No changes expected	Yes	Basic ²	LOD = 2.17 acres MCGP applies In MS4 UA	No , <20,000 SF of new IC or < 5 acres of developed area
2013.06	Bridge Repair & Rehabilitation	Replacing the Snow Hill Road bridge superstructure. Work includes concrete deck and steel girder replacement, concrete substructure modifications and repairs, approach work and paving, guard rail, and bridge rails.	No	Less than 1 acre	Yes	Basic ²	LOD = 2.06 acres MCGP applies	No , <1 acre of new IC or < 5 acres of developed area
2013.07	Other	Exit 80 - Lewiston Interchange NB&SB On-Ramp Reconstruction & NB&SB Off-Ramp Reconstruction.	Yes (Hart Brook)	Less than 20,000 sq ft of new IC expected	Yes	Basic ²	In Lewiston/ outside UA	Yes , >20 000 SF if new IC or >5 acres developed area
2013.08	Bridge Repair & Rehabilitation	Bridge Repairs at up to 10 bridges from York to West Gardiner- Replacing or repairing leaky or missing joint seals (possibly combine adjacent bridges with bridge or paving contracts)	N/A	No changes expected	Yes	Basic ²	LOD = 0.1 acres	N/A
2013.09	Bridge Repair & Rehabilitation	Bridge Repair (2 bridges), Falmouth-Hurricane Rd over Piscataqua River wearing surface & substructure repairs and Hurricane Rd underpass wearing surface, substructure repairs & raising	No	No changes expected	Yes	Basic ²	LOD = 0.9 acres	No , <1 acre of new IC or < 5 acres of developed area
2013.10	Bridge Repair & Rehabilitation	Androscoggin River Bridge, Auburn/ Lewiston- steel girder repairs & strengthening	No	No changes expected	Yes	Basic ²	LOD = 0.1 acres Portions In MS4 UA	No , <1 acre of new IC or < 5 acres of developed area
2013.11	Bridge Repair & Rehabilitation	Exit 52 Interchange, Falmouth- Bridge deck and substructure repairs, wearing surface, and ramp paving & Blackstrap Rd. Bridge, Falmouth - Bridge Rehabilitation including raising/approach work	No	Less than 1 acre of new IC expected	Yes	Basic ²	Portions In MS4 UA	No , <1 acre of new IC or < 5 acres of developed area
2013.12	Other	Tree cutting/logging MM 83 to MM 92.6, Lewiston to Litchfield.	No	No changes expected	Yes	Basic ²	Portions In MS4 UA	No , <1 acre of new IC or < 5 acres of developed area
2013.56	Other	West Gardiner MM104 SB Overheight Detection System purchase & installation	No	No changes expected	Yes	Basic ²	-	No , <1 acre of new IC or < 5 acres of developed area
2013.58	Other	New Gloucester Toll Plaza Cash Lane Conversion - Civil/Electrical Work	No	Less than 1 acre of new IC expected	Yes	Basic ²	-	No , <1 acre of new IC or < 5 acres of developed area

NOTES:

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3 - "MOA Reportable" indicates that the project may require Ch 500 BMPs beyond Basic Standards (e.g., General Standards to the Extent Practicable with DEP Consultation) as per the current MOA and Flowchart above.

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LOD = "Limits of Disturbance" greater than or equal to 1 acre may triggersMaine Construction General Permit (MCGP) coverage