MAINE TURNPIKE AUTHORITY

2010 PROGRESS REPORT
ON IMPLEMENTATION OF THE STORMWATER
MEMORANDUM OF AGREEMENT

Prepared by:
Maine Turnpike Authority

Submitted on:
April 25, 2011

think blue
clean water starts with you!

Stormwater Protection in Maine

Maine Turnpike Authority

2360 CONGRESS STREET
PORTLAND, MAINE 04102

VIA USPS MAIL – RETURN RECEIPT REQUESTED

June 6, 2011

Mr. Don Witherill
Bureau of Land and Water Quality
Maine Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

SUBJECT: Maine Turnpike Authority (MTA)
Memorandum of Agreement (MOA) for Storm Water Management
2010 Annual Progress Report

Dear Don:

MTA is pleased to submit the 2010 Annual MOA Progress Report for your review. A total of one (1) hard copy with five (5) digital CD copies have been enclosed for distribution to appropriate Department personnel.

Please do not hesitate to contact me at (207) 871-7771 ext. 359 to discuss this report, should you have any questions.

Respectfully,

John M. Branscom
Environmental Services Coordinator
Maine Turnpike Authority

Enclosure: 2010 Progress Report on Implementation of the Stormwater MOA

Cc: Steve Tibbetts, Maine Department of Transportation (MaineDOT)
Peter Merfeld, MTA
Steve Tartre, MTA
Bill Wells, MTA
Lauren Carrier, MTA
Bob Driscoll, HNTB
Robyn Saunders, GZA

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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 includes information and data on construction projects and activities accomplished in 2010; projects and activities anticipated in 2011; and a list of staff or designees who provided oversight with respect to erosion and sedimentation control and stormwater control.

The intent of the MOA is to achieve stormwater quantity and quality controls reasonably consistent with the standards set out by the DEP in Chapter 500 – Stormwater Management Rules, and the requirements of the Maine Pollutant Discharge Elimination System (MEPDES) General Permit for Construction Activity issued pursuant to 06-096 CMR 529 (2)(a)(2)(i) and Part IV (D)(6) and (7) of the General Permit for the Discharge of Storm Water from MaineDOT and MTA Municipal Separate Storm Sewer Systems (MS4s).

The MOA reflects the specific technical concerns associated with linear transportation projects undertaken by or under the supervision of MaineDOT and MTA, and specifies the stormwater quantity and quality standards that apply to those projects. As part of the conditions established under the MOA, MaineDOT and MTA are not obligated to (1) obtain a permit; or (2) obtain DEP approval under Chapter 500 for linear projects undertaken by MTA. A copy of the current Stormwater MOA is located in **Appendix A**. The MOA was updated in November 2007 with a significant coordinated effort among MTA, MaineDOT, and DEP. These changes to the MOA and associated operating criteria are reflected in this 2010 annual report.

II. ACTIVITIES ACCOMPLISHED

a. Training

MTA in-house highway maintenance supervisors and foremen, as well as engineers, consultants, and contractors who are certified by the Maine Department of Environmental Protection's (DEP) Nonpoint Source Program (NPS) or are Professional Engineers (PEs) experienced with stormwater requirements are listed in **Table 1** of **Appendix B**.

In 2010, MTA continued to place a high priority on stormwater training for employees in several internal departments which include:

- Highway & Equipment Maintenance. MTA's Highway Maintenance Supervisors and Foremen are certified through the DEP's Nonpoint Source (NPS) Program in 2010; and
- Engineering & Building Maintenance. MTA's Engineering Staff (e.g., inspectors and managers) are certified through the DEP's NPS Program in 2010, as well.

The Turnpike has attended DEP and MaineDOT training sessions and workshops through 2010, and also plans to continue to attend joint training and workshop sessions in 2011 in order to learn and share knowledge on erosion and sediment control practices and promote multi-agency interaction. In addition, MTA updated their internal stormwater training program for 2010 to focus on permit requirements including Chapter 500, MS4 minimum control measures (MCMs), Maine Construction General Permit (MCGP), Long Creek Post-Construction Stormwater Discharges, and other Urban Impaired Stream (UIS) watershed considerations.

b. Contracted Projects

In 2010, MTA awarded eight (8) construction projects, as seen in **Table 2** of **Appendix B**. Of the eight (8) projects awarded in 2010, MOA applicability and subsequent reporting is required for six (6) projects[1]. These six (6) projects, plus three (3) construction projects awarded in 2009 that remained under construction (see **Table 2**) in 2010, are listed in **Table 3** of **Appendix B** along with a summary of the permanent stormwater Best Management Practices (BMPs) installed as part of these nine (9) construction projects managed under the MOA in 2010.

Table 3 of **Appendix B** summarizes the permanent stormwater Best Management Practices (BMPs) installed as part of the nine (9) active projects in 2010 managed under the MOA. As seen in **Table 3**, the majority of the BMPs installed in 2010 were associated with upgrades to existing infrastructure. No new catch basins were installed in 2010, only adjustments or modifications to existing structures were performed on the various linear projects constructed in 2010. The majority of projects constructed in 2010 involved bridge rehabilitations that required:

- Rip rap downspouts (i.e., Sabattus River bridge, and Presumpscot River bridge);
- Slope stabilization (i.e. Falmouth Spur, Route 196-Lisbon Street, Sabattus River bridge, and Presumpscot River bridge); and/or
- Culvert and stone ditch protection (i.e. Route 196-Lisbon Street, Washington Street/Route 202 bridge, Sabattus River bridge, and Presumpscot River bridge).

c. MTA Highway Maintenance Department Construction Projects

MTA's Highway Maintenance Department completed three (3) small construction projects which incorporated permanent BMPs. **Table 4** of **Appendix B** provides a summary of MTA Highway Maintenance Department construction projects with an inventory of permanent BMPs completed in 2010.

[1] The remaining projects included: (1) Contract 2010.05 – Bridge Repair is South Portland, which did not include any new permanent BMPs and ground disturbance was limited since the project consisted mainly of upgrades to the bridge decking; and (2) Contract 2010.06 – Eastern Trail Pedestrian Bridge in Kennebunk, which was delayed and not awarded until late December 2010 thus no significant work was conducted in 2010.

d. Post Construction Maintenance and Inspection

Operations & Maintenance (O&M)

A summary of the O&M tasks accomplished in 2010 along MTA right-of-way (ROW) is presented in **Table 5** of **Appendix B**. The most common maintenance activities accomplished by MTA's Highway Maintenance Department in 2010 included sweeping of paved (impervious) surfaces, such as roadways, toll plazas, service plazas, crossovers, maintenance yards, and commuter parking lots. MTA continues to annually inspect 100% of the catch basins and associated culverts; repairs and catchment cleanouts are subsequently performed as needed. Similar to previous years, approximately 63% of the catch basins contained enough sediment to require cleaning.

The 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 similar to the format of **Table 5**. 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.

Inspections of ROW

In 2010, HNTB (MTA's primary construction contractor) conducted a thorough inspection of the Turnpike. 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 process, HNTB submits to MTA a report that provides advice and recommendations as to the proper maintenance, repair, and operation of the Turnpike during the ensuing fiscal year.

A detailed Annual Inspection Report was transmitted to the Authority's Executive Director in October 2010. Below is a summary of information contained within the Annual Inspection Report relative to storm water quality and quantity control.

> *The roadway surface drainage system, consisting of drainage ditches, catch basins and cross culverts, was inspected and found to be in fair-to-good condition. Catch basin repair is typically included as part of the pavement rehabilitation projects. This practice appears to be adequate to maintain the catch basins in fair-to-good condition. Routine ditch and side slope repairs are required for proper upkeep of the highway. Turnpike maintenance forces routinely clear debris from drainage ditches and regrade the surrounding areas as necessary. All ditches will continue to be evaluated and recommendations for reconstruction will be made as required.*
>
> *Numerous rivers and streams pass under the turnpike through box culverts and culvert pipes. All box culverts and pipes 60 inches in diameter or greater are inspected every year. Pipes 36 to 54 inches in diameter are inspected on a five*

year cycle and were last inspected in 2008. All box culverts and all pipes 60 inches in diameter and larger were inspected in 2010 (a total of 89 individual culvert ends), and were found to be in satisfactory condition.

The Maine Turnpike periodically issues contracts to address erosion or drainage issues that are not able to be addressed by the Authority's maintenance forces due to their location and the type of equipment required to cost effectively complete the repair. HNTB did not identify any large areas of erosion or drainage concerns in 2010 that warrant immediate repair, and we recommend that the areas noted in the detailed inspection report be monitored on a yearly basis.

In addition to the HNTB inspections and surveys in 2010, MTA continued implementing its Stormwater Program Management Plan (SPMP) as required by the NPDES Phase II Municipal Separated Storm Sewer System (MS4) Permit/Program. This SPMP identifies the municipalities and receiving waters to which MTA may discharge within approximately 17.8 miles of Urbanized Areas (UAs) as indicated in the 2000 Census. In support of the SPMP's six minimum control measures (MCMs), MTA continues to make progress with the measurable goals established in MTA's SPMP, which include (but are not limited to) implementing an illicit discharge detection and elimination (IDDE) program; developing a storm sewer system map of all outfalls within UA; conducting annual dry weather and opportunistic inspections; and assessing the contents during clean out of catch basins. In addition to the 17.8 miles of ROW within UA, MTA voluntarily applied the MS4 MCMs to document post-construction activities (e.g., documenting catch basin and outfall inspections/cleanout, prioritizing sweeping, etc.) within several UIS watersheds in 2010 (i.e., Long Creek in South Portland and Hart Brook in Lewiston).

In 2010, MTA also developed a new stormwater compliance program to ensure stormwater related activities and other environmental considerations are documented in a singular binder for all construction projects. The compliance program, known as the Construction Project Environmental Compliance (CPEC) program, separates all construction projects into three separate phases:

- Project Development (e.g., planning, permitting, design, etc.)
- Active Construction; and
- Post-Construction requirements (i.e., long-term O&M and inspection).

Each CPEC binder includes regulatory checklists that identify applicable requirements and activities for each project undertaken by MTA, such as the weekly Erosion Control Report (ECR) with corrective actions, Erosion and Sedimentation Control (ESC) Plans, as well Construction General Permit (CGP) documents (e.g., Notice of Intent to comply [NOI], Notice of Termination [NOT], etc.). All stormwater related documentation is kept in a single three-ring binder for each project for all three phases of the project along with the completed checklists and inspection forms to ensure compliance is maintained throughout the project by appropriate MTA and/or contractor personnel.

III. ACTIVITIES AND CONSTRUCTION PROJECTS PLANNED FOR 2011

a. Training

In addition to continuing to maintain certification for key employees with the DEP's NPS Training Program in 2010, MTA will continue to operate a Storm Water Pollution Reduction Training Program for MTA employees. This training program complies with MTA's NPDES Phase II MS4 Stormwater Program Management Plan (SPMP) for two Minimum Control Measures (MCMs) to include: Public Education and Outreach, and Pollution Prevention (P2)/Good Housekeeping for Municipal Operations.

As seen in the representative training curricula included in **Appendix C**, a revised SPMP training program was performed for MTA Maintenance personnel and Engineering inspectors. The stormwater training program, which is combined with SPCC topics, was performed in May and June 2010 by regulatory specialists from GZA GeoEnvironmental, Inc. (GZA) and MTA alike. The training was attended by approximately 130 MTA employees from Engineer, Highway and Equipment Maintenance, as well as Fare Collection Supervisors. MTA will continue to train employees in the following areas:

- Impacts of non-stormwater discharges;
- Job-specific responsibilities associated with the SPMP, as well as the integrated SPCC/stormwater pollution prevention plan that MTA maintains at each Maintenance Facility;
- Indicators of illicit connections or illegal dumping;
- Dry weather and opportunistic inspection procedures;
- Notification and/or response procedures upon suspicion of illicit connection or discharge;
- Procedures to prevent/reduce storm water pollution from the activities specified in *Part IV(H)6(a)(ii)* of the Permit under the Pollution Prevention (P2)/Good Housekeeping MCM; and
- Associated ESC BMPs.

In April 2009, the combined SPCC/Stormwater training curriculum was updated to reflect the following:

- Revisions to the new MPDES MS4 Permit, including information regarding MTA's two designated highest priority watersheds and other urban impaired stream watersheds; and
- Requirements associated with erosion prevention and sedimentation control, including construction and post-construction BMPs, operation and maintenance (O&M), and inspections.

In April 2010, these updates were further refined to expand and elaborate on these concepts of stormwater management, pollution prevention, erosion prevention and sedimentation control. The 2010 training program also provided a workshop in how to accurately capture and document MTA's obligations and reporting requirements.

b. Contracted Projects

In 2010, MTA efforts were focused 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 2011, MTA will continue to primarily focus on bridge projects (i.e., repair, maintenance, rehabilitation and/or replacement), with additional projects involving pavement rehabilitation, interchange modifications, toll plaza modifications at New Gloucester and other small scale linear projects. These projects that will be managed in accordance with the existing MOA are summarized in **Table 6** of **Appendix B.** The development and implementation of the CPEC program in 2010 will continue in 2011 for all of these projects to ensure compliance with Chapter 500/MOA and other environmental considerations.

c. MTA Highway Maintenance Department Projects

MTA has no specific plans to perform any new construction projects, which involve permanent BMPs along the Turnpike (such as installation of sediment traps/catch basins, permanent check dams, etc.). 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. In addition, the development and implementation of the new CPEC program will be applied to proposed projects in 2011 thus facilitating the inspections and overall recordkeeping process for MTA Highway Maintenance Foremen and Supervisors for these small scale construction projects involving permanent BMPs within their territory.

d. Operations & Maintenance

MTA will continue to contract an outside engineering firm to perform the Annual Inspection of MTA ROW, which includes infrastructure (e.g., bridges, buildings, roadways, shoulders, culverts, etc.) as well as permanently installed BMPs (e.g., drainage structures, vegetated buffers and other erosion control measures).

MTA's Highway Maintenance Department employees primary focus is to perform routine and as-needed O&M BMPs. Consistent with previous years, the proposed BMPs for 2011 (shown in **Table 7**) will include the removal of sand from guard rails and other ancillary facilities (e.g., parking lots, median crossovers, toll facilities, etc.), as well as routine sweeping of paved areas.

IV. STORMWATER MOA OVERSIGHT

Stormwater MOA compliance and oversight is provided for the Turnpike by the following MTA and HNTB personnel:

MTA Management Staff:

Peter Merfeld, P.E., Chief Operations Officer
Steve Tartre, P.E., Director of Engineering and Building Maintenance
William Franklin, Deputy Director of Engineering and Building Maintenance
Scott Warchol, Project Administrator
Scott McConihe, Inspector
Gerry Ouellette, Inspector
Jody Dyke, Inspector
Wes Jackson, Director of Highway & Equipment Maintenance (retired December 2010)
William Wells, Deputy Director of Highway & Equipment Maintenance
Roger Mathews, Highway Division Supervisor
Andy Perry, Highway Division Supervisor
Dale Cook, Foreman at Gardiner and Litchfield Highway Maintenance Facility
Rick Dionne, Foreman at Auburn Highway Maintenance Facility
Gary Montague, Foreman at Gray Highway Maintenance Facility
Bill Thompson, Foreman at South Portland Highway Maintenance Facility
Jim Sotir, Foreman at Kennebunk Highway Maintenance Facility
Joe Violette, Foreman at York Highway Maintenance Facility
John Branscom, Environmental Services Coordinator

HNTB, Inc.

Roland Lavallee, P.E
Bob Driscoll, P.E.
Lori Driscoll, P.E.
Tim Cote, P.E.
Charles Myers, P.E.
Clayton Hoak, P.E.
Walter Fagerlund, P.E.
Donald Ettinger, P.E.
Lauren Meek, P.E.
Dale Mitchell, P.E.
Trevin Cobb
Mark Desenberg
John Doughty
Tianna Higgins
Jamie Waugh

V. CONCLUSION

MTA will continue to apply the appropriate engineering design and building practices for construction projects to successfully meet the requirements of the current Stormwater MOA. MTA management is committed to post-construction operations and maintenance, and increased education for its employees. MTA will carefully manage stormwater and erosion control issues to protect the environment and comply with the current MOA.

APPENDIX A

STORMWATER MOA

MEMORANDUM OF AGREEMENT FOR STORMWATER MANAGEMENT BETWEEN THE MAINE DEPARTMENT OF TRANSPORTATION, MAINE TURNPIKE AUTHORITY AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

The Maine Department of Environmental Protection (hereinafter DEP), the Maine Department of Transportation (hereinafter MaineDOT), and the Maine Turnpike Authority (hereinafter MTA) agree as follows:

WHEREAS, projects involving state transportation systems developed by or under the supervision of the MaineDOT or MTA must meet the storm water requirements set forth in a Memorandum of Agreement between the DEP, MaineDOT and MTA; and

WHEREAS, DEP, MaineDOT and MTA recognize the unique characteristics, benefits and impacts of state transportation systems, including without limitation roads and railroads; and

WHEREAS, DEP, MaineDOT and MTA agree that the intent of this Memorandum of Agreement is to achieve stormwater quality and quantity controls reasonably consistent with the standards set out by the DEP in Chapter 500 Stormwater Management Rules; and

WHEREAS, those objectives will be achieved by a comprehensive stormwater management program that applies to any project developed, administered, supervised, or overseen by MaineDOT or MTA which otherwise would have required a stormwater permit or been subject to the standards of Chapter 500, but for the exemption in 38 M.R.S.A. §420-D(7)(G), and that applies to all other MaineDOT and MTA projects located in the organized territory which would not have required a storm water permit or not have been subject to the standards of Chapter 500; and

WHEREAS, comprehensive stormwater management as part of MaineDOT and MTA projects in the organized territory will result in substantial environmental benefits for all

watersheds and in particular those direct watersheds of lakes most at risk from new development or urban impaired streams.

NOW, THEREFORE, MaineDOT and MTA will adopt the following requirements for stormwater management,

1. Applicability.

This Memorandum of Agreement (MOA) applies to MaineDOT and MTA projects that would be required to meet the requirements of the Stormwater Management Law if not for the exemption in Title 38 MRSA §420-D(7)(G). It does not apply to projects requiring a permit pursuant to the Site Location of Development Law.

This MOA addresses the specific technical issues associated with state transportation system projects undertaken by or under the administration, supervision, or oversight of MaineDOT and MTA, and specifies the storm water quality and quantity standards which will apply to those projects. MaineDOT and MTA have agreed to adopt standards that are based on the type of project and the project location with respect to direct watersheds of lakes most at risk from new development and urban impaired streams, as set forth in Chapters 500 and 502 of the Maine Stormwater Management Rules.

No state transportation system project constructed pursuant to the requirements of this MOA is required to get a permit or DEP approval pursuant to the Maine Stormwater Management Law.

2. Definitions.

A. Roads. All roads, highways, bridges, bike paths, interchanges and intersections.

B. Construction site operator. The contractor's designated on-site supervisor or MaineDOT or MTA's designated on-site supervisor if there is no outside

contractor.

C. State transportation system. 1) (a) MaineDOT and MTA administered or supervised state or state aid highways along with associated sidewalks, paths, trails and/or bridges; (b) MaineDOT administered or supervised marine highways, airports, and rail lines along with associated sidewalks, paths, trails and/or bridges, and 2) any associated facilities essential to the safe and efficient operation of those state transportation systems, including but not limited to highway maintenance facilities, transit/rail stations, toll plazas, ferry terminals, cargo ports, intermodal transportation centers, weigh stations, rest areas, visitor information centers, service plazas, and park-and-ride lots as well as parking lots and other infrastructure serving those facilities.

D. Linear portion of a project. All rail lines, roads, highways, bridges, or similar transportation corridors, along with associated interchanges, scenic turnouts, access ramps, airport runways and taxiways, weigh stations, toll facilities, intersections, sidewalks, trails, paths and similar associated facilities including associated parking and building area of up to 5,000 square feet.

E. Non-linear portion of a project. All portions of a state transportation system that are not linear. Examples of a non-linear portion of a project include, but are not limited to, maintenance facilities, intermodal transportation centers, transit/rail stations, and airport terminals, hangers and aprons.

3. Specific Provisions to Comply with Chapter 500 Standards.

All state transportation system projects undertaken by or under the administration, supervision, or oversight of MaineDOT and MTA shall comply with the requirements of Chapter 500 and 502 as follows.

A. Basic Standards. All projects shall meet the Basic Standards described in Section

4(A) of Chapter 500, through implementation of best management practices described in the MaineDOT's Best Management Practices for Erosion and Sedimentation Control (hereinafter the MaineDOT BMP Manual) as may be updated from time to time.

B. General Standards. For projects that are large enough to trigger the General Standard threshold in Chapter 500:

(1) A linear portion of a project located in the direct watershed of a lake most at risk from new development or in the watershed of an urban impaired stream, shall meet the General Standards to the extent practicable as determined through consultation with and agreement by DEP, except that redevelopment of existing impervious area may qualify for the exception in Section 4(B)(3)(e).

(2) A linear portion of a project associated with an existing travel corridor constructed prior to July 19, 2007,[1] and not located in either the direct watershed of a lake most at risk from new development or in the watershed of an urban impaired stream, shall not be required to meet the General Standards.

(3) A linear portion of a project that is not associated with an existing travel corridor shall meet the General Standards to the extent practicable as determined through consultation with and agreement by DEP.

(4) A non-linear portion of a project shall meet the General Standards, except that redevelopment of existing impervious area may qualify for the exception in Section 4(B)(3)(e) of Chapter 500.

C. Phosphorus standard. Projects triggering the Phosphorus standard shall instead apply the General Standards in accordance with Section 3(B) of this MOA.

[1] July 19, 2007 is the date the first MOA with this language became effective.

D. Urban impaired stream standard. A linear or non-linear portion of a project that is not associated with an existing travel corridor, is located within the watershed of an urban impaired stream, and triggers the Urban Impaired Stream Standard, shall meet the Urban Impaired Stream Standard in Chapter 500, Section 4(D), to the extent practicable as determined through consultation with and agreement by DEP. MaineDOT and MTA may use mitigation credit measures within the same watershed as that portion of a project in order meet the requirements of Chapter 500, Section 4(D).

E. Flooding standard. For a state transportation system project that triggers the thresholds of the Flooding Standard, MaineDOT and MTA shall apply design and engineering measures to the extent practicable such that project drainage avoids adverse impacts to offsite property resulting from project-related peak flow.

The following additional requirements of Chapter 500 shall be met through review, reporting and recordkeeping undertaken by MaineDOT and MTA pursuant to Section 4 of this MOA: project notification and submittal requirements of Ch. 500(7)(B), Ch. 500(7)(E)(1-6), Ch. 500(8)(C)(1 through 3), Ch. 500(8)(D)(1-6), and Ch. 500(8)(E)(1-2); the pre-application meeting requirements of Ch. 500(8)(A); the recording requirements of Ch. 500(11); and the re-certification requirements of Ch. 500, Appendix B(4). DEP agrees that MaineDOT and MTA have demonstrated the qualifications of their respective staff to perform the maintenance activities required pursuant to Ch. 500, Appendix (B)(3) and therefore, meet the intent of that requirement without contracting with third-parties.

4. Interagency Review.

As part of the annual Interagency Review MaineDOT and MTA agree to provide DEP with a list of all projects started in the 12 months since the last Interagency Review meeting and a list of projects anticipated for the next 12 months. The DEP, MaineDOT

and MTA also agree to hold interagency meetings as necessary, but at least annually, to identify, discuss and resolve any issues which may have arisen regarding interpretation and implementation of the MOA. MaineDOT and MTA each shall keep records of their projects that would otherwise trigger the stormwater rules requirements, including: the project location; a description of other work done in the watershed; a description of any alternative stormwater management measures installed and their relative performance, if known; a description of each instance where, pursuant to Section 3(B)(1) and 3(D) of this MOA, the General Standards were not fully applied because it was determined to not be practicable to do so and the extent to which the General Standards were not met; a list of facilities or state transportation systems that have undergone site inspections; and a list of staff or designees who provided oversight with respect to erosion and sedimentation control and stormwater control. As part of this annual review MaineDOT and MTA shall provide DEP with a report on maintenance surveys and activities.

Dated: 10/31/07

By: _____
David A. Littell, Commissioner
Maine Department of Environmental Protection

Dated: 11/06/07

By: _____
David Cole, Commissioner
Maine Department of Transportation

Dated: 11/14/07

By: _____
Gerard P. Conley, Sr., Chairman
Maine Turnpike Authority

APPENDIX B

TABLES 1 – 7

TABLE 1 - LIST OF TRAINED PERSONNEL

Maine Turnpike Authority

This table provides a list of all MTA trained personnal provided for 2010 to employees providing stormwater and sedimentation control oversight on projects. In addition, the table lists employees who are NPS certified or are PE's experienced with stormwater requirements

Name (Last, First)	Company	Maine P.E. with stormwater experience	DEP Erosion Control Certified	Other Training Attended
IN-HOUSE PERSONNEL				
Cook, Dale	MTA			Pollution Prevention (SPCC/Stormwater Phase II); Completed ACM Erosion Control Course (2006); Completed NPS training courses (2009): - Basic and advanced Erosion Control Practices - Maintenance and Inspection of Stormwater BMPs
Dionne, Rick	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Dyke, Jody	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Franklin, Bill	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Lachance, Scott	MTA		Y	
Mathews, Roger	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
McConihe, Scott	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Merfeld, Peter	MTA	Y		
Montague, Gary	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Ouellette, Gerry	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Perry, Andy	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Sotir, James	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Tartre, Stephen	MTA	Y	Y	
Thomspon, Bill	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Violett, Joe	MTA			Pollution Prevention (SPCC/Stormwater Phase II) Completed NPS training courses (2010): - Basic and advanced Erosion Control Practices
Warchol, Scott	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Wells, Bill	MTA		Y	
PRIMARY CONTRACTOR PERSONNEL				
Blake, Greg	HNTB	Y		
Cobb, Trevin	HNTB		Y	
Cote, Tim	HNTB	Y		
Driscoll, Bob	HNTB	Y		
Driscoll, Lori	HNTB	Y		
Desenberg, Mark	HNTB		Y	
Doughty, John	HNTB			
Ettinger, Donald	HNTB	Y		
Fagerlund, Walter	HNTB	Y		
Higgins, Tianna	HNTB			
Hoak, Clayton	HNTB	Y		
Lavallee, Roland	HNTB	Y		
Meek, Lauren	HNTB	Y		
Mitchell, Dale	HNTB	Y		CPESC
Munger, Bruce	HNTB		Y	
Myers, Charles	HNTB	Y	Y	
Waugh, Jamie	HNTB		Y	

TABLE 2 - LIST OF ACTIVE CONSTRUCTION PROJECTS

Maine Turnpike Authority

This table provides a summary of construction contracts and solicitations issued in 2010

Contract Number	Approximate Location	Description	Linear or Non-linear Project
2009.02	Falmouth	Bridge Rehabilitation (Falmouth Spur - Blackstrap, MCRR)	Linear
2009.03	Lewiston	Bridge Rehabilitation (Route 196-Lisbon Street)	Linear
S2009.55	West Gardiner	West Gardiner Truck Parking Expansion and TSE installation	Non-Linear

Contract Number	Approximate Location	Description	Linear or Non-linear Project
2010.01	Portland	2010 Pavement Rehabilitation & Guardrail Improvements (Mile 2.2 to 6.8)	Linear
2010.02	Sabattus	Bridge Rehabilitation	Linear
2010.03	Portland and Falmouth	Bridge Rehabilitations	Linear
2010.04	Auburn	Bridge Rehabilitation	Linear
2010.05	South Portland	Bridge Repair	Linear
2010.06*	Kennebunk	Eastern Trail Pedestrian Bridge	Linear
2010.07	Kittery and York	2010 Pavement Rehabilitation & Guardrail Improvements (Mile 44.0 to 51.2)	Linear
2010.08	Auburn	Interchange Paving and Improvements	Linear

* Contract 2010.06 awarded in late December 2010. No work completed by MTA until 2011.

TABLE 3 - BMPs ASSOCIATED WITH PROJECTS IN 2010

Maine Turnpike Authority

This table is an inventory of permanent BMPs installed by the MTA contracts and soliciations in 2010 (listed by project)

Contract Number	Project Location/Description	Year of Installation	Sediment Trap	Rip Rap Downspout	Culvert Inlet Protection (Stone)	Culvert Outlet Protection (Stone)	Slope Stabilize (x1000SF)	Vegetated Buffer (x1000 SF)	Stone Ditch Protection (x1000SF)	Permanent Stone Check Dam	Catch Basin or Holding Tank[1]	Other
2009.02	Bridge Rehabilitation (Falmouth Spur - Blackstrap, MCRR)	2010					19.10		0.85			
2009.03	Bridge Rehabilitation (Route 196-Lisbon Street)	2010			1		33.10		1.58			
S2009.55	West Gardiner Truck Parking Expansion and TSE installation	2010					0.70					
2010.01	2010 Pavement Rehabilitation & Guardrail Improvements (Mile 2.2 to 6.8).	2010									34	
2010.02	Bridge Rehabilitation (Sabattus River)	2010		2		1	11.00					
2010.03	Bridge Rehabilitations (Presumpscot River & Auburn Street)	2010		1		1	0.39				1	
2010.04	Bridge Rehabilitation (Washington Street\Route 202)	2010			2	2					3	
2010.07	2010 Pavement Rehabilitation & Guardrail Improvements (Mile 44.0 to 51.2).	2010									37	
2010.08	Interchange Paving and Improvements (Auburn Interchange)	2010					3.75		0.15		2	
	All Projects Total:			**3**	**3**	**4**	**68**		**3**		77	

[1] Contract 2010 01 & 2010 07 - catch basins are all existing and adjusted or modified, no new installations

TABLE 4 - INVENTORY OF PERMANENT BMP's

Maine Turnpike Authority

This table is a summary of MTA Highway Maintenance Department new construction/installation projects accomplished in 2010

Approximate Location	Project Description	Sediment Traps/ Catch basins (Qty #)	Rip Rap Down spout (Qty#)	Culvert Inlet Protection (stone) (Qty#)	Slope Stabilization (SF)	Veg. Buffer (x1000SF)	Perm. Check Dam (Qty#)	Outer Perimeter Barkgrindings Barrier (#LF)
South Portland (Crosby Maintenance Facility)	Maintenance Yard BMP Retrofits				15,000	75		400
Auburn MM 72 NB	Message Board Pad Construction				4,500			
Auburn MM 68.6 SB	Message Board Pad Construction				600			

TABLE 5 - SUMMARY OF MTA HIGHWAY MAINTENANCE DEPARTMENT 2009 O&M

Maine Turnpike Authority

This table is a summary of MTA Highway Maintenance Department and Engineering department Operations and Maintenance (O&M) accomplished in 2010

Highway Maintenance Facility	Location	Repair/Redo Ditching (Total Linear Miles)	Culvert /Downspout Repair /Maintenance (Qty. #)	Catch Basin Repair /Maintenance (Qty.#)	Remove Sand from Guard Rails (#Linear Miles)	Slope and/or ROW Repair/Mulching (#SF)	Inspect Catchments[1] (Total # inspected)	Catchments cleaned out (Total # cleaned out)	Street Sweeping (# linear Miles)	Sweeping of Ancillary Facilities[2] (# Facilities/Year)	Litter Picking (#Miles)
York HMF	Kittery to Wells	0	10	0	40 [3]	18,504	241	120 [4]	45	64	54
Kennebunk HMF	Wells to Saco	0.28	1	0	30	5,300	229	200	37	39	79
South Portland HMF	Saco to Falmouth	0	0	0	97	10,175	179	107	68	19	337
Gray HMF	Falmouth to New Gloucester	0.02	3	1	28	1,140	152	84	56	20	19
Auburn HMF	New Gloucester to Sabattus	0	4	0	40	80	329	133	67	55	260
Litchfield and Gardiner HMF	Sabattus to Augusta	22.3	0	2	44.6	3,675	256	230	44.6	40	89
TOTALS	**Kittery to Augusta**	**22.60**	**18**	**3**	**279**	**38,874**	**1,386**	**874**	**317.1**	**237**	**837.2**

NOTES:

[1] Catchments include catch basins, sediment traps, vegetated swales, detention ponds, etc.

[2] Ancillary facilities include parking lots, median crossovers, interchanges, service plazas, maintenance yards, etc.

[3] York territory was under-construction for pavement rehabilitation during the summer months, removal of sand from guardrails was the responsibility of the contractor during this time and sweeping of the mainline was performed however it was limited due to these activities.

[4] York territory was under-construction for pavement rehabilitation which included retrofits to the existing catch basins structures, cleaning of these structures was performed by MTA contractors and limited access for inspections were conducted by MTA HM personnel before/during/after construction.

TABLE 6 - ANTICIPATED CONSTRUCTION CONTRACTS FOR 2011

Maine Turnpike Authority

This table is a summary of anticipated construction contracts to be issued in 2011

Contract Number	Approximate Location	Description
2011.01	York/Ogunquit/Wells	2011 Pavement Rehabilitation (Mile 13.3 to 23.3).
2011.02	Portland	Exit 48 Bridge Replacement
2011.03	Litchfield	Bridge Rehabilitation & Bridge Repair
2011.04	Falmouth	Exit 53 Bridge Rehabilitation
2011.05	South Portland/Falmouth	Bridge Repair & Culvert Repair
2011.06	New Glouster	Toll Plaza modifications
2011.07	Auburn	Bridge Repairs
2011.08	Auburn	Interchange Modifications
2011.09	Lewiston	Interchange Modifications

Contract Number	Approximate Location	Description
S2011.50	Auburn	Bridge Repair
S2011.51	Falmouth	Bridge Repair
S2011.52	Portland	Bridge Repair
S2011.53	Falmouth	Bridge Repair

TABLE 7 - SUMMARY OF PROPOSED O&M FOR INSTALLED BMPs

Maine Turnpike Authority

This table is a summary of the proposed O&M of permantently installed BMPs throughout MTA for 2011

Project ID	Location	Repair/Redo Ditching (#Miles Linear Total)	Culvert Repair (Qty. #)	Catch Basins to be Repaired (Qty.#)	Remove Sand from Guard Rails (#Linear Miles)	Slope /Right of way Repair/Mulching (#SF total)	Inspect Catch Basins, Sediment Traps And Veg. Swales and detention Ponds (Total % to be Inspected)	Catch Basins, Sediment Traps; and Detention Ponds to be Cleaned out (% of Total)	Street Sweeping (# linear Miles)	Sweep Park Lots; Maint. Yards; Median Cross Overs; Toll Plazas; Interchanges, Service Plazas; MISC. (# Times Sweep/Year)	Litter Picking (# Miles)
Median & Mainline NB & SB; & Facilities	Kittery to Augusta	1-2	25-50	50-75	180-200	* As Needed	100%	50 - 60%	180-200	1-2	223

* Includes O&M performed by both MTA Highway Maintenance and contractors (e.g., HNTB)

APPENDIX C

REPRESENTATIVE STORMWATER TRAINING CURRICULUM

MAINE TURNPIKE AUTHORITY REFRESHER TRAINING
FOR
SPILL PREVENTION, CONTROL AND COUNTERMEASURES (SPCC),
MOBILE SPCC,
STORM WATER POLLUTION PREVENTION (SWPP),
AND
EROSION AND SEDIMENTATION CONTROL (ESC)

May 2010

AGENDA

7:30 AM	CONVENE
7:30-9:00	SPCC TRAINING
	Changes to facility SPCC Plans
	Three Goals of SPCC Program
	1. Spill Prevention
	2. Spill Control
	3. Spill Countermeasures
	NEW SPCC TRIVIA GAME!
	15 MINUTE BREAK
9:15-9:30	MOBILE SPCC TRAINING
	Review Mobile SPCC Plan
9:30-11:15	STORMWATER AND ESC TRAINING
	MS4 Best Management Practices at Maintenance Facilities
	Requirements of MTA Stormwater Management Permit and Program
	ESC Practices for Earthwork Projects
	NEW STORMWATER AND ESC TRIVIA GAME!
11:15-11:30	TEST AND EVALUATION
11:30	ADJOURN

MAINE TURNPIKE AUTHORITY

ANNUAL ENVIRONMENTAL TRAINING

- *OIL SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC)*
- *MOBILE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC)*
- *STORMWATER POLLUTION PREVENTION*
- *EROSION & SEDIMENTATION CONTROL*

Prepared and conducted by
GZA GeoEnvironmental, Inc.
MAY 2010

1

REGULATORY BACKGROUND

EPA's Clean Water Act (40 CFR 122)

"...no one has the right to pollute the waters of the United States..."

- ***Authority under the National Pollutant Discharge and Elimination System (NPDES)***
- ***Authority delegated to Maine DEP***
  - ***Maine Pollutant Discharge and Elimination System (MPDES) permits and programs***

1

REGULATORY BACKGROUND AND ATMOSPHERE

Maine DEP MPDES Programs

"...regulate construction, industrial activities and municipal storm sewers..."

- ***Requirements under Maine DEP are changing...***
  - ***Chapter 500 Stormwater Management for New Development and Redevelopment***
  - ***Chapter 529 General Permit for the Discharge of Stormwater from MDOT/MTA Municipal Separate Storm Sewer Systems***
  - ***Multi-Sector General Permit (MSGP) for Stormwater Discharges***
  - ***Maine Construction General Permit (MCGP)***
- ***Urban Impaired Streams (UIS) are developing Watershed Management Plans and Permitting requirements.***

1

REGULATORY BACKGROUND

TO SATISFY THE REGULATORY REQUIREMENTS, MTA HAS DEVELOPED....

- **Storm Water Program Management Plan (SPMP) for all regulated UAs along Turnpike**
  - **2008 New 5-year Plan!**
  - **Catch basin cleanout program**
  - **Outfall inspection program**
  - **Stormwater Awareness Plan**
  - **BMP Adoption Plan**
- **Storm Water Pollution Prevention Plan (SWPPP) elements are incorporated into facility SPCC Plans.**
- **Good housekeeping BMPs for all maintenance facilities**
  - **Regardless of location (e.g., UA or non-UA)**
- **Construction inspection checklist for ALL projects**
  - **Regardless of location and size**

1

SO...we know where these UAs subject to storm water regulations are along the mainline:

- **"Urbanized Areas" Include:**
  - **Sabattus - Mile 83.6 to 84.3**
  - **Lewiston – all of Lewiston**
  - **Auburn – Mile 75.0 to 75.6 and 78.9 to 79.4**
  - **Falmouth – Mile 51.8 to 53.4 and Exits 52, 53**
  - **Portland – Mile 46.7 to 51.8, Exits 46, 47, 48**
  - **Scarborough – Mile 41.0 to 42.0**
  - **Saco – Mile 33.0 to 35.7, Exit 36 approach ramp**
  - **Biddeford – Mile 32.0 to 33.0**
  - **Kittery – Mile 3.1 to 4.2 and 0 to 2.2, Exits 1, 2, 3**

1

SO... is your Maintenance Facility located within these UAs?

NO, BUT....MTA has implemented "good housekeeping" BMPs at all Maintenance Facility to minimize the potential for storm water pollution.

Because....

DEP states:

"...the effect stormwater runoff has on the water quality of Maine waters is impacted by the level of effort put into the construction, operation, and maintenance of MTA's stormwater infrastructure. Polluted water entering the storm drain system and discharged untreated directly to waterbodies is used for drinking, fishing, and swimming, which impacts everyone in Maine."

1

Permit Requirements

DILEMMA FOR TRANSPORTATION SYSTEMS :

Subject to many duplicative requirements

For example, Separate MS4 Requirements

- **Implement Awareness Plan**
  - **GOAL: raise awareness that polluted stormwater runoff is one of the most significant sources of water quality problems for Maine's waters**
- **Implement BMP Adoption Plan**
  - **GOAL: identify BMPs that reduce polluted stormwater runoff**

BMPs at Maintenance Facilities

Many MTA Maintenance Facility Activities May Have the Potential To Impact Storm Water

- **Equipment Storage**
- **Vehicle Maintenance and Washing**
- **Material Handling and Storage**
  - **Oil and Petroleum Products**
  - **Sand and Salt**
  - **Waste and Excess Material Storage**
  - **Painting**

1

BMPs at Maintenance Facilities

To satisfy these permit requirements MTA needs YOUR HELP in:

- **Implementing the required BMPs**
- **Tracking BMPs using the appropriate documentation**

1

Review of Stormwater BMPs

Two types of BMPs:

- **Non-structural**
  - **Operational and pollution-prevention type practices to prevent pollutants from entering stormwater runoff**
    - **Ex: Good housekeeping practices**

- **Structural**
  - **Engineered and constructed systems designed to provide water quantity or quality control**
    - **Ex: Sedimentation trap**

Sedimentation trap = Catch basin

1

Review of Stormwater BMPs: other sedimentation traps

Review of Stormwater BMPs

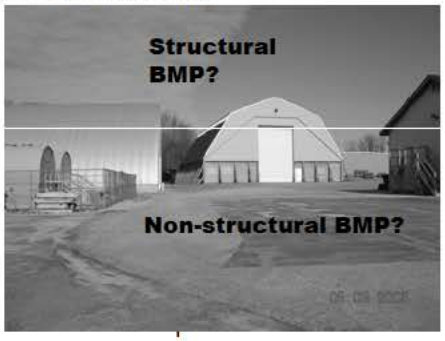
Let's focus on Maintenance Facilities first….

…Before we move on to construction

1

Review of Stormwater BMPs

Indoor sand and salt storage



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Review of Stormwater BMPs

Indoor sand and salt storage

1

Review of Stormwater BMPs
Vehicle washing procedures

Only RINSE outside at designated rinse point!

Only WASH inside in designated wash bay!

1

Review of Stormwater BMPs
Pavement Sweeping

Is sweeping a BMP?

1

Review of Stormwater BMPs
Pavement Sweeping

How often?

Don't forget to track your sweeping activities in the quarterly report

Priority in Spring time

Priority near Urban Impaired Streams

Hart Brook (Dill Brook) and Goosefare Brook

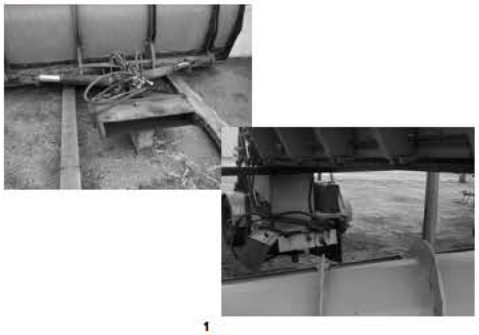
More on sweeping on mainline...

Storm Water Pollution Prevention:
BMPs at Maintenance Facilities
Solid waste management

What's wrong with this picture? →

What's right about this picture? →

Storm Water Pollution Prevention:
BMPs at Maintenance Facilities
Capping Hydraulic Lines



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Storm Water Pollution Prevention:
BMPs at Maintenance Facilities
Proper vehicle, equipment and materials storage

Use vegetated buffers for storing galvanized materials →

←Be mindful of hydraulic hoses and store equipment inside/under cover whenever possible

Review of Stormwater BMPs

Why is it important to maintain Stormwater BMPs at your Maintenance Facility?

a.) Many materials can become pollutants in stormwater runoff

b.) Many activities have the potential to impact stormwater runoff

c.) Both a.) and b.)

Review of Stormwater BMPs

What are some of the activities that have the potential to impact stormwater if BMPs are not in place?

Equipment Storage?

Refueling?

Vehicle Maintenance and Washing?

Painting Operations?

Others?

1

Review of Stormwater BMPs

What are some of the materials that have the potential to impact stormwater if BMPs are not in place?

Sand and Salt

Petroleum products

Magnesium chloride and Salt Brine

Paint overspray

Others?

1

Review of Stormwater BMPs

Now, let's move on...

...to the mainline and other areas

NOW...
what are the responsibilities outside the Maintenance Facility?

- Comply with requirements outlined in SPMP and Permit
  - Five-Year Permit Pro_ram addressin_ six Minimum Control Measures (MCMs)
  - Focused on Areas Where Maine Turnpike Passes Through "Urban Areas"
  - Recordkeeping and Annual Reporting required
  - Satisfy Six (6) MCMs...which are...

1

MINIMUM CONTROL MEASURES

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
   - CB cleanout and assessments
   - CB and Outfall inspections

4. Construction Storm Water Runoff Control
5. Post-Construction Storm Water Management
6. Pollution Prevention/Good Housekeeping

1

MTA IDDE PROGRAM

- IDDE Program has been implemented within all Urbanized Areas (UAs) over five years
  - Maps have been provided to each HM/EM Facility
- Dry Weather Inspections of Storm Water Catch Basins and Outfalls within UAs
  - MTA Highway Maintenance will be doing dry weather inspections during the summer months
  - Always be looking for flow in periods where there has been little or no rainfall

1

ILLICIT DISCHARGE DETECTION AND ELIMINATION

What does ILLICIT DISCHARGE mean?

"...any non-permitted discharge to...the waters of the State that **does not consist entirely of stormwater** or authorized non-stormwater discharges identified in Part IV(H)(3)(b)."

For example,

1. Illegal tie-in from sewer discharge
2. Chemical discharge from mill
3. Laundry or car wash discharges containing detergent

But, there are also...

- Authorized non-stormwater discharges

1

AUTHORIZED NON-STORMWATER DISCHARGES

- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water in filtration (as defined at 40 CFR 35.2005(20))
- Uncontaminated pumped ground water
- Uncontaminated flows from foundation drains
- Air conditioning and compressor condensate
- Irrigation water
- Flows from uncontaminated springs
- Uncontaminated water from crawl space pumps
- Uncontaminated flows from footing drains
- Lawn water runoff
- Flows from riparian habitats and wetlands
- Residual street wash water (where spills/leaks of toxics or hazardous materials have not occurred, unless all spilled material has been removed and detergents are not used)
- Hydrant flushing and fire fighting activity runoff
- Water line flushing and discharges from potable water sources

1

ILLICIT DISCHARGE DETECTION AND ELIMINATION

What does ILLICIT DISCHARGE mean?

"...any non-permitted discharge to...the waters of the State that does not consist entirely of stormwater or authorized non-stormwater discharges identified in Part IV(H)(3)(b)."

If an ILLICIT DISCHARGE is identified, it must be:

1. **Documented using the IDDE notification form; and**
2. **Reported to the Environmental Services Coordinator right away**

1


ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)
NOTIFICATION FORM

INCIDENT DESCRIPTION

1

IDDE NOTIFICATION:

IDDE DETECTION

Stormwater permit requires that a strategy for the detection of illicit discharges in MTA's open ditch system is given priority to areas within the Hart Brook and Goosefare Brook watersheds.

What illicit discharge has the highest potential to contaminate the turnpike's open ditch system?

A spill from a wreck.

In response, MTA has developed the following programs:

- **IDDE Notification Form**
- **Mobile SPCC**
- **Highway Safety Incident response**
- **Annual Comprehensive Inspection**

Don't forget to log your ditch repairs in the Quarterly MOA Report form!

1

TYPICAL OUTFALL:

What do you call this?

1

ARE THESE OUTFALLS?

1

INTERCONNECTION BETWEEN CATCH BASINS

SO... what else are we required to do?

PERMIT REQUIREMENTS

MEPDES Permit Part IV(D) 3. Illicit Discharge Detection and Elimination (IDDE):

"Each permittee must...[conduct] dry weather inspections includin¸ trainin¸ for locatin¸ illicit dischar¸es..."

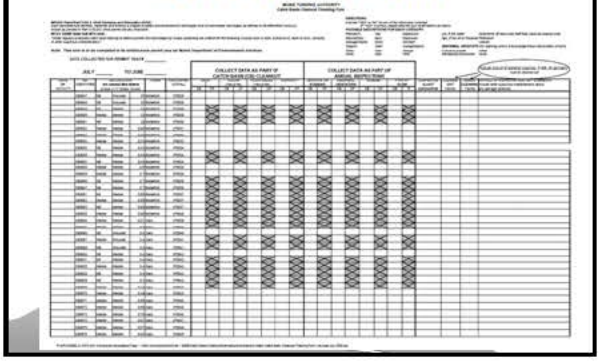
SPMP MEASURABLE GOALS

BMP: Assess content of catch basins during annual cleanout

Goal: Utilize regularly scheduled catch basin cleaning to detect possible illicit discharges by visually assessing the contents for the following:

a) *Unusual color or odor*
b) *Excessive oil*
c) *Viscosity*
d) *Other suspicious characteristics*

CATCH BASIN CLEANOUT TRACKING FORM



CATCH BASIN CLEANOUT TRACKING FORM

- DATE OF CLEANOUT
- CB/OF INDENTIFIER
- CB/OF LOCATION

CATCH BASIN CLEANOUT TRACKING FORM

- UNUSUAL ODOR/COLOR
- EXCESSIVE OIL
- FOAM OR SCUM
- VISCOUS
- INITIALS OF INSPECTOR

CATCH BASIN CLEANOUT TRACKING FORM

- COMMENTS

What type of comments would you make here?

What type of comments would you make here?

But wait what if you are in the Long Creek Watershed?

- **Additional mainline maintenance requirements**
  1. **Maintain sheet flow!!**
     - **Regular sweeping of edge of pavement to remove deposits**
     - **Removal of mounded sediments deposited along the edge of pavement (and reseeded if necessary)**
  2. **Limited mowing of ROW**
  3. **No application of pesticides or fertilizers**

UIS Watersheds are highly visible areas to public scrutiny…be more vigilant.

Now…
let's talk about MCMs #4 & #5 by discussing Erosion and Sedimentation Control (ESC) Principles and BMPs

- **SIX MINIMUM CONTROL MEASURES**
  1. Public Education and Outreach
  2. Public Involvement and Participation
  3. Illicit Discharge Detection and Elimination
     - CB cleanout and assessments
     - CB and Outfall inspections
  4. Construction Storm Water Runoff Control
  5. Post-Construction Storm Water Management
  6. Pollution Prevention/Good Housekeeping

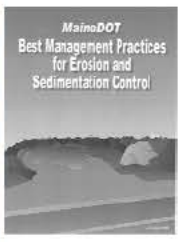
EROSION & SEDIMENTATION CONTROL

There have been a number of changes to rules involving earthwork projects:

"What are the changes and new requirements that I need to be aware of in Highway Maintenance Operations?"

Review of Permit Requirements

MTA and MaineDOT are required to report annually to DEP regarding:



- **All projects undertaken**
- **All BMPs**
  - **Structural – installed**
  - **Non-structural – completed O&M**
- **Inspections**

NEW MTA PROGRAM

MTA is developing a construction recording keeping program…

- **Construction Project Environmental Compliance (CPEC) Binder**
  - **Contains all relevant materials for Stormwater and Erosion/Sedimentation Control permitting requirements**
  - **Control documentation for construction project compliance**

Coming soon…

more training!!

49

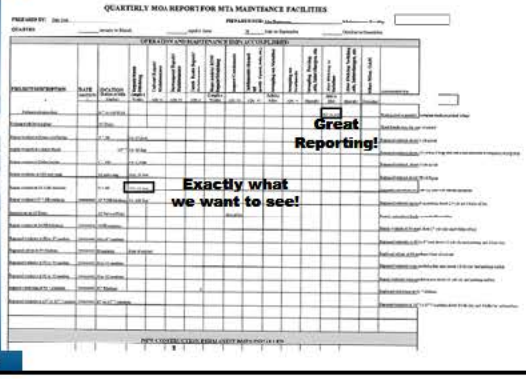
Review of Permit Requirements

In the meantime how can all of this data be tracked?

- **Complete quarterly MOA Report for MTA Maintenance Facilities**

50

QUARTERLY MOA REPORTING FORM



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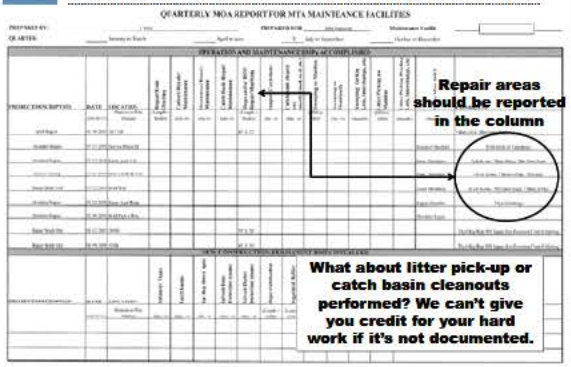
QUARTERLY MOA REPORTING FORM



ANNUAL ACTIVITIES

53

REPAIRING OR REDOING DITCHES

Don't forget to log your ditch repairs and maintenance in the Quarterly MOA Report form!

54

CULVERT REPAIR & MAINTENANCE

Fish passage concerns, new regulations are forming statewide and in certain Municipalities.

Don't forget to log your culvert repairs and maintenance in the Quarterly MOA Report form!

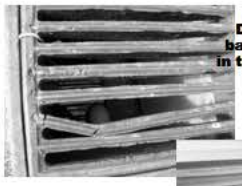
55

PERMANENT SLOPE STABILIZATION: RIPRAP DOWNSPOUTS

Don't forget to log your downspout work in the Quarterly MOA Report form!

56

CATCH BASIN REPAIR & MAINTENANCE



Don't forget to log your catch basins repairs and maintenance in the Quarterly MOA Report form!

57

SLOPE AND RIGHT OF WAY REPAIRS

Don't forget to log your slope and ROW repairs and maintenance in the Quarterly MOA Report form!

58

Review of Permit Requirements

In the meantime how can all of this data be tracked?

- **Complete quarterly MOA Report for MTA Maintenance Facilities**
- **Prepare project-specific Erosion and Sedimentation Control (ESC) Plans**

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EROSION & SEDIMENTATION CONTROL PLANS

What is an Erosion and Sedimentation Control (ESC) Plan?

Dig Safe System, Inc.
It's Smart. It's Easy. It's the Law.

= **Erosion and Sedimentation Control (ESC) Plan**

... a tool and resource for correct implementation and use of BMPs

60

EROSION & SEDIMENTATION CONTROL PLANS

Resource for temporary ESC BMPs

...to install new structural BMPs

BMP Manual can be found in your Foreman's office or online
http://www.state.me.us/mdot/environmental-office-homepage/2008bmpmanual.php

61

Review of Permit Requirements

In the meantime how can all of this data be tracked?

- **Complete quarterly MOA Report for MTA Maintenance Facilities**
- **Prepare project-specific Erosion and Sedimentation Control (ESC) Plans**
- **Complete Inspection Checklist for Construction Sites**

62

INSPECTION CHECKLIST FOR CONSTRUCTION

Inspections and Reporting

A daily inspection log must kept for the duration of all construction projects.

- The inspections should include:
  - Disturbed and impervious areas
  - Erosion control measures
  - Materials storage areas exposed to precipitation
  - Vehicle entrances and exits

63

INSPECTION CHECKLIST FOR CONSTRUCTION

64

CONSTRUCTION REQUIREMENT

Winter Stabilization

Temporary winter stabilization must be used between November 1st and April 1st or outside of said time period if the ground is frozen or snow covered.

- Cover all disturbed soils and seeded ground

65

OTHER REQUIREMENTS

Pollution Prevention

Pollution prevention measures must be in place prior to construction activities

- Protect natural buffers
- Control activities within construction boundaries
- Protect groundwater supp.ies by preventing infiltration contamination
- Prevent debris and hazardous materials from entering waterbodies
- SPCC Plan

Fun Fact: Did you know that "any potatoes or any part or parts of potatoes" are not permitted to be discharged into any water body within the state of Maine.

Maine DEP Water Statutes Title 38 §417 Certain deposits and discharges prohibited

66

BRIEF REVIEW OF COMMON BMPs

Implementing appropriate BMPs, as described in Maine DOT's Stormwater BMPs Manual, to all MTA related activities will help to minimize stormwater pollutants introduced to Maine's waterbodies.

Newly installed BMPs must be tracked and inspected in first year

67

BRIEF REVIEW OF COMMON BMPs

- **MaineDOT BMP Manual is a good resource for:**
  - Details of structural BMPs
  - Summary of MOA, regulations and other background information
- **BMPs are more plentiful and more frequent**
  - Use a daily log to document earthwork
  - Must track all projects regardless of size and location
  - Implement SPCC measures

68

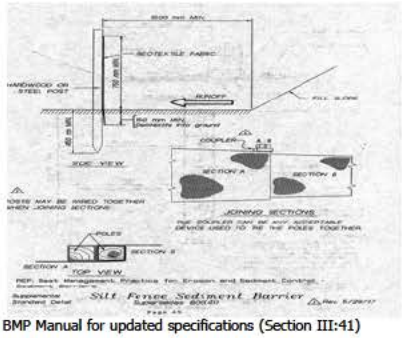
BRIEF REVIEW OF BMPs
VERY IMPORTANT!!

Silt fence must be installed prior to any land disturbance
Silt fence must be installed downhill of all disturbed slopes

- Regardless of size or location
- Until area is **permanently stabilized**

69

TYPICAL SILT FENCE DETAIL



See BMP Manual for updated specifications (Section III:41)

70

BRIEF REVIEW OF BMPs
VERY IMPORTANT!!

What's wrong with this picture?

71

BRIEF REVIEW OF BMPs
VERY IMPORTANT!!

Mulch!

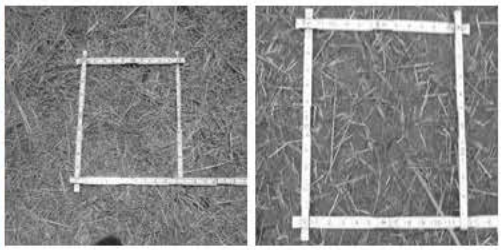
Newly disturbed earth shall be mulched or otherwise stabilized by the end of each workday.

- Mulch shall be maintained on a daily basis

72

ADEQUATE MULCHING:

Will both of these mulch applications prevent erosion?



Hay and straw mulch applications are addressed in Section III:9 of the MaineDOT BMP Manual

73

VERY IMPORTANT!!

Regardless of the time of year, take appropriate measures to prevent erosion or sedimentation from occurring AND to correct any existing problems

74

OTHER REQUIREMENTS: VERY IMPORTANT!!

Trained Personnel

All projects must have an On-Site Responsible Party (OSRP)

- OSRP has been trained through DEP'S Non-Point Source Training Center
- OSRP is knowledgeable in erosion and sediment control

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Review of Permit Requirements

In the meantime how can all of this data be tracked?

- Complete quarterly MOA Report for MTA Maintenance Facilities
- Prepare project-specific Erosion and Sedimentation Control (ESC) Plans
- Complete Inspection Checklist for Construction Sites
- Perform monthly inspections of BMPs post-construction

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Post-Construction BMP Inspections

What about after construction? Do inspections stop and everything functions on it's own.....?

- BMP inspection and maintenance requirement of Chapter 500 permitting, currently at the following facilities:
  - Gardiner Service Plaza
  - MTA Headquarters building
  - Kennebunk SB and NB Service Plazas
- Performed and recorded monthly

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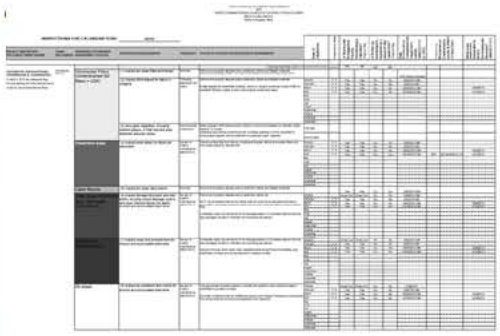
Post-Construction BMP Inspections



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IMPORTANT POINTS:
As OSRP you should...

- **Be familiar with required ESCs**
- **Be familiar with MaineDOT BMPs**
- **Be prepared to document ESCs and BMPs**
  - Summaries used to complete the Annual Reports
- **Be conscious and vigilant if you are in a UIS Watershed**
- **More changes are on the way....**
  - UIS watershed management plans...
  - Construction Project Environmental Compliance (CPEC) binders...

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REMEMBER:

"...the effect stormwater runoff has on the water quality of Maine waters is impacted by the level of effort put into the construction, operation, and maintenance of MTA's stormwater infrastructure. Polluted water entering the storm drain system and discharged untreated directly to waterbodies is used for drinking, fishing, and swimming, which impacts everyone in Maine."

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Thank You

...and keep up the GREAT WORK!!

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Maine Turnpike Authority
MS4 Stormwater Awareness Plan

Developing and implementing a Stormwater Awareness Plan is a requirement of the Maine Department of Environmental Protection's (DEP's) *General Permit for the Discharge of Stormwater from Maine Department of Transportation (MaineDOT) and Maine Turnpike Authority (MTA) Municipal Separate Storm Sewer Systems* (MS4s). Since MTA is subject to this MS4 permit and its six *Minimum Control Measures* (MCMs), *Part IV(H)(1)(a)(i)* requires MTA to conduct Public Education and Outreach (MCM #1) efforts that ***"continue raising awareness of stormwater issues amongst employees and contractors."***

1.0 PERMIT LANGUAGE

Part IV(H)(1) of the MS4 Permit establishes three goals for *MCM #1 - Public Education and Outreach on Stormwater Impacts.* These include the following:

1. *To raise awareness that polluted stormwater runoff is one of the most significant sources of water quality problems for Maine's waters;*
2. *To motivate staff and contractors to use Best Management Practices (BMPs) which reduce polluted stormwater runoff; and*
3. *To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.*

In addition to continuing outreach efforts from the previous MS4 Permit (e.g., 5-year cycle)[1], MTA must satisfy these three goals by also continuing to raise awareness of stormwater among MTA employees and contractors. The progress and effectiveness of the Plan and associated efforts must then be evaluated and included in each annual report submitted to Maine DEP in accordance with *Part IV(J)* of the MS4 Permit. As part of this evaluation, MTA must include an assessment of process indicators and impact indicators to evaluate efforts in meeting these goals. In the fifth annual report, the BMP Adoption Plan shall be reviewed fully and include analysis of the process and impact indicators.

2.0 COVERAGE AREA

This plan has been developed for implementation by MTA to meet MS4 Permit requirements for Urbanized Areas (UAs) within MTA's right-of-way (ROW).

Process indicators are related to the execution of the program, such as (1) percent or number of employees who attend a training session; or (2) completion of a particular action item (e.g., distributing posters to employee work place and/or contractor job site).

Impact indicators are related to the achievement of the goals and objectives of the program, such as (1) observable/measurable effects on behavior; or (2) percent or number of employees to describe sources of storm water pollution, proper spill response, or maintenance of a BMP.

[1] Public education and outreach efforts continued from the previous MS4 permit cycle include (but are not limited to) conducting annual stormwater pollution prevention/spill prevention control and countermeasures (SPCC) training to MTA maintenance and engineering employees, as well as other Measurable Goals that can be found in MTA's Stormwater Program Management Plan (SPMP) dated December 2008.

3.0 OBJECTIVE

The objective of this Stormwater Awareness Plan is to raise awareness among MTA employees and contractors regarding stormwater issues. For example, stormwater runoff is one of the most significant sources of water quality problems for Maine's waters.

The goal of the Stormwater Awareness Plan is to provide information relative to stormwater impacts in an effort to raise awareness of MTA employees. For example, 100% of Highway Maintenance employees and Engineering Inspectors will attend training sessions at which stormwater issues and impacts will be addressed. Additionally, MTA will also work to raise awareness among MTA employees in other departments, such as Fare Collections by providing abbreviated Stormwater/Spill Prevention and Response training to supervisors and managers who will in turn inform additional employees regarding stormwater issues relative to MTA operations.

The goal of this Plan is to also raise awareness of contractors by providing this Plan, as well as the Targeted BMP Adoption Plan (which is designed to motivate employees and contractors to use BMPs to reduce polluted stormwater runoff), prior to starting work on MTA projects.

4.0 MESSAGE

The message MTA will strive to impart on employees and contractors will relate to the potential impacts their activities may have on stormwater runoff and water quality in Maine. The message statement is:

> *"The effect stormwater runoff has on the water quality of Maine waters is impacted by the level of effort put into the construction, operation, and maintenance of MTA's stormwater infrastructure. Polluted water entering the storm drain system and discharged untreated directly to waterbodies is used for drinking, fishing, and swimming, which impacts everyone in Maine."*

In addition to the Stormwater Awareness Plan message, the target audience will be informed of authorized non-stormwater discharges allowed by the permit provided they do not contribute to a violation of water quality standards, as determined by the DEP. These include the following:

- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
- Uncontaminated pumped ground water
- Uncontaminated flows from foundation drains
- Air conditioning and compressor condensate
- Irrigation water
- Flows from uncontaminated springs
- Uncontaminated water from crawl space pumps
- Uncontaminated flows from footing drains
- Lawn watering runoff
- Flows from riparian habitats and wetlands
- Residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material has been removed and detergents are not used)
- Hydrant flushing and fire fighting activity runoff
- Water line flushing and discharges from potable water sources

4.1 OUTREACH TOOL(S) AND DISTRIBUTION

This Stormwater Awareness Plan and message will be provided to each MTA employee at annual training sessions and also to each contractor before commencement of work, in addition to the Targeted BMP Adoption Plan.

MTA has established or will rely on a number of outreach tools including the following:

- Existing stormwater training programs
  - For MTA employees, the internal training program will be evaluated annually (and updated, as needed) to include storm water topics in order to assess process and impact indicators; and
  - For contractors, MTA continues to require an On-Site Responsible Party (OSRP) certified by DEP's NPS Training Program to be knowledgeable of stormwater, specifically erosion prevention, sedimentation control and other potential impacts to water quality in Maine.
- Stormwater information packages to raise awareness and encourage utilization of targeted BMPs
  - For MTA employees, information will be provided during annual and supplemental training sessions. Informational packages may also be provided via MTA's newsletters and memos posted to employee bulletin boards, as well as through employee meetings, including quarterly Environmental Health & Safety Committee meetings.
  - For contractors, MTA will continue to include contractual requirements provided in the standard contract language that establishes the anticipated expectations for performance and payment. Stormwater information will be discussed or provided to contractors prior to starting work (e.g., at Pre-Construction meetings).

4.2 TIMELINE AND IMPLEMENTATION SCHEDULE

The timeline and implementation schedule is determined by:

- The training schedule established each year for MTA employees; and
- The solicitation and project award notices each year.

MTA has established a representative training schedule for each year and is similar to the table below:

Date	Training Type
April	Erosion and Sediment Control (ESC) and Stormwater Pollution Prevention for highway maintenance Supervisors and Foremen
May - June	Spill Prevention Control and Countermeasures Plan (SPCC), Stormwater and Erosion and Sediment Control (ESC) for MTA maintenance and engineering employees.
October	Spill Prevention Control and Countermeasures Plan (SPCC) and Stormwater for Fare Collections

The training sessions are designed to meet the goal of increasing awareness, as well as encouraging utilization of targeted BMPs to reduce stormwater runoff and potential impacts. In addition to these training sessions, there may be supplemental training sessions as needed and/or new information posters about stormwater BMPs posted at MTA facilities. Newsletters including stormwater information may also be sent each year to employees.

For contractors, MTA's requirement to have an OSRP certified by DEP's NPS Program ensures that the contractor is aware of stormwater related issues. However, in Permit Year 2, MTA will begin distributing this Stormwater Awareness Plan to contractors.

4.3 RESPONSIBLE PARTY

The primary responsible party at MTA is the Environmental Services Coordinator, John Branscom. The Environmental Services Coordinator may also rely on the following:

- MTA Supervisors, Foremen, Inspectors and/or other personnel to inform MTA employees and contractors of the targeted BMPs to be utilized;
- An environmental consulting firm, such as GZA GeoEnvironmental, Inc, to ensure MTA's employees are trained as defined by the Plan; and
- A design engineering firm, such as HNTB, who administer construction contracts, to ensure the Plan is properly implemented by the contractors.

4.4 EVALUATION PROTOCOL

MTA training is documented with attendance sign-in sheets, exam scores, in-class workshops and evaluation forms. A training database is maintained with information gathered from employees during each training session.

Process Indicators: Assessment of the program execution will be included in the annual report. The following topics will be reported for MTA employees:

1. Number of employees that attended training; and
2. Average exam scores for attendees.

Impact Indicators: Gauging the achievement of goals and objectives of the program will be included in the annual report. These will be addressed by the following behavioral change questions:

1. Number or percentage of employees to identify the goals of MCM #1 correctly;
2. Number or percentage of employees to identify source(s) of storm water pollution;
3. Number or percentage of employees to identify and differentiate between structural and non-structural BMPs; and
4. Number or percentage of employees to demonstrate an applied knowledge of BMP-specific information.

Process and impact indicators for contractors will be tracked by documenting the pre-construction meetings when this Plan and the Targeted BMP Adoption Plan are provided to each contractor and the contractor, in turn, provides MTA with the certification for their OSRP for the project.

4.5 PLAN MODIFICATION

This Stormwater Awareness Plan may require modification if evaluation data shows that efforts are not effective. Should modifications be needed, the plan will be revised or a new plan will be developed.

Maine Turnpike Authority
MS4 Targeted BMP Adoption Plan

Developing and implementing a Best Management Plan (BMP) Adoption Plan is a requirement of the Maine Department of Environmental Protection's (DEP's) *General Permit for the Discharge of Stormwater from Maine Department of Transportation (MaineDOT) and Maine Turnpike Authority (MTA) Municipal Separate Storm Sewer Systems* (MS4s). Since MTA is subject to this MS4 permit and its six *Minimum Control Measures* (MCMs), *Part IV(H)(1)(a)(ii)* requires MTA to conduct Public Education and Outreach (MCM #1) efforts that **encourage *"employees and contractors to utilize BMPs that minimize stormwater pollution."***

1.0 PERMIT LANGUAGE

Part IV(H)(1) of the MS4 Permit establishes three goals for *MCM #1 - Public Education and Outreach on Stormwater Impacts*. These include the following:

1. *To raise awareness that polluted stormwater runoff is one of the most significant sources of water quality problems for Maine's waters;*
2. *To motivate staff and contractors to use Best Management Practices (BMPs) which reduce polluted stormwater runoff; and*
3. *To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.*

In addition to continuing outreach efforts from the previous MS4 Permit (e.g., 5-year cycle)[1], MTA must satisfy these three goals by encouraging employees and contractors to use BMPs that minimize stormwater pollution as part of this Targeted BMP Adoption Plan. The progress and effectiveness of the Plan and associated efforts must then be evaluated and included in each annual report submitted to Maine DEP in accordance with *Part IV(J)* of the MS4 Permit. As part of this evaluation, MTA must include an assessment of process indicators and impact indicators to evaluate efforts in meeting these goals. In the fifth annual report, the BMP Adoption Plan shall be reviewed fully and include analysis of the process and impact indicators.

2.0 COVERAGE AREA

This plan has been developed for implementation by MTA to meet MS4 Permit requirements for Urbanized Areas (UAs) within MTA's right-of-way (ROW).

Process indicators are related to the execution of the program, such as (1) percent or number of employees who attend a training session; or (2) completion of a particular action item (e.g., distributing posters to employee work place and/or contractor job site).

Impact indicators are related to the achievement of the goals and objectives of the program, such as (1) observable/measurable effects on behavior; or (2) percent or number of employees to describe sources of storm water pollution, proper spill response, or maintenance of a BMP.

[1] Public education and outreach efforts continued from the previous MS4 permit cycle include (but are not limited to) conducting annual stormwater pollution prevention/spill prevention control and countermeasures (SPCC) training to MTA maintenance and engineering employees, as well as other Measurable Goals that can be found in MTA's Stormwater Program Management Plan (SPMP) dated December 2008.

3.0 OBJECTIVE

The objective of this Targeted BMP Adoption Plan is to educate MTA's employees and contractors to use BMPs which reduce polluted stormwater runoff within UA.

The goal of the BMP Adoption Plan is to target BMPs in the MaineDOT BMP Manual to be utilized by employees and contractors that minimize stormwater pollution during construction activities, such as:

(1) Installing silt fence prior to land disturbance; and

(2) Ensuring that hay mulch is applied to soil at the end of each work day.

For MTA employees, focus will also be given to targeting BMPs relevant to transportation-related maintenance and good housekeeping activities, such as:

(1) Regular sweeping of the mainline and peripheral facilities;

(2) Annual catch basin clean-outs and sediment removal;

(3) As needed ditch cleaning and repair;

(4) On-going culvert maintenance and litter removal.

Contractors are also encouraged to utilize BMPs in accordance with standard construction contract language (e.g., Special Provision 656), as well as the MaineDOT BMP Manual.

4.0 MESSAGE

The message MTA will strive to impart on employees and contractors will relate to the impacts their activities have on stormwater runoff and the importance of BMPs. The message statement is:

> *"Implementing appropriate BMPs, as described in MaineDOT's Stormwater BMPs Manual, to all MTA related activities will help to minimize stormwater pollutants introduced to Maine's waterbodies."*

4.1 OUTREACH TOOL(S) AND DISTRIBUTION

Targeted BMPs are included in the MaineDOT BMP Manual that is available at each MTA maintenance facility and referenced in standard contract language for contractors.

MTA has established or will rely on a number of outreach tools including the following:

- Existing stormwater training programs
    - For MTA employees, the internal training program will be evaluated annually (and updated, as needed) to include storm water topics in order to assess process and impact indicators; and
    - For contractors, MTA continues to require an On-Site Responsible Party (OSRP) certified by DEP's NPS Training Program to be knowledgeable in erosion prevention and sedimentation control.
- Existing standard contract language
    - Requires contractors to maintain a certified OSRP on-site who has authority to implement BMPs appropriately; and
    - Specifies that contractors must utilize MaineDOT's BMP Manual, as well as other BMPs, to ensure construction site runoff is minimized.
- Stormwater information packages to raise awareness and encourage utilization of targeted BMPs
    - For MTA employees, information will be provided during annual and supplemental training sessions. Informational packages may also be provided via MTA's newsletters

and memos posted to employee bulletin boards, as well as through employee meetings, including quarterly Environmental Health & Safety Committee meetings.

- For contractors, MTA will continue to include contractual requirements provided in the standard contract language that establishes the anticipated expectations for performance and payment. This Target BMP Adoption Plan will also be provided to contractors prior to starting work (e.g., at Pre-Construction meetings).

4.2 TIMELINE AND IMPLEMENTATION SCHEDULE

The timeline and implementation schedule is determined by:

- The training schedule established each year for MTA employees; and
- The solicitation and project award notices each year.

MTA has established a representative training schedule for each year and is similar to the table below.

Date	Training Type
April	Erosion and Sediment Control (ESC) and Stormwater Pollution Prevention for Highway Maintenance Supervisors and Foremen
May - June	Spill Prevention Control and Countermeasures Plan (SPCC), Stormwater and Erosion and Sediment Control (ESC) for MTA maintenance and engineering employees.

In addition to the training sessions above, there may be supplemental training sessions as needed and/or new information posters about stormwater BMPs posted at MTA facilities. Newsletters including stormwater information may also be sent each year to employees.

For contractors, targeted BMPs are already being implemented in accordance with contract language and the MaineDOT BMP Manual. However, in Permit Year 2, MTA will begin distributing this Targeted BMP Adoption Plan to contractors.

4.3 RESPONSIBLE PARTY

The primary responsible party at MTA is the Environmental Services Coordinator, John Branscom. The Environmental Services Coordinator may also rely on the following:

- MTA Supervisors, Foremen, Inspectors and/or other personnel to inform MTA employees and contractors of the targeted BMPs to be utilized;
- An environmental consulting firm, such as GZA GeoEnvironmental, Inc, to ensure MTA's employees are trained as defined by the Plan; and
- A design engineering firm, such as HNTB, who administer construction contracts, to ensure the Plan is properly implemented by the contractors.

5.0 EVALUATION PROTOCOL

MTA training is documented with attendance sign-in sheets, exam scores, in-class workshops and evaluation forms. A training database is maintained with information gathered from employees during each training session.

Process Indicators: Assessment of the program execution will be included in the annual report. The following topics will be reported for MTA employees:

1. Number of employees that attended training; and
2. Average exam scores for attendees.

Impact Indicators: Gauging the achievement of goals and objectives of the program will be included in the annual report. These will be addressed by the following behavioral change questions:

1. Number or percentage of employees to identify the goals of MCM #1 correctly;

2. Number or percentage of employees to identify source(s) of storm water pollution;
3. Number or percentage of employees to identify and differentiate between structural and non-structural BMPs; and
4. Number or percentage of employees to demonstrate an applied knowledge of BMP-specific information.

Process and impact indicators for contractors will be tracked and evaluated based on daily and/or weekly inspections conducted on-site.

6.0 PLAN MODIFICATION

This Targeted BMP Adoption Plan may require modification if evaluation data shows that efforts are not effective. Should modifications be needed, the plan will be revised or a new plan will be developed.

Memorandum

Date: **April 7, 2010**

To: Highway Maintenance Foremen and Supervisors/ Sweeper Operators

From: Wesley L. Jackson

RE: Sweeping

As you know, it is time to begin the sweeping operations for 2010. The preparation of the machines for a season of sweeping should begin (March) or well in advance so when the weather condition have improved allowing the sweeping operations to begin it will be without unnecessary delays due to needed maintenance or repairs. All repairs shall be under the direct supervision of the Equipment Maintenance Supervisor or his designee. The goal of this memo is to provide guidance in identifying location priorities for environmental and operational concerns. Let's keep in mind that the goal is to stay ahead of the line striping operations. The order in which your scheduling is outlined below should be followed closely. To be efficient at what we do it is the expectation of the Director of Highway Maintenance that all of the coordination for the sweeping operation shall be under the direct supervision of the Highway Supervisor or their Designee.

I. Impaired Stream Crossings/Service Areas

A. The designated highway (Schwarze) sweeper will be evaluated for its readiness by sweeping the Kennebunk NB & SB Service Areas including Exit 25. Next to the water shed areas at **Goosefare Brook** (MM 35.0 to MM36.6) and then up to **Long Creek/Red Brook** (MM44 to MM 46.4) area. The scope is to sweep all paved areas and left shoulders along the median then the outside shoulders within the outlined areas.

B. The designated vacuum/sweeper is not typically assigned to sweep the mainline but the focus should be on evaluating its performance first sweeping a Service Plaza near the home base of the equipment then extend out to the **Hart Brook w**ater shed area (MM 78.9 to MM 83.6) all paved areas and left shoulders along the median and the outside shoulders once this is completed the sweeper should be directed to move to the remaining plaza locations from Mile 58.6 working to the north.

II. Mainline and Interchanges

A. Upon the completion of the stream locations and the Kennebunk Service Plaza areas, the focus of the mechanical sweeper should be directed to the Spruce Creek in Kittery working north on the mainline of our highway working north section by section under the direction of the Highway Maintenance Supervisor or his designee until the sweeping is completed to MM 109 in Augusta.

B. Upon completion of the Hart Brook Water shed area and the Northerly Service Plaza Locations the sweeper/vac machine should focus on all interchange ramps beginning at Exit 7 York working north until all locations are completed.

III. Overhead Bridges

A. When the mainline and interchanges are done, the sweeping of all MTA owned overhead brides should be started. Any bridges with a large amount of pedestrian traffic, especially schoolchildren, can be worked in as time allows while doing the mainline and interchanges.

IV. Parking Lots

A. Parking lots are to be done next or when circumstances may prevent sweeping in other areas. It may be necessary to do some of the busier commuter lots on the weekend, such assignments need to be coordinated and discussed with the Director of Highway Maintenance in advance of setting such schedule.

Other Notes:

I. Water Trucks should be set up as soon as possible using spare vehicles.

II. Tractors with broom attachments should be hooked up and begin working as soon as possible.

III. Any areas that require hand work should either be done prior to the arrival of the sweeper or at a later date. The sweepers should never be held up waiting for hand work to be done.

IV. Again to be efficient in our operations it is of utmost importance that the supervisors and foremen work together coordinating the sweeping efforts between sections.

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) NOTIFICATION FORM

Maine Turnpike Authority

This form shall be completed in the event that an illicit discharge is detected within the MTA right-of-way (ROW).
This form is also applicable for identifying any authorized non-stormwater discharges identified within MTA ROW.

(Underlined terms are defined on Page 2 of this form)

INCIDENT DESCRIPTION

Was an Illicit Discharge Observed? ☐ Yes ☐ No

Was an Authorized Non-Stormwater Discharge Observed? (See list of authorized discharges on Page 2) ☐ Yes ☐ No

If Yes, What Type of Authorized Non-Stormwater Discharge Was Observed? _____

Location Where Observed (*Mile Marker, Town*): _____

_____

Outfall or Catch Basin ID: _____

Date Inspected: _____

Time Inspected: _____ ☐ am ☐ pm

Weather conditions: _____

Observations? (*check all that apply*)

☐ Flow	☐ Floatables	☐ Outfall or Catch Basin Damage	☐ Atmosphere
☐ Odor	☐ Deposits, Staining, Algae/Baterial Growth	☐ Turbidity	☐ Storm Sewer
☐ Color	☐ Abnormal Vegetation	☐ Other (*specify*):	

Detailed description of Observations:

_____

_____

_____

Possible Source: _____

_____

Corrective Action(s) Taken (*Water Quality Testing, Visual/Video Inspections, Smoke/Dye Testing*): _____

_____

_____

_____

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) NOTIFICATION FORM

Maine Turnpike Authority

This form shall be completed in the event that an illicit discharge is detected within the MTA right-of-way (ROW).
This form is also applicable for identifying any authorized non-stormwater discharges identified within MTA ROW.

(Underlined terms are defined on Page 2 of this form)

NOTIFICATIONS

AGENCY	PHONE NUMBER	CONTACT NAME	DATE/ TIME
Maine Department of Environmental Protection	1-800-452-1942 (207) 287-5404	David Ladd	

DOCUMENT INSTRUCTIONS GIVEN BY EACH AGENCY NOTIFIED: *(attach sheets as necessary)*

REVIEW AND APPROVAL

PREPARER OF IDDE NOTIFICATION REPORT:

(printed name) (signature) (date)

ENVIRONMENTAL SERVICES COORDINATOR:

(printed name) (signature) (date)

An illicit discharge is defined as "any non-permitted discharge to a regulated MS4 or the waters of the State that does not consist entirely of stormwater or authorized non-stormwater discharges (see definition below).

An authorized non-stormwater discharge includes the one or more of following:

- Landscape irrigation
- Lawn watering runoff
- Diverted stream flows
- Rising ground waters
- Uncontaminated groundwater infiltration and/or pumped groundwater
- Uncontaminated flows from foundation drains, footing drains and/or crawl space pumps
- Air conditioning and air compressor condensate
- Irrigation water
- Flows from uncontaminated springs
- Flows from riparian habitats and wetlands
- Residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred, unless all spill material has been removed and detergents are not used)
- Hydrant flushing and fire fighting activity runoff
- Water line flushing and discharges of potable water sources

MAINE TURNPIKE AUTHORITY
Catch Basin Cleanout Tracking Form

MPDES Permit Part IV(D) 3. Illicit Discharge and Elimination (IDDE).
Each permittee must develop, implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges, as defined in 06-096CMR521(9)(b)(2), except as provided in Part IV(D)3(c) of this permit into any small MS4.
MTA's SWMP states that MTA shall…
"Utilize regularly scheduled catch basin cleaning to detect possible illicit discharges by visually assessing the contents for the following: unusual color or odor, excessive oil, foam or scum, viscosity, or other suspicious characteristics."

Note: This form is to be completed in its entirety each permit year per Maine Department of Environmental Services.

DATA COLLECTED FOR PERMIT YEAR # _____

JULY _____ TO JUNE _____

DIRECTIONS:
Indicate "YES" or "NO" for any of the information collected.
IF "YES" is correct, please describe your observations as follows:

POSSIBLE DESCRIPTIONS FOR EACH CATEGORY

Petroleum	*Grey*	*Algae/scum*	*Low, if like water*	*Sediments* ***(if more than half full, must be cleaned out)***
Rancid/Sour	*Black*	*Foam/suds*	*High, if like oil or molasses*	*Petroleum*
Sewage/Septic	*Brown*	*Oil/sheen*		*Leaves*
Organic	*Green*	*Garbage/debris*	***ABNORMAL VEGETATIO***	*Iron staining (which is red-orange-brown discoloration of soils)*
Other	*Other*	*Sewage*	*Excessive growth*	*Other*
None	*Clear*	*Other*	*Stressed/dry/discolored*	*None*

Indicate amount of sediments observed, if >50% of catchment, must be cleaned out

DATE OF ACTIVITY	CB IDENTIFIER	CB LOCATION with nearest Mile Marker (Example: 41.77 NB/Med. Shoulder)			TOWN	ASSOCIATED OUTFALL	COLLECT DATA AS PART OF CATCH BASIN (CB) CLEANOUT								COLLECT DATA AS PART OF ANNUAL INSPECTIONS								SUSPECTED ILLICIT DISCHARGE	CLEANED OUT Yes/No	NEEDS CLEANING Yes/No	INITIALS OF INSPECTOR AND ANY COMMENTS include other suspicious characteristics and/or any damage observed
							ODOR		COLOR (Yes or No)		FLOATABLES (Yes or No)		VISCOSITY		DEPOSITS OR STAINING		ABNORMAL VEGETATION		DAMAGE		TYPE OF FLOW					
							CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF				
	CB0047	NB	Shoulder	32	Biddeford	OF0029																				
	CB0048	SB	Shoulder	32	Biddeford	OF0030																				
	CB0049	SB	Median	32	Biddeford	OF0030		X		X		X		X		X		X		X		X				
	CB0050	Median	Median	32	Biddeford	OF0030		X		X		X		X		X		X		X		X				
	CB0051	NB	Median	32	Biddeford	OF0030		X		X		X		X		X		X		X		X				
	CB0052	Median	Median	32.05	Biddeford	OF0031																				
	CB0053	Median	Median	32.23	Biddeford	OF0032																				
	CB0054	Median	Median	32.33	Biddeford	OF0033																				
	CB0055	SB	Median	32.43	Biddeford	OF0034																				
	CB0056	Median	Median	32.43	Biddeford	OF0034		X		X		X		X		X		X		X		X				
	CB0057	NB	Median	32.43	Biddeford	OF0034		X		X		X		X		X		X		X		X				
	CB0058	Median	Median	32.6	Biddeford	OF0035																				
	CB0059	Median	Median	32.7	Biddeford	OF0036																				
	CB0060	SB	Median	32.7	Biddeford	OF0036		X		X		X		X		X		X		X		X				
	CB8847	NB	Median	32.7	Biddeford	OF0036		X		X		X		X		X		X		X		X				
	CB0061	SB	Median	32.89	Biddeford	OF0037		X		X		X		X		X		X		X		X				
	CB0062	Median	Median	32.89	Biddeford	OF0037		X		X		X		X		X		X		X		X				
	CB0063	NB	Median	32.89	Biddeford	OF0037		X		X		X		X		X		X		X		X				
	CB8835	Median	Median	32.95	Biddeford	OF8845		X		X		X		X		X		X		X		X				
	CB0064	Median	Median	33.21	Saco	OF0038		X		X		X		X		X		X		X		X				
	CB0065	Median	Median	33.3	Saco	OF0039		X		X		X		X		X		X		X		X				
	CB0066	SB	Shoulder	33.4	Saco	OF0040																				
	CB0067	Median	Shoulder	33.4	Saco	OF0041		X		X		X		X		X		X		X		X				
	CB0068	NB	Shoulder	33.4	Saco	OF0041		X		X		X		X		X		X		X		X				
	CB8834	SB	Median	33.4	Saco	OF0042																				
	CB8831	SB	Median	33.4	Saco	OF0042		X		X		X		X		X		X		X		X				
	CB8830	Median	Median	33.4	Saco	OF0042		X		X		X		X		X		X		X		X				
	CB8829	NB	Median	33.4	Saco	OF0042		X		X		X		X		X		X		X		X				
	CB8828	NB	Median	33.4	Saco	OF0042		X		X		X		X		X		X		X		X				
	CB0069	Median	Median	33.43	Saco	OF0042		X		X		X		X		X		X		X		X				
	CB0070	Median	Median	33.49	Saco	OF0043																				
	CB0071	Median	Median	33.59	Saco	OF0044																				
	CB0072	Median	Median	33.68	Saco	OF0045																				
	CB0073	Median	Median	33.78	Saco	OF0046																				
	CB0074	Median	Median	33.87	Saco	OF0047																				
	CB0075	Median	Median	33.97	Saco	OF0048																				
	CB0076	Median	Median	34.04	Saco	OF0049																				

MAINE TURNPIKE AUTHORITY
Catch Basin Cleanout Tracking Form

MPDES Permit Part IV(D) 3. Illicit Discharge and Elimination (IDDE).
Each permittee must develop, implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges, as defined in 06-096CMR521(9)(b)(2), except as provided in Part IV(D)3(c) of this permit into any small MS4.
MTA's SWMP states that MTA shall…
"Utilize regularly scheduled catch basin cleaning to detect possible illicit discharges by visually assessing the contents for the following: unusual color or odor, excessive oil, foam or scum, viscosity, or other suspicious characteristics."

Note: This form is to be completed in its entirety each permit year per Maine Department of Environmental Services.

DATA COLLECTED FOR PERMIT YEAR # _____

JULY _____ TO JUNE _____

DIRECTIONS:
Indicate "YES" or "NO" for any of the information collected.
IF "YES" is correct, please describe your observations as follows:

POSSIBLE DESCRIPTIONS FOR EACH CATEGORY

Petroleum	*Grey*	*Algae/scum*	*Low, if like water*	*Sediments* ***(if more than half full, must be cleaned out)***
Rancid/Sour	*Black*	*Foam/suds*	*High, if like oil or molasses*	*Petroleum*
Sewage/Septic	*Brown*	*Oil/sheen*		*Leaves*
Organic	*Green*	*Garbage/debris*	***ABNORMAL VEGETATIO***	*Iron staining (which is red-orange-brown discoloration of soils)*
Other	*Other*	*Sewage*	*Excessive growth*	*Other*
None	*Clear*	*Other*	*Stressed/dry/discolored*	*None*

Indicate amount of sediments observed, if >50% of catchment, must be cleaned out

DATE OF ACTIVITY	CB IDENTIFIER	CB LOCATION with nearest Mile Marker (Example: 41.77 NB/Med. Shoulder)			TOWN	ASSOCIATED OUTFALL	COLLECT DATA AS PART OF CATCH BASIN (CB) CLEANOUT								COLLECT DATA AS PART OF ANNUAL INSPECTIONS								SUSPECTED ILLICIT DISCHARGE	CLEANED OUT Yes/No	NEEDS CLEANING Yes/No	INITIALS OF INSPECTOR AND ANY COMMENTS include other suspicious characteristics and/or any damage observed
							ODOR		COLOR (Yes or No)		FLOATABLES (Yes or No)		VISCOSITY		DEPOSITS OR STAINING		ABNORMAL VEGETATION		DAMAGE		TYPE OF FLOW					
							CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF				
	CB0077	Median	Median	34.13	Saco	OF0050																			
	CB0078	Median	Median	34.23	Saco	OF0051																			
	CB0080	SB	Shoulder	34.39	Saco	OF0053																			
	CB0079	Median	Median	34.4	Saco	OF0052																			
	CB0081	SB	Shoulder	34.4	Saco	OF0053		X		X		X		X		X		X		X		X			
	CB0082	NB	Median	34.53	Saco	OF0054																			
	CB0083	Median	Median	34.53	Saco	OF0054		X		X		X		X		X		X		X		X			
	CB0084	SB	Median	34.53	Saco	OF0054		X		X		X		X		X		X		X		X			
	CB0085	SB	Shoulder	34.53	Saco	OF0055																			
	CB0086	Median	Median	34.71	Saco	OF0056																			
	CB0087	Median	Median	34.79	Saco	OF0057																			
	CB0088	SB	Shoulder	34.85	Saco	OF0058																			
	CB0091	Median	Median	34.85	Saco	OF0058		X		X		X		X		X		X		X		X			
	CB0089	NB	Shoulder	34.85	Saco	OF0059																			
	CB0090	NB	Shoulder	34.85	Saco	OF0059		X		X		X		X		X		X		X		X			
	CB8837	Median	Median	34.9	Saco	OF8844																			
	CB0092	Median	Median	34.99	Saco	OF0060																			
	CB0093	Median	Median	35.07	Saco	OF0061																			
	CB8851	Median	Median	35.3	Saco	OF0062																			
	CB0094	NB	Shoulder	35.35	Saco	OF0062		X		X		X		X		X		X		X		X			
	CB0095	NB	Median	35.35	Saco	OF0062		X		X		X		X		X		X		X		X			
	CB0097	Median	Median	35.35	Saco	OF0062		X		X		X		X		X		X		X		X			
	CB0098	SB	Median	35.35	Saco	OF0062		X		X		X		X		X		X		X		X			
	CB0096	SB	Shoulder	35.35	Saco	OF0063																			
	CB0099	NB	Shoulder	35.55	Saco**	OF0064																			
	CB0100	NB	Median	35.55	Saco**	OF0064		X		X		X		X		X		X		X		X			
	CB0101	Median	Median	35.55	Saco**	OF0064		X		X		X		X		X		X		X		X			
	CB0102	SB	Median	35.55	Saco**	OF0064		X		X		X		X		X		X		X		X			
	CB0103	SB	Shoulder	35.64	Saco**	OF0065																			
	CB0110	SB	Exit Ramp	35.7	Saco**	OF0069																			
	CB0111	SB	Exit Ramp	35.7	Saco**	OF0070																			
	CB0112	SB	Exit Ramp	35.7	Saco**	OF0071																			
	CB0113	SB	Exit Ramp	35.7	Saco**	OF0072																			
	CB0114	SB	Exit Ramp	35.7	Saco**	OF0073																			
	CB0104	NB	Shoulder	35.75	Saco**	OF0066																			
	CB0105	NB	Median	35.75	Saco**	OF0066		X		X		X		X		X		X		X		X			

MAINE TURNPIKE AUTHORITY
Catch Basin Cleanout Tracking Form

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DATA COLLECTED FOR PERMIT YEAR # _____

JULY _____ TO JUNE _____

DIRECTIONS:
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IF "YES" is correct, please describe your observations as follows:

POSSIBLE DESCRIPTIONS FOR EACH CATEGORY

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Sewage/Septic	*Brown*	*Oil/sheen*		*Leaves*
Organic	*Green*	*Garbage/debris*	***ABNORMAL VEGETATIO***	*Iron staining (which is red-orange-brown discoloration of soils)*
Other	*Other*	*Sewage*	*Excessive growth*	*Other*
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							ODOR		COLOR (Yes or No)		FLOATABLES (Yes or No)		VISCOSITY		DEPOSITS OR STAINING		ABNORMAL VEGETATION		DAMAGE		TYPE OF FLOW					
							CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF	CB	OF				
	CB0106	Median	Median	35.75	Saco**	OF0066		X		X		X		X		X		X		X		X				
	CB0107	SB	Median	35.75	Saco**	OF0066		X		X		X		X		X		X		X		X				
	CB0108	Median	Median	35.79	Saco**	OF0067																				
	CB0109	SB	Shoulder	35.87	Saco**	OF0068																				
	CB8852	Median	Median	35.9	Saco**	OF8863																				
	CB8827	Median	Median	Exit 36	Saco**	OF8833																				
	CB8826	Median	Median	Exit 36	Saco**	OF8834																				
	CB8825	Median	Median	Exit 36	Saco**	OF8835																				
	CB8824	Median	Median	Exit 36	Saco**	OF8836																				

** Goosefare Brook Watershed

QUARTERLY MOA REPORT FOR MTA MAINTEANCE FACILITIES

PREPARED BY: _____ **PREPARED FOR:** _____ **Maintenance Facility**

QUARTER: _____ January to March _____ April to June _____ July to September _____ October to December

OPERATION AND MAINTENANCE BMPs ACCOMPLISHED

PROJECT DESCRIPTION	DATE	LOCATION	Repair/Redo Ditching	Culvert Repair/ Maintenance	Downspout Repair/ Maintenance	Catch Basin Repair/ Maintenance	Slope and/or ROW Repair/Mulching	Inspect Catchments	Catchments cleaned out (specify if pond, swale, etc.)	Sweeping on Mainline	Sweeping on Overheads	Sweeping Parking Lots, Interchanges, etc.	Litter Picking on Mainline	Litter Picking Parkling Lots, Interchanges, etc.	Other Misc. O&M	COMMENTS
	(MM/DD/YY)	(Station or Mile Marker)	(Length x Width)	(Qty #)	(Qty #)	(Qty #)	(Length x Width)	(Qty #)	(Qty #)	(MM to MM)	(Qty #)	(Specify)	(MM to MM)	(Specify)	(Describe)	

NEW CONSTRUCTION: PERMANENT BMPS INSTALLED

PROJECT DESCRIPTION	DATE	LOCATION	Sediment Traps	Catch basins	Rip Rap Down spout	Culvert Inlet Protection (stone)	Culvert Outlet Protection (stone)	Slope Stabilization	Vegetated Buffer	Permanent Check Dam	Stone Ditch Protection	Outer Perimeter Barkgrindings Barrier (#LF)	Other Misc. Structural BMP	COMMENTS
	(MM/DD/YY)	(Station or Mile Marker)	(Qty #)	(Qty #)	(Qty #)	(Qty #)	(Qty #)	(Length x width)	(Length x width)	(Qty #)	(Qty #)	(Linear Feet)	(Describe)	

QUARTERLY MOA REPORT FOR MTA MAINTEANCE FACILITIES

PREPARED BY: Dale Cook **PREPARED FOR:** John Branscome **Maintenance Facility** Gardiner and Litchfield Maint

QUARTER: _____ January to March _____ April to June X July to September _____ October to December

OPERATION AND MAINTENANCE BMPs ACCOMPLISHED

PROJECT DESCRIPTION	DATE	LOCATION	Repair/Redo Ditching	Culvert Repair/ Maintenance	Downspout Repair/ Maintenance	Catch Basin Repair/ Maintenance	Slope and/or ROW Repair/Mulching	Inspect Catchments	Catchments cleaned out (specify if pond, swale, etc.)	Sweeping on Mainline	Sweeping on Overheads	Sweeping Parking Lots, Interchanges, etc.	Litter Picking on Mainline	Litter Picking Parkling Lots, Interchanges, etc.	Other Misc. O&M	COMMENTS
	0404/DD/YY)	(Station or Mile Marker)	(Length x Width)	(Qty =)	(Qty =)	(Qty =)	(Length x Width)	(Qty =)	(Qty =)	(MM to MM)	(Qty =)	(Specify)	(MM to MM)	(Specify)	(Describe)	
Picking trash main line		86 7 to 109 N&S											86 7 to 109			Trash picked as needed compleat medium picked in Sept
Picking trash Service plaza		102 Plaza														Trash barrels evry day rest as needed
Repair washout at Plains road bridge		95 7 SB	3 by 15 foot													Repaired washout about 3 yds gravel
Repair washout at Central Street		107 7	3 by 80 feet													Repaired washout about 20 yds Rip F Rap and check dam installed at beginning of Rip Rap
Repair washout at Fisher bridge		87 7 NB	3 by 12 feet													Repaired washout about 3 yds gravel
Repair washouts at 103 exit ramp		103 exit ramp	30 by 20 feet													Repaired washout about 28 yds Rupap
Repair washout at 93 3 SB shoulder		93 3 SB	20 by 10 feet													Repaired with about 10 yds clay area was seeded and hayed
Repair washout 105 5 NB medium	=======	105 5 NB Medium	3 by 100 feet													Repaired washout repaired in medium about 25 yds and 6 bales of hay
Inspections at 102 Plaza		102 Service Plaza						All in plaza								Inspect and replace Socks as needed Monothley
Repair washout at 94 NB Medium	=======	94 NB medium														Repair washout at 94 used about 15 yds clay and 6 bales of hay
Repaired washouts at 88 to 87 medium	=======	88 to 87 medium														Repaired washouts at 88 to 87 used about 12 yds clay and matting and 4 bales hay
Repaired culvert at 89 Medium	=======	89 medium	8 feet of culvert													Replaced culvert at 89 medium 8 feet of culvert
Repaired washouts at 92 to 93 medium	=======	92 to 93 medium														Repaired washouts were needed in this area about 18 yds clay and matting and hay
Repaired washouts at 91 to 92 medium	=======	91 to 92 medium														Repair washouts were needed in area about 13 yds clay and matting and hay
Replace catch basin at 91 5 Medium	=======	91 5 Medium				1										Replaced catch basin at 91 5 Medium
Repaired washouts at 107 to 107 5 medium	=======	107 to 107 5 medium														Repaired washouts at 107 to 107 5 medium about 10 yds clay and 4 bales hay and matting

NEW CONSTRUCTION: PERMANENT BMPS INSTALLED

PROJECT DESCRIPTION	DATE	LOCATION	Sediment Traps	Catch basins	Rip Rap Down spout	Culvert Inlet Protection (stone)	Culvert Outlet Protection (stone)	Slope Stabilization	Vegetated Buffer	Permanent Check Dam	Stone Ditch Protection	Outer Perimeter Barkgrindings Barrier	Other Misc. Structural BMP	COMMENTS
	0404/DD/YY)	(Station or Mile Marker)	(Qty =)	(Qty =)	(Qty =)	(Qty =)	(Qty =)	(Length x width)	(Length x width)	(Qty =)	(Qty =)	(Linear Feet)	(Describe)	

Inspection Checklist for Construction Sites to satisfy requirements of Chapter 500 Stormwater Management Rules, Maine Construction General Permit (CGP) and Municipal Separate Storm Sewer System (MS4) Permit as they apply to Maine Turnpike Authority

Project Name: _____

Project Location: _____

Name of OSRP*: _____

OSRP means on-site responsible party that is knowledgable of erosion prevention and sedimentation control practices and has been certified by the DEP's NonPoint Source (NPS) Training Center or a similar training program.

DAILY INSPECTION LOG FOR THE WEEK OF: _____	**DAY**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	Complete this column only if weekend work is conducted **Sat/Sun**
	DATE						
	INITIALS						

A. GENERAL SECTION

(1) Amount of On-site Precipitation							
SOURCE OF INFORMATION (circle one)							
on-site weather station							
website: _____							
rain gauge							
IMPORTANT: If there was rain, were the following areas inspected before and after the storm event…							
...disturbed and impervious areas?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
...erosion control measures?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
…material storage areas exposed to precipitation?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
...locations where vehicles enter and exit the site?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
…all deficiencies and corrective actions are noted below?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
(2) Air Temperature							
SOURCE OF INFORMATION (circle one)							
on-site weather station							
website: _____							
thermometer							

B. EROSION CONTROL MEASURES

(1) Are erosion prevention and sedimentation controls….						
in place prior to land disturbance?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
in place prior to embankment/excavation operations?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
working effectively?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If no, please describe failure and corrective actions in comments section below	Note #__	Note #__	Note #__	Note #__	Note #__	Note #__
(2) Is silt fence properly installed downhill of disturbed slopes?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If no, please describe failure and corrective actions in comments section below	Note #__	Note #__	Note #__	Note #__	Note #__	Note #__
(3) All newly disturbed earth is stabilized by applying mulch daily?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If yes, is mulch maintained on-site on a daily basis?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If no, what other daily method of stabilization is being used?						
(4) All disturbed ditches are stabilized by the end of the workday?	Y or N or NA	Y or N or NA	Y or N or NA	Y or N or NA	Y or N or NA	Y or N or NA
If yes, what type of stabilization is being used and maintained on-site daily?						
(5) Permanent slope stabilization measures are applied…						
within one week of last soil disturbance?	Y or N or NA	Y or N or NA	Y or N or NA	Y or N or NA	Y or N or NA	Y or N or NA
If yes, identify area and date of last disturbance?	Note #__	Note #__	Note #__	Note #__	Note #__	Note #__
(6) Is the project site currently under an approved period of suspended work?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If yes, then has the daily inspection log been maintained current and up-to-date?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N

C. HOUSEKEEPING

(1) Are inspections conducted on a weekly basis to ensure that sedimentation and potential pollutants are minimized from…						
materials storage areas exposed to precipitation?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
locations where vehicle enter and exit the site?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N
If no, explain reason in comments section below	Note #__	Note #__	Note #__	Note #__	Note #__	Note #__
(2) Are inspections conducted daily to ensure that discharges do not impact receiving waters?	Y or N	Y or N	Y or N	Y or N	Y or N	Y or N

COMMENTS:

NOTE #1…. _____

NOTE #2…. _____

NOTE #3…. _____

NOTE #4…. _____

APPENDICES -- BASIC PERFORMANCE STANDARDS

APPENDIX A. Erosion and sedimentation control

This appendix applies to all projects.

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 M.R.S.A. § 480-B. Sediment control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken.

NOTE: The site must be maintained to prevent unreasonable erosion and sedimentation. See 38 M.R.S.A § 420-C (in part). Other or additional standards than those provided in Appendix A may apply, under the Natural Resources Protection Act, to a project located in or adjacent to a protected natural resource.

NOTE: For guidance on erosion and sedimentation controls, consult "Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection.

1. **Pollution prevention.** Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable.

   The discharge may not result in erosion of any open drainage channels, swales, upland, or coastal or freshwater wetlands.

   NOTE: Buffers improve water quality by helping to filter pollutants in run-off both during and after construction. Minimizing disturbed areas through phasing limits the amount of exposed soil on the site through retention of natural cover and by retiring areas as permanently stabilized. Less exposed soil results in fewer erosion controls to install and maintain. If work within an area is not anticipated to begin within two weeks time, consider leaving the area in its naturally existing cover.

2. **Sediment barriers.** Prior to construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

3. **Temporary stabilization.** Stabilize with mulch or other non-erodable cover any exposed soils that will not be worked for more than 7 days. Stabilize areas within 75 feet of a wetland or waterbody within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first.

4. **Removal of temporary sediment control measures.** Remove any temporary sediment control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

   NOTE: It is recommended that silt fence be removed by cutting the fence materials at ground level to avoid additional soil disturbance.

5. Permanent stabilization. If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days by planting vegetation, seeding, sod, or through the use of permanent mulch, or riprap, or road sub-base. If using vegetation for stabilization, select the proper vegetation for the light, soil and moisture conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be seeded and mulched again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. One or more of the following may apply to a particular site.

(a) Seeded areas. For seeded areas, permanent stabilization means a 90% cover of healthy plants with no evidence of washing or rilling of the topsoil.

(b) Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

(c) Permanent Mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

(d) Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

(e) Agricultural use. For construction projects on land used for agricultural purposes (e.g., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

(f) Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

(g) Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation, with a well-graded riprap lining, or with another non-erosive lining such as concrete or asphalt pavement. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

6. Winter construction. "Winter construction" is construction activity performed during the period from November 1 through April 15. If disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions.

NOTE: For guidance on winter construction standards, see the "Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection.

7. Stormwater channels. Ditches, swales, and other open stormwater channels must be designed, constructed, and stabilized using measures that achieve long-term erosion control. Ditches, swales, and other open stormwater channels must be designed to handle, at a minimum, the expected volume

of run-off. Each channel should be constructed in sections so that the section's grading, shaping, and installation of the permanent lining can be completed the same day. If a channel's final grading or lining installation must be delayed, then diversion berms must be used to divert stormwater away from the channel, properly-spaced check dams must be installed in the channel to slow the water velocity, and a temporary lining installed along the channel to prevent scouring. Permanent stabilization of channels is addressed under Appendix A(5)(g) above.

8. **Roads.** Gravel and paved roads must be designed and constructed with crowns or other measures, such as water bars, to ensure that stormwater is delivered immediately to adjacent stable ditches, vegetated buffer areas, catch basin inlets, or street gutters.

9. **Culverts.** Culverts must be sized to avoid unintended flooding of upstream areas or frequent overtopping of roadways. Culvert inlets must be protected with appropriate materials for the expected entrance velocity, and protection must extend at least as high as the expected maximum elevation of storage behind the culvert. Culvert outlet design must incorporate measures, such as aprons or plunge pools, to prevent scour of the stream channel. The design must take account of tailwater depth.

10. **Parking areas**. Parking areas must be constructed to ensure runoff is delivered to adjacent swales, catch basins, curb gutters, or buffer areas without eroding areas downslope. The parking area’s subbase compaction and grading must be done to ensure runoff is evenly distributed to adjacent buffers or side slopes. Catch basins must be located and set to provide enough storage depth at the inlet to allow inflow of peak runoff rates without by-pass of runoff to other areas.

11. **Additional requirements.** Additional requirements may be applied on a site-specific basis.

APPENDIX B. Inspection and maintenance

This appendix applies to all projects. A project that is only required to meet basic standards (stormwater PBR) must meet the standards in Section 1. All other projects must meet standards in Sections 1 through 5.

See Appendix D(5) for additional maintenance requirements related to infiltration of stormwater.

1. During construction. The following standards must be met during construction.

(a) Inspection and corrective action. Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

(b) Maintenance. Maintain all measures in effective operating condition until areas are permanently stabilized. If best management practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

(c) Documentation. Keep a log (report) summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log must be made accessible to department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

2. Post-construction. The following standards must be met after construction.

(a) Plan. Carry out an approved inspection and maintenance plan that is consistent with the minimum requirements of this section. The plan must address inspection and maintenance of the project's permanent erosion control measures and stormwater management system. This plan may be combined with the plan listed in Section 2(a) of this appendix. See Section 8(C)(2) for submission requirements.

(b) Inspection and corrective action. All measures must be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections. The following areas, facilities, and measures must be inspected and identified deficiencies must be corrected. Areas, facilities, and measures other than those listed below may also require inspection on a specific site. Inspection

or maintenance tasks other than those discussed below must be included in the maintenance plan developed for a specific site.

NOTE: Expanded and more-detailed descriptions for specific maintenance tasks may be found in the Maine DEP's "Stormwater Management for Maine: Best Management Practices."

(i) Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. See permanent stabilization standards in Appendix A(5).

(ii) Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

(iii) Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

(iv) Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring. Clean-out must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at inlet any grates, at any inflow channels to the basin, and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

(v) Inspect resource and treatment buffers at least once a year for evidence of erosion, concentrating flow, and encroachment by development. If flows are concentrating within a buffer, site grading, level spreaders, or ditch turn-outs must be used to ensure a more even distribution of flow into a buffer. Check down slope of all spreaders and turn-outs for erosion. If erosion is present, adjust or modify the spreader's or turnout's lip to ensure a better distribution of flow into a buffer. Clean-out any accumulation of sediment within the spreader bays or turn-out pools.

(c) Regular maintenance

(i) Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the

road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures to restore their function.

(ii) Manage each buffer's vegetation consistently with the requirements in any deed restrictions for the buffer. Wooded buffers must remain fully wooded and have no disturbance to the duff layer. Vegetation in non-wooded buffers may not be cut more than three times per year, and may not be cut shorter than six inches.

NOTE: Contact the department's Division of Watershed Management (Maine DEP) for assistance developing inspection and maintenance requirements for other drainage control and runoff treatment measures installed on the site. The maintenance needs for most measures may be found in the Maine DEP's "Stormwater Management for Maine: Best Management Practices."

(d) Documentation. Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal.

The log must be made accessible to department staff and a copy provided to the department upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

3. Maintenance contract. Contract with a third-party or other qualified professional, as approved by the department, for the removal of accumulated sediments, oils, and debris within any proprietary devices and the replacement of any absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project.

4. Re-certification. Submit a certification of the following to the department within three months of the expiration of each five-year interval from the date of issuance of the permit.

(a) Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
(b) Inspection and repair of stormwater control system. All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.
(c) Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

Municipalities with separate storm sewer systems regulated under the Maine Pollutant Discharge Elimination System (MPDES) Program may report on all regulated systems under their control as part of their required annual reporting in lieu of separate certification of each system. Municipalities not regulated by MPDES, but that are responsible for maintenance of permitted stormwater systems, may report on multiple stormwater systems in one report.

5. **Duration of maintenance.** Perform maintenance as described and required in the permit unless and until the system is formally accepted by the municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, or a component of a stormwater system, it must provide a letter to the department stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with department standards. Upon such assumption of responsibility, and approval by the department, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

6. **Additional requirements.** Additional requirements may be applied on a site-specific basis.

APPENDIX C. Housekeeping

These performance standards apply to all projects.

1. **Spill prevention.** Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.

2. **Groundwater protection.** During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

   See Appendix D for license by rule standards for infiltration.

   NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1).

3. **Fugitive sediment and dust.** Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

   NOTE: An example of the use of BMPs to control fugitive sediment and dust is as follows. Operations during wet months that experience tracking of mud off the site onto public roads should provide for sweeping of road areas at least once a week and prior to significant storm events. Where chronic mud tracking occurs, a stabilized construction entrance should be provided. Operations during dry months, that experience fugitive dust problems, should wet down the access roads once a week or more frequently as needed.

   NOTE: Dewatering a stream without a permit from the department violates state water quality standards and the Natural Resources Protection Act.

4. **Debris and other materials.** Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

   NOTE: To prevent these materials from becoming a source of pollutants, construction and post-construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

5. **Trench or foundation de-watering.** Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe

construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.

NOTE: For guidance on de-watering controls, consult the Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection."

6. Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges.

7. Additional requirements. Additional requirements may be applied on a site-specific basis.

POST-CONSTRUCTION PERMIT REQUIREMENTS
AND
INSPECTION/MAINTENANCE SCHEDULE FOR NEWLY INSTALLED BMPs
Maine Turnpike Authority
Kittery to Augusta, Maine

INSPECTIONS FOR CALENDAR YEAR 2010

PROJECT DESCRIPTION/ APPLICABLE PERMIT NUMBER	TOWN/ MILE MARKER	PERMANENT STORMWATER MANAGEMENT FACILITIES	MAINTENANCE REQUIREMENTS	FREQUENCY	FOLLOW UP ACTIONS FOR MAINTENANCE REQUIREMENTS	Date of inspection	Inspector's Initials	Is Stormwater Management Facility functioning as intended? (Yes or No)		Is follow up maintenance required as a result of this inspection? (Yes or No)		Date Maintenance Completed with Inspector's Initials (MM/DD/YYYY by ABC)	Follow-up Maintenance Conducted by whom & When? (Initials/Date)		When was paperwork forwarded to MTA's Environmental Services? (MM/DD/YYYY)
					Underdrain Soil Filter (USF) >>>	>>>>>>>>>>>>>>>>	>>>>>>>	NB	SB	NB	SB				
Kennebunk Service Plazas (Northbound & Southbound) On April 5, 2010 we replace Rip Rap from the parking lot to the Sediment pond on the So. Bound side Service Plaza	Kennebunk Exit 25	Stormwater Filters (Underdrained Soil filters = USF)	(1) Inspect and clean filters and forbays	Annually	Remove and properly dispose of sand, sediment, debris and floatable materials. *After annual clean ng of filter USF must drain within 24 hours following a ra n event.*							Sump Socks Changed			
			(2) Inspect entire feature for debris or clogging	Fo lowing significant rain event	Remove and properly dispose of sand, sediment, debris and floatable materials. **If water ponds for more than 72 hours,** rework or replace top several inches of f lter to reestablish filtration quality of soil to meet original construction specs.	January	D. M.	Yes	Yes	No	No	1/29/2010 DM			
						February	D. M.	Yes	Yes	No	No	2/5/2010 DM			
						March	D. M.	Yes	Yes	No	No	03/03/2010 DM			3/29/2010
						April	D. M.	Yes	Yes	No	No	04/14/2010 DM			4/16/2010
						May									
						June									
						July									
						August									
						September									
						October									
						November									
						December									
			(3) Mow grass vegetation, including wetland grasses, in filter bed and along detention area side slopes	Semi-annually (maximum)	Wetland grass in filter bed should be mowed no more than 2x/season to maintain height less than 12 inches. *Harvesting and pruning excessive growth including weeding to control unwanted or nvasive p ant species will be performed on a period c bas s if required*	First date									
						Second date									
		Pavement areas	(4) Inspect paved areas for debris and sediments	As part of routine maintenance (MONTHLY)	Remove surface itter from the site, including a l swales, ditches, stormwater f lters and other areas subject to rainfall/runoff.	January	D. M.	Yes	Yes	No	No	1/29/2010 DM			
						February	D. M.	Yes	Yes	No	No	2/5/2010 DM			
						March	D. M.	Yes	Yes	No	No	03/03/2010 DM			3/29/2010
						April	D. M.	Yes	Yes	No	No	04/14/2010 DM	MTA	SB 04/05/2010 JS	4/16/2010
						May									
						June									
						July									
						August									
						September									
						October									
						November									
						December									
		Catch Basins	(5) Inspect and clean catch basins	Annually	Remove and properly dispose of sand, sediment, debris and floatable materials.			Yes	Yes	No	No	1/29/2010 DM			
		Open pipes and ditches (e.g., stormwater conveyance)	(6) Inspect drainage structures and other BMPs, including closed drainage systems and open channels/ditches for debris, erosion and accumulated sediments	As part of routine maintenance (MONTHLY)	Remove and properly dispose of sand, sediment, debris, etc. NOTE Accumulated sediment and debris shall be removed and disposed well before accumulation adversely impacts the performance of the drainage system and stormwater f lters. Immediately repair any element(s) of the drainage system or stormwater feature that has been damaged, eroded or otherwise not functioning as intended.	January		Snow Cov.	Snow Cov.	No	No	1/29/2010 DM			
						February	D. M.	Yes	Yes	No	No	2/5/2010 DM			
						March	D. M.	Yes	Yes	No	No	03/03/2010 DM			3/29/2010
						April	D. M.	Yes	Yes	No	No	04/14/2010 DM			4/16/2010
						May									
						June									
						July									
						August									
						September									
						October									
						November									
						December									
		Slopes and embankments	(7) Inspect slopes and embankments for erosion and accumulated sediments	As part of routine maintenance (MONTHLY)	Immediately repair any element(s) of the drainage system or stormwater feature that has been damaged, eroded or otherwise not functioning as intended. Sediment removal, earth repair and/or reseeding shall be performed immediately upon identification of issue and the site restored to a stable condition.	January		Snow Cov.	Snow Cov.	No	No	1/29/2010 DM			
						February	D. M.	Yes	Yes	No	No	2/5/2010 DM			
						March	D. M.	Yes	Yes	No	No	03/03/2010 DM			3/29/2010
						April	D. M.	Yes	Yes	No	No	04/14/2010 DM			4/16/2010
						May									
						June									
						July									
						August									
						September									
						October									
						November									
						December									
		All areas	(8) Inspect site conditions and monitor for erosion and accumulated sediments	As part of routine maintenance (MONTHLY)	Take appropriate corrective actions to maintain the system in good working condition, where/when a problem is noted. Any areas or systems that are identified as having more frequent maintenance requirement than normal shall be monitored and inspected more frequently	January		Snow Cov.	Snow Cov.	No	No	1/29/2010			
						February	D. M.	Yes	Yes	No	No	2/5/2010 DM			
						March	D. M.	Yes	Yes	No	No	03/03/2010 DM			3/29/2010
						April	D. M.	Yes	Yes	No	No	04/14/2010 DM			4/16/2010
						May									
						June									
						July									
						August									
						September									
						October									
						November									
						December									

Maine Turnpike Authority
Stormwater/ESC Trivia Game
May 2010

SW TRIVIA GAME

WHO SAID PERMIT	ARE YOU SURE THAT'S THE BEST	WHO SAID ILLICIT	IS IT STABLE	PAPER, PAPER, & MORE PAPER
10	10	10	10	10
20	20	20	20	20
30	30	30	30	30
40	40	40	40	40
50	50	50	50	50

[SAYS WHO?]

What is the definition of MS4?

ANSWER: Municipal Separate Storm Sewer Systems (MS4s)

[SAYS WHO?]

What does UA stand for and who defines it?

ANSWER: Urbanized Areas (UA) and DEP defines it based on the US Census definition of urbanized areas.

Maine Turnpike Authority
Stormwater/ESC Trivia Game
May 2010

[SAYS WHO?]

Why are stormwater permits required?

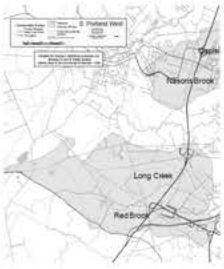
ANSWER: Polluted water entering the storm drainage system and discharged untreated directly to waterbodies is used for drinking, fishing, and swimming, which impacts everyone in Maine.

[SAYS WHO?]

What are the new requirements proposed under the Multi-Sector General Permit (MSGP) for Stormwater Discharges?

ANSWER: Quarterly visual monitoring following a qualified rain event (10th of inch)

[SAYS WHO?]



What brand new permit was accepted this year that will affect MTA in a specific Watershed and has potential to in other areas?

ANSWER: Long Creek Watershed Management Plan and General Permit for Post Construction in Long Creek

[ARE YOU SURE THAT'S THE BEST?]

What are the two categories of BMPs?

ANSWER:

1. **Structural** - engineered and constructed systems for water quantity and/or quality control
2. **Non-structural** – operational and pollution prevention type practices to prevent pollutants from entering stormwater runoff

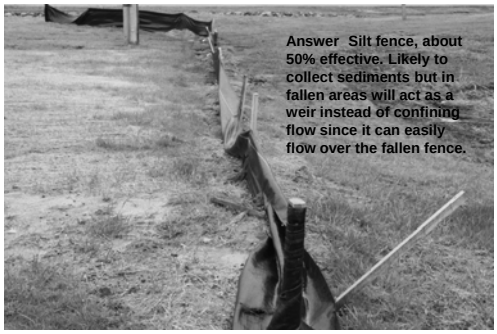
[ARE YOU SURE THAT'S THE BEST?]

Can you name three MTA maintenance facility activities that have the highest potential for impacting stormwater.

ANSWER:
•Equipment Storage
•Vehicle Maintenance and/or washing
•Material handling and storage

[ARE YOU SURE THAT'S THE BEST?]

What BMP is this and how effective is this one?



Maine Turnpike Authority
Stormwater/ESC Trivia Game
May 2010

[ARE YOU SURE THAT'S THE BEST?]

How effective is this catch basin in collecting flow? What concerns should we have about this area?

ANSWER: Likely captures 10% of flows. The lack of vegetation will generate erosion and sedimentation as seen with the channelized flow. No vegetation to dissipate flows and buffer pollutant loads. Covered CB is likely clogged internally also.

[ARE YOU SURE THAT'S THE BEST?]

Name the three non-structural BMPs shown here that are commonly used at every maintenance facility?

ANSWER Capping Hydraulic Lines
BONUS Where is the best place to store equipment?

ANSWER Solid waste management
BONUS What's wrong here?

...shing procedures
...ods of washing
permitted?

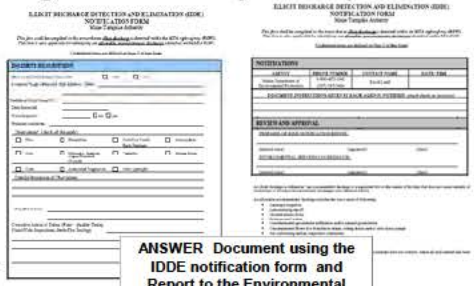
[WHO SAID ILLICIT?]

What is the MS4 acronym IDDE stand for?

ANSWER: Illicit Discharge Detection and Elimination (IDDE)

[WHO SAID ILLICIT?]

What do you do if you observe an illicit discharge? Who should you notify?



ANSWER Document using the IDDE notification form and Report to the Environmental Services Coordinator right away.

[WHO SAID ILLICIT?]

Which of the following are not "authorized non-stormwater discharges" listed in the MS4 permit?

(A) Landscape irrigation
(B) Diverted stream flows
(C) Vehicle wash water
(D) Air conditioning and compressor condensate
(E) Uncontaminated flows from footing drains

[WHO SAID ILLICIT?]

What type of inspections are required as part of the IDDE program?

ANSWER: Dry weather inspections of outfalls and catch basin cleanout

[WHO SAID ILLICIT?]

What are the suspicious characteristics of sediments that must be documented during the annual catch basins clean-out?

ANSWER:
1. Unusual color or odor
2. Excessive oil
3. Viscosity
4. Other suspicious characteristics

[IS IT STABLE?]

What is the difference between erosion and sedimentation?

ANSWER:
Erosion = Movement of soil by action of water or wind.
Erosion is natural; but accelerated erosion is not!

Sedimentation = "settling out" of soil particle from the water.

[IS IT STABLE?]

What type of comments would you make on the CB clean-out form at this location?

[IS IT STABLE?]

What is wrong with this picture?

[IS IT STABLE?]

What type of comments would you make on the CB clean-out form at this location?

[IS IT STABLE?]

When should permanent slope stabilization measures be applied? Name three of the approved methods for permanent stabilization.

ANSWER: IMMEDIATELY and at lease within one week of the last soil disturbance.

Approved Methods

- **Seeded areas:** 90% cover of healthy plants with no evidence of washing or rilling of the topsoil.
- **Sodded areas:** Complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.
- **Permanent Mulch:** Total coverage of the exposed area.
- **Riprap:** Stabilized slopes with appropriate backing of a well-graded gravel or approved geotextile.
- **Paved areas:** Placement of the compacted gravel subbase is completed.
- **Ditches, channels, and swales:** Channel is stabilized with a 90% cover of healthy vegetation, well-graded riprap lining, or with another non-erosive lining. No evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

Maine Turnpike Authority
Stormwater/ESC Trivia Game
May 2010

[PAPER, PAPER, AND MORE PAPER] *

Who do you send all your stormwater related paperwork to?

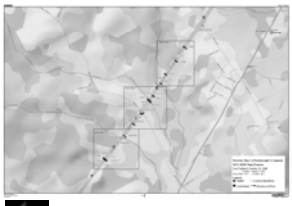
ANSWER: John Branscom, Environmental Services Coordinator

BONUS: Where do you keep the originals?

ANSWER: In your on-site files

[PAPER, PAPER, AND MORE PAPER]

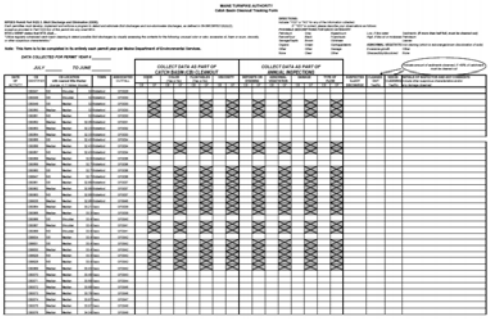
Where are these UA maps located at your facility?



ANSWER: in your on-site environmental files

[PAPER, PAPER, AND MORE PAPER]

What is this form used for?



ANSWER: Catch basins cleanout and dry weather outfall inspections tracking

[PAPER, PAPER, AND MORE PAPER]

What do you report on this form?

ANSWER: MOA Reporting

- Repairs/redo of ditching (miles)
- Repair/ maintenance of Culvert/Downspout (#)
- Repair/ maintenance of CBs (#)
- Removal of sand from guard rails (miles)
- Repaired/mulched of slope and/or ROW (length x width)
- Inspected catchments (#)
- Cleanout of catchments (#)
- Swept streets (miles)
- Swept ancillary facilities (#)
- Picking of Litter (miles)

[PAPER, PAPER, AND MORE PAPER]

What do you use this form for?

ANSWER:
Daily construction log form – to be used during earthwork construction projects. During post construction – inspect the construction project site and document your inspection using the construction log form at least once per week until the site is permanently vegetated and stabilized.