MAINE TURNPIKE AUTHORITY

2009 PROGRESS REPORT
ON IMPLEMENTATION OF THE STORMWATER
MEMORANDUM OF AGREEMENT

Prepared by:
Maine Turnpike Authority

Submitted on:
July 14, 2010

think blue
clean water starts with you!

Stormwater Protection in Maine

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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 2009; projects and activities anticipated in 2010; 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; (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 2009 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 2009, 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 2009; and
- Engineering & Building Maintenance. MTA's Engineering Staff (e.g., inspectors and managers) are certified through the DEP's NPS Program in 2009, as well.

The Turnpike has attended DEP and MaineDOT training sessions and workshops through 2009, and also plans to continue to attend joint training and workshop sessions in 2010 in order to learn and share knowledge on erosion and sediment control practices and promote multi-agency interaction. In addition, MTA has updated their internal stormwater training program for 2010 to focus on permit requirements including Chapter 500, MS4s, Maine Construction General Permit (MCGP), Long Creek Post-Construction Stormwater Discharges, and other Urban Impaired Streams (UIS) watershed considerations.

b. Contracted Projects

In 2009, MTA awarded fourteen (14) construction projects, as seen in **Table 2** of **Appendix B**. Eight (8) of these projects are considered to be linear construction projects subject to MOA applicability and subsequent reporting is required for only two (2) projects[1].

Table 3 of **Appendix B** summarizes the permanent stormwater Best Management Practices (BMPs) installed as part of two projects in 2009 managed under the MOA. All construction projects awarded in 2008 were completed and none remained under construction in 2009. As seen in **Table 3**, the majority of the BMPs installed in 2009 were associated with upgrades to existing infrastructure. Three (3) new catch basins were installed in the Pavement Rehabilitation project from Mile Marker (MM) 35.3 to 44.5 Northbound and Southbound, additionally, culvert inlet protection was installed on the Route 196 – Lisbon Street Overpass Rehabilitation project along with 5 new catch basins.

c. MTA Highway Maintenance Department Construction Projects

MTA's Highway Maintenance Department completed four (4) 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 2009.

d. Post Construction Maintenance and Inspection

Operations & Maintenance (O&M)

A summary of the O&M tasks accomplished in 2009 is presented in **Table 5** of **Appendix B**. The most common maintenance activities accomplished by MTA's Highway Maintenance Department in 2009 included sweeping of paved (impervious) surfaces, such as roadways, toll plazas, service plazas, crossovers, maintenance yards, and commuter parking lots. MTA continues to inspect 100% of the catch basins and associated culverts; repairs and catchment cleanouts are subsequently performed as needed. Similar to previous years, approximately 50% of the catch basins contained enough sediment to require cleaning.

[1] The remaining projects, listed in **Table 2**, did not install any new permanent BMPs or have MOA requirements beyond typical ESC measures (i.e., basic standards).

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

In 2009, 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 2009. 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. All box culverts and all pipes 60 inches in diameter and larger were inspected in 2009 (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 significant areas of erosion or drainage concerns in 2009 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 2009, 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 14.5 miles of Urbanized Areas (UAs) as indicated in the 2000 Census. In support of the SPMP's six minimum control measures, 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 2010, MTA began the development of a new stormwater compliance program to ensure all stormwater related activities and other environmental considerations are documented in a singular binder for and during construction projects. The compliance program, known as the Construction Project Environmental Compliance (CPEC) program, separates all construction projects into three phases (i.e., Project Development, Construction, and Post-Construction) and identifies applicable requirements and activities for each project undertaken by MTA. All stormwater related documentation is kept in a single CPEC binder for each project during each of these three phases of the project along with a corresponding checklist to ensure compliance is maintained throughout the project by appropriate MTA and/or contractor personnel.

III. ACTIVITIES AND CONSTRUCTION PROJECTS PLANNED FOR 2010

a. Training

In addition to continuing to maintain certification for key employees with the DEP's NPS Training Program in 2009, 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 2009 by regulatory specialists from GZA GeoEnvironmental, Inc. (GZA) and MTA alike. The training was attended by approximately 111 MTA employees. MTA will continue to train employees in the following areas:

- impacts of non-stormwater discharges;
- job-specific responsibilities associated with the SPMP;
- 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; and
- 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.

Prior to conducting training, the combined SPCC/Stormwater training curriculum was updated circa April 2009 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.

b. Contracted Projects

In 2009, MTA efforts were focused on bridge repair/maintenance projects, upgrades to buildings (e.g. York toll rehabilitation and Litchfield and West Gardiner materials storage building, etc.), and smaller scale linear projects with operations and maintenance components, as opposed to the larger Turnpike Widening effort that was completed in 2004. In 2010, MTA will continue to primarily focus on bridge repair/maintenance projects, pavement rehabilitation, and other small scale 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 binders for all of these projects ensures 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 enable and facilitate MTA Highway Maintenance's role in the recordkeeping process of any construction projects involving permanent BMPs within their territory.

d. Operations & Maintenance

HNTB will continue to perform the Annual Inspection of MTA, which includes infrastructure (e.g., bridges, buildings, roadways, 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 Best Management Practices (BMPs). These proposed BMPs (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. In addition, the development and implementation of the new CPEC program will enable and facilitate MTA Highway Maintenance's role in the post-construction O & M of newly installed BMPs within their territory.

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 McConihe, Resident Engineer
Gerry Ouellette, Resident Engineer
Scott Warchol, Project Coordinator
Wes Jackson, Director of Highway & Equipment Maintenance
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
Roger Cabana, 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.
Ron Affonso

Trevin Cobb
Mark Desenberg
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 2009 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				
Dionne, Rick	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Cabana, Roger	MTA			Pollution Prevention (SPCC/Stormwater Phase II)
Cook, Dale	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Franklin, Bill	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II) Conference on Better Roads and Parking: Design and Construction Maintenance
Jackson, Wes	MTA		Y	
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		Pollution Prevention (SPCC/Stormwater Phase II)
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	Pollution Prevention (SPCC/Stormwater Phase II)
Thomspon, Bill	MTA		Y	Pollution Prevention (SPCC/Stormwater Phase II)
Warchol, Scott	MTA		Y	
Wells, Bill	MTA		Y	
PRIMARY CONTRACTOR PERSONNEL				
Affonso, Ron	HNTB		Y	
Blake, Greg	HNTB	Y		
Cobb, Trevin	HNTB		Y	
Cote, Tim	HNTB	Y		
Driscoll, Bob	HNTB	Y		
Driscoll, Lori	HNTB	Y		
Desenberg, Mark	HNTB		Y	
Ettinger, Donald	HNTB	Y		
Fagerlund, Walter	HNTB	Y		
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		
Waugh, Jamie	HNTB		Y	

TABLE 2 - LIST OF CONSTRUCTION PROJECTS

Maine Turnpike Authority

This table provides a summary of construction contracts and solicitations issued in 2009

Contract Number	Approximate Location	Description	Linear or Non-linear Project
2009.01	Saco/Scarborough	2009 Pavement Rehabilitation (Mile 35.5 to 43.3)	Linear
2009.02	Falmouth	Bridge Rehabilitation (Falmouth Spur - Blackstrap, MCRR)	Linear
2009.03	Lewiston	Bridge Rehabilitation (Route 196-Lisbon Street)	Linear
2009.05	West Gardiner	Guardrail Modifications	Linear
2009.06	West Gardiner	Material Storage Building	Non-linear
2009.07	Litchfield	Material Storage Building	Non-linear
2009.08	West Gardiner	Travel Plazas Truck Expansion	Linear

Contract Number	Approximate Location	Description	Linear or Non-linear Project
S2009.51	York	York Railing Repair	Linear
S2009.52	Lewiston and Litchfield	Fuel system removals	Non-Linear
S2009.53	Various	Traffic Count Stations	Non-Linear
S2009.54	Lewiston and Litchfield	Lewiston & Litchfield Service Plaza Building Demolition	Non-Linear
S2009.55	West Gardiner	West Gardiner Truck Parking Expansion and TSE installation	Non-Linear
S2009.56	York	York Toll Rehab	Linear
S2009.57	Portland	Forest Ave Bridge Joint Repair	Linear

TABLE 3 - BMPs ASSOCIATED WITH PROJECTS IN 2009

Maine Turnpike Authority

This table is an inventory of permanent BMPs installed by the MTA contracts and soliciations in 2009 (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	Other
2009.01	Pavement Rehabilitation - Mile 35.3 to Mile 44.5 NB & SB	2009									3 installation 32 upgrades	
2009.03	Lewiston Route 196/Lisbon Street Overpass Rehabilitation	2009			1						5	
	All Projects Total:		**0**		**1**		**0**	**0**			**40**	

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 2009

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)
Gray HMF	Culvert & washout repair at MM 54 NB		1 (30 tons of riprap)					
Auburn HMF	Access Road NB 73.1			1				
Litchfield and Gardiner HMF	102 NB Sign base installed				750			
	Litchfield Maintenance elctric line installation				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 2009

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	0	0	40	1,512	241	150	45	64	17
Kennebunk HMF	Wells to Saco	1	0	0	36	21,703	229	82	85	30	50
South Portland HMF	Saco to Falmouth	3	1	0	30[3]	1,250	179[4]	82	48	21	160
Gray HMF	Falmouth to New Gloucester	0	3	0	29	7,100	152	84	28	28	75
Auburn HMF	New Gloucester to Sabattus	0	18	3	40	475	303	155	115	33	80
Litchfield and Gardiner HMF	Sabattus to Augusta	0	all	0	45	2,158	256	100	45	70	89
TOTALS	**Kittery to Augusta**	**4**	**22**	**3**	**189.2**	**34,198**	**1,181**	**653**	**366**	**246**	**470.9**

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] South Portland 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] South Portland 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 2010

Maine Turnpike Authority

This table is a summary of anticipated construction contracts to be issued in 2010

Contract Number	Approximate Location	Description
2010.01	Portland	2010 Pavement Rehabilitaiton & Guardrail Improvements (Mile 2.2 to 6.8).
2010.02	Sabattus	Bridge Rehabilitation
2010.03	Portland and Falmouth	Bridge Rehabilitation
2010.04	Auburn	Bridge Rehabilitation
2010.05	South Portland	Bridge Repair
2010.06	Kennebunk	Bridge Construction
2010.07	Kittery and York	2010 Pavement Rehabilitaiton & Guardrail Improvements (Mile 44.0 to 51.2).

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 2010

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

ANNUAL ENVIRONMENTAL TRAINING

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

Prepared and conducted by

GZA GeoEnvironmental, Inc.

MAY 2009

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GZA GeoEnvironmental, Inc.
MAY 2009

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TRAINING OVERVIEW:

- Review MTA's Plans and BMPs
- Spill Response procedures and notifications
- Review stormwater management requirements
  - Urbanized Areas
  - Urban Impaired Streams
- Highlight Erosion and Sedimentation Control (ESC) requirements for all MTA projects

Let's start with SPCC requirements first….

1

SPCC Regulatory Background

- Federal Regulations set standard
  - EPA's Oil Pollution Prevention Regulations (40 CFR 112)
- Supplemental State Rules
  - CMR Chapter 800 and 801 -- Identification and Remediation of Oil and Hazardous Matter

1

SPCC Regulatory Background

ENFORCEMENT OF REGULATIONS

- EPA conducts unannounced inspections and may assess penalties up to $27,500 per day
  - Aggressive Enforcement Program!!
- DEP may also inspect facilities

1

SPCC Regulatory Background

- WHO IS REGULATED BY SPCC MANAGEMENT RULES?
  - Facilities that store more than 1,320 gallons oil (petroleum products) in aboveground storage are subject to
    - ***QUESTION: Can you think of which MTA Facilities STORE MORE THAN 1,320 GALLONS of petroleum products?***
- WHO HAS THE POTENTIAL TO SPILL PETROLEUM?
  - MTA has developed SPCC Plans for all maintenance facilities as a best management practice (BMP)

1

TYPICAL SPCC PLAN: Table of Contents

1

TYPICAL SPCC PLAN: Table of Contents

TABLES

- TABLE 1 INVENTORY OF POTENTIAL POLLUTANT SOURCES
- TABLE 2 POLLUTION PREVENTION TEAM
- TABLE 3 SPILL RESPONSE EQUIPMENT
- TABLE 4 SPILL HISTORY
- TABLE 5 DRAINAGE AREA DESCRIPTIONS
- TABLE 6 POTENTIAL POLLUTANT SOURCES / RISK IDENTIF.
- TABLE 7 POTENTIAL SPILL PREDICTIONS
- TABLE 8 BMP SUMMARY AND IMPLEMENTATION SCHEDULE

FIGURES

- FIGURE 1 LOCUS PLAN
- FIGURE 2 SITE PLAN

1

TYPICAL SPCC PLAN: Table of Contents

- APPENDIX A
  - REGULATORY CROSS-REFERENCE MATRIX
- APPENDIX B
  - EMERGENCY RESPONSE GUIDE / CONTACT INFORMATION
- APPENDIX C
  - INTERNAL EMERGENCY CONTACT NOTICE
- APPENDIX D
  - SPILL REPORT FORMS
- APPENDIX E
  - NOTICE TO OIL DELIVERY DRIVERS
- APPENDIX F
  - ROUTINE FACILITY INSPECTION REPORTS
    CORRECTIVE ACTION REPORTS
- APPENDIX G
  - DOCUMENTATION OF ANNUAL TRAINING

1

MOST IMPORTANT PARTS OF SPCC PLAN

- FIGURE 2
  - Oil Storage Locations
  - Drainage Features (described in Table 5)
- APPENDIX B THROUGH APPENDIX F
  - App B – Emergency Spill Info (see Table 3)
  - App C – Notification Info
  - App D – Spill Report Form
  - App F – Inspection Forms

THIS FACILITY SPECIFIC INFORMATION IS PROVIDED IN TRAINING HANDOUTS FOR REFERENCE TODAY!!!

1

OIL STORAGE LOCATIONS:

TWO QUESTIONS:

#1 Where are quantities of oil stored or handled at your Maintenance Facility?

USE FIGURE 2 HANDOUT TO CHECK YOUR ANSWER(S)

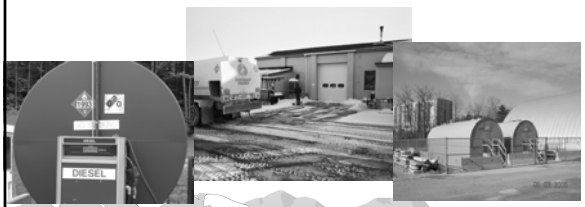
Now #2….What if there was a release from these locations, where would the spill go?

LET'S FIND OUT…

1

OUTSIDE?
EXTERIOR DRAINAGE FEATURES

- Direct Discharge: Storm Drains, catch basins, etc.
- Indirect Discharge: Surface drainage to nearby streams or wetland



How close are they to OIL STORAGE LOCATIONS?

INSIDE?
INTERIOR DRAINAGE FEATURES

Are there any INTERIOR DRAINAGE FEATURES are present at your Maintenance Facility?

- Floor drains: WHERE DOES THE LIQUID GO?

1

INSIDE?
INTERIOR DRAINAGE FEATURES

- Holding tank wastewater pumped and disposed as industrial wastewater
  - contamination - additional disposal $$$
  - may change in hazardous waste generator status

$$$$$$$$$$$$$$$$$$$$$$$$

BE CAREFUL OF WHAT GOES DOWN THE DRAINS!!!

$$$$$$$$$$$$$$$$$$$$$$$$

1

INTERIOR DRAINAGE FEATURES:
Cleanup = $$$$

DRAINAGE FEATURES:
Potential Spill Pathways

"Why is it so important to identify all oil storage locations and drainage features?"

...because oil can enter the "navigable waters" by one or more of the following potential spill pathways:

1. **Direct spillage into drainage system**
2. **Spillage into a floor drain or other conduit that discharges into the streams**
3. **Overland flow to streams**

1

DRAINAGE FEATURES:
Potential Spill Pathways

Do you have any areas where direct spillage into drainage system could occur?

1

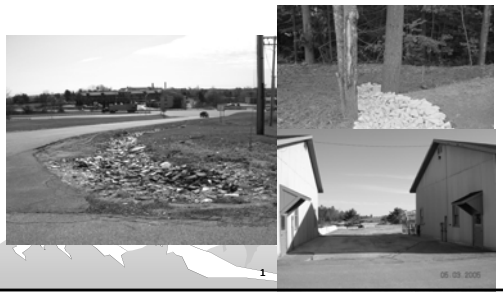
DRAINAGE FEATURES:
Potential Spill Pathways

any direct conduits to the environment?

1

DRAINAGE FEATURES:
Potential Spill Pathways

Any areas where overland flows may be directed to a stream, wetland or other waterbody?



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POSSIBLE SPILL SCENARIOS

- At your facility, what are the most common types of spills?
- What was the last spill at your facility?

1

SPCC PROGRAM GOALS

THREE GOALS

1. SPILL PREVENTION
   - Prevent spills before they happen
2. SPILL CONTROL
   - Control spills before they reach the environment
3. SPILL COUNTERMEASURES
   - Establish response procedures in the event of a spill

1

SPCC PROGRAM GOALS

How do we achieve the three (3) SPCC Goals?

1. SPILL PREVENTION
   - Installation of required equipment/systems
   - Preventive and routine maintenance
   - Security
   - Best management practices for oil storage/handling
   - Training
   - Inspection and corrective action
2. SPILL CONTROL
3. SPILL COUNTERMEASURES

1

Spill Prevention BMPs

- *TANK MONITORING AND ALARM SYSTEMS*
- Veeder-Root monitoring systems on ASTs at several MTA maintenance facilities
  - Inventory monitoring
  - Leak detection
- Level alarms and overfill protection on ASTs, USTs, and holding tanks
- Routine checks and preventive maintenance on monitoring/warning systems

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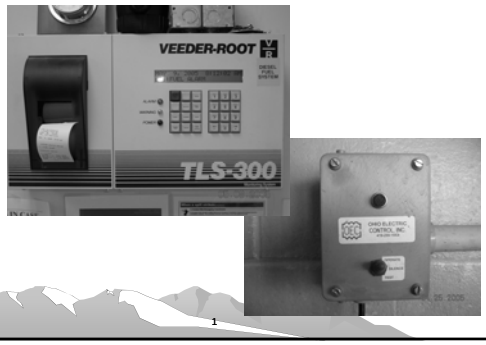
Spill Prevention BMPs



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Spill Prevention BMPs

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Spill Prevention BMPs

LOADING/UNLOADING PROCEDURES –

NOTICE FOR DELIVERY DRIVERS

Spill Prevention/Control BMPs

BMPs relating to oil storage and handling

Spill Prevention BMPs

- ANNUAL TRAINING
  - Initial training - 2002
  - Annual updates and reviews for significant changes (e.g., new tank installation)
  - New employees or changes in job duties

Spill Prevention BMPs

INSPECTIONS – REQUIRED MONTHLY*

- Tanks/Containers/Equipment are checked for the following:
  - signs of spills or leakage
  - good condition (i.e., not rusted, dented, etc.)
  - properly closed
  - fuel lines not leaking
  - containers or equipment are placed for easy access
  - proper labeling of drums, tanks, containers
  - secondary containment in good condition
  - accumulation of material within secondary containment
  - CORRECTIVE ACTIONS TO BE NOTED ON INSPECTION FORM
  - RECORDS TO BE MAINTAINED ON-SITE IN SPCC PLAN

SPCC PROGRAM GOALS

How do we achieve the three (3) SPCC Goals?

1. SPILL PREVENTION
2. SPILL CONTROL
   - Secondary containment
   - Monitoring of leak detection systems
3. SPILL COUNTERMEASURES

Achieving Spill Control

- Respond immediately to alarms.
- Provide secondary containment for all tanks and containers:
  - Oil drums/containers are stored on “spill pallets”.
- Perform regularly scheduled tests on monitoring systems to ensure that they are operational, including leak detection and overfill protection.
- Employ temporary containment systems during transfers.
- Report all spills and unusual observations to Supervisor

Spill Control BMPs

- Leak detection systems
- Monitoring and inspections
- Secondary containment
- Spill response equipment and supplies
- Security
- BMPs during transfers and operations with high spill potential

1

Spill Control
Secondary Containment

1

Spill Control
Spill Response Materials



1

Spill Control
Spill Response Materials

- Located at or near each tank and container storage location

1

Spill Control
Spill Response Materials

- Spill materials include:
  - Absorbent pads and Spill Magic
  - Pig Co ® 65 gallon Overpak Spill Kit containing the following equipment/material:
    - 10-48 in. Socks; 6-10 ft. Socks; 6-Pillows; 56-Wipers; 40 PIG® Mat Pads; 6-Disposal bags & ties; 6-Tamper Proof Labels; 1-Emergency Response Guidebook; 1-Instruction Manual
  - Spill mats for covering catch basins/floor drains
  - Protective Gloves/Suits and Safety Glasses/Goggles
  - Caution tape for securing spill area
  - Shovels and bags for collection of clean-up material

1

Spill Control
Security

Spill Control
BMPs during oil transfers

• How does this help control spills?

1

SPCC PROGRAM GOALS

How do we achieve the three (3) SPCC Goals?

1. SPILL PREVENTION
2. SPILL CONTROL
3. SPILL COUNTERMEASURES
   - Quick spill response activities/training
   - Spill control equipment and materials
   - Emergency response assistance

1

Spill Countermeasures

Steps in an Oil Spill

- Observation and Evaluation / Assess Situation
- Reporting and Seeking Assistance (Contact SPCC Emergency Coordinator)
- Initial Containment / Protect Receptors
- Containment (stop or contain the spill)
- Spill Cleanup
- Follow-Up/Incident Analysis
- Restoration/Compensation

☺REMEMBER: Personal safety is top priority!!! You should attempt to contain the spill only if you and others are not endangered by doing so.

☺SEE HANDOUT of Appendix B

1

Spill Countermeasures

Response to spill will vary depending on type of spill

- Incidental spills:
  - MTA employees can respond
- Non-Incidental spills:
  - Certified contractor will respond

1

Spill Countermeasures

What is an incidental spill?

- Incidental spills: "Incidental spills" are considered those spills:
  - in which personnel are familiar with the hazards associated with the spilled material; and
  - containment and response do not pose potential safety or health hazards;
  - can be controlled in the immediate release area; and
  - which do NOT reach the environment; and
  - which are less than 5 gallons.

1

Spill Countermeasures

For Incidental Spills ONLY

1. Assess the spill situation (source, material, quantity, limits).
2. REMEMBER: Personal safety is top priority!!! -attempt to contain spill only if you can do so without risk!
3. Extinguish all source of ignition.
4. Use personal protective equipment (PPE) as appropriate for hazards of the spilled material and your level of training

1

Spill Countermeasures

For Incidental Spills ONLY

5. Evacuate unnecessary personnel –secure spill area w/ caution tape
6. Protect potential receptors/cut off migration pathways
7. STOP THE LEAK and CONTAIN THE SPILL!!!
8. Use appropriate spill response equipment
9. Assist with Spill report and any follow up as requested

1

For Non-Incidental Spills:

- REMEMBER: Personal safety is top priority!!!
- Cover/protect floor drains & catch basins, if you can do so without risk.
- Evacuate and secure the spill area.
- Immediately report the spill to SPCC Emergency Coordinator (EC)
- EC will notify MTA Communications Center and John Branscom, MTA Environmental Coordinator, and decide whether outside assistance is needed
- If required, MTA Communication Center will contact emergency response agencies and Maine DEP.
- Provide as much information as possible about the spill (e.g., nature of spill, location and quantity of oil released).
- Remain close to the site to direct responders to the spill location (as long as you are in a safe position).

1

Spill Countermeasures

Where are Emergency Contact Lists (ECL) located?

Review ECL handout

1

Spill Countermeasures

Document ALL spills:

- Ensure that SPILL REPORT FORM has been completed, reviewed with affected parties, signed and filed in SPCC Plan and with MTA Environmental Services Coordinator
- Discuss what must be done to prevent another occurrence
  - Was the response quick and effective?
  - Should anything be done to enhance the prevention, control and/or response system?

1

Spill Countermeasures

- VERY IMPORTANT!
  - Restock Spill Kits with replacement items and additional items, if necessary.

1

QUESTIONS

SPILL PREVENTION, CONTROL OR RESPONSE

48

STORM WATER POLLUTION PREVENTION

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

Maine DEP MPDES Programs

"…regulate construction, industrial activities and municipal storm seweres…"

- *Requirements under Maine DEP*
  - *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*
    - *Applicable within Urbanizes Areas*
- *NEW!! Requirements in Urban Impaired Streams*

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
- 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

PROGRAM OVERVIEW : Storm Water Training

- **Introduction**
- **Best Management Practices (BMPs) at your Maintenance Facilities**
- **Requirements in Urbanized Areas (UAs) along Turnpike**
  - **Illicit Discharge Detection and Elimination Program**
    - Catch Basin (CB) cleanouts and assessments
    - CB and Outfall inspections

1

PROGRAM OVERVIEW : Storm Water Training

- **Best Management Practices (BMPs) when conducting earthwork projects**
  - Regardless of size
  - All projects included
  - Reference MaineDOT BMP Manual
- **Inspection and Maintenance required for all newly installed structural BMPs**
  - For example, infiltration basins at West Gardiner

1

SO…
where are these UAs subject to storm water regulations?

- "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

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….

1

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

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

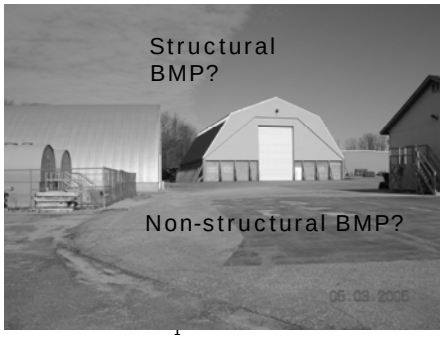
Let's focus on Maintenance Facilities first….

…Before we move on to construction

1

Review of Stormwater BMPs

Indoor sand and salt storage



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Review of Stormwater BMPs

Vehicle washing procedures

Only RINSE outside at designated rinse point!

Only WASH inside in designated wash bay!

1

Storm Water Pollution Prevention: BMPs at Maintenance Facilities

Solid waste management

What's wrong with this picture? ➔

What's right about this picture? ➔

1

Storm Water Pollution Prevention: BMPs at Maintenance Facilities

Capping Hydraulic Lines

1

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

1

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.)

1

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

Calcium chloride

Paint overspray

Others?

1

Review of Stormwater BMPs

Now, let's move on...

...to the mainline and other areas

1

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

- Comply with requirements outlined in SPMP and Permit
  - Five-Year Permit Program addressing 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

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

- IDDE Program has been implemented within all Urbanized Areas (UAs) over five years
  - Mapping has been conducted by Scott Lachance and GZA using GPS data points collected for all CB and outfalls within UA
  - Maps have been provided to each HM/EM Facility
- Dry Weather Inspections of Storm Water Catch Basins and Outfalls within UAs
  - Initial inspection performed when mapped
  - GZA has performed follow up dry weather inspection throughout summer months
  - Not sure who will be doing inspections this year?
    - GZA or MTA Highway Maintenance?
  - 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

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ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)
NITTEW a TWIN FORM
Maine Turnpike Authority

INCIDENT DESCRIPTION

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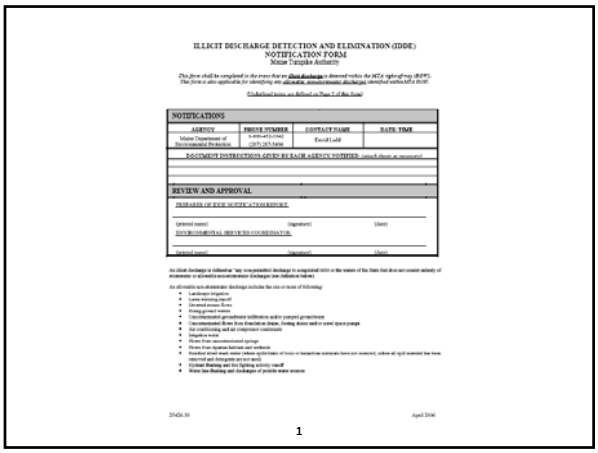

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)
NOTIFICATION FORM
Maine Turnpike Authority

NOTIFICATIONS

AGENCY	PHONE NUMBER	CONTACT NAME	DATE/TIME
Maine Department of Environmental Protection	1-800-452-1942 (207) 287-3456	Harold Ladd	

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

REVIEW AND APPROVAL

PREPARER OF ESCR NOTIFICATION REPORT

(printed name) (signature) (date)

ENVIRONMENTAL SERVICES COORDINATOR

(printed name) (signature) (date)

1

IDDE NOTIFICATION:

1

TYPICAL OUTFALL:
What do you call this?

1

ARE THESE OUTFALLS?

1

INTERCONNECTION BETWEEN CATCH BASINS

1

SO…
what <u>else</u> 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 including training for locating illicit discharges…"

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

1

CATCH BASIN CLEANOUT TRACKING FORM

MPDES Permit Part IV(D) 3. Illicit Discharge Detection and Elimination.
Each permittee must develop, implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges, as defined in 06-096CMR22(4)(A)(2), except as provided in Part IV(D)(3)(1) 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."

DATE OF CLEANOUT	CB IDENTIFIER (Example: map-lot)	CB LOCATION with nearest Mile Marker (Example: in I-1 Median, Northbound)	UNUSUAL ODOR/COLOR (Yes or No) If yes, describe	EXCESSIVE OIL (Yes or No) If yes, describe	FOAM OR SCUM? (Yes or No) If yes, describe	VISCOUS? (Yes or No) If yes, describe	INITIALS OF INSPECTOR AND ANY COMMENTS include other suspicious characteristics and/or any damage observed

1

CATCH BASIN CLEANOUT TRACKING FORM

- DATE OF CLEANOUT
- CB INDENTIFIER
- CB LOCATION

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CATCH BASIN (CB) LOCATION

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CATCH BASIN (CB) IDENTIFIER

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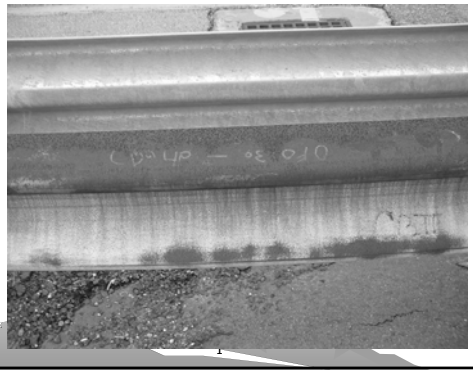
CATCH BASIN (CB) IDENTIFIER



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CATCH BASIN (CB) IDENTIFIER: Use Outfall Information

All outfalls are identified on the delineator post located next to the outlet

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CATCH BASIN CLEANOUT TRACKING FORM

- UNUSUAL ODOR/COLOR

CATCH BASIN CLEANOUT TRACKING FORM

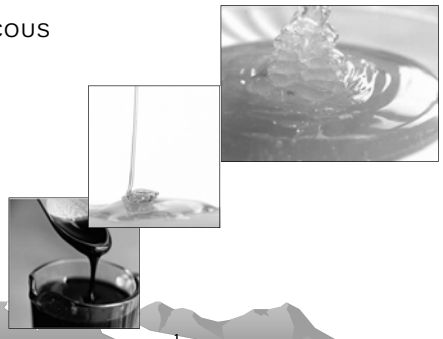
- EXCESSIVE OIL

CATCH BASIN CLEANOUT TRACKING FORM

- FOAM OR SCUM

CATCH BASIN CLEANOUT TRACKING FORM

- VISCOUS



CATCH BASIN CLEANOUT TRACKING FORM

- 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?

What type of comments would you make here?

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

Review of Permit Requirements

How can all of this data be tracked?

MaineDOT requires Foremen to

- Conduct inspections of existing and new BMPs
- Prepare project-specific Erosion and Sedimentation Control (ESC) Plans
- Maintain hay bales in truck at all times during construction season

103

Review of Permit Requirements

Question 3:

What is the difference between erosion and sedimentation?

104

Erosion and Sedimentation

- **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.**

105

Review of Permit Requirements

What BMPs are involved with Ditching?

106

BMP REQUIREMENTS: DITCHES

- **Existing ditches shall be maintained until the new ditches are stabilized.**
  - Stone check dams shall be placed in existing ditches prior to construction to prevent the release of sedimentation
  - Stone check dams shall be installed at the outlets of all existing and proposed ditches adjacent to all streams

107

BMP REQUIREMENTS: DITCHES

- **For proposed ditches, stabilize the outlet first and build from the bottom up. Only excavate what can be stabilized or protected by the end of the work day.**

108

Temporary Stabilization Method

Ditch Stabilization

All disturbed ditches shall be stabilized by the end of each workday.

- ❖Stabilization shall be maintained on a daily basis
- ❖Erosion control blanket shall be installed in the bottom of all ditches except where a stone lining is planned. Seed shall be applied prior to the placement of the blanket.

109

BMP REQUIREMENTS: DITCHES

Permanent Stabilization

110

CULVERT REPAIR & MAINTENANCE

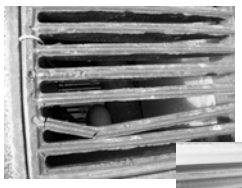
111

Review of Permit Requirements

Is a downspout a BMP?

112

CATCH BASIN REPAIR & MAINTENANCE



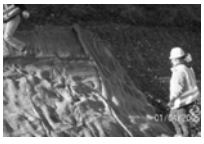
113

REVIEW OF PERMIT REQUIREMENTS

SLOPE REPAIR

All temporary erosion control devices shall be in place prior to any embankment and excavation operations

Temporary Stabilization = mulching, surface roughening
versus
Permanent Stabilization = ???



114

SLOPE AND RIGHT OF WAY REPAIRS

115

REQUIREMENT:

Permanent Stabilization

Permanent slope stabilization measures shall be applied 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.

116

PERMANENT SLOPE STABILIZATION: STONE DITCH PROTECTION

117

PERMANENT SLOPE STABILIZATION: RIPRAP DOWNSPOUTS

118

REQUIREMENT:

Winter Stabilization

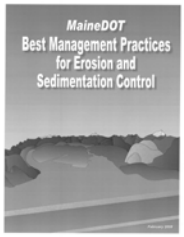
Temporary winter stabilization must be used between November 1st and April 1st or outside of said time period if the ground is frozen or snow covered.

- Cover all disturbed soils and seeded ground

119

Review of Permit Requirements

Resource for temporary ESC BMPs

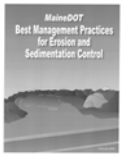


...to install new structural BMPs

120

Review of Permit Requirements

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

121

Review of Permit Requirements

- **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

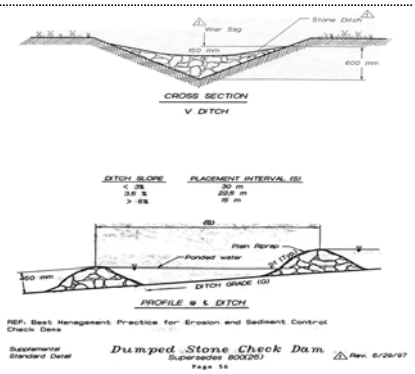
122

Review of Permit Requirements

What about a stone check dam?

123

TYPICAL CHECK DAM DETAIL



124

Review of Permit Requirements

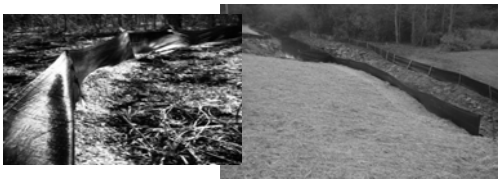
What about a bark mulch berm a BMP?

125

Review of Permit Requirements

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**



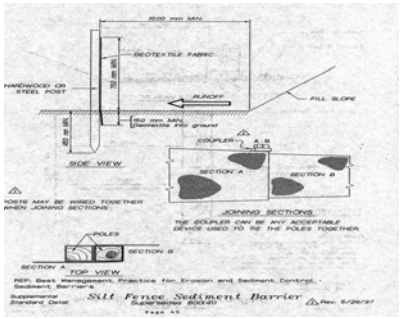
126

Review of Permit Requirements

What's wrong with this picture?

127

TYPICAL SILT FENCE DETAIL

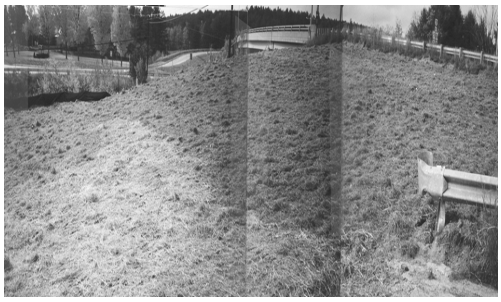


See BMP Manual for updated specifications (Section III:41)

128

Review of Permit Requirements

Is applying hay mulch a BMP?

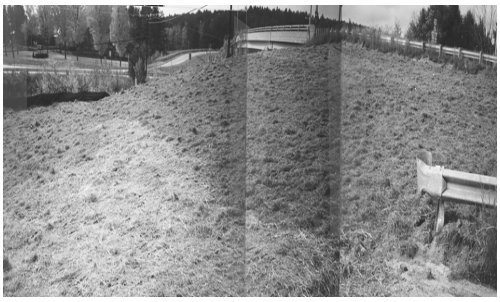


129

Review of Permit Requirements

How much should be applied?

When should it be applied?



130

Temporary Stabilization Method

Mulch!

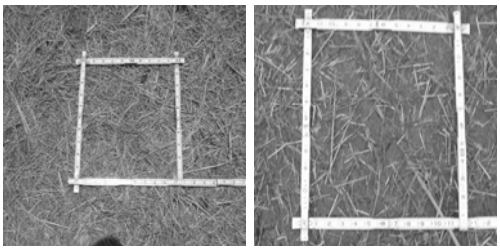
Newly disturbed earth shall be mulched or otherwise stabilized by the end of each workday.

- Mulch shall be maintained on a daily basis

131

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

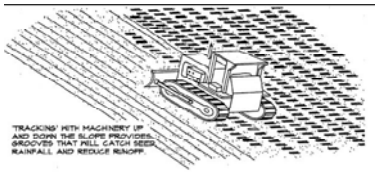
132

Temporary Stabilization Method

Surface Roughening (Tracking)

Bare earth slopes shall be roughened to dissipate sheet flow.

This should be accomplished by "tracking" the slope perpendicular to the centerline (e.g. "track" the equipment up and down the slope).



TRACKING

❖ Which is steeper a 3:1 or 2:1 slope?

Sec-III:27 of DOT BMP Manual

133

OTHER REQUIREMENTS:

Inspections and Reporting

A daily inspection log must kept for the duration of the project.

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

134

OTHER REQUIREMENTS:

Inspections and Reporting

- The daily log should include the following:
  - On-site precipitation
  - Air temperature
  - Signed by certified inspector
  - Notes on all ESCs in place
    - How they performed?
    - If they failed?
    - Any corrective actions required/taken?
- The log must be updated at least
  - Weekly
  - After all significant storm runoff
  - After flood events
  - Even when work has been suspended temporarily

135

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 supplies 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

136

OTHER CONSTUCTION REQUIREMENTS:
BMPs for Protecting Natural Resources

- **Work in wetlands is prohibited**
  - **...except to the minimum extent necessary for completion of detailed work.**
  - Excavated and other materials shall not be stockpiled in wetlands.
  - Hay bales, silt fences or other suitable barriers shall be used, where necessary, to prevent sedimentation from eroding materials.
- **Disturbance of natural resources beyond the construction limits shown on work plans is NOT allowed.**

137

OTHER CONSTUCTION REQUIREMENTS:
General BMPs for Channels, Culverts and Pipes

- **Before allowing permanent channels to carry water, they shall be stabilized.**
  - This may require the installation of temporary erosion control BMPs or temporarily diverting flows.

138

OTHER CONSTUCTION REQUIREMENTS:
General BMPs for Channels, Culverts and Pipes

- **All cross culvert outlets shall be armored before the end of the work day**

- **Construction operations may require the placement of a temporary pipe with fill over a ditch line to provide access to a work area**

139

OTHER CONSTUCTION REQUIREMENTS:
General BMPs

- **Prior to conducting clearing and grubbing operations, temporary and permanent sedimentation control measures shall be installed.**
- **Temporary and permanent erosion and sedimentation controls shall be inspected and maintained during periods of approved suspension (e.g., even when earthwork for project is on hold or not being conducted).**
- **Contain all demolition debris (including debris from wearing surface removal, sawcut slurry, dust, etc.) and do not allow it to discharge to any resource. Dispose of debris should be in accordance with Maine Solid Waste Law, Title 38 M.R.S.A., Section 1301 et. seq.**

140

OTHER CONSTUCTION REQUIREMENTS:
VERY IMPORTANT!!

- **Temporary erosion control measures shall be maintained until the site is stabilized with vegetation or other permanent control measures**

141

OTHER CONSTUCTION REQUIREMENTS:
VERY IMPORTANT!!

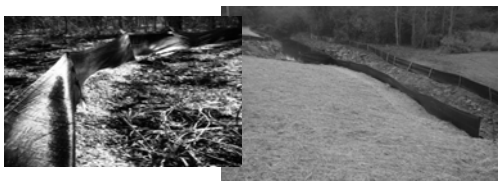
- **Regardless of the time of year, take appropriate measures to prevent erosion or sedimentation from occurring AND to correct any existing problems**

142

Review of Permit Requirements:
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**



143

Review of Permit Requirements:
VERY IMPORTANTT!!

Mulch!

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

- Mulch shall be maintained on a daily basis

144

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

145

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 to DEP
- **More changes are on the way....**
  - Inspections of Permanent BMPs

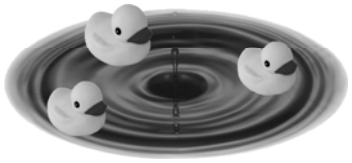
146

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.

147

Thank You



...and keep up the GREAT WORK!!

148

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.

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.

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).

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."*

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.

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.

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).

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.

EMERGENCY CONTACT LIST
GRAY HIGHWAY MAINTENANCE FACILITY

EMERGENCY COORDINATORS
Discoverer shall contact one of the following in the order presented

Primary Emergency Response Coordinator	Gary Montague, Highway Maintenance Supervisor	Office: (207) 657-5867 Cell phone: (207) 838-6826 Pager: (207) 759-8503
First Alternate Emergency Response Coordinator	Andy Perry, Highway Division Manager	Office: (207) 582-6350 Cell phone: (207) 831-5813 Pager: (207) 759-9721
Second Alternate Emergency Response Coordinator	Wes Jackson, Director of Highway & Equipment Maintenance	Office: (207) 871-7771 ext. 113 Cell phone: (207) 831-5811 Pager: (207) 750-2748

OTHER MTA CONTACTS
Discoverer or EC shall contact each of the following as soon as possible

MTA Communications Center	(207) 871-7771 ext.4
Arlo Pike, Safety Coordinator	(207) 871-7771 ext. 358; cell: 831-8225
John Branscom, Environmental Services Coordinator	(207) 871-7771 ext. 359; cell: 671-3487; pg: 471-0881

OTHER AGENCIES EMERGENCY CONTACT
(EMERGENCY DIAL 911 – other number for reference, if needed)

Gray Fire Department	**911** or (207) 657-3931
Maine State Police	(800) 482-0730
Maine Department of Environmental Protection **Spill Hotline** Central Office	 **(800) 482-0777** (207) 287-7688
Maine Emergency Management Agency (MEMA)	(207) 287-4080
Maine State Emergency Response Commission	(800) 452-4464
Centers for Disease Control	(800) 311-3435
National Response Center	(800) 424-8802
EPA Region 1	(617) 223-7265 (24 hours)

SPILL RESPONSE CONTRACTORS
EC will contact if spill recovery and/or cleanup assistance is required

Petroleum/Fuel Suppliers: No. 2 Fuel Oil: Union Oil Co. Propane: Downeast Energy Motor & Lubricating Oils: Maine Lubrication Services	 (207) 799-1521 (207) 799-5585 (207) 772-6513
Clean Harbors Environmental Services	(207) 799-8111 -
Environmental Projects, Inc.	(207) 786-7390
ENPRO Services, Inc.	(207) 799-0850

When a spill strikes.....

1. Contact Site Emergency Coordinator

If not present when the spill is initially observed the Emergency Coordinator or back-up Coordinator should be immediately contacted. The Coordinator shall then direct actions at the site relative to the spill.

2. Assess the risk:

From the moment a spill occurs and throughout the response, determine the risks that may affect human health, the environment, and property. Always put safety FIRST. If possible, identify the spilled material, its source, and determine how much was spilled. Identify potential receptors (drains, etc). Determine if spill is minor, "Incidental" or "Non-incidental". If "Non-incidental" report immediately to MTA Communication Center. Com Center will contact emergency response agencies. Consider need to evacuate area where spill has occurred.

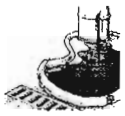
3. Extinguish all sources of ignition

Assess potential fire hazards. Extinguish or remove sources of flame or spark.

4. Select personal protective equipment (PPE):

If spill is " Incidental" and will be cleaned up by site personnel, choose the appropriate PPE to safely respond to the spill. Consult Material Safety Data Sheets (MSDS) and literature from chemical and PPE manufacturers for the best recommendations. If you are uncertain of the danger and the material is unknown, allow outside response agencies to respond to the incident.

5. Confine the spill / protect receptors:



SPEED COUNTS! Limit the spill area by blocking, diverting, or confining the spill. Use contained absorbents including the Socks, Booms and Mats found in spill kits. Stop the flow of the liquid before it has a chance to contaminate a water source. Spill kits are designed to facilitate a quick, effective response.

6. Stop the source:

After the spill is confined, stop the source of the spill. This may simply involve turning a container upright, or plugging a leak from a damaged drum or container. Transfer liquids from the damaged container to an appropriate new one.

7. Evaluate the incident and implement cleanup:

Once the spill is confined and the leak has been stopped, it is time to reassess the incident and develop a plan of action for implementing the spill cleanup. Spills are commonly absorbed. Pillows, mat pads, and absorbent can be used to absorb the remainder of the spill. Simply place the pillows and pads throughout the spill area. Once the absorbents are saturated with solvent, etc., they may be considered hazardous waste and should be disposed of as such. Oil soaked absorbents should be double bagged and shipped to an incinerator. Contact ME DEP or ME Dept of Public Safety to report the spill (if hasn't already been reported by the Communication Center).

8. Decontaminate:

Decontaminate the site, personnel, and equipment by removing or neutralizing the hazardous materials that have accumulated during the spill. This may involve removing and disposing of contaminated media, such as soil, that was exposed during spill incident.

9. Complete required reports

Complete all notifications and paperwork required by local, state, and federal guidelines for reporting spill incidents. Failure to do so can result in penalties. Coordinate with the MTA's Environmental Services Coordinator.

10. Conduct incident analysis

The Environmental Services Coordinator will conduct an incident analysis and develop plans to prevent recurrence.

SAFETY FIRST

SPILL REPORT FORM

Maine Turnpike Authority - Gray Maintenance Facility
Mile 63.3 Southbound (Route 115/202)
Gray, Maine 04039

INCIDENT DESCRIPTION

Is The Spill Reportable? ☐ Yes ☐ No

Location Where Occurred: _____

_____

Date Began: _____ Date Ended: _____

Time Began: _____ ☐ am ☐ pm Time Ended: _____ ☐ am ☐ pm

Spill/Release onto or into: (*check all that apply*) ☐ Air ☐ Ground ☐ Water

Material Spilled/Released: _____

_____

Extremely Hazardous Substance (EHS) Involved? ☐ Yes ☐ No

Amounts Spilled/Released: _____

Amounts Recovered: _____

Source and Cause of the Discharge: _____

_____

_____

Is more spillage possible? ☐ Yes ☐ No **If yes**, amount: _____

Description of All Affected Media (*include weather conditions*): _____

_____

_____

What resources are at risk? (*check all that apply*)

☐ Public Safety ☐ Public Water or Well ☐ Private Water or Well ☐ Atmosphere

☐ Land or Ground ☐ Open Water ☐ Surface Drainage ☐ Storm Sewer

☐ Sanitary Sewer ☐ Vapors in Building ☐ Other (*specify*): _____

Damages or Injuries Caused by Discharge: _____

_____

_____

_____

Is an Evacuation necessary? ☐ Yes ☐ No

Corrective Action(s) Taken: _____

_____

_____

_____

_____

SPILL REPORT FORM

Maine Turnpike Authority - Gray Maintenance Facility
Mile 63.3 Southbound (Route 115/202)
Gray, Maine 04039

NOTIFICATIONS (To be made if spill is reportable)

AGENCY	PHONE NUMBER	CONTACT NAME	DATE/ TIME	REPORTING CRITERIA
Gray Fire Department	911 or 657-3931			If aid is needed to evacuate area
Maine State Police/State Emergency Response Commission (SERC)	1-800-482-0730			If aid is needed to evacuate or respond to spill
Maine Department of Environmental Protection				If spill is >5 gal. or visible sheen is present on surface water
SPILL HOTLINE	1-800-482-0777			
Central Office	287-7688			
Maine Emergency Management Agency (MEMA)	287-4080			If aid is needed to evacuate or respond to spill
National Response Center (NRC)	1-800-424-8802			If visible sheen is present on surface water

OTHER EMERGENCY TELEPHONE NUMBERS (for reference, if needed):	
Environmental Protection Agency, Region 1	1-800-424-8802
Clean Harbors Environmental Services	1-207-799-8111
Environmental Projects, Inc.	1-207-786-7390
ENPRO Services, Inc.	1-207-799-0850
Maine Medical Center, Portland, ME	1-207-662-0111
Poison Control Center	1-800-222-1222

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

_____

_____

REVIEW AND APPROVAL

PREPARER OF SPILL REPORT:

_____

(printed name) (signature) (date)

CONTRACTOR SITE SUPERVISOR:

_____

(printed name) (signature) (date)

FACILITY OPERATOR:

_____

(printed name) (signature) (date)

NOTE: In the event of a spill, Table 4 of this Plan should be updated; a copy of this *Spill Report* **must** be retained in Appendix D. A *BMP Incident and Corrective Actions Report* (see Appendix F-2) may also need to be completed and retained as part of this Plan.

APPENDIX F
ROUTINE FACILITY INSPECTION REPORTS

INSTRUCTIONS FOR MTA'S HIGHWAY MAINTENANCE FACILITY'S SPCC INSPECTION PROGRAM:

MONTHLY

1. Complete inspection items #1 through #5 on
Appendix F - Inspection Checklist
(If any issues present during inspection, complete
Appendix F-2 - BMP/PM Incident and Corrective Action Report).

2. Inventory Spill Equipment using pages 6 through 9 of **Inspection Checklist.**

3. Submit completed **Inspection Checklist**
(*and any **Corrective Action Reports**, if necessary*)
to the Environmental Services Coordinator for review and certification.

4. Maintain copies of the completed **Inspection Checklists**
in the facility's environmental file located in the Foreman's office.

QUARTERLY

1. In addition to the Monthly procedures listed above,
complete inspection items #6 through #18 on
Appendix F - SPCC/SWPPP Inspection Checklist
(If any issues present during inspection, complete
Appendix F-2 - BMP/PM Incident and Corrective Action Report).

2. Inventory Spill Equipment using pages 6 through 9 of **Inspection Checklist.**

3. Submit completed **Inspection Checklist**
(*and any **Corrective Action Reports**, if necessary*)
to the Environmental Services Coordinator for review and certification.

4. Maintain copies of the completed **Inspection Checklists**
in the facility's environmental file located in the Foreman's office.

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]	
1. No. 2 Fuel Oil / Underground storage tank (UST) Western side of Building #2 (Paint/Body Shop) - SWPPP SPCC			
- Post a sign at the fill port that warns the driver to disconnect the filling hose and inspect the vehicle for leakage before departure.	Monthly	Yes ☐	No ☐
- Fill port is flush-mounted on the paved driveway and securely capped.	Monthly	Yes ☐	No ☐
- Work areas are maintained in clean and orderly condition.	Monthly	Yes ☐	No ☐
- Inspections of the UST fill port area and surrounding ground surfaces confirm the absence of spills or leaks.	Monthly	Yes ☐	No ☐
- A high level alarm system (audible and visual) is provided at the fill port to ensure proper filling of the UST.	Monthly	Yes ☐	No ☐
2. Virgin Petroleum Products / Motor oil, Hydr/Trans fluids, Lubricants, Rust Preventive Bulk storage (ASTs) within Bldg #3 (3-Bay garage); 55-gallon drums and other misc. containers located in Bldgs #2 and #6 - SPCC			
- Work areas are maintained in clean and orderly condition.	Monthly	Yes ☐	No ☐
- Areas where petroleum products are stored are inspected for evidence of spill or other pollutants discharged or contacting storm water as part of the facility's inspection program.	Monthly	Yes ☐	No ☐
- All containers are properly and plainly labeled.	Monthly	Yes ☐	No ☐
- All containers are maintained in good condition, compatible with its contents and stored in doors on appropriate secondary containment pallets.	Monthly	Yes ☐	No ☐
- Spill response equipment (see Table 3) is located proximate to petroleum storage areas and is available for use during an accidental release.	Monthly	Yes ☐	No ☐
3. Loading/Unloading Areas / No. 2 fuel unloaded at Bldg #2 (Paint/Body Shop) into UST. Holding tank (UST) at Bldg #3 (3-bay garage) cleaned out periodically - SWPPP SPCC			
- Loading/unloading areas are maintained in clean and orderly condition.	Monthly	Yes ☐	No ☐
- Loading/unloading areas are inspected for evidence of spills or other pollutants discrhaged or contacting storm water as part of the facility's routine inspection program (and also prior to delivery truck departure).	Monthly	Yes ☐	No ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]
4. Used Oil / Two 55-gallon drums located in Building 3 (3-Bay garage/Vehicle Maintenance Area) - SWPPP SPCC		
- Spill response equipment (see Table 3) is located proximate to waste oil generation and storage area and is available for use during and accidental release.	Monthly	Yes ☐ No ☐
- Areas where waste oil is generated, accumulated, and/or stored are inspected for evidence of spills or other pollutants contacting storm water.	Monthly	Yes ☐ No ☐
- All containers are properly and plainly labeled.	Monthly	Yes ☐ No ☐
- All containers are maintained in good condition, compatible with its contents and stored indoors on appropriate secondary containment.	Monthly	Yes ☐ No ☐
5. Machinery with oil resevoirs / Storage of three machines with oil resevoirs in Building 7 (4-Bay Garage) - SWPPP SPCC		
- Spill response equipment (see Table 3) is located proximate to machinery storage area and is available for use during and accidental release and includes catch basin drain mats.	Monthly	Yes ☐ No ☐
- Machinery storage areas are inspected on a regular basis for evidence of spills, leaks, or pollutants that may have the potential to contact storm water.	Monthly	Yes ☐ No ☐
- Machinery storage areas are maintained in a clean and orderly condition.	Monthly	Yes ☐ No ☐
6. Antifreeze / Virgin and spent antifreeze Stored within Bldg #3 (if spent antifreeze is characterized as hazardous waste, this spent antifreeze is stored in HazWaste Storage Bldg) - SWPPP HazWaste		
- All containers are properly and plainly labeled.	Quarterly	Yes ☐ No ☐
- Spill response equipment (see Table 3) is located proximate to antifreeze storage and is available for use during an accidental release.	Quarterly	Yes ☐ No ☐
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
- All containers are maintained in good condition, compatible with its contents and stored in doors on appropriate secondary containment pallets.	Quarterly	Yes ☐ No ☐
- Areas where antifreeze is stored are inspected for evidence of spills or other pollutants discharged or contacting storm water (Note: hazardous waste storage areas require daily inspections).	Quarterly	Yes ☐ No ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]
7. Paint and paint by-products / Vehicle paint and paint thinner **Bulk storage within Bldg #2 (Paint/Body Shop); small paint cabinet in Bldg #6 (8-bay) for touch-up paint storage - SWPPP HazWaste**		
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
- Areas where paint and paint by-products are used are inspected for evidence of spills or other pollutants discharged or contacting storm water as part of the facility's regular inspection program (Note: haz. waste storage areas require daily inspections).	Quarterly	Yes ☐ No ☐
- Spill response equipment (see Table 3) is located proximate to painting operations and is available for use during an accidental release.	Quarterly	Yes ☐ No ☐
- All containers are maintained in good condition, compatible with its contents and stored in doors on appropriate secondary containment pallets.	Quarterly	Yes ☐ No ☐
- All containers are properly and plainly labeled.	Quarterly	Yes ☐ No ☐
8. Sandpiles (Indoor Storage) / Sand **Stockpiled within Bldg #10 (Sand/Salt Storage) - SWPPP**		
- The area surrounding indoor sand stockpiles is inspected for evidence of spills or other pollutants contacting storm water as part of the facility's quarterly storm water inspection program.	Quarterly	Yes ☐ No ☐
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
9. Sandpiles (Outdoor Storage) / Sand and Gravel Stockpiles **Northeastern corner of the facility, behind Bldg #6 (8-bay garage) - SWPPP**		
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
- Sand piles are inspected for evidence of spills or other pollutants contacting stormwater, as well as erosion, as part of the facility's quarterly storm water inspection program.	Quarterly	Yes ☐ No ☐
10. Salt Piles (Indoor Storage) / Salt **Stockpiled within Bldg #1 (Salt Shed) - SWPPP**		
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
- Salt piles are inspected for evidence of spills or pollutants, such salt, potentially contacting storm water as part of the facility's quarterly storm water inpection program.	Quarterly	Yes ☐ No ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]	
11. Outdoor Materials and Equipment Storage / Signs, guardrails, arrow and message board trailers, plows, salt racks, tires, etc. stored outdoors around yard - SWPPP			
- Outdoor storage areas are maintained in clean and orderly condition.	Quarterly	Yes ☐	No ☐
- Areas of outdoor material and equipment storage are inspected for evidence for evidence of spills or pollutants contacting storm water as part of the facility's quarterly storm water inspection program.	Quarterly	Yes ☐	No ☐
12. Calcium Chloride (CaCl) Deicing Solution / Liquid CaCl Deicing Solution Tank located outside beside Bldg #1 (Salt Shed) - SWPPP			
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐	No ☐
- This tank and surrounding area is inspected for evidence of spills or other pollutants discharged or contacting storm water as part of the facility's quarterly storm water inspection program.	Quarterly	Yes ☐	No ☐
13. Outdoor Storage of Scrap Materials/Waste Debris / Rubber, wood, metal and concrete debris Stockpiled outdoors in the northern portion of GMF behind the 4- and 8-bay garages - SWPPP			
- Outdoor storage areas are maintained in clean and orderly condition.	Quarterly	Yes ☐	No ☐
- Areas where outdoor storage of scrap materials and waste debris is accumulated and/or stored are inpsected for evidence of spills or other pollutants discharged or contacting storm water as part of the facility's routine inspection program	Quarterly	Yes ☐	No ☐
14. Municipal Solid Waste (MSW) / Municipal solid waste dumpster Located behind Bldg #6 (8-bay garage) - SWPPP			
- The MSW container and the surroudning area are maintained in clean and orderly condition.	Quarterly	Yes ☐	No ☐
- MSW containers are inspected for evidence of spills or other pollutants discharged or contacting storm water as part of the facility's regular inspection program.	Quarterly	Yes ☐	No ☐
15. Vehicle Parking Awaiting Maintenance / Vehicles (e.g., trucks) and equipment (e.g., tractor) parked around yard outside - SWPPP			
- Confine the storage of leaky or leak-prone vehicles/equipment awaiting maintenance to deisgnated areas. At GMF, leaky/leak-prone vehicles are serviced indoors immediately. Vehicles/equipment parked outside awaiting maintenance are inspected regularly.	Quarterly	Yes ☐	No ☐
- Areas where vehicle/equipment parking occurs are maintained in clean and orderly condition.	Quarterly	Yes ☐	No ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]
15. Vehicle Parking Awaiting Maintenance / Vehicles (e.g., trucks) and equipment (e.g., tractor) parked around yard outside - SWPPP		
- Areas where vehicles/equipment are parked awaiting maintenance/repair are inpsected for evidnece of spills or other pollutants discharged or contacting storm water as part of the facility's routine inspection program.	Quarterly	Yes ☐ No ☐
16. Vehicle and Equipment Maintenance / Vehicle and Equipment Maintenance Primarily performed within Bldg #3 (3-bay garage); some other routine maintenance (fluids top off, vehicle washing, etc.) in Bldgs #6 and #7 - SWPPP SPCC		
- Vehicle and equipment maintenance areas are inspected on a regular basis for evidence of spills, leaks or pollutants that may have the potential to contact storm water.	Quarterly	Yes ☐ No ☐
- Work areas are maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
- Areas where vehicle and equipment maintenance, repair and/or washing occur are inspected for evidence of spills or other pollutants dicharged to or contacting storm water as part of the facility's routine inspection program.	Quarterly	Yes ☐ No ☐
17. Significant Dust or Particulate / Sand and Gravel piles/unpaved areas, sand and bead blasting of snow plows and associated equipment Located in northern portion of GMF - SWPPP		
- Areas susceptible to erosion are inspected as part of the facility's regular inspection program. Inspection in this area includes identifying any evidence of erosion or evidence of spills or pollutants discharged or contacting storm water.	Quarterly	Yes ☐ No ☐
18. Authorized Non-Storm Water Discharge / Air condition condensate Two window-mount AC units in office area of Bldg #3 (3-bay garage) - SWPPP		
- Areas where air conditioning condensate may be discharged are inspected as part of the facility's routine inspection program.	Quarterly	Yes ☐ No ☐
19. Vehicle Washing Area / Vehicle rinsing outdoors (washing performed within garage plumbed to holding tank) / Rinse water runs off to vegetated strip or catch basin; washwater collected in holding tank - SWPPP		
- Vehicle rinse area maintained in clean and orderly condition.	Quarterly	Yes ☐ No ☐
- Excessive sediments, sand and gravel are swept and removed from area on a regular basis.	Quarterly	Yes ☐ No ☐
- Designated vehicle wash and rinse areas are inspected on a regular basis for evidence of spills, leaks, or other pollutants discharged or contacting stormwater as part of the facility's regular inspection program (including excessive sand and sediment).	Quarterly	Yes ☐ No ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]

SPILL EQUIPMENT USED AT THIS FACILITY:

(If Tamper Device is present, no further inspection is required)

Spill Kit-01

Location: Building #2 (Paint/Body Shop)

Contents:	*Present?*
Tamper proof labels	Y ☐ N ☐
Sorbent Pillows (4)	Y ☐ N ☐
Shovels - Spark proof	Y ☐ N ☐
Rubber gloves	Y ☐ N ☐
Rags	Y ☐ N ☐
Push Brooms	Y ☐ N ☐
Goggles	Y ☐ N ☐
Emergency Response Guide	Y ☐ N ☐
65 gallon over-pack drum	Y ☐ N ☐
30 or 55 gallon drum	Y ☐ N ☐
10' Socks (14)	Y ☐ N ☐

Spill Kit-02

Location: Building #2 (Paint/Body Shop)

Contents:	*Present?*
Box of Spill Magic powder absobent	Y ☐ N ☐

Spill Kit-03

Location: Building #2 (Paint/Body Shop)

Contents:	*Present?*
Box of sorbent pads	Y ☐ N ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]

Spill Kit-04

Location: Building #3 (3-bay garage)

Contents:	*Present?*
Tamper proof labels	Y ☐ N ☐
Sorbent Pillows (4)	Y ☐ N ☐
Shovels - Spark proof	Y ☐ N ☐
Rubber gloves	Y ☐ N ☐
Rags	Y ☐ N ☐
Push Brooms	Y ☐ N ☐
Goggles	Y ☐ N ☐
Emergency Response Guide	Y ☐ N ☐
30 gallon overpack drum	Y ☐ N ☐
10' Socks (4)	Y ☐ N ☐

Spill Kit-05

Location: Building #3 (3-Bay garage)

Contents:	*Present?*
Box of Spill Magic powder absobent	Y ☐ N ☐

Spill Kit-06

Location: Building #3 (3-Bay garage)

Contents:	*Present?*
Box of sorbent pads	Y ☐ N ☐

Spill Kit-07

Location: Building #3 (3-Bay Garage)

Contents:	*Present?*
Acid Spill Kit	Y ☐ N ☐

Spill Kit-08

Location: Building #6 (8-bay garage)

Contents:	*Present?*
Box of Spill Magic powder absobent	Y ☐ N ☐
Box of sorbent pads	Y ☐ N ☐

Spill Kit-09

Location: Building #6 (8-bay garage)

Contents:	*Present?*
Acid Spill Kit	Y ☐ N ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]

Spill Kit-10

Location: Building #7 (4-bay garage)

Contents:	*Present?*
Shovels - Spark proof	Y ☐ N ☐
Push Brooms	Y ☐ N ☐
Box of Spill Magic powder absobent	Y ☐ N ☐
Box of sorbent pads	Y ☐ N ☐

Spill Kit-11

Location: Building #7 (4-bay garage)

Contents:	*Present?*
Acid Spill Kit	Y ☐ N ☐

Spill Kit-12

Location: Emergency Electrical Generator Building

Contents:	*Present?*
Tamper Proof labels (6)	Y ☐ N ☐
Sorbent Wiper Pads (56)	Y ☐ N ☐
Sorbent Pillows (4)	Y ☐ N ☐
PIG Mat Pads (24)	Y ☐ N ☐
Instruction Manual	Y ☐ N ☐
Emergency Response Guide	Y ☐ N ☐
Disposal bags and ties (13)	Y ☐ N ☐
Box of Spill Magic powder absobent	Y ☐ N ☐
Box of sorbent pads	Y ☐ N ☐
48" Socks (5)	Y ☐ N ☐
35 gallon overpack drum	Y ☐ N ☐
10' Socks (14)	Y ☐ N ☐

Spill Kit-13

Location: Building #1 (Salt Shed)

Contents:	*Present?*
Box of sorbent pads	Y ☐ N ☐

Spill Kit-14

Location: Building #10 (Sand Storage Shed)

Contents:	*Present?*
Box of sorbent pads	Y ☐ N ☐

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F
SPCC/SWPPP INSPECTION CHECKLIST

Date: _____ Inspection Completed By: _____ Wet or Dry Weather: _____

POLLUTANTS ENTERING DRAINAGE SYSTEMS

Is there any evidence of pollutants entering the storm water conveyance systems from the following areas?

SOURCE # / AREA INSPECTED / INSPECTION ITEMS – REGULATORY PROGRAM	INSPECTION FREQUENCY	YES / NO (Check Box)[1]

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Reviewed by (John Branscom, Environmental Services Coordinator): _____ Date: _____

(1) If the answer is "No" to any of the inspection items, identify the specific conditions observed for each source on the reverse side of this page, and initiate corrective actions. Document corrective actions using the "BMP INCIDENT AND CORRECTIVE ACTION REPORT."

APPENDIX F-2
BMP/PM INCIDENT AND CORRECTIVE ACTION REPORT

Instructions:	This worksheet is to be completed when evidence of pollutants entering the storm water system or ineffective BMPs/PMs are identified. When complete, this report should be attached to the activity record that initiated this corrective action.

Report Initiated by: ☐ Monthly SPCC Inspection ☐ Quarterly Stormwater Inspection ☐ Other_____

Date:	Time:	Potential Pollutant Source Number (if applicable):

Report Completed by:

1. Observations:

2. Are additional BMPs/Pms appropriate? If any changes are necessary including repair or maintenance, describe change needed and date completed below:

Change/Activity	Date Completed

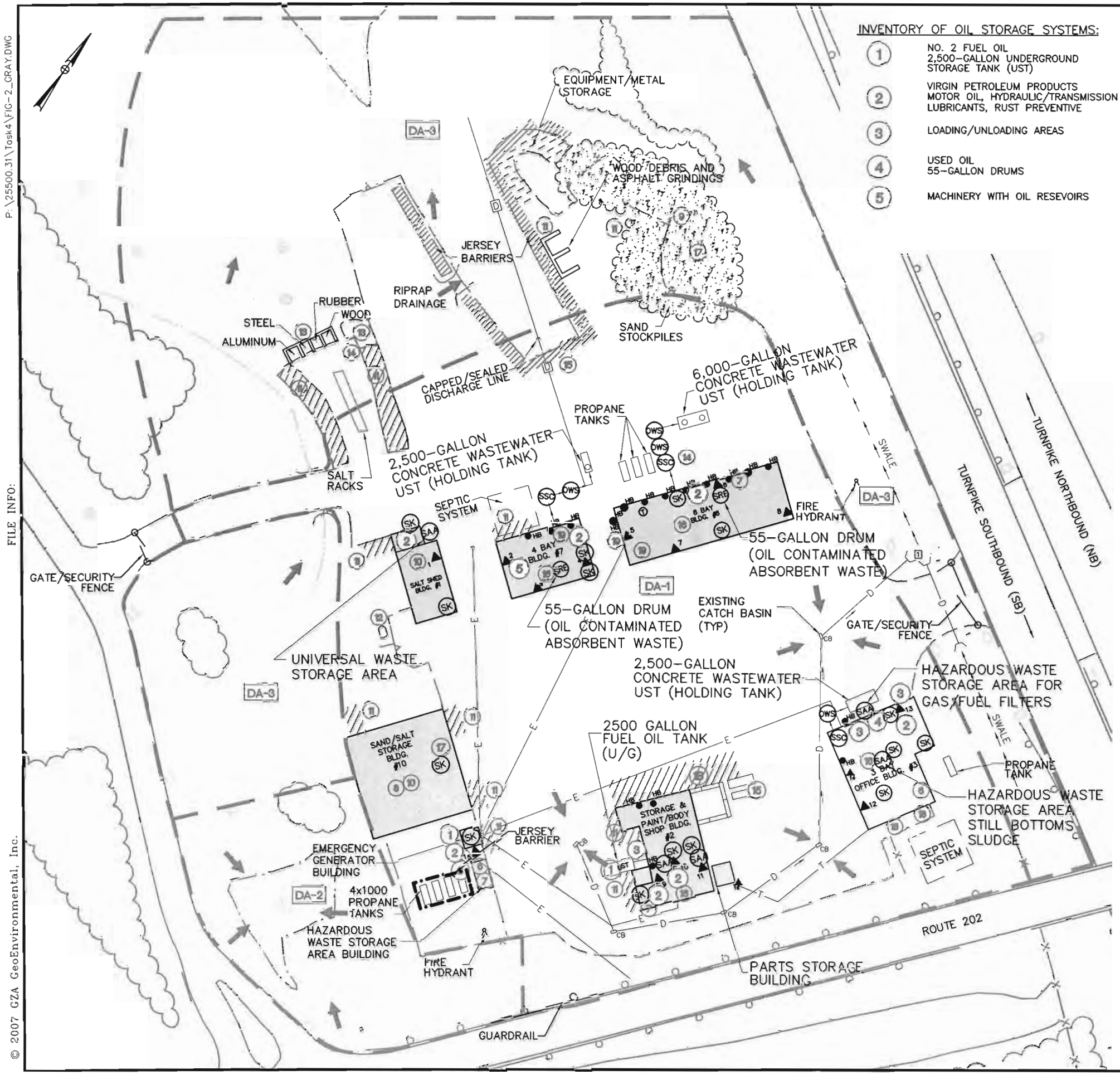
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Reviewed By:_____
Authorized Signature

Date:_____

P:\25500.31\Task4\FIG-2_GRAY.DWG

FILE INFO:



INVENTORY OF OIL STORAGE SYSTEMS:

1. NO. 2 FUEL OIL 2,500-GALLON UNDERGROUND STORAGE TANK (UST)
2. VIRGIN PETROLEUM PRODUCTS MOTOR OIL, HYDRAULIC/TRANSMISSION FLUID, LUBRICANTS, RUST PREVENTIVE
3. LOADING/UNLOADING AREAS
4. USED OIL 55-GALLON DRUMS
5. MACHINERY WITH OIL RESEVOIRS

LEGEND:

- DRAINAGE AREA BOUNDARY
- DA-1 DRAINAGE AREA NUMBER
- GENERAL DIRECTION OF STORM WATER FLOW
- EDGE OF PAVEMENT
- GUARDRAIL
- DRAINAGE SWALE
- 1 OUTFALL LOCATION AND NUMBER
- 1 OIL STORAGE LOCATIONS
- 10 NON- SPCC POTENTIAL STORM WATER POLLUTANT SOURCE AREAS (REFER TO TABLE 6 FOR DESCRIPTION OF SOURCE AREAS)
- OUTDOOR EQUIPMENT/MATERIAL STORAGE
- OUTDOOR SAND STOCKPILE
- FIRE HYDRANT
- WETLAND AREAS
- HB HOSE BIB (WATER)
- 12 FIRE EXTINGUISHER
- SK SPILL KIT
- SRE SPILL RESPONSE EQUIPMENT
- OWS 250-GAL. OIL/WATER SEPARATOR
- SSC SOLIDS SETTLING CHAMBER
- SAA HAZARDOUS OR UNIVERSAL WASTE SATELLITE ACCUMULATION AREA (SAA)
- D DRAINAGE LINES
- T TELEPHONE LINES
- E ELECTRIC LINES
- CB CATCH BASIN

NOTES:

1.) THE BASE MAP WAS PREPARED FROM A FIGURE INCLUDED AS PART OF THE CONTINGENCY PLAN FOR THE MTA GRAY MAINTENANCE FACILITY THAT WAS ORIGINALLY PROVIDED BY HNTB CORPORATION. UPDATES TO THE BASE MAP AND ADDITIONAL SITE FEATURES WERE ESTIMATED VISUALLY BY GZA PERSONNEL DURING THE FEBRUARY 2003 SITE VISIT AND SHOULD BE CONSIDERED APPROXIMATE LOCATIONS.

2.) DRAINAGE AREAS AND PATHWAYS SHOWN ON THIS PLAN HAVE BEEN DRAWN BASED ON TOPOGRAPHY AND SITE FEATURES PRESENT AT THE TIME OF GZA'S FEBRUARY 2003 SITE VISIT. THE OUTFALL DESIGNATIONS CORRESPOND TO DRAINAGE AREA DESIGNATIONS.

3.) NOT ALL UNDERGROUND UTILITIES ARE SHOWN. THE LOCATIONS OF THE INDICATED UNDERGROUND DRAINAGE AND UTILITIES IS APPROXIMATE.

GRAPHIC SCALE 0' 80' 160' / 80'

GZA GeoEnvironmental, Inc.
Engineers and Scientists
4 FREE STREET
PORTLAND, MAINE 04101
(207)879-9190

DES'D BY : MKA
CHK'D BY : RLS
APP'D BY : RAB
DRAWN BY : JRT
SCALE : 1"=80'
DATE : OCT 2008

INTEGRATED STORM WATER POLLUTION PREVENTION AND SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

GRAY, MAINE

SITE PLAN

PROJECT No.: 25500.31

FIGURE No.: 2