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## NPDES Phase II MS4 General Permit Annual Report

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### I. General Information

Organization: NH Department of Transportation (NHDOT)  
EPA NPDES Permit Number: NHR043001  
Annual Report Number and Reporting Period: No. 6: May 1, 2009 to April 30, 2010  
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#### Certification:

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 gather and evaluate 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.



David J. Brillhart PE  
Assistant Commissioner,  
New Hampshire Department of Transportation

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## II. Self Assessment

The New Hampshire Department of Transportation (Department) is committed to developing, implementing a program to reduce the discharge of pollutants from the Department's regulated Small MS4s to the maximum extent practicable, with the goals of protecting water quality and satisfying the water quality requirements of the Clean Water Act and state water quality standards while providing a safe and efficient transportation system for the public.

During this seventh year of the permit, the Department has continued to further its efforts in three principal areas including (1) continuing to map and inventory the drainage infrastructure along state-maintained roadways in the MS4 communities (Min. Measure 3); (2) continuing to enhance its erosion control project review and contractor oversight program (Min Measure 4); and (3) increasing stormwater treatment structure maintenance activities (Min. Measure 5),

Relative to mapping, the Department has made substantial progress this past year by completing nearly all of the estimated 627 state-maintained miles in the urbanized areas. The only areas that remain are I-95 and Spaulding Turnpike. Drainage structures were mapped in the field with assistance from Survey crews, District Maintenance personnel using GPS equipment. Basic structure attributes were recorded including structure type (i.e., catch basin, outfall, etc.) as well as size, material type and condition, and whether there are potential problem areas that require further review. The Department has also updated its list of water bodies that receive runoff from state-maintained roadways in urbanized areas. This list includes additional information with regard to any water quality impairments from the Draft 2010 303(d) list. This updated list is included in Appendix A of this Annual Report.

The Bureau of Environment has continued to strengthen its role in coordinating erosion control planning, review and inspections for all the Department's projects. For some of the larger projects, the Department has been coordinating with DES Wetland, Watershed Management and Alteration of Terrain personnel to insure consistency with the erosion control planning, contractor SWPPP development and monitoring efforts for all of the Department's projects. The Department has improved its review of construction SWPPPs prepared by contractors and has recently required turbidity monitoring in adjacent streams for larger construction sites.

Although separate but very much related to the MS4 Program, the Department has investigated and is beginning to utilize some innovative stormwater treatment BMPs into its major roadway design projects including the proposed I-93 and Route 125 Improvement Projects. In working with NHDES and as part of the issuance on the 401 Water Quality Certificates for each of these projects, the Department has committed to performing pollutant loading analyses for each roadway segment incorporating treatment measures to maintain no net increase in the post-construction pollutant loads attributed to highway runoff. As a result of this process, several innovative BMP designs, including gravel wetlands, infiltration trenches and dry swales have been included in recent roadway designs as well as recent road construction projects.

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The Department has also strived to increase its public education and outreach efforts through press releases, public notices and additional posting of information on its web site. Recently purchased Stormwater enclosed trailer for the stormwater table has made many appearances at local fairs, schools, and Department events.



The Department has completed this self-assessment and has determined that our agency is in general compliance with all permit conditions and continues to work toward completing measurable goals set out initially in the NOI.

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### **III. Summary of Minimum Control Measures**

This section is formatted as follows:

#### **NPDES Minimum Control Measure**

| <u>Code</u> | <u>Description</u>                            |
|-------------|-----------------------------------------------|
| BMP         | BMP Description                               |
| TEAM        | Responsible Team/ Bureau Name                 |
| GOAL        | Measurable Goal                               |
| PROG        | Progress on Goal(s) Permit Year 6 (2008-2009) |
| ACTION      | Planned Activities Year 6 (2009-2010)         |

#### **1. Public Education and Outreach**

##### **1A. Nonpoint Source Stormwater Display**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Showcase the Department's Nonpoint Source Stormwater Table at 6 NH State Fairs annually, and other appropriate locations (e.g. schools)                                                                                                                                                                                                                                                                                                                    |
| TEAM   | Bureau of Highway Maintenance and Bureau of Environment                                                                                                                                                                                                                                                                                                                                                                                                    |
| GOAL   | Note the approximate number of events that the Department's stormwater table was viewed.                                                                                                                                                                                                                                                                                                                                                                   |
| PROG   | In this 7th permit year, the Stormwater / NPS presentation table was displayed at the major New Hampshire State Fairs, highlighting water resource protection and other natural resources through the state. The table illustrates various Department activities related to bridges, roadways, sand and salt operations, patrol sheds, and active construction sites. An enclosed trailer was purchased to ease in transportation and protect the display. |
| ACTION | The Department anticipates using the improved stormwater display table for presentations at local schools, and other appropriate audiences in addition to the state fairs.                                                                                                                                                                                                                                                                                 |

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### **1B. Meetings / Presentations with Professional, Private, and Public Organizations**

|        |                                                                                                                                                                                                                                                                                                                                     |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | The Department will continue to attend and/or assist in organizing appropriate stormwater related presentations and workshops with both public and private organizations.                                                                                                                                                           |
| TEAM   | Bureau of Environment                                                                                                                                                                                                                                                                                                               |
| GOAL   | In general, members of Department's Bureau of Environment personnel try to attend two to three stormwater related workshops each year to remain up to date on stormwater issues and regulatory changes. The total number of presentations/meetings, its focus and the target audience for each workshop will be reported each year. |
| PROG   | This past year, the Department hosted a National Highway Institute Erosion and Sedimentation Coarse, a Certified Stormwater Inspector Coarse and ACEC-NH Technical Transfer Conference.                                                                                                                                             |
| ACTION | Continue to provide or assist in hosting or supporting presentations to both public and private organizations.                                                                                                                                                                                                                      |

### **1C Transportation Stormwater Conferences**

|        |                                                                                                                                                                                                         |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | The Department will continue meeting with the surrounding New England states to coordinate programs and share information.                                                                              |
| TEAM   | Bureau of Environment                                                                                                                                                                                   |
| GOAL   | Meet at least annually.                                                                                                                                                                                 |
| PROG   | The Department's Environmental personnel last met with other New England Transportation Agency environmental staff in San Diego at the national conference held in June of 2008.                        |
| ACTION | Continue to meet and coordinate with other New England State Agencies to share information and efforts relative to stormwater issues. The National Group met in Denver, in the last week of April 2010. |

### **1D Develop Appropriate Media Campaign**

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP  | Increase public education and outreach efforts through additional public announcements and information sharing using the available media options including the Department's web site.                                                                                                                                                                                                                                                                                                                              |
| TEAM | Commissioner's Office and Bureau of Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| GOAL | The Department will focus on informing the traveling public on the Department's activities through press releases, media contacts and public meetings                                                                                                                                                                                                                                                                                                                                                              |
| PROG | The Department's Public Information Officer continues to work with various NH media outlets i.e., NHPR, WMUR (channel 9) and state newspapers to distribute public information regarding the Department's activities. In the past year, numerous press releases were posted to highlight or provide notice on various activities including transportation planning and proposed roadway improvements. The Department has worked with WMUR (Channel 9), Union Leader newspaper and Lawrence Eagle Tribune to inform |

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the traveling public about the Department's efforts of the Salt Reduction Workgroup. The Department also teamed with the Department of Safety for a series of Public information ads on Winter Driving.

**ACTION** The Department's Public Information Officer will continue to inform and educate the public through local media outlets on Department activities related to pollution prevention actions. A large Department funded public salt education effort will begin this year administered by Salt Reduction Workgroup Steering Committee.

### **1E Development Partnerships**

**BMP** Encourage and facilitate development of mutually beneficial partnerships.

**TEAM** Bureau of Environment

**GOAL** Document the partnerships that are formed.

**PROG** The Department has been actively pursuing and formulating important partnerships with such groups as the NH Association of General Contractors, the UNH T2 group and the NH Chapter of the American Council of Engineering Companies (ACEC). For the past two years, Department has teamed with ACEC-NH to host a Technical Transfer Conference in April in Concord, NH. This conference is geared toward increasing awareness of new technologies and techniques for pollution prevention, stormwater management as well other interests.

**ACTION** The Department will continue to support the efforts of the NH Stormwater Center, ACEC, AGC and others to distribute and exchange the latest information on stormwater treatment design.

### **1F Grant Opportunities**

**BMP** Review opportunities to apply for project grants to mitigate water quality impairments from roadway runoff. Program projects for this purpose to meet grant requirements

**TEAM** Bureau of Environment

**GOAL** Note the project type, location, and whether the committee selected the project. If project is selected, report on the status.

**PROG** As part of the reauthorization of the FHWA SAFETEA-LU 23 USC 101(a)(35), STP Funds are now available for projects that address existing water quality problems associated with highway runoff. In addition as part of the IDDE Program, the Department plans to use ODD Funds to help pay for the design and installation of the infiltration device planned for the Hampton Beach outfall. Previously, District 6 received a NOAA Coastal Zone Restoration grant to assist in the storm drain mapping in the Seacoast area.

**ACTION** The Department will continue to work toward identifying suitable projects and available funding sources.

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### 1G Special Events

|        |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Research the types of special events (ex. Earth Day, local fairs, Wild NH, etc) and determine appropriate involvement.                                                                                                                                                                                                                                                                                           |
| TEAM   | Bureau of Environment                                                                                                                                                                                                                                                                                                                                                                                            |
| GOAL   | Note the event and the type of involvement from the Department.<br>Note the number of events per year.                                                                                                                                                                                                                                                                                                           |
| PROG   | The BOE personnel will occasionally participate in special events to display the new Stormwater Demonstration Table or discuss the Department's activities to minimize and prevent stormwater related impacts. Most recently, BOE personnel have made several visits and display presentations to area schools. The Department will also meet with watershed association groups when invited or as issues arise. |
| ACTION | The Department will continue to look for appropriate events in which to participate and will contact other events groups such as the Department of Agriculture, NH Fair Association, NH DRED and others.                                                                                                                                                                                                         |

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### **2. Public Participation and Involvement**

#### **2A Sponsor A Highway Program**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Local businesses and volunteer groups will adopt a roadway segment to periodically clean up trash and debris in return for a free sign highlighting the business or group. District personnel help by collecting filled trash bags along the route.                                                                                                                                                                                                                                                                                                                                                   |
| TEAM   | Bureau of Highway Maintenance and Bureau of Turnpikes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| GOAL   | Document quantity of roadside material collected on an annual basis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PROG   | The Program continues to represent one of the most successful programs for public participation with over 475 different volunteer groups participating in collecting trash on over 1,500 miles of roadway. Since the Program began in 1994, over 271,464 bags of trash have been collected. (See Appendix B for Program Data). The Department also supports the Annual Coastal Cleanup Event by picking up and disposing the trash bags that were filled by volunteers along the coastal beaches. The Department has over the years covered the cost of hauling and disposing of the collected trash. |
| ACTION | The Department will continue supporting these programs and providing annual data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

#### **2B Department Public Meetings**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | The Department continues to provide opportunities for public input and involvement on specific projects through Public Informational Meetings, as well as Public Hearings. These meetings engage the public in specific discussions of stormwater management issues.                                                                                                                                                                                                                                            |
| TEAM   | Bureau of Environment, Bureau of Highway Design, and Bureau of Bridge Design                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| GOAL   | Coordinate with the Environmental Project Managers and document the number of public meetings that occurred within the regulated communities. Document any water quality issues that were brought to the Department's attention.                                                                                                                                                                                                                                                                                |
| PROG   | The Department continues to schedule and promote public meetings related to new projects. For these meetings the Department solicits public input about water quality and stormwater issues. Where proposed projects are located in a Small MS4 community, local stormwater coordinators are specifically invited to these meetings to discuss stormwater issues. The Department continues attending the Salt Reduction Workgroup meeting associated with the Chloride TMDLs in the southern part of the State. |
| ACTION | BOE personnel and District staff will continue to solicit input at public meetings and work with Lake Associations and NHDES regarding water quality problems and addressing stormwater management aspects for all of its projects statewide.                                                                                                                                                                                                                                                                   |

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### **2C Seek Relevant Information from Public Officials**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Notify and request input on stormwater or other environmental issues from municipal officials, regional planning commissions and other State Agencies by sending out initial notification letters and environmental report documents during the project planning phase.                                                                                                                                                                                                                                                        |
| TEAM   | Bureau of Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| GOAL   | Incorporate any comments and concerns into the project design documents that were received through these letters during the project development phase. Municipal and regional officials are asked specifically to express and comment of water quality concerns and stormwater management issues related to proposed roadway projects. The letter provides a mechanism to discuss concerns at the local level and address existing as well as potential issues through the design and construction of new storm drain systems. |
| PROG   | The BOE will continue to use to interact with local (including stormwater coordinator), state, and federal officials to solicit water quality concerns.                                                                                                                                                                                                                                                                                                                                                                        |
| ACTION | BOE will continue to follow-up with discussions with design and construction staff as needed.                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### **2D The Department's Website**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Expanding the use of its web site to promote public involvement and participation with regard to stormwater issues.                                                                                                                                                                                                                                                                                                                            |
| TEAM   | Office of Information Technology and Bureau of Environment                                                                                                                                                                                                                                                                                                                                                                                     |
| GOAL   | Keep the existing website current.                                                                                                                                                                                                                                                                                                                                                                                                             |
| PROG   | The Department continues to add new project information, reference documents, and links to its current main website as a means of disseminating public information. For some of the larger, multi-year projects such as the I-93 project, separate project specific web sites have been created to host project related environmental documents and studies. The site would include stormwater related documents and NPDES Phase II resources. |
| ACTION | As time allows, Bureau of Environment staff will continue to add technical guidance, or project related stormwater related information into the main Department's website.                                                                                                                                                                                                                                                                     |

### **3. Illicit Discharge Detection and Elimination**

#### **3A Drainage Permits**

|        |                                                                                                                                                                                                                                                                                                             |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Review and update the drainage connection assessment and approval letters used by District Personnel to allow property owners to connect or contribute runoff to the Department's storm drain system. Additional language will be included to address concerns about non-stormwater and illicit discharges. |
| TEAM   | Bureau of Highway Maintenance and Attorney General's Office                                                                                                                                                                                                                                                 |
| GOAL   | BOE will coordinate with District Personnel to explain purpose and intent of changes. The revised approval letter will be used for new drainage connections.                                                                                                                                                |
| PROG   | The Department is currently reviewing the existing regulation with the Attorney Generals Office.                                                                                                                                                                                                            |
| ACTION | Continue to process and coordinate with AG office to finalize the drainage connection approval letters.                                                                                                                                                                                                     |

#### **3B Drainage Map**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Map the entire Department maintained drainage system located within the regulated Small MS4 communities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TEAM   | Bureau of Environment and Bureau of Highway Design.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| GOAL   | Maintain sufficient progress to complete mapping of entire MS4 drainage system by May 2010.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| PROG   | The Department has continued to make substantial progress in mapping its drainage system (including inlets, storm drains and outfalls) within the urbanized areas and identifying all receiving waters. The Department estimates that it has mapped approximately all of its stormwater system within Small MS4. The Department has now identified and mapped the receiving water bodies associated with the Department's maintained roadways in the urbanized area. See Appendix A. The list also indicates whether the water body is listed as impaired (base on the 2010 NHDES 303(d) list). See Appendix C for mapping examples. |
| ACTION | This concluded this goal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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### **3C Illicit Detection and Elimination Program**

|        |                                                                                                                                                                                                                                                                                                                             |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Detect and eliminate illicit discharges and/or connections from the Department storm drain system. The Department will prioritize future IDDE efforts with consideration to 303(d) impaired water bodies, public water supplies, and recreational areas.                                                                    |
| TEAM   | Bureaus of Environment and Highway Maintenance.                                                                                                                                                                                                                                                                             |
| GOAL   | Review all outfalls associated with waters that are impaired with bacteria ( <u>E. coli</u> , <u>Enterococcus</u> ).                                                                                                                                                                                                        |
| PROG   | The Department main focus this previous year the chloride TMDL. The \$564,000 effort is complete and the Department is implementing BMPs to towards attaining the allocation specified in the plan.                                                                                                                         |
| ACTION | The Department will continue to investigate mapped outfalls focusing on water bodies on the 303 (d) list of impaired water bodies. The Department will continue to maintain records of all outfall investigations. The BOE will coordinate with the District Maintenance personnel to assist in the outfall investigations. |

## **4. Construction Site Runoff Control**

### **4A Stormwater Pollution Prevention Plan Review**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Continue to review comment and approve project-specific SWPPPs developed by contractors for the Department's projects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TEAM   | Bureaus of Environment and Construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| GOAL   | Review, update and document the approval process of the project-specific SWPPPs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| PROG   | The Department continues to strengthen its requirements for site erosion control and review on construction projects. The Department has developed a detailed checklist to insure contractors are including the minimum requirements of the CGP in their SWPPPs and improves the process for Erosion and Sediment (E&S) control review. The Department has also developed a new database to track milestones of ongoing projects that have SWPPPs. The Department has been actively involved with the review and development of a revised MOA with the DES Alteration of Terrain Program, which is setting new standards for erosion control. The Department has incorporated elements of the AOT regulation and educated contractors to remain compliant with the Program requirements. |
| ACTION | The Department is continuing to incorporate new requirements in our program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### **4B Educate New Erosion Control Inspectors**

|      |                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------|
| BMP  | Educate new contractors on the expectations for inspections and erosion control maintenance.                                 |
| TEAM | Bureaus of Environments and Construction                                                                                     |
| GOAL | Identify new contractors and erosion control inspectors that have not worked with the Department as SWPPPs are submitted and |

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inspectors are listed, to insure typical protocols and BMPs are implemented.

**PROG**

The Department continues to review SWPPPs and work with contractors and inspectors in the field and evaluate their success or failure. The Department is reviewing DES's recent general guidance for conducting turbidity monitoring, BMP inspection and BMP maintenance plans. When finalized, these procedures will be provided to contractors and erosion control inspectors as needed on a project-by-project basis.

**ACTION**

The Department is facilitating Certified professional erosion and sediment control specialist classes to develop an Alteration of Terrain compliant workforce.

### **4C Roadway Maintenance Activities**

**BMP**

Coordinate with the Division of Operations and others as appropriate, with regard to erosion control issues as part of maintenance activities.

**TEAM**

Bureau of Environment and Bureau of Highway Maintenance

**GOAL**

Coordinate with Highway Maintenance personnel with planning and field review of erosion control BMPs.

**PROG**

The BOE has expanded its review of erosion control BMPS to other divisions outside of the Construction Bureau. Through this expanded coordination, BOE believes that the Department's roadway maintenance is becoming more consistent across the various Districts in the State.

**ACTION**

The Department is looking to implement EPA's model SWPPP template for use by the Department maintenance personnel in developing their SWPPPs for their projects.

### **4D Stormwater Management Erosion and Sedimentation Control Reference Manuals**

**BMP**

Continue utilizing the stormwater management erosion and sedimentation control manuals.

**TEAM**

Bureau of Environment

**GOAL**

Review manuals and reference materials to ensure that they remain in compliance with all Federal and State regulations.

**PROG**

The Department has updated its "Construction Manual" to be the general guidebook for all Department activities related to construction projects, including erosion and sediment control. The Department has also completed the update to the manual "The Department Guidelines for Temporary Erosion and Sediment Control and Stormwater Management". Future updates will be conducted as necessary as new information or BMPs become available or adopted. As an example, the Department has recently begun to utilize flocculants as specified in the ELG for the CGP.

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When adopted, new specs for flocculants will be added to the Manual.

**ACTION** Department will continue to monitor and become familiar with the revised NHDES Site Alteration Rules, which were adopted on 1/1/2009. Volume III "Erosion and Sediment control" manuals are being distributed to Department Personnel.

### **4E Meetings with EPA Region 1 and NHDES**

**BMP** Meet with EPA Region 1 and NHDES on an as needed basis to discuss water quality issues associated with construction-related activities.

**TEAM** Bureau of Environment

**GOAL** Prepare/file a conference report of any meeting noting agenda, attendees, points of interest and any action items.

**PROG** There are essentially no updates or changes to this BMP.

**ACTION** The Department will continue to keep open communication with NHDES and EPA Region 1 relative to construction-related issues.

### **4F Project Design**

**BMP** Appropriate drainage and erosion control measures including project planning, phasing and sequencing will continue to be a major focus as part of the roadway improvement design phase. Review all projects currently in the design phase.

**TEAM** Bureau of Environment, Bureau of Highway Design and Bureau of Bridge Design

**GOAL** Meet regularly with the BOE Environmental Managers and the Highway Design Project Managers to discuss and document proposed projects with respect to stormwater runoff and water quality BMPs that are needed.

**PROG** The Department has also been coordinating DES Wetlands and Watershed Management Bureau personnel on SWPPP review on major projects such as the I-93 project.

**ACTION** The BOE will continue to coordinate NHDES to provide updates and workshops to help educate design and maintenance personnel on the latest best management practices.

### **4G Specifications**

**BMP** Review the current specifications and compare to the 2003-2008 Construction General Permit (CGP) and new NHDES Alteration of Terrain permit. Make revisions as appropriate.

**TEAM** Bureau of Environment and Bureau of Highway Design

**GOAL** Continue to review and maintain up to date construction specifications regarding stormwater Best Management Practices.

**PROG** The Construction specifications were recently updated in April 2010 and have been fully implemented. From time to time, new individual

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specifications are developed as needed for new erosion control or stormwater management BMPs.

### **ACTION**

The Department plans to develop new construction specifications for recently published ELG for the CGP and to address the recent 401 water quality requirements for pollutant loading and turbidity monitoring.

### **4H Construction School**

#### **BMP**

Provide the Bureau of Construction personnel with training or updates on stormwater issues and/or NPDES Phase II issues.

#### **TEAM**

Bureau of Environment and Bureau of Construction

#### **GOAL**

The Department again did a Construction School Program highlighting the requirements of the MS4 and CGP Program.

#### **PROG**

The Construction School is an effective training forum to educate personnel on the basic elements of the NPDES Program. More recently, the Department hosted more focused workshop on common issues that construction engineers should be on lookout when building wet basins and other stormwater treatment structures.

### **ACTION**

The Department will continue to periodically assess the need for NPDES-related workshops for its employees. The Bureau of Environment will continue to revise and prioritize the education and outreach needs of the Department.

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### **5. Post Construction Runoff Control**

#### **5A Review Stormwater BMP Designs for Proposed Projects**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Develop a consistent internal review process to evaluate the designs and needs of proposed water quality BMPs that would be included in new construction projects relative to sensitivity of the receiving waters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| TEAM   | Bureau of Environment, Bureau of Highway Maintenance, Bureau of Construction, and Bureau of Bridge Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GOAL   | Establish a review process to evaluate BMPs designs on proposed projects to insure consistency with recent guidance criteria. Document and follow-up as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| PROG   | The review process for stormwater BMP design has been done on an as needed and project-by-project basis. The Department has been coordinating with NHDES on their Interim Guidance documents regarding pollutant loading analyses and BMP design. This Interim Guidance language was essentially the same as the adopted Alteration of Terrain Program regulations. The Department has incorporated the Interim Guidance into the design process as new roadway designs are initiated. The I-93 project has become a test case for developing a review and coordination process. Other projects such as the NH Route 125 project in Plaistow-Kingston, others requiring Water Quality Certifications and projects within urbanized MS4 areas are being reviewed. |
| ACTION | The Department will continue to coordinate with DES to better understand the intent of the new regulations and the latest BMP designs, and implement them in projects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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### **5B Develop Data Base to Maintain Inventory Stormwater BMPS and Manage Drainage Infrastructure Assets**

|        |                                                                                                                                                                                                                                                                                          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Develop a database to allow tracking and scheduling of routine maintenance procedures on stormwater treatment structures                                                                                                                                                                 |
| TEAM   | Bureau of Highway Maintenance, Bureau of Turnpikes and Bureau of Bridge Maintenance.                                                                                                                                                                                                     |
| GOAL   | The Department has developed a central GIS database of stormwater treatment structures.                                                                                                                                                                                                  |
| PROG   | The Department determined methods that track efforts used to maintain the systems. The Department did a complete inspection of all its stormwater systems and is completing maintenance and repairs this summer.                                                                         |
| ACTION | The Department will re-inspect the structures this summer and include other types such as constructed wetlands. The Department will also research available software packages to identify programs that can be used to schedule and track maintenance needs based on GIS attribute data. |

### **5C Standardize Routine Roadway and BMP Maintenance Procedures**

|        |                                                                                                                                                |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Develop and implement Standard Operating Procedures manual to be utilized as a guide for maintenance personnel in maintaining stormwater BMPs. |
| TEAM   | Bureau of Highway Maintenance, Bureau of Construction and Bureau of Environment.                                                               |
| GOAL   | Develop a Department SOP manual preferable a durable pocket-sized field manual to outline standard maintenance protocols for various BMPs.     |
| PROG   | The Department will continue to work on developing an Environmental Management System.                                                         |
| ACTION | The Department will include BMP Maintenance procedures in the EMS.                                                                             |

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### **5D Enhance/ Replace / Upgrade Roadway and Drainage Culverts to Rectify Observed Sediment and other Pollutant Source Areas**

|        |                                                                                                                                                                                     |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Coordinate with Watershed Groups, Lake Assoc., etc. to address Erosion Control Issues Related to Existing Roads and Culvert Washouts in Environmental Sensitive Areas.              |
| TEAM   | Bureau of Highway Maintenance and Bureau of Environment                                                                                                                             |
| GOAL   | To address complaint-based or other known pollutant source issues related to the Department drainage in a timely manner to satisfy stakeholders and minimize water quality impacts. |
| PROG   | The Department has responded and coordinated with various watershed groups in the state to address known problem areas.                                                             |
| ACTION | The Department will continue to coordinate with resource agencies and volunteer groups as water quality issues are brought to their attention.                                      |

## **6. Pollution Prevention / Good Housekeeping**

### **6A Managing Assets for Transportation Systems (MATS)**

|        |                                                                                                                                                                                                                                                                                                |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Continue to inventory and incorporate the Department drainage system in the GIS system to enable management and maintenance of the drainage related assets.                                                                                                                                    |
| TEAM   | Bureau of Highway Maintenance, Office of Information Technology and Bureau of Finance and Contracts                                                                                                                                                                                            |
| GOAL   | Complete mapping inventory of drainage systems and develop procedures to capture maintenance activities in the MATS system or MATS like system.                                                                                                                                                |
| PROG   | The Department is using a GIS based system to maintain an inventory of the storm drain infrastructure.                                                                                                                                                                                         |
| ACTION | The Department will continue to work toward integrating drainage system components into a GIS system with the other systems. The Department will research the available software to identify appropriate software packages that can integrate GIS attribute data to real-time work activities. |

### **6B Roadside Litter Removal Program**

|        |                                                                                                                                                                                                            |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Remove roadside litter from all Department maintained roads                                                                                                                                                |
| TEAM   | Bureau of Highway Maintenance and Bureau of Turnpikes.                                                                                                                                                     |
| GOAL   | Maintain a level of roadside cleanliness that is considered acceptable to the public based on the number of complaints received or lack thereof regarding litter.                                          |
| PROG   | Roadside litter removal is part of the Department maintenance program and is done throughout the year. Actual quantities of material are not typically calculated. There are no major changes to this BMP. |
| ACTION | Continue removing roadside litter from all Department roadways.                                                                                                                                            |

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### 6C Coastal Cleanup

|        |                                                                                                                               |
|--------|-------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Continue to support the annual Coastal Cleanup Program by collecting and disposing of the filled trash bags and other debris. |
| TEAM   | Bureau Highway Maintenance                                                                                                    |
| GOAL   | Coordinate with District personnel to pickup trash bags and collected debris following each event.                            |
| PROG   | In Fall 2009, District 6 collected the bags of litter left along the roadside along the NH Route 1 corridor.                  |
| ACTION | Continue to assist in the debris pickup and disposal in support of this program.                                              |

### 6D Employees Training

|        |                                                                                                                                                                                                         |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | The Department will continue providing appropriate presentations to Department staff relative to stormwater issues and the NPDES Phase II program.                                                      |
| TEAM   | Bureaus of Environment, Highway Maintenance and Commissioner's Office                                                                                                                                   |
| GOAL   | A total number of presentations/meetings and the target audience within the reporting year will be documented. A follow-up on identified issues will be noted and required actions identified.          |
| PROG   | The Department has held a number of internal training sessions focused on pollution prevention.                                                                                                         |
| ACTION | The Department will continue to update and modify training to Department Personnel. The Bureau of Environment will note the training needs and prioritize those needs for subsequent training sessions. |

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### **6E Guidance Materials**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Update guidance documents and evaluate the need for additional guidance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TEAM   | Bureau of Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| GOAL   | Update the guidance document and summarize the changes. Note any additional guidance materials that have been or will be developed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| PROG   | The Department has deployed a new internal guidance document, BMPs for Routine Roadway and Railway Maintenance Activities, for use by all Maintenance Districts and Operations bureaus as an educational reference tool and for performing roadside maintenance and being sensitive to environmental issues. The Bureau of Environment also prepared an internal guidance document entitled "The Department Guidelines for Temporary Erosion and Sedimentation control and Stormwater Management." The new NHDES Stormwater manual release in December 2008 was printed and distributed to design personnel. |
| ACTION | The BOE will continue to refine and adopt procedures, and provide employee training to implement standardized procedures statewide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### **6F Winter Maintenance Activities**

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BMP    | Review current procedures and determine ways to reduce salt use through the use of more efficient application procedures and/or technologies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TEAM   | Commissioner's Office, Bureaus of Highway Maintenance, Turnpikes and Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| GOAL   | Document current practices and make recommendations relative to new technologies. Meet with appropriate Department personnel to review current deicing procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PROG   | The Department has been working closely with the Salt Reduction Working Group to identify feasible measures to reducing salt use both at the state and municipal level. In this past year, the Department has been using "Schmitz" spreaders, which pre-wet road salt just prior to application. The "pre-wet" process activates the salt, which improves its effectiveness. In addition, four roadway weather information stations (RWIS) were installed in MS4 areas and a total of 11 RWIS stations statewide. The RWIS data is being fed into the Maintenance Decision Support System (MDSS) to help reduce the unnecessary dispensing of salt. |
| ACTION | The Department will continue to aggressively pursue and experiment with various methods to reduce its salt usage including annual training of its employees and implantation on new technologies. The Department will continue to participate in the Salt Reduction Working Group, which provide a means to exchange technical information to other users and stakeholders.                                                                                                                                                                                                                                                                         |

