



Rhode Island Department of
Transportation

***RIPDES SMALL MS4
2007 ANNUAL REPORT
RIPDES PERMIT # RIR040036***

RIDOT PHASE II
Storm Water Management

A graphic consisting of several concentric, horizontal, wavy lines in blue, resembling ripples on water, positioned below the text.



DEM USE ONLY	
Date Received	_____

RIPDES SMALL MS4 ANNUAL REPORT

GENERAL INFORMATION PAGE

RIPDES PERMIT #RIR040 _____

REPORTING PERIOD: **YEAR 4**
Jan 07-Dec 07

OPERATOR OF MS4

Name: Michael P. Lewis, Director, RHODE ISLAND DEPARTMENT OF TRANSPORTATION			
Mailing Address: 2 Capitol Hill			
City: Providence	State: RI	Zip: 02903	Phone: (401) 222-2023
Contact Person: Robert Shawver		Title: Associate Chief Engineer; Capital Planning	
Legal status (circle one):			
PRI - Private	PUB - Public	BPP - Public/Private	STA - State FED - Federal
Other (please specify):			

OWNER OF MS4 (if different from OPERATOR)

Name: SAME			
Mailing Address:			
City:	State:	Zip:	Phone: ()
Contact Person:	Title:		

CERTIFICATION

<p>I certify under penalty of law that this document and all attachments were prepared under the 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, I certify that 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.</p>	
Print Name	___ Michael P. Lewis _____
Print Title	___ Director _____
Signature	_____ Date _____

this page intentionally left blank



**MINIMUM CONTROL MEASURE #1:
PUBLIC EDUCATION AND OUTREACH (Part IV.B.1 General Permit)**

SECTION I. MEASURABLE GOALS: (For shaded areas, please provide descriptions of ongoing activity in SECTION II.)

A. REQUIRED MEASURABLE GOALS:				
Permit ID#	BMP ID	List Measurable Goal	Date(s) Completed	If goal was NOT met, briefly list reasons, current status, plans and new date for meeting the goal
IV.B.1.b.1		Implementation of activities undertaken to educate the community about storm water issues. (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.1.b.2		Implementation of public education activities to involve the community in the storm water program (indicate if activities were undertaken by permittee or other entities) (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
B. ADDITIONAL MEASURABLE GOALS:				
		Commitment to the Stormwater Education and Outreach Program through URI NEMO (OPTIONAL - DUE MARCH 2007)	Ongoing	RIDOT funds the Program through the RIDOT/RIDEM/URI-CE Agreement. DOT also attends all Advisory Committee meetings, training programs, and reviews all educational material before distribution.
		Attendance at the following trainings: <input checked="" type="checkbox"/> 4/24/2007 Making an Impact with LID <input checked="" type="checkbox"/> 5/10/2007 TR-55 for Plan Reviewers <input checked="" type="checkbox"/> 12/12/2007 DPW Employee Training		
IV.B.1.b.1 IV.B.1.b.2	1A, 1B	Partner with URI Cooperative Extension to Provide Training to State and Municipal Officials and Coordinated Public Outreach Message. Measurable Goal: Execute MOA in Year 3; Receive deliverables on an agreed-upon timeline	February 2006	URI Agreement signed February 2006 Letter of invitation to municipal MS4s mailed February 2007 Workshops/training available 2007 through 2009. Attachment A provides URI's 2007 Annual Progress Report.
	1C	Develop Website Measurable Goal: Storm Water page added to RIDOT website within Year 2	Completed May 2006/ January 2007	Launched May 2006; Statewide notification via RIDOT Press Release in Jan 2007. http://www.dot.state.ri.us/programs/enviro
		Measurable Goal: Update regularly Year 3-5	Ongoing	Website updated quarterly, or as needed
		Measurable Goal: 50 hits/1st year; 25 hits/yr	Ongoing	Counter available on website; >1200 hits in 2007
	1D	Publish storm water materials in DOA and RIDOT Newsletter. Measurable Goal: Develop and publish materials within Year 3.	Completed 2006	Submitted with 2006 Annual Report
	1E	Continue Existing Program: RIDOT Winter Training existing program (Years 1 – 5) Measurable Goal: All pertinent employees trained	Ongoing	RIDOT winter training program
	1F	Develop storm water training to be provided as part of the winter training program. Measurable Goal: Storm water training provided	Ongoing	National Highway Institute courses; URI training/workshops; Erosion and Sedimentation Control Workshops held in 2007 Winter Training
		Measurable Goal: All pertinent employees trained	Ongoing	Appropriate Construction, Design, Environmental, Maintenance personnel trained

SECTION II. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as activities, topics addressed, audiences and pollutants targeted. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for choosing the education activity to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals.)

IV.B.1.b.1, IV.B.1.b.2; BMP ID 1A, BMP ID 1B – Public Education and Outreach – ONGOING

The Natural Resources Unit is responsible for partnering with the URI Cooperative Extension to provide training to State and municipal officials and create a coordinated public outreach message. The target audience consists of State and municipal officials, Watershed groups, residents, and RIDOT personnel. A draft proposal was submitted with RIDOT's Storm Water Management Plan (2004). The RIDOT/DEM/URI Agreement was signed in February 2006, and educational materials and workshops were available in Year 4. As a partner in the program, RIDEM has an original copy of the URI/DOT/DEM Agreement.

In Year 5, URI will continue to provide printed materials, training workshops, and educational resources addressing pollution prevention topics for priority resources and specific audiences using templates that communities can use directly or adapt to local needs. These will incorporate a consistent message while targeting specific audiences.

URI has provided an annual report and assessment to RIDOT & RIDEM, which provides the measurable goals set and agreed upon by RIDOT, RIDEM, and URI-CE in the contract agreement, and the success towards each. **ATTACHMENT A**

Additional Measurable Goals and Activities

BMP ID 1C – Develop Website – COMPLETED

The Natural Resources Unit launched a storm water webpage on the RIDOT website in May 2006. A statewide Press Release announced the availability to the general public in January 2007. Municipal storm water coordinators were notified via email of availability. The website provides a description of the Phase II program, RIDOT's SWMPP, Annual Reports, links to related sites, training opportunities, and a web-based resource library that includes the Soil Erosion and Sediment Control Handbook and the Storm Water Design Manual. The website is updated quarterly or more frequently if needed. Since the January 2007 public launch, the website has had over 1200 hits. <http://www.dot.state.ri.us/programs/enviro>

BMP ID 1D – Publish Newsletter – COMPLETED

The Natural Resources Unit and The Communications Office published an article the DOA /RIDOT 2006 Winter newsletter. The target audience was State personnel. (Submitted with 2006 Annual Report)

BMP ID 1E, 1F – Employee Training – ONGOING

RIDOT has an existing winter training program for RIDOT personnel. This training includes storm water specific training as an integrated part of other courses. Each division (Maintenance, Construction, Design, Environmental) attends courses as appropriate.

Maintenance Winter Operations

On a bi-weekly basis a meeting is held with each of the District Superintendents, the Operations Chiefs and the Division Administrator. During these meetings the upcoming seasonal activities, such as winter operations (discussion begins in the summer), are brought up and techniques which should be followed or adjustments made from previous years are discussed. The Superintendents are then expected to provide these details to their operations personnel.

Although this year there has not yet been any formal training activities, there has been an abundance of discussion of how the operations shall occur for each storm. This includes briefing the Field Operations Supervisors prior and during the storm with expected snowfall times and rates as well as discussing each storm upon their completion to discover what may or may not have worked well.

NPDES Stormwater Webcast: Construction SWPPPs from A to Z: Everything You Ever Wanted to Know (and More!) - January 10, 2007

Many construction sites across the country must develop Stormwater Pollution Prevention Plans (or similar documents with similar names). This webcast will discuss how to develop an effective SWPPP and introduce EPA's helpful new guide, "Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Site Operators." We will discuss: the key elements that SWPPPs should contain tips for common erosion and sediment control BMPs and good housekeeping BMPs and how to conduct effective self-inspections.

Construction Inspection, Workmanship, and Quality – January 30 – 31, 2007

This 2-day NHI course is aimed at helping those involved in the inspection of highway construction projects to improve their understanding of the factors that contribute to high quality products. Using workshops and real-life examples that are relevant to participants, the course covers the legal, liability, and risk issues, and quality assurance topics related to construction projects. Emphasizing stewardship and oversight roles, the course discusses the importance of fostering partnership and teamwork among stakeholders, as well as the importance of quality decisions. With the goal of improving overall product quality, the course presents participants with approaches that help improve the quality of field decisions and the implementation of decisive actions in the field.

Stormwater Treatment BMP Seminar - March 6, 2007

Last March, ASCE Rhode Island Section held a dinner meeting where Mr. Thomas Ballestero of UNH CSTEVEV provided a power packed presentation on the real world CSTEVEV BMP testing facility. This upcoming seminar will update attendees on recent testing results, industry trends such as low-impact development (LID), and also provide insight on strategies used in targeting specific pollutants. Key Presenters were:
Mr. Michael DeRotto from the Rhode Island Department of Transportation (RIDOT)
Mr. James Houle from the University of New Hampshire's Stormwater Center (UNH CSTEVEV)

18th Annual Nonpoint Source (NPS) Pollution Conference - May 21-23, 2007

The 3-day conference brings together all those in New England and New York State involved in NPS pollution management, including participants from state, federal, and municipal governments; consulting firms; academia; and watershed organizations. What are the right tools for controlling NPS pollution? What can we do differently? What are the challenges, old and new, in our watersheds? This conference will provide you with the opportunity to learn more about NPS pollution issues and projects at the local, state, and federal levels. This year's agenda focuses on many of the innovative solutions to the challenges facing our watersheds.

Rhode Island GIS Conference - June 1, 2007

A highlight of the conference is a series of three sessions committed to municipal GIS applications. Other sessions include an overview of GIS in Rhode Island State Government, discussions of Internet GIS applications and natural resource-oriented GIS applications, tips and tricks for working with ESRI ArcGIS Desktop and Google Earth, and techniques for bringing GIS to the classroom. Furthermore, new users may participate in GIS 101 and GPS 101 sessions that will provide introductions to these technologies through a series of brief lectures and exercises. Finally, a special session will be offered to introduce the much-anticipated Rhode Island's Geodata Gateway, and learn how to make the most of Internet-based map services offered in the State.

NPDES Stormwater Webcast - July 11, 2007

IDDE 201 - Field and Lab Methods (with film clips from a real IDDE investigation!)

Speakers: Jennifer Zielinski, Center for Watershed Protection and Harry Stark, Cuyahoga County Board of Health

Please join us for our next webcast on Wednesday July 11, 2007 from 12:00-2:00 pm EDT. We will build on the foundation created in last

September's webcast on Illicit Discharge Detection and Elimination (IDDE) with Jennifer Zielinski of the Center for Watershed Protection. This webcast will focus on the field and lab methods that can be used to identify, track, and correct illicit discharges to local storm sewer systems. For the first time in our webcast series, we will include film clips in our presentation to help illustrate real field procedures and techniques.

Using the New Rhode Island Site Specific Soil Mapping Guide – November 15, 2007

Site specific soil survey mapping provides detailed information on water table depth, hydric soils and restrictive layers that developers, land owners and municipal officials need to accurately evaluate suitability of land for development. The workshop will describe a new manual which establishes standard methods and procedures to follow when making site specific soil surveys in Rhode Island. This will focus on practical application of the new method specifically for land developers, system designers, and local officials.

Invasive Plant Management Certification Program – January 23, 2008

The URI College of the Environment and Life Sciences Outreach Center, in partnership with the Rhode Island Coastal Resources Management Council (CRMC), held a two-day Invasives Management Certification Program. The program was intended to provide guidance to landscape professionals working within coastal buffer zones. All four personnel of the Maintenance Division's Roadside Crew attended the program, and three will take the exam to get certified.

In Year 4, as part of the Agreement, the URI Cooperative Extension provided training and workshops for MS4s and RIDOT.

Making an Impact with LID Workshop – April 24, 2007

Making an Impact with Low Impact Development: Helping RI Communities Use the Lessons Learned from Existing Projects
The workshop will highlight current research findings and successes of several Low Impact Development projects in New England, focusing on lessons that Rhode Island communities can apply to implement this technique. Case studies will demonstrate practical methods for overcoming impediments to local use of LID, focusing on planning and site design, construction and maintenance issues, and costs. Speakers include leading researchers and consulting professionals with extensive experience in applying LID techniques.

TR55 Basic Training – May 10, 2007

This workshop will cover the fundamental uses and limitations of TR-55, including submittal requirements for development applications, appropriate inputs and assumptions, and use of results in stormwater management plans. This will provide training on basic hydrologic analysis to support local use of proposed DEM stormwater design standards that emphasize control of stormwater volume. It will offer a foundation for future workshops on the application of TR-55 for low impact development (LID) techniques. Municipalities and other MS4s will earn credit towards meeting Phase II requirements for education and outreach.

Public Works Facility SWPPP Training – December 12, 2007

Stormwater Management at Your Public Works Facility: Employee Training. This training opportunity is designed specifically for DPW and DOT supervisors responsible for implementing Stormwater Pollution Prevention Plans (SWPPPs) on garages and town/state owned facilities. This workshop will be structured as a Training the Trainer event. Materials will be provided for participants to take back to train their employees on Stormwater Pollution Prevention. Participants are encouraged to bring copies of the SWPPPs for discussion and review. This workshop is offered to assist MS4 communities with complying with Phase II regulations.

Everything You Need to Know About Erosion and Sediment Controls: Installation, Maintenance and Inspection - February 27, 2008; March 10, 2008

This workshop will focus on how to:
Install erosion and sediment controls;
Inspect erosion and sediment controls on a routine basis following storms
Maintain or modify erosion and sediment controls to ensure good protection

In addition to attending training sessions, the Natural Resources Unit has also provided public education/outreach

- Outfall Field Training – The Natural Resources Unit conducted an Outfall Field Training session to aid other MS4s in outfall identification, mapping, and dry weather surveys and sampling. Fifteen communities participated in the training. Documents were handed out at the training session and provided on the RIDOT Storm Water Web Page. (June 26, 2007)
- Town of North Smithfield – Coordination re: Illicit Discharge Detection and Elimination; worked with North Smithfield Department identifying outfall ownership, and dry weather discharge surveys
- City of Lincoln, Rhode Island – Outreach re: Illicit Discharge Detection and Elimination; aided Lincoln Public Works Department in GPS locating outfalls; continued support w/ Phase II requirements (Summer 2007)
- Town of Glocester, Rhode Island – Outreach re: Illicit Discharge Detection and Elimination; aided Glocester Public Works Department in dry weather discharge surveys of outfalls; continued support w/ Phase II requirements (October 2007)
- City of Providence, Rhode Island – Coordination re: Illicit Discharge Detection and Elimination; worked with Providence Public Works Department identifying outfall ownership (Fall 2007)
- City of Warwick, Rhode Island – Coordination re: Greenwich Bay TMDL and Stormdrain Retrofit project (Summer 2007)



**MINIMUM CONTROL MEASURE #2:
PUBLIC INVOLVEMENT/PARTICIPATION (Part IV.B.2 General Permit)**

SECTION I. MEASURABLE GOALS: (For shaded areas, please provide descriptions of ongoing activity in SECTION II.)

A. REQUIRED MEASURABLE GOALS:				
Permit ID#	BMP ID	List Measurable Goal	Date(s) Completed	If goal was NOT met, briefly list reasons, current status, plans and new date for meeting the goal
IV.B.2.b.2.ii	2B	Implementation of public involvement activities and description of groups engaged (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.2.b.2.iii		Public notice of the draft annual report and provide the opportunity for public comment (ANNUALLY)	3/1/2007 – 4/1/2007	
B. ADDITIONAL MEASURABLE GOALS:				
	2A	Continue Existing Programs: Adopt a Highway/Spot. Provide bags, litter picks, transportation, and traffic control. Measurable Goal: Continuous Improvement	Ongoing	
	2B	Proposed Program: Partner with URI Cooperative Extension to Provide Public Outreach Program Measurable Goal: Execute MOA in Year 3; Receive deliverables on an agreed-upon timeline.	February 2006	URI Agreement signed February 2006 Letter of invitation to municipal MS4s mailed February 2007 workshops/training available 2007 through 2009 Attachment A provides URI's 2007 Annual Progress Report.
	2C	Continue Existing Program: Fund clean up efforts - Prison cleanup crews Measurable Goal: Continuous Improvement	Ongoing	
	2E	Continue Existing Program: Enhancement Program. Measurable Goal: Continue Funding	Ongoing	

SECTION II. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as types of activities and audiences/groups engaged. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals.)

IV.B.2.b.2.ii ; BMP ID 2B – Public Involvement – ONGOING

The Natural Resources Unit has developed a partnership with the URI Cooperative Extension to provide a public outreach program. The target audiences of this BMP include the public, State and municipal officials, environmental groups and educational organizations focusing on various pollutant sources. The URI agreement was signed in February 2006. URI has provided an annual report and assessment to RIDOT, which provides the measurable goals set and agreed upon by RIDOT, RIDEM, and URI-CE in the contract agreement, and the success towards each. Workshops began in February 2007 and will continue through 2009. **ATTACHMENT A**

IV.B.2.b.2.iii

The draft Annual Report for 2007 went through a 30-day public notice before final submission to RIDEM. See Section III.

Additional Measurable Goals and Activities

BMP ID 2A – Adopt-a-Highway Program – ONGOING

The Maintenance Division has continued with the Adopt-a-Highway and Adopt-a-Spot programs providing bags, litter pick-ups, transportation and traffic control. The target audiences of this BMP include the public, commercial and industrial businesses, trade associations, environmental groups and educational organizations. Litter is the target pollutant source for this BMP. The level of public participation determines the success of this goal.

The Adopt-A-Highway Program (AAH) is geared for non-profit, volunteer groups such as environmental groups, students, boy/girl scouts and civic minded businesses. The small signs are free to not-for-profit organizations and the large signs are a charge, RIDOT Maintenance Division fabricates and installs the signs for this program. The Sponsor is responsible to do 4 cleanups per year or whatever it takes to keep the segment clean, the actual Sponsor conducts the cleanups. The segments in the AAH Program are on secondary roads, no high speed routes or interstates. **Adopt-a-Highway currently has 98 sponsors in the program and 196 miles are cleaned as a result.**

The Sponsor-A-Highway Program (SAH) is geared toward businesses and there are currently two companies that the Department does business with, Adopt-A-Highway Maintenance Corporation and Adopt-A-Highway Litter Removal Service of America, Inc. Both are based out of California and they are active in many states. They charge a monthly fee to each Sponsor for the sign panel (*Catch the Wave Ride with Pride*) and they are obligated to clean each segment 19 times per year. There is a set schedule for each company to follow and the cleanups take place on Mondays. Both companies send electronic cleanup reports. SAH has segments on all the major routes and interstates. **Sponsor-A-Highway has 46 Segments Sponsored (92 Miles Sponsored), out of a total of 119 total segments in the program.**

The following is a breakdown of the Sponsor-a-Highway Segments:

Route 4 – total segments 10	8 sponsored	Route 146– total segments 16	1 sponsored
Route 6 – total segments 4	0 sponsored	Route 195 – total segments 4	3 sponsored
Route 10 – total segments 4	1 sponsored	Route 295– total segments 24	8 sponsored
Route 78– total segments 4	1 sponsored	Route 95 – total segments 45	24 sponsored

BMP ID 2C – Prison Crew Cleanups – ONGOING

The Maintenance Division has continued with cleanup efforts – prison crew cleanups along RIDOT roadways in 2007 yielded 76,127 bags of litter to be picked up and disposed of.

BMP ID 2D: Deleted per RIDEM

BMP ID 2E – Enhancement Program – ONGOING

The projects included in the Enhancement Program for the FY2006/FY2007 TIP were selected and recommended by RIDOT's Transportation Enhancement Advisory Committee (TEAC), which conducted a thorough solicitation, outreach, and proposal evaluation process during late 2004 and early 2005.

Approximately 112 applications were received, in addition to the on-going program (carried forward from the previous TIP). This program continues on-going projects with \$7M million allocated for FY 2008 and 2009.

All enhancement projects listed in the TIP are initiated through the development of a project agreement with the sponsor and/or the commencing of the design process. The funds to be allocated for each project as well as the year of anticipated implementation is available at <http://www.planning.state.ri.us/transportation/>. The implementation schedule is based on the information available to RIDOT and is subject to change. To expedite program implementation, RIDOT is given flexibility in advancing projects within the annual Enhancement budget when other projects are delayed.

In 2007, RIDOT, RIPTA, Air Quality Transportation Subcommittee, and Statewide Planning requested an amendment to the current TIP. Requested changes include:

- Add FY 2008 to the 2006-2007 TIP for all programs
- Reallocate funding within and/or among TIP programs based on construction cost increases and scheduling of earmarked projects, requiring the rescheduling of many projects for implementation, such that fiscal constraint is maintained. Many bridge, highway, bicycle, and enhancement projects are delayed for this reason, but no projects have been dropped from the TIP. Please see individual line items in TIP (pgs. 69-76)

Although no enhancement projects fall under the "Mitigation of Highway Runoff" category, many enhancement projects have stormwater mitigation components. In 2007, nine enhancement projects were started or completed.

Projects that went to construction this year or were completed:

- Old Town Hall (Westerly)
- King Street (East Greenwich)
- Pawtuxet Village Traffic Calming (Warwick/Cranston)
- Warren Ave./Broadway Revitalization (E. Providence)
- Dutch Island Lighthouse (Jamestown)
- Woonsocket Trailhead Enhancement (as part of Blackstone Bikeway Segment 7C)
- Exeter Library Entrance Enhancement (Exeter)
- Almy Farm Stone Wall Restoration (Little Compton)
- Switch Road (Hopkinton)



**MINIMUM CONTROL MEASURE #3:
ILLICIT DISCHARGE DETECTION AND ELIMINATION (Part IV.B.3 General Permit)**

SECTION I. MEASURABLE GOALS: (For shaded areas, please provide descriptions of ongoing activity in SECTION II.)

A. REQUIRED MEASURABLE GOALS:					
Permit ID#	BMP ID	List Measurable Goal	Date(s) Completed	Date Submitted to RIDEM	Name of document used to submit info to RIDEM and where it can be found in that document. If goal was NOT met, briefly list reasons, current status, plans and new date for meeting the goal.
IV.B.3.b.1	3A, B	Development of an outfall map showing the location of all outfalls and names of receiving waters (DUE YEAR 3)	Ongoing	9/27/07	Updated map/data submitted with each Annual Report (2004, 2005, 2006, 2007) Latest GIS data & metadata submitted to Paul Jordan on 9/27/07 ATTACHMENT B
IV.B.3.b.2	--	Tagging outfall pipes if GIS maps are not being developed (OPTIONAL ACTIVITY)	N/A		PLEASE COMPLETE UNDER SECTION II.
IV.B.3.b.3	3C	Recording of additional elements, such as location of catch basins, manholes and pipes, on an on-going basis. (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.3.b.4	--	Adoption of Ordinance to prohibit and enforce illicit discharges into the MS4 (DUE YEAR 2)	N/A	N/A	This minimum measure is not applicable to RIDOT
		Signed Letter from City or Town Solicitor (DUE YEAR 2)	N/A	N/A	This minimum measure is not applicable to RIDOT
IV.B.3.b.5.ii, iii, iv, & v	3Div	Implement procedures for the receipt and consideration of complaints, tracing the source of an illicit discharge, removing the source of the illicit discharge, and evaluating and assessing the program (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.3.b.5.vi	3Div	Inspection of all catch basins and manholes for illicit connections and non-storm water discharges (DUE YEAR 4)	Ongoing		
IV.B.3.b.5.vii	3Div	Completion of two dry weather surveys, one between Jan 1 st and April 30 th and one between July 1 st and Oct 31 st . (Sanitary sewers- bacteria sampling is only required once between July 1 st and Oct 31 st) (DUE YEAR 4)	Ongoing		Dry weather surveys are being conducted on an ongoing basis with the outfall mapping; follow-up surveys are still underway. Data submitted with this Annual Report ATTACHMENT C
IV.B.3.b.7	3Div	Implementation of coordinating activities with physically interconnected MS4s, including state and federal owned or operated MS4s, when illicit discharges are detected or reported (ONGOING)			PLEASE COMPLETE UNDER SECTION II.

ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd

IV.B.3.b.8	3Div	Implementation of referral to RIDEM of non-storm water discharges not authorized by this permit or a pre-existing permit (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.3.b.9	1A	Education of public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste as well as allowable non-stormwater discharges found to be significant contributors of pollutants to the MS4. (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
B. ADDITIONAL MEASURABLE GOALS:					
	3A	Proposed Program: OUTFALL MAPPING (Year 1 – 5)			
	i	Select Consultant/Vendor to Map Storm Water Outfalls along divided – and limited-access highways (as part of the Asset Management RFP). Measurable Goal: Review RFP and Hire Consultant within Year 4.	---	---	Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated. Rather than soliciting vendors to complete the inventory analysis and to perform designated maintenance task, the Department is currently planning on doing much of that work in-house. The changing of this Measurable Goal will require an amendment to the Storm Water Management Program Plan.
	ii -viii	Existing Program: Map outfalls by sub-basin	Ongoing	9/27/7	Drainage outfalls not located on limited-access or divided highways have been identified and GPSed. Mapping of these outfalls is anticipated to be completed in Year 5. Latest GIS data/metadata provided to Paul Jordan 9/27/7 ATTACHMENT B
	3B	Proposed Program: OUTFALL DATABASE (Year 1 – 5)			
	i-ii	Measurable Goal: Select Asset Management software within Year 2-3; Install in Year 4	---	---	Please see BMP ID 3Ai.
	iii-iv	Measurable Goal: Enter outfall field data collected into GIS Software (Year 3)	Ongoing	9/27/7	All GPS data is processed within a week of collection; ArcGIS database is up-to-date with all field data collected.
IV.B.3.b.5	3C	Proposed Program: Develop procedure for recording "additional elements". Measurable Goal: Design policy memo developed by end of Year 3.	Completed	April 2007	RIDOT developed an IDDE plan during Year 3 that addresses requirements under Permit ID# IV.B.3.b.5. Submitted to RIDEM with Year 3 Annual Report. No comments received. Finalized during Year 4. Training to be conducted Year 5. ATTACHMENT D
	3D	ID Existing and plan for future connections (Year 1 – 5)			
	i	Existing Program: Drainage discharges to system accounted for through PAP system drainage. Volume limited by existing DPM. Measurable Goal: Continue existing program.	Completed		Current policy appropriately limits new discharges

ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd

	ii	Proposed Program: Adopt/Evaluate Design Policy Memo for New Connections/Discharges to include geo-referencing. Measurable Goal: Revised DPM regarding drainage connections by end of Year 3.	Completed	April 2007	2006 Annual Report
	iii	Proposed Program: Identify Existing Connections/Discharges. Limited to review of PAP records for last three years and identification of significant contributors discharging to system. Measurable Goal: Identify existing connections/discharges by end of Year2.	Completed	April 2007	2006 Annual Report
	iv	Develop IDDE Program Measurable Goal: Develop IDDE program and Submit to RIDEM for review in Year 3	Completed	April 2007	2006 Annual Report
	v	Implement IDDE Program	Completed	2007	Training to be conducted in Year 5
	3E	Proposed Program: Survey outfalls for dry weather flow (Year 1 – 5)			
	i-v	Measurable Goal: Survey Outfalls to identify Dry Weather Flows	Ongoing		Drainage outfalls not located on limited-access or divided highways have been identified and GPSed. As outfalls are identified, a dry weather survey is conducted. Follow-up surveys conducted as necessary. Surveying of these outfalls is anticipated to be completed in Year 5. Latest GIS data/metadata provided to Paul Jordan 9/27/7
	3F	Proposed Program: Sample Outfalls under Dry Weather Conditions (Year 1 – 5)			
		Measurable Goal: Purchase equipment to sample storm water outfalls with dry weather flow	Completed	April 2007	2006 Annual Report
	i-vii	Measurable Goal: Sample outfalls	Ongoing	April 2008	Drainage outfalls not located on limited-access or divided highways have been identified and GPSed. As outfalls are identified, a dry weather survey is conducted. Follow-up surveys conducted as necessary. Dry weather sampling completed as outlined in the RIDOT IDDE Program Plan. Sampling of these outfalls is anticipated to be completed in Year 5. Data provided with this Annual Report. ATTACHMENT C

SECTION II. OVERALL EVALUATION:

<p>GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS</p> <p>Include information relevant to the implementation of each measurable goal, such as activities implemented (when reporting tracked and eliminated illicit discharges, please explain the rationale for targeting the illicit discharge) to comply with on-going requirements, and illicit discharge public education activities, audiences and pollutants targeted. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.</p> <p>(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals.)</p>
<p>Permit ID# IV.B.3.b.1; BMP ID 3A – Outfall Mapping – ONGOING</p> <p>This measurable goal was not completed by Year 3 and RIDOT will require additional time to map its entire state-wide system. The Natural Resources Unit Summer Interns, supported by the MIS Office, have been inventorying outfalls through plan research and field data collection using GPS. To date, RIDOT has mapped 3420 outfalls and taken associated photos on non-divided/easy access roadways. Five sub-basins remain partially completed (Seekonk River, Pawtuxet River, Pocasset River, Warren River, and Coastal Waters). It is anticipated that these will be completed in Year 5 (provided Summer Interns are available). <u>ATTACHMENT B</u></p> <p><i>Divided and limited-access highways remain to be inventoried and mapped. RIDOT had previously reported that outfalls on limited-access and divided highways would be mapped by a contractor for the Asset Management Program to be installed in Maintenance. Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated. Rather than soliciting vendors to complete the inventory analysis, the Department is currently planning on doing much of that work in-house.</i></p> <p><i>The changing of this Measurable Goal will require an amendment to the Storm Water Management Program Plan. This change will require RIDOT to investigate other feasible options of mapping these outfalls. An amended SWMPP will be submitted to RIDEM as soon as possible within Year 5 of the Permit.</i></p> <p>BMP ID 3B – Outfall Database – ONGOING</p> <p>A spatial database (ArcGIS) has been created for RIDOT outfall location and identification. As outfall data (GPS coordinates, photos, and attributes) are collected, the Natural Resource Unit and the GIS Office are responsible for updating the database. The database is updated within a week of data collection. The ArcGIS database and metadata have been forwarded over to Paul Jordan of the RIDEM MIS division in September 2007.</p>
<p>IV.B.3.b.2 – Tagging of Outfalls</p> <p>Not applicable – GIS maps are being developed.</p>
<p>Permit ID# IV.B.3.b.3; BMP ID 3C – Recording of Additional Elements – ONGOING</p> <p>The Natural Resources Unit developed an IDDE plan which details the procedure for locating additional elements (catch basins, man holes, etc.), recording pertinent information about them, and amending mapping to depict these features. As illicit discharges are investigated, addition elements will be recorded as necessary to aid in the tracing, sourcing, and removal of the illicit connection. The IDDE Plan was submitted to RIDEM with the 2006 Annual Report (no comments received). The IDDE Plan was finalized in Year 4, and training is to be conducted in Year 5. <u>ATTACHMENT D</u></p>

IV.B.3.b.4 – Adoption of Ordinance

Not applicable to RIDOT

IV.B.3.b.5 – Standard Operating Procedures; BMP ID 3Div, v – Develop & Implement IDDE Plan – ONGOING

RIDOT developed an IDDE program during 2006 that addresses the SOP requirements under Permit ID# **IV.B.3.b.5**. The RIDOT IDDE Program was developed using New England Interstate Water Pollution Control Commission's Illicit Discharge Detection and Elimination Manual – A Handbook for Municipalities (January 2003), the Center for Watershed Protection Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessments (October 2004), and RIDEM IDDE workshop materials (December 2004). The IDDE manual was modified to reflect RIDOT authority and procedures. The Plan has been previously forwarded to RIDEM for review (via email to M. Chatterton and via the 2006 Annual Report). No comments were received. The Plan was finalized in Year 4; training will be held in Year 5. **ATTACHMENT D.**

IV.B.3.b.5.vi – Inspection of all catch basins for illicit connections

At this time, the RIDOT Maintenance Division does not have a procedure in place to accurately assess which catch basins, or how many, have been cleaned/inspected/maintained. Developing an activity tracking procedure will be a priority in Year 5. Currently, catch basins are inspected for illicit connections during drainage plan improvement design, as part of RIDOT's Statewide Drainage Project, or during Outfall Mapping/Surveying/Sampling. The Maintenance Division will receive training in Year 5 re: Stormwater System Inspection & Maintenance as part of the URI-CE Agreement.

The Kickemuit River Council will be investigating and inspecting RIDOT catch basins and drainage system on Metacom Ave as part of an illicit discharge detection program (funded through RIDEM). RIDOT has been working with the KRC to provide support since the inception of the program. In 2007, RIDOT Maintenance Division cleaned catch basins on Metacom Ave in direct response to the KRC's request. The KRC program is anticipated to start in early 2008.

IV.B.3.b.5.vii – Dry Weather Surveys/Sampling – ONGOING

BMP ID 3E – Outfall Surveys: Outfalls have been examined for dry weather discharges during the initial Outfall Mapping (Permit ID# IV.B.3.b.1; BMP ID 3A – Outfall Mapping) that occurred during dry weather conditions during between July and October each year. Outfalls that were determined to have dry weather discharge, or were unknown, will be re-visited, and another dry weather survey conducted. If dry weather discharge is present, the flow will be sampled for pH, conductivity, temperature, and bacteria as described in the RIDOT IDDE Plan.

BMP ID 3F – Outfall Sampling: The Natural Resources Unit has purchased equipment to sample dry-weather-flowing outfalls for pH, conductivity, and temperature. If flow is present, sampling will be conducted in accordance with the RIDOT IDDE Plan. To date, 64 outfalls (out of 3420) have exhibited Dry Weather Discharge; another 122 have to be revisited in Year 5 to conduct another dry weather survey. Of the 64 DWD outfalls, 50 have been visited for sampling. Sample results are provided in **ATTACHMENT C.**

IV.B.3.b.7 – Coordination b/t MS4s – ONGOING

RIDOT developed an IDDE program during 2006 that addresses the requirements under Permit ID# **IV.B.3.b.7. ATTACHMENT D.**

IV.B.3.b.8 – Referral to RIDEM of non-storm water discharges – ONGOING

RIDOT developed an IDDE program during 2006 that addresses the requirements under Permit ID# **IV.B.3.b.8. ATTACHMENT D.**

Permit ID# IV.B.3.b.9 – Educate public – ONGOING

This will be covered under the URI-CE Agreement; please see Minimum Measure 1A.

Additional Measurable Goals and Activities

BMP ID 3D – Existing/Future Connections – ONGOING

The Design Office oversees the drainage discharges to the RIDOT system accounted for through Physical Alteration Permit Application (PAPA) system drainage. PAPAs are required whenever a party with State-adjacent land wants curbcut access and/or drainage to the State system. The permit does not allow for additional net flow or volume to the RIDOT system. Tie-ins to the system are required to treat storm water. PAPAs from 2002-2006 were reviewed and each connection into the RIDOT system was inspected, GPSed, and documented. A revised policy for PAPA policy/regulation was established in Year 3 (2006) to include geo-referencing of commercial interconnections. New interconnections have been added to the geo-referenced database system (ArcGIS). The PAPA records may be reviewed when an illicit discharge is located to aid in identification of existing contributors. Please see **SECTION III.B** for data.

SECTION III.A Other Reporting Requirements - Illicit Discharge Inspections to Date (Part IV.G.2.m)

Total Illicit Discharges Identified: 0	Total Illicit Discharges Tracked: 0
Total Illicit Discharges Eliminated: 0	# of Complaints Received: 0
# of Violations Issued: 0	# of Unresolved Violations Referred to RIDEM: 0
Summary of Enforcement Actions:	
<p>Illicit connection inspections in Year 4 were conducted at Scarborough Beach through the Stormdrain Retrofit Demonstration Project. A hired consultant, in collaboration with RIDOT NRU personnel, conducted sampling and drainage system mapping to determine if illicit connections exist and are causing beach closures due to potentially unhealthy bacteria concentrations in stormwater runoff. Scarborough Beach was deemed a high priority beach by Governor Carcieri in 2003, and RIDOT has continued to study and evaluate means to eliminate beach closures. In Year 4 (2007), RIDOT's consultant evaluated DOH sampling data, conducted sampling, investigated and mapped the storm drain system to five outfalls that drain on to the beach area, and investigated system changes that may reduce or eliminate stormwater causes. A sub-consultant has provided a proposal to examine the circulation and flushing near Scarborough Beach to aid in the determination of feasible solutions. In Year 5 (2008), RIDOT will continue to work with our consultants, and the RIDEM TMDL Program, to address beach closures at Scarborough Beach.</p>	
Extent to which the MS4 system has been mapped:	
<p>To date, RIDOT has mapped 3420 outfalls on non-divided/easy access roadways. Five (out of 47) sub-basins remain partially completed (Seekonk River, Pawtuxet River, Pocassett River, Warren River, and Coastal Waters). It is anticipated that these will be completed in Year 5. Divided and limited-access highways remain to be inventoried and mapped. The NRU will work with the Maintenance Division to develop a procedure for mapping these remaining outfalls.</p>	

SECTION III.B Interconnections (Part IV.G.2.k and IV.G.2.l)

Interconnection:	Date Found:	Location:	Connectee:	Originating Source:	Planned and Coordinated Efforts and Activities with Connectee:

Please see **ATTACHMENT E**



**MINIMUM CONTROL MEASURE #4:
CONSTRUCTION SITE STORM WATER RUNOFF CONTROL (Part IV.B.4 General Permit)**

SECTION I. MEASURABLE GOALS: (For shaded areas, please provide descriptions of ongoing activity in SECTION II.)

A. REQUIRED MEASURABLE GOALS:					
Permit ID#	BMP ID	List Measurable Goal	Date(s) Completed	Date Submitted to RIDEM	Name of document used to submit info to RIDEM and where it can be found in that document. If goal was NOT met, briefly list reasons, current status, plans and new date for meeting the goal.
IV.B.4.b.1	---	Adoption of Ordinance to require erosion and sediment control, control of other wastes, and sanctions to ensure compliance (DUE YEAR 2)	N/A	N/A	Adoption of Ordinance not applicable to RIDOT
		Signed Letter from City or Town Solicitor (DUE YEAR 2)			Current RIDOT Standard Specifications for Road and Bridge Design and contractor DPMs require environmental compliance on construction sites
IV.B.4.b.2 IV.B.4.b.4		Review of 100% of plans and SWPPPs, issuance and tracking of permits for construction projects \geq 1 acre not reviewed by other State Programs (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.4.b.6		Implementation of procedures to receive and consider information from the public (if relevant.) (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.4.b.7		Inspection of 100% of all construction projects within the regulated area that discharge or have the potential to discharge to the MS4. Enforcement of erosion and sediment control measures and other measures for control of waste at construction sites. (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.4.b.8		Implementation of procedures for referral to the State of non-compliant construction site operators (ONGOING)			PLEASE COMPLETE UNDER SECTION II.

B. ADDITIONAL MEASURABLE GOALS:				
	4A	Proposed Program: Review blue book and draft revision to make specification tighter. Measurable Goal: Outline for a revised specification available for use in Year 4.	Ongoing	
	4B	Proposed Program: Modify standard specification to require erosion and sediment controls inspection a minimum of once per week, and during (or immediately after) each storm, or once per week during periods of dry weather or minor storms. Measurable Goal: Revised specification available for use in Year 4.	Ongoing	
	4C	Proposed Program: Modify standard specification to require contractor to keep surplus erosion and sediment control materials on-site. Measurable Goal: Revised specification available for use in Year 4.	Ongoing	
	4D	Proposed Program: Mandate BMP inspection schedule to be once per week by Wednesday. To be completed by the contractor per the specification. Measurable Goal: Revised specification available for use in Year 4.	Ongoing	<p>Many of the revisions and changes to RIDOT policies (either the Standard Specifications, SWPPP requirements, or Design Policy Memos) are already informally enforced through design plan review by the NRU.</p> <p>Specification revisions are being drafted by the Natural Resources Unit (NRU) and are anticipated to be completed by in 2008 for RIDOT internal review. Implementing the changes should be accomplished by the end of Year 5.</p>
	4E	Proposed Program: Revise WBS/DPM to include project specific inspection checklist to be developed during design phase, identifying BMPs by station and sensitive areas to be inspected. Checklist to be used by designated RIDOT or contractor personnel. Measurable Goal: Revised WBS available for use in Year 4.	Ongoing	
	4I	Proposed Program: Modify RIDOT Policy to require preparation of SWPPPs for all projects to be included in Construction Documents (P,S&E) prepared by consultant during design phase. Contractor to sign NOI form and share liability. Measurable Goal: Revised WBS available for use in first quarter of Year 3.	Ongoing	
	4J	Proposed Program: Develop a contract enforcement mechanism for RIDOT to enforce BMPs. Measurable Goal: Outline of enforcement procedure available in Year 3.	Ongoing	

CONSTRUCTION SITE STORM WATER RUNOFF CONTROL cont'd

4F	Existing Program: Inspection program on project specific basis.	Ongoing		
4G	Existing Program: Erosion and sediment control inspection techniques provided at RIDOT winter training.	Ongoing		
4H	Existing Program: Standard specification requires contractor to control waste and dispose of properly.	Ongoing		
4K	Proposed Program: Develop or contract for waste control training for RIDOT Resident Engineers and Inspectors. Measurable Goal: Training curriculum available for use in first quarter of Year 3.	Ongoing		
4L	Implement Training Program. Measurable Goal: Training curriculum in use in first quarter of Year 3.	Ongoing		
4M	Proposed Program: Meetings with contractor prior to construction commencement to review environmental constraints and conditions. Measurable Goal: Procedure developed for conducting pre-construction environmental meetings in Year 2.	Ongoing		
4N	Proposed Program: pilot program kick-off meetings on three projects. Measurable Goal: Pre-construction environmental meetings held for three new projects during Year 3.	Ongoing		
4O	Proposed Program: conduct meetings at project kick-off for 10 projects. Projects would be selected based on applicability. Measurable Goal: Pre-construction environmental meetings held for ten new projects during Years 3, 4 and 5.	Ongoing		

SECTION II. OVERALL EVALUATION:

<p>GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:</p> <p>Include information relevant to the implementation of each measurable goal, such as activities implemented to support the review, issuance and tracking of permits, inspections and receipt of complaints. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.</p> <p>(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals.)</p>
<p>IV.B.4.b.1– Adoption of Ordinance</p> <p>Not applicable to RIDOT</p>
<p>IV.B.4.b.2 – Procedures to ensure appropriate State permits are obtained – ONGOING IV.B.4.b.4 – Procedures to review 100% of plans and SWPPPs</p> <p>The RIDOT Natural Resources Unit reviews all plans and associated documents (i.e. SWPPPs) to determine permit applicability. Plans requiring permits are sent to the appropriate agencies for permitting.</p> <p>Current RIDOT policy (DPM 330.13/ DPM 460.08) states:</p> <p>It is the responsibility of the Designer to make recommendations to RIDOT regarding appropriate permit application types and to prepare all appropriate materials and supporting documentation. Recommendations should be completed as early as possible during project development and in all cases should be made prior to any project's advancement beyond 30% design.</p> <p>Once the require permit applications have been identified by the RIDOT Project Manager (PM) and/orNRU, the Designer will download the most recent version of the correct forms and corresponding regulations – in most cases, from the permit-granting Agency's website. The Designer may be required to complete Section G "Certification of Professionals", if directed by the NRU. In all cases, the date of any signatures on any application form shall not predate the plan and/or supporting documentation dates.</p> <p>Draft submissions to RIDOT must contain one copy of all the permit application materials for review by the NRU. Designers should review Enclosures specific to their Applications, as found in the application checklists. Once the Designer has submitted the draft permit application package to the PM and/or the NRU directly, the NRU will review the contents and either approve, or reject with comments. If approved by the NRU, the Designer will be contacted by the RIDOT PM and be informed of the number of copies of the permit application package to be submitted for the permit granting Agency's use. If it is rejected, it is returned to the Designer for revision. Once approved by the NRU, the permit application is submitted to the corresponding Agency for processing.</p> <p>All permits are required to be acquired prior to the contract plans, specification and estimate (PS &E) review. Any permits, permit stipulations, and SWPPP are part of the contract documents that are advertised and subsequently awarded.</p>

IV.B.4.b.6 – Procedures to receive public comment/information – ONGOING

As part of RIDOT's renewed commitment to public service, RIDOT has established a Customer Service Office. The purpose of the Customer Service Office is to keep information lines open between the citizens of Rhode Island and RIDOT. We hope to inform, assist, and coordinate our efforts with the general public, cities/towns, businesses, chambers of commerce, public and private organizations, and elected officials during all phases of transportation projects, from concept through completion, to lessen both construction inconveniences and economic impacts. We will strive to produce an effective public information program incorporating such tools as public meetings, project brochures and informational handouts concerning our roads and bridges. Our web site will continue to post up-to-date information on the progress of our projects. The Customer Service Office will also respond to any questions or concerns you may have regarding the Department of Transportation. The Customer Service Office may be contacted via phone, email, or the RIDOT website: <http://www.dot.state.ri.us/custserv/index.html>.

IV.B.4.b.7 – Inspection of all construction projects/enforcement of E & S controls – ONGOING

Current RIDOT Policy (Standard Specifications for Road and Bridge Construction) states:

212.03 CONSTRUCTION METHODS. Erosion and pollution controls shall be maintained by the Contractor to the satisfaction of the Engineer. Erosion and pollution controls must be able to prevent, under normal weather conditions, both the movement of soil materials and the intrusion of sediment-laden discharges into environmentally sensitive areas. Construction shall not commence or continue until all specified erosion and pollution controls are in place, properly installed and accepted by the Engineer. Erosion and pollution controls shall be routinely inspected by the Engineer. The Engineer shall notify the Contractor immediately if problems develop. The Contractor shall commence cleaning and maintenance measures no later than the next consecutive calendar day after receiving a directive from the Engineer to perform such measures. The Contractor shall aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Engineer. In the event of a weekend storm, the Contractor must have resources available to restore, and, if necessary, to replace any damaged controls.

In addition, RIDOT Construction projects that disturb an area greater than one acre are also required to have Storm Water Pollution Prevention Plans (SWPPPs). SWPPPs require erosion and sedimentation control inspections on a weekly basis, and/or after a storm event. RIDOT hires inspectors to perform SWPPP inspections on RIDOT construction projects.

Final Inspections are conducted on every RIDOT construction project, and are attended by appropriate personnel from the Maintenance, Design, Construction, and Environmental sections. If any drainage work, BMP, or proper stabilization is not correctly installed/established, the contractor is notified and must remedy the issue before Final Acceptance is granted. Final payment is based on this Final Acceptance.

IV.B.4.b.8 – Procedures for referral to State of non-compliant construction site operators

Not applicable to RIDOT. RIDOT is both the 'owner' and 'operator' for all RIDOT construction projects.

Additional Measurable Goals and Activities

BMP ID 4A – E, H – J – Review/Revise RIDOT policies – ONGOING – anticipated to be implemented in Year 5

Current Specifications (Rhode Island DOT Standard Specifications for Road and Bridge Construction (i.e. 'Blue Book')) require erosion and sediment controls, proper disposal of waste, and inspections. Revised specifications will provide detailed measures and will provide enforcement mechanisms and repercussions.

Revisions include modifying the standard specification to:

- require the contractor to keep surplus erosion and sediment control materials on-site
- require inspection a minimum of once per week during or immediately after each storm or once per week during periods of dry weather or minor storms
- require weekly BMP inspections
- include a project specific inspection checklist to be developed during design phase, identifying BMPs by station and sensitive areas to be inspected

The Natural Resources Unit requires preparation of SWPPPs for all projects to be included in Construction Documents prepared by the consultant during the design phase. All SWPPPs are reviewed by the NRU. The NRU is also completing a SWPPP template, checklist, and inspection form that all RIDOT consultants will be required to use, so that SWPPPs become more standardized, and therefore more enforceable.

The NRU is currently drafting revisions to the Blue Book and drafting new Design Policy Memos (DPMS) to provide stricter guidance on erosion and sediment controls and inspections of BMPs. On an informal basis, these revisions have already been implemented within the design plan and SWPPP review process.

The NRU meets with contractors prior to construction commencement to review environmental constraints and permit conditions. RIDOT reviews all applications submitted to RIDEM, CRMC, ACOE and USCG. Inter-Agency coordination meetings are held quarterly, or more frequently as necessary, to discuss and resolve construction-related issues. The NRU is working with the other State Agencies to commit to being present at pre-construction meetings so that any permit questions the contractor has may be answered before construction is started.

The standard specification requires the contractor to control waste and dispose of it properly. The RIDOT Project Engineer will ensure that the construction contractor controls litter on the site.

BMP ID 4F – Inspections – ONGOING

RIDOT Resident Engineers and inspectors are responsible for daily inspection of construction sites. Erosion and Sediment controls, waste disposal, and general site conditions are part of the daily inspection activity. The Natural Resources Unit is also responsible for inspections on a project specific basis. NRU inspections are performed on a project-specific basis. RIDOT will work towards a proactive inspection schedule with more standardized documentation.

BMP ID 4G – Erosion and Sedimentation Control Training – ONGOING

The URI-CE Agreement provided Erosion and Sediment Control training to RIDOT construction personnel in February/March 2008 (for 2007 Winter Training).

BMP ID 4K, 4L – Waste Control Training - ONGOING

The standard specifications require proper control and disposal of construction site waste. The Resident Engineer is responsible for ensuring these specifications are met onsite. The URI-CE Agreement will provide training to RIDOT personnel.

BMP ID 4M, 4N, 4O – Pre-construction Meetings – ONGOING

The NRU currently meets with contractors prior to construction commencement to review environmental constraints and permit conditions.

SECTION III. A Plan and SWPPP Reviews during Year 4 (2007)

# of Construction Reviews completed:	The NRU reviews all construction plans and SWPPPs prior to submission to regulatory agencies.	
Summary of Reviews and Findings:		

SECTION III.B Erosion and Sediment Control Inspections during Year 4 (2007) (Part IV.G.2.n)

# of Site Inspections:	# of Complaints Received:	Each active construction project with a SWPPP has weekly &/or storm event E&S monitoring. RIDOT works cooperatively with RIDEM & CRMC on E&S compliance issues.
# of Violations Issued:	# of Unresolved Violations Referred to RIDEM:	
Summary of Enforcement Actions:		

Construction Project	SWPPP Review	SWPPP Monitoring
1R Improvements to Providence Street -- PRIORITY		x
Berkeley Br. #769/Martin St. Br. #774	x	x
Blackstone River Bicycle Facility (Segment 4A)		x
Hartford Ave. Drainage	x	
Improvements to Warwick Neck Ave.	x	x
Jamestown Br. Demolition C-1		x
Northwest Bike Trail / Woonasquatucket River Greenway C-2	x	x
Post Road (Route 1) Intersection Improvements -- PRIORITY		x
Relocated Rt. 403 - Frenchtown Road Br. #1010	x	x
Relocated Rt. 403 - Post Road Interchange - Phase II	x	x
Relocated Rt. 403 - Route 4 Interchange, Phase I	x	x
Relocated Rt. 403 - Route 4 Interchange, Phase II	x	x
Relocated Rt. 403 - Rt. 4 Bridge No. 1012	x	x
Smithfield Ave. (1R) -- PRIORITY	x	x
Station Park - Interim Landscape Project	x	x
Waterfront Dr. (Warren Ave. Connector) C-7 -- PRIORITY	x	x



**MINIMUM CONTROL MEASURE #5:
POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
(Part IV.B.5 General Permit)**

SECTION I. MEASURABLE GOALS: (For shaded areas, please provide descriptions of ongoing activity in SECTION II.)

A. REQUIRED MEASURABLE GOALS:					
Permit ID#	BMP ID	List Measurable Goal	Date(s) Completed	Date Submitted to RIDEM	Name of document used to submit info to RIDEM and where it can be found in that document. If goal was NOT met, briefly list reasons, current status, plans and new date for meeting the goal.
IV.B.5.b.4		Review of 100% of plans for development projects one or more acres not reviewed by other State Programs (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.5.b.5		Coordination with existing State programs requiring post-construction storm water management (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.5.b.6		Implementation of referral to the State of new discharges of storm water associated with industrial activity (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.5.b.9	---	Adoption of Ordinance to address post-construction runoff from new development and redevelopment (DUE YEAR 2)	N/A	N/A	Not applicable to RIDOT
		Signed Letter from City or Town Solicitor (DUE YEAR 2)			
IV.B.5.b.10	5D	Post-construction inspections of BMPs and inspect 100% of all development \geq 1 acre within the regulated area that discharges to the MS4 (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.5.b.11	5B	Implementation of how long-term O&M of selected BMPs for new and re-development will be identified, tracked and enforced (ONGOING)			PLEASE COMPLETE UNDER SECTION II.
IV.B.5.b.12	5C	Identification of existing structural BMPs (ONGOING)			PLEASE COMPLETE UNDER SECTION II.

POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT cont'd

B. ADDITIONAL MEASURABLE GOALS:					
IV.B.5.b.2	5A	Existing Program: Current RIDOT DPM requires that all new construction meet the State Water Quality Standards and redevelopment projects must incorporate retrofit actions to improve storm water quality to the maximum extent practicable.	Ongoing		
IV.B.5.b.11	5B	Existing Program: Current maintenance practices include snow removal, street sweeping and catch basin cleaning.	Ongoing		
IV.B.5.b.12	5C	Existing Program: Location of Drainage Structures for Maintenance Division	Ongoing		
IV.B.5.b.10	5D	Proposed Program: Final Acceptance of Construction work by Maintenance Personnel. Audit to ensure project completeness. Measurable Goal: Maintenance division personnel present at final acceptance beginning third quarter of Year 3.	Ongoing		
	5E	Proposed Program: Expanded As-Built Plan requirement. As-built plans would be prepared based on Resident Engineer's project diary, and made available to RIDOT staff, including maintenance through current plan file management system available on internal network. Measurable Goal: Develop/implement/evaluate an as-built plan policy.	Ongoing		

SECTION II. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:
<p>Include information relevant to the implementation of each measurable goal, such as activities implemented to support the review, issuance and tracking of permits, inspections and receipt of complaints, etc. Please indicate if any projects have incorporated the use of Low Impact Development techniques. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.</p> <p>(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals.)</p>
<p>IV.B.5.b.4 – Review of plans – ONGOING</p> <p>Current RIDOT policy requires that all new construction meet the State water quality standards for pollutant removal from storm water and redevelopment projects must incorporate BMPs to improve storm water quality to the maximum extent practicable. Management of post-construction runoff is incorporated into</p>

POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT cont'd

project designs. RIDOT's Natural Resource Unit reviews all construction design plan to determine if Permits from regulatory agencies (RIDEM, CRMC, Coast Guard, etc) are required.

IV.B.5.b.5 – Coordination w/ State – ONGOING

The NRU coordinates a Quarterly Interagency Meeting with RIDEM, CRMC, Coast Guard, etc. to review projects.

IV.B.5.b.6 – Referral to State re: new industrial activity

Not applicable to RIDOT.

IV.B.5.b.9 – Adoption of Ordinance

Not applicable to RIDOT

IV.B.5.b.10; BMP ID 5D, 5E - Post-construction inspections – ONGOING

The Finals Section notifies the relevant Offices (Environmental, Design, Construction, and Maintenance) and representative personnel are present at final inspection of construction work. This facilitates understanding of drainage systems, and improves knowledge of system components.

The Construction Section will implement an as-built plan requirement. As-built plans would be prepared based on Resident Engineer's project diary and made available to RIDOT staff, including maintenance through a current plan file management system available on the internal network. As-built plans depict the project as actually constructed. This will facilitate location and mapping of "additional elements" and maintenance.

Any significant changes during construction must be submitted to the NRU for permit compliance verification; if applicable, the NRU submits permit modifications to appropriate regulatory agencies.

IV.B.5.b.11 – O&M of BMPs – ONGOING

BMP ID 5B – Maintenance and Cleaning – ONGOING

The Maintenance Division is responsible for snow removal, street sweeping and catch basin cleaning. Sweeping and catch basin cleaning work is completed on an as needed/ as possible basis. Completion of work is dependent on available manpower. Currently, daily activity sheets report the type of work and location of work completed; however these reports are not summarized on a monthly/yearly basis at this time in order to be able to provide an accurate number of basins cleaned per year. The Maintenance Division is looking to have this function complete for tracking the 2008 activities.

In 2007 all highways were swept a minimum of one time during the spring season following the winter operations. Additionally, some high volume roads such as the interstate and limited access highways were swept an additional 1-2 times.

RIDOT had previously reported that long-term O&M of storm water BMPs will be ensured through the Asset Management Program in the Maintenance Division. Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated. Rather than soliciting vendors to perform the asset inventory and designated maintenance, the Department is currently planning on doing much of that work in-house.

The changing of this Measurable Goal will require an amendment to the Storm Water Management Program Plan. This change will require RIDOT to investigate other feasible options of BMP maintenance and maintenance documentation. An amended SWMPP will be submitted to RIDEM as soon as possible within Year 5 of the Permit.

IV.B.5.b.12; BMP ID 5C: – Identification of existing structural BMPs – COMPLETED

A storm water BMP (swirl-chambers, treatment ponds, etc) inventory was completed in Year 3. The Design Office updates this database each year.

The NRU has contracted a consultant to inspect, GPS, and provide a maintenance plan for storm water BMPs through the Storm Drain Retrofit Demonstration project. This contract is expected to be completed in Year 5. As part of this contract, an Access database was developed to record base information for each of the BMPs, along with inspections and photos. A copy is provided on CD with this Annual Report. **ATTACHMENT F**

Additional Measurable Goals and Activities

PERMIT ID: IV.B.5.b.2; BMP ID 5A: Meeting Water Quality Standards – ONGOING

Current RIDOT policy requires that all new construction meet the State water quality standards for pollutant removal from storm water and redevelopment projects must incorporate BMPs to improve storm water quality to the maximum extent practicable. Management of post-construction runoff is incorporated into project designs.

SECTION III.A. Plan and SWPPP Reviews during Year 4 (2007)

of Post-Construction Reviews completed:

Summary of Reviews and Finding:

All construction plans and SWPPPs are reviewed by RIDOT Design and NRU before contract award. Post-construction storm water BMPs are reviewed at that time. Please see Minimum Measure 4, Section III.

SECTION III.B. Post Construction Inspections during Year 4 (2007): Proper Installation of Structural BMPs (Part IV.G.2.o)

SECTION III.C. Post Construction Inspections during Year 4 (2007): Proper Operation and Maintenance of Structural BMPs (Part IV.G.2.p)

of Site Inspections: 40

of Complaints Received: --

of Violations Issued: --

of Unresolved Violations Referred to RIDEM: 0

Summary of Enforcement Actions:

All 2007 Final Inspections were attended by Design, Construction, and Maintenance personnel. Environmental attended when appropriate.

Please see ATTACHMENT G



**MINIMUM CONTROL MEASURE #6:
POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS (Part IV.B.6 General Permit)**

SECTION I. MEASURABLE GOALS: (For shaded areas, please provide descriptions of ongoing activity in SECTION II.)

A. REQUIRED MEASURABLE GOALS:				
Permit ID#	BMP ID	List Measurable Goal	Date(s) Completed	If goal was NOT met, briefly list reasons, current status, plans and new date for meeting the goal
IV.B.6.b.1.i		Identification, location and description of all municipally owned structural BMPs (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.1.ii		Inspection and cleaning BMPs (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.1.iii	6K, 6L	Annual catch basin inspection and cleaning program (ANNUALLY)	Ongoing	
IV.B.6.b.1.iv	6S	Minimize erosion of road side shoulders and ditches by requiring stabilization of those areas (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.1.v	3A	Identify and report annually the known discharges causing scouring at outfall pipes or outfalls with excessive sedimentation and a description of all corrective actions (ONGOING / ANNUALLY)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.1.vi	6T, 6U	Annual road sweeping of all streets and roads within the regulated area annually (ANNUALLY)	2007	
IV.B.6.b.1.vii		Maintenance activities, schedules and long-term inspection for controls to reduce floatables (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.1.viii		Proper disposal of removed waste from the MS4 (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.4		Municipally owned non-Industrial facilities must develop and implement BMPs for O& M and Good Housekeeping, as well as corrective actions designed to eliminate and/or minimize the discharge of pollutants to waters of the State (DUE YEAR 4)	2006	Facility SWPPPs and SPPs were submitted to RIDEM RIPDES Program with the 2006 Annual Report.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

IV.B.6.b.5		Reporting and tracking of inspections, comprehensive site evaluations, corrective actions implemented and scheduled improvements to minimize the discharge of pollutants at industrial facilities owned and operated by the municipality (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.6	6C 6D 6E	Implementation of employee training programs that will be used to prevent and reduce storm water pollution (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
IV.B.6.b.7		Implementation of procedures for assessing potential water quality impacts to existing and new flow management projects (ONGOING)		PLEASE COMPLETE UNDER SECTION II.
B. ADDITIONAL MEASURABLE GOALS:				
	6A	Existing Program: Signage in Low Salt Areas	Ongoing	A Winter Operations Manual is being drafted by RIDOT Maintenance and Environmental to document Maintenance procedures. RIDOT will submit to RIDEM with the Year 5 Annual Report. A Winter Operations Training session will be held before the 2008 winter season.
	6B	Existing Program: Use of straight salt for de-icing on interstates and heavily traveled roadways. Reduces sedimentation and clean up requirements of sand applications.	Ongoing	
	6Bi	New Program: Anti-Icing Management Program	Ongoing	

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

6F	Existing Program: All Water Quality Units statewide inspected September 2002. Measurable Goal: Inspect Annually	2007/2008	<p>The Natural Resources Unit and the Design Section has identified RIDOT BMPs through plan research and field work.</p> <p>Through the Stormdrain Retrofit Demonstration Project, RIDOT has hired a consultant to inspect, GPS, and photograph all RIDOT BMPs. This contract will also provide a maintenance SOP and schedule for each BMP.</p> <p>This BMP Monitoring Program is anticipated to be completed in Year 5.</p>
6G	Proposed Program: Rent equipment to clean Water Quality units and evaluate need to purchase equipment or subcontract the cleaning to a contractor. Measurable Goal: Cleaning equipment rented, used and evaluated. Decision made on future cleaning practices by end of second quarter of Year 3.	Ongoing	
6H	Proposed Program: Implement Water Quality Unit cleaning program Measurable Goal: Water Quality unit cleaning program in use beginning in third quarter of Year 3. All vortechs units to be inspected once annually and cleaned in accordance with manufacturer's specifications.	Ongoing	
6I	Proposed Program: Develop a Standard Operating Procedure for maintenance of swales. Measurable Goal: Develop standard operating procedure by end of first quarter of Year 3.	Ongoing	
6J	Implement Standard Operating Procedure. Measurable Goal: Standard Operating Procedure in use beginning in third quarter of Year 3.	Ongoing	
6M	Proposed Program: Inventory existing detention basins. Measurable Goal: Database of detention basin locations by end of second quarter of Year 3.	Completed	
6N	Proposed Program: Develop inspection, maintenance, and mowing protocol for Detention Basins. Measurable Goal: Detention basin inspection and maintenance protocol available for use by second quarter of Year 3.	Ongoing	
6O	Implement Protocol. Measurable Goal: Begin inspecting and maintaining detention basins. Ten (10) basins to be inspected annually beginning in first quarter of Year 4 and cleaned as necessary.	Ongoing	
6P	Proposed Program: Develop Standard Operating Procedure for maintaining drainage structures in wetlands. Measurable Goal: Standard operating procedure approved by RIDOT by end of Year 3.	Ongoing	
6Q	Proposed Program: Negotiate Memorandum of Agreement with RIDEM for maintaining drainage structures in wetlands. Measurable Goal: Begin negotiating MOA with RIDEM during first quarter of Year 3.	Ongoing	

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

	6Ri	Proposed Program: Develop method for tracking inspections of drainages structures. Measurable Goal: Evaluate current record keeping practices during Year 2.		<i>Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated. RIDOT will work towards another solution to better track system inspections and maintenance.</i>
	ii	Measurable Goal: Conduct needs assessment regarding asset management software during Year 3.		
	iii	Measurable Goal: Evaluate needs for computer hardware to support record keeping and inspection effort. Requisition new equipment during Year 3.		
	iv	Measurable Goal: Implement new record keeping programs including software and hardware during Year 4.		

SECTION II. OVERALL EVALUATION:

<p>GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:</p> <p>Include information relevant to the implementation of each measurable goal, such as activities and practices used to address on-going requirements. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.</p> <p>(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals.)</p> <p>Permit ID# IV.B.6.b.1.i – ID BMPs - COMPLETED Permit ID# IV.B.6.b.1.ii – Inspect/Clean BMPs - ONGOING</p> <p>An inventory of all structural BMPs was completed in Year 3 by the Design and Environmental Offices. The Design Office is responsible for updating this on a yearly basis.</p> <p>The NRU has contracted a consultant to inspect, GPS, and provide a maintenance plan for storm water BMPs through the Storm Drain Retrofit Demonstration project. This BMP Monitoring contract is expected to be completed in Year 5. As part of this contract, an Access database was developed by the NRU to record base information for each of the BMPs, along with inspections and photos. <u>ATTACHMENT F</u></p> <p><i>RIDOT had previously reported that long-term O&M of storm water BMPs will be ensured through the Asset Management Program in the Maintenance Division. Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated.</i></p> <p><i>Changing of this measurable goal will require RIDOT to submit an amended SWMPP. RIDOT will determine the feasibility of in-house maintenance of storm water BMPs, and determine what measures will be required to ensure adequate inspection and maintenance of the BMPs. An amended SWMPP will be submitted to RIDEM as soon as possible within Year 5.</i></p>

Permit ID# IV.B.6.b.1.iii, BMP ID 6K, 6L – Annual Catch Basin Cleaning – ONGOING

The Maintenance Division is responsible for cleaning catch basins. Each Maintenance District has different schedules, abilities, and protocols for cleaning catch basins. Catch basins are primarily cleaned through a complaint-driven process and opportunistic maintenance/construction projects.

Daily Activity reports currently report the type of work and location of work completed however these reports are not summarized on a monthly/yearly basis at this time in order to be able to provide an accurate number of basins cleaned per year. RIDOT is looking to have this function complete for tracking the 2008 activities. Based on the work reported, approximately 15% of all catch basins (~3,750) are cleaned annually.

RIDOT had previously reported that long-term O&M of storm water BMPs will be ensured through the Asset Management Program in the Maintenance Division. Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated. As a priority in Year 5, the NRU and the Maintenance Division will work together to develop a better method of tracking Maintenance work and activities.

Permit ID# IV.B.6.b.1.iv, BMP ID 6S – Stabilization of road side shoulders – ONGOING

RIDOT is working with the University of Rhode Island to develop a slope stabilizing, salt tolerant grass mix. The study with URI on the Salt Tolerant Grass Mixes is entitled Evaluation of Native Grasses for Highway Slope Stabilization and Salt Tolerance. It is a 2-year study and will be conducted with Dr. Rebecca Brown from URI. It will start in Spring 2006 and the final results will be published in Oct of 2008. The purpose of the study is to help develop a grass seed mix that we can use along the highway, especially at the road edge, where grass is being killed by the winter salt. It would be advantageous to have a grass seed mix that will grow in this 20 foot zone, so erosion of the road edge would not occur. Another part of this study is to help develop a seed mix that consists of native grasses that are deep rooted for use on steep slopes to help prevent erosion. This would be used in rural areas and would possibly not be mowed. This project is funded with research monies from FHWA.

The Natural Resources Unit has successfully worked on implementing specifications for the use of compost-amended soil on a project-specific basis. Currently, specifications are before the Standard Specification committee to make compost-amended soil an accepted RIDOT product.

Permit ID# IV.B.6.b.1.v – Discharges causing scouring – ONGOING

Discharges causing scouring are identified during the initial outfall location identification and GPS field work (**Permit ID# IV.B.3.b.1; BMP ID 3A – Outfall Mapping**).

Permit ID# IV.B.6.b.1.vi, BMP ID 6T, 6U – Annual Road Sweeping – ONGOING

The Maintenance Division is responsible for the sweeping of State maintained roadways on an annual basis. 100% of roadways are systematically swept; secondary sweeping (and above) are based upon complaints and general need. The work order program currently in use allows for response to complaints. Currently, RIDOT has insufficient resources to conduct roadway sweeping more than once per year other than as a response to complaint or need.

In 2007 the Division began tracking of sweeping operations with a statewide sweeping schedule which was updated on a weekly basis to ensure that each roadway segment was swept in a timely and orderly fashion, and how many times each segment was swept.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

All complaints received are tracked through our Pendings Database. In 2007 approximately 800 complaints were received of which approximately 90% were resolved.

Based on current staffing levels and the amount of time it takes to sweep all highways, RIDOT will seek to improve our performance in the future. However a complete analysis of the 2007 sweeping season has not yet occurred. This is to be completed prior to the commencement of the 2008 sweeping operation.

Permit ID# IV.B.6.b.1.vii – O&M re: floatables – ONGOING

RIDOT uses prison work crews to pick up litter along highways. In 2007, work crews removed 76,127 bags of garbage from RIDOT roadways. Please see Minimum Measure 2C.

Permit ID# IV.B.6.b.1.viii – Proper disposal of waste

RIDOT Maintenance facilities have Stormwater Pollution Prevention Plans and/or Spill Prevention Plans (as appropriate). Submitted to RIDEM RIPDES w/ 2006 Annual Report.

Permit ID# IV.B.6.b.4 – O&M/Good Housekeeping for non-industrial facilities - ONGOING

RIDOT Maintenance facilities have Stormwater Pollution Prevention Plans and/or Spill Prevention Plans (as appropriate). Submitted to RIDEM RIPDES w/ 2006 Annual Report.

Permit ID# IV.B.6.b.5 – Inspections/evaluations etc. at industrial facilities

Not applicable to RIDOT; RIDOT Maintenance facilities do not require individual industrial discharge RIPDES permits.

Permit ID# IV.B.6.b.6, BMP ID 6C, 6D, 6E – Employee training

As part of the URI-CE Agreement, a storm water training program for RIDOT maintenance personnel was developed. Provided Year 4/Year 5. Please see Minimum Measure 1.

Permit ID# IV.B.6.b.7 – New flow management projects

Not applicable to RIDOT

Additional Measurable Goals and Activities

BMP ID 6A, 6B – Winter Operations - ONGOING

A Winter Operations Manual is nearing completion and will be completed prior to the start of the 2008-2009 Winter Season. Training is anticipated to be held prior to the 2008/2009 Winter Season. RIDOT will submit the Winter Operations Manual to RIDEM with the Year 5 Annual Report. RIDOT winter operations procedures are based on FHWA Guidelines such as the Manual of Practice for an Effective Anti-Icing Program.

To be included in this Manual are Standard Operating Procedures regarding:

- Snow disposal Policy: site selection, site preparation and maintenance, and emergency snow disposal options
- Inspection and Calibration of equipment Policy and Procedures
- Anti-icing Policy and Procedures
- De-icing Policy and Procedures
- Salt Storage Policy and Procedures
- Salt/Sand Usage Policy
- Low Salt/Special Protection Area Salt/Sand Usage Policy
- New equipment Policy

Currently all of RIDOT winter operations are conducted with a standard 1:1 mix of sand:salt. This is sometimes adjusted to account for the moisture content of the snow/ice as well as the temperatures encountered during each storm. Additionally using FHWA recommended application rates helps to ensure that materials are spread as appropriate as possible. Truck operators are aware of the policies through discussion with their District supervisors as well as the loader operators which create the mix of materials. An anti-icing program is in place. Anti-icing practices include pre-treating roadways with an Anti-Icing solution. This reduces the amount of salt and sand required during the storm event. Anti-Icing equipment is being purchased as replacement of older vehicles. As the vehicle capability increases, so will the anti-icing program.

BMP IDs 6F, 6G, 6H, 6I, 6J, 6M, 6N, 6O, 6P, 6Q, 6R

Inventory, inspection, cleaning, maintenance, standard operating procedures, and tracking activity for RIDOT storm water BMPs.

RIDOT had previously reported that long-term O&M of storm water BMPs will be ensured through the Asset Management Program in the Maintenance Division. Due to the current fiscal constraints that the State is in, RIDOT will not be moving forward with the Asset Management Program development as originally anticipated. The Department is currently planning on doing much of the work through the Storm Drain Retrofit Demonstration Project BMP Monitoring contract.

The NRU and the Design Section have identified all RIDOT BMPs through plan inspection and contract document searches. An Access Database was developed by the NRU to document the BMP inventory, inspection, and maintenance. The consultant will locate, GPS, and inspect each unit, develop maintenance SOPs and schedule, and provide a biddable document that RIDOT can use to contract out the cleaning and maintenance of treatment units. A copy of the database is attached (**ATTACHMENT E**). The cleaning contract for the BMPs is anticipated to be advertised in the Fall of 2008 (Year 5).

SECTION III.A Structural BMPs (Part IV.B.6.b.1.i)

BMP ID:	Location:	Name of BMP Owner/Operator:	Description of BMP:
		Please see BMP database <u>Attachment F</u>	

SECTION III.B Discharges Causing Scouring or Excessive Sedimentation (Part IV.B.6.b.1.v)

Outfall ID:	Location:	Description of Problem:	Description of Remediation Taken, include dates:	Receiving Water Body Name/Description:
		Please see Outfall Database <u>Attachment B</u>		

SECTION III.C Note any planned municipal construction projects/opportunities to incorporate water quality BMPs, low impact development, or activities to promote infiltration and recharge (Part IV.G.2.j).

Each RIDOT construction project is designed and reviewed utilizing the *RI Stormwater Design & Installation Standards Manual* and the *RI Soil Erosion Sediment Control Handbook*. Each project incorporates storm water BMPs to the maximum extent practicable.

Through the Storm Drain Retrofit Demonstration Project, RIDOT is working with RIDEM, the City of Warwick, and a consultant to design BMPs in the Greenwich Bay TMDL area.

SECTION III.D Please include a summary of results of any other information that has been collected and analyzed. This includes any type of data (Part IV.G.2.e).

N/A



TOTAL MAXIMUM DAILY LOAD (TMDL) or other Water Quality Determination REQUIREMENTS

SECTION I. If you have been notified that discharges from your MS4 require non-structural or structural storm water controls based on an approved TMDL or other water quality determination, please provide an assessment of the progress towards meeting the requirements for the control of storm water identified in the approved TMDL (Part IV.G.2.d). Please indicate rationale for the activities chosen to address the pollutant of concern.

The **storm drain retrofit program** utilized a stakeholder group to prioritize the Storm Drain Retrofit Demonstration Program outfall selection process. This stakeholder group included the Rhode Island Department of Environmental Management, Federal Environmental Protection Agency, Save the Bay, and community representatives from Cranston, Warwick, and West Warwick, as well as representatives from the Pawtuxet River Authority. It was mutually agreed that RIDOT would proceed with the design and construction of five outfalls on the Pawtuxet River as a first priority. A Design Study Report for the remaining fifteen outfalls from the original University of Rhode Island study was prepared. During FY2003, the Department procured additional consultant services through an RFP process. Crossman Engineering was the selected consulting firm and design efforts on additional storm water projects began in FY2004. RIDOT will continue to advance storm water abatement components that are prioritized with RIDEM. Future elements for incorporation into RIDOT's program will include recommendations from federally approved TMDL studies that are prioritized with RIDEM.

To date, the Retrofit program has expended more than \$3.8 million in design and construction of 13 retrofit projects. Four additional projects along the Woonasquatucket River (W2, W6, W23) and Seekonk River (S1) have been designed, and are waiting for funding (est. \$1.84M). Preliminary designs are being developed for the Greenwich Bay area in Warwick.

Please see <http://www.dot.ri.gov/programs/enviro/Stormwater.pdf> for an overview of the Retrofit Program's accomplishments.

Additionally, each construction project is designed and reviewed utilizing the *RI Stormwater Design & Installation Standards Manual* and the *RI Soil Erosion Sediment Control Handbook*. Each project incorporates storm water BMPs to the maximum extent practicable. TMDLs are consulted during the design of new projects to determine if conditions at any priority outfalls may be improved during project construction.



RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Office of Water Resources



INSTRUCTIONS FOR THE RI POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS AND INDUSTRIAL ACTIVITY AT ELIGIBLE FACILITIES OPERATED BY REGULATED SMALL MS4s ANNUAL REPORT FORM

WHO MUST SUBMIT AN ANNUAL REPORT:

Owners/Operators of regulated small municipal separate storm sewer systems (MS4s) and industrial activities authorized to discharge storm water under the Rhode Island Pollutant Discharge Elimination System (RIPDES) Storm Water General Permit for Small Municipal Separate Storm Sewer Systems and Industrial Activity at Eligible Facilities Operated by Regulated Small MS4s, must submit an Annual Report, outlined in Part IV.G of the permit. The Report must be submitted each year after permit issuance by March 10th to track progress of compliance. If you have questions regarding this Annual Report Form contact Margarita Chatterton of the Rhode Island Department of Environmental Management (RIDEM), Office of Water Resources, Permitting Section at (401) 222-4700 ext. 7605.

The Annual Report must be submitted to:

RIDEM
Office of Water Resources
RIPDES Program
Permitting Section
235 Promenade Street
Providence, RI 02908
ATTN: Margarita Chatterton

INSTRUCTIONS FOR COMPLETION:

GENERAL INFORMATION PAGE:

“RIPDES Permit #”

Include your permit ID # to ensure proper tracking.

“Operator of MS4”

Give the legal name of the person, firm, public (municipal) organization, or any other entity that is responsible for day-to-day operations of the MS4 described in this application (RIPDES Rules 3 & 12). Enter the complete address and telephone number of the operator. Circle the appropriate choice to indicate the legal status of the operator of the MS4.

“Owner of MS4”

If the owner is the same as the operator do not complete this section. Give the legal name of the person, firm,

public (municipal) organization, or any other entity that owns the MS4 described in this application (RIPDES Rules 3 & 12). Do not use a colloquial name. Enter the complete address and telephone number of the owner.

“Certification”

State and federal statutes provide for severe penalties for submitting false information on this application form. State and federal regulations require this application to be signed as follows (RIPDES Rule 12);

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information or permit application requirements; and where authority to sign documentation has been assigned or delegated to the manager in accordance with cooperate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor;

For a Municipality, State, Federal or other public site: by either a principal executive officer or ranking elected official.

SECTION I- MEASURABLE GOALS:

One or more pages, front and back, are provided to report on the status of measurable goals which have been developed to aid in the implementation of strategies, procedures, and programs used to achieve each of the six minimum control measures in Part IV.B of the General Permit. Please type or print in the appropriate areas only. If additional space is needed please submit attachments to the appropriate minimum control measure following the format provided.

Where indicated, please provide the status of the pertinent local ordinances and City or Town Solicitor’s letter. If these documents have not

previously been submitted to RIDEM, please include them with this Annual Report.

The first section entitled "Required Measurable Goals" includes mainly strategies, procedures, and programs, which **MUST** be developed/implemented by a specific year as mandated by the permit.

The second section entitled "Additional Measurable Goals" provides space to include your own MS4-specific measurable goals not prescribed in the permit (though noted in your Storm Water Management Program Plan), but are intended to aid in the implementation of strategies, procedures, and programs outlined in the permit to comply with each minimum measure.

Example: Public Education and Outreach

"Required Measurable Goals"- Sections IV.B.1.b.2 and IV.B.1.b.4 are considered "Required Measurable Goals" because strategies on how to inform the community on how to become involved in the storm water program and how operators will utilize partnerships, and strategies to list target pollutant sources **MUST** be developed within the first year. These are considered "Required Measurable Goals" because the development of such strategies has a deadline.

"Additional Measurable Goals"- Any further establishment of deadlines, percentages, etc. used to aid the implementation of strategies, procedures, or programs are considered "Additional Measurable Goals." Examples may include: informing 70% of residents about proper fertilizer use; introduction of an ordinance to control pet waste by the end of the third year. These would classify as "Additional Measurable Goals" because they are not prescribed by the permit but are fulfilling overall minimum measure requirements.

"Permit ID #"

The Permit ID # is the part of the permit where you can find a listing or description of the required measurable goal.

"BMP ID #"

The BMP ID # refers to the number assigned to a specific requirement or BMP and reported to the Department in the Storm Water Management Program Plan.

"List Measurable Goal"

A brief description of the measurable goal with the year it must be completed by in parentheses.

"Date(s) Completed"

Enter the date the measurable goal was completed. (Note that this date may have been during previous reporting years.) For ongoing tasks (and shaded areas), please use the space in Section II to describe actions taken to meet the goal, progress, plans, etc.

"Date Submitted to RIDEM"

Enter the date that a required document was submitted to RIDEM as part of meeting a measurable goal. (Note that this date may have been during previous reporting years.)

"If goal was NOT met..."

Complete this section only if you have not yet completed the tasks/measurable goals. If you have not met the measurable goal on time **OR** are on track with meeting the measurable goal on time, please provide a brief description as to why the goal has not been met, the current status of actions needed to meet the goal, any current plans, and the date you foresee the goal to be completed by. Please keep this section brief. **For items that have been shaded, please use Section II to describe what new and/or ongoing activities have been undertaken or progress made toward meeting the measurable goal.**

SECTION II- OVERALL EVALUATION:

This section provides narrative space for a more descriptive explanation and evaluation of the actions taken to satisfy each of the minimum control measures.

Please provide a general summary of actions taken (implementation of BMPs, development of procedures, events, etc.) to meet the measurable goals of the minimum measure. **Be sure to identify parties responsible for achieving each measurable goal** and reference any reliance on another entity for achieving any measurable goal.

Describe whether each measurable goal was completed within the time proposed in the MS4 General Permit or your Storm Water Management Program Plan (SWMPP). Why or why not? Provide a progress report and discussion of activities that will be carried out during the next reporting cycle to satisfy the requirements of the minimum measures. If applicable, assess the appropriateness of the actions taken to meet the requirements of the minimum measure. In determining appropriateness, you may want to consider at a minimum the local population targeted, pollution sources addressed, receiving water concerns, integration with local management procedures, and available resources and violations or environmental impacts eliminated or minimized.

Also, discuss the effectiveness of the implementation of BMPs to meet the requirements of the minimum measure and the overall effectiveness of the minimum measure. Describe your progress towards achieving the overall goal of reducing the discharge of pollutants. Please include assessment parameters/indicators used to measure the success of the minimum measure. Also include a discussion of any proposed changes to BMPs or measurable goals.

After evaluation, it may be necessary to make changes or modifications to your Implementation Schedule if the time frame, appropriateness or effectiveness cannot be assured. If so, please include descriptions of changes or modifications, and detailed justification in the appropriate sections.

SECTION III- ADDITIONAL ANNUAL REPORT REQUIREMENTS

Section III refers to additional reporting requirements that the MS4 General Permit is required to submit to the Department as part of the Annual Report. Section III requirements apply to Minimum Control Measures 2 through 6.

Minimum Control Measure #2: Section III:
Specify the date of and how the annual report was public noticed. If a public meeting was needed, provide the date and place. Include a summary of public comments received in the public comment period of the draft annual report and planned responses or changes to the program (new or revised BMP's and measurable goals, partnerships, etc.). Be sure to attach a copy of your public notice (Part IV.G.2.h and IV.G.2.i).

Minimum Control Measure #3: Section III.A:
Provide the number of illicit discharges identified, complaints received, violations with a summary of enforcement actions, and unresolved violations that have been referred to RIDEM. Include a short narrative describing the extent to which your system has been mapped (Part IV.G.2.m).

Minimum Control Measure #3: Section III.B:
List location, date found, operator of the physically interconnected MS4, and originating source of newly identified physical interconnections with other small MS4s. Also note any planned or coordinated activities with the physically interconnected MS4 (Part IV.G.2.k and IV.G.2.l).

Minimum Control Measures #4 & 5: Section III.A:
Identify the number of construction and post-construction plan and SWPPP reviews completed during Year 4 (2007) and any further information. This includes, but is not limited to a summary of the reviews, responsible parties, and types of projects reviewed.

Minimum Control Measure #4: Section III.B:
Construction inspection information for erosion and sediment control should be submitted annually as stated in Part IV.G.2.n. Provide a summary of the number of site inspections conducted, inspections that have resulted in enforcement actions, violations that have been resolved and of those unresolved, referred to RIDEM.

Minimum Control Measure #5: Section III.B:
Post-construction inspection information for proper installation of post-construction structural BMPs should be submitted annually as stated in Part IV.G.2.o. This should provide a summary of the number of site inspections conducted, inspections that have resulted in enforcement actions, violations that have been resolved and of those unresolved, referred to RIDEM.

Minimum Control Measure #5: Section III.C:
Inspection information for proper operation and maintenance of post-construction structural BMPs should be submitted annually as stated in Part IV.G.2.p. This should provide a summary of the number of site inspections conducted, inspections that have resulted in enforcement actions, violations that have been resolved and of those unresolved, referred to RIDEM.

Minimum Control Measure #6: Section III.A:
As prescribed in Part IV.B.6.b.1.i of the General Permit, the MS4 operator must identify and list the specific location and description of all structural BMPs in the SWMPP at the time of application and update the information in the annual report.

Minimum Control Measure #6: Section III.B:
Part IV.B.6.b.1.v of the Permit states to identify and report annually, as part of the annual report, known discharges causing scouring at outfall pipes or outfalls with excessive sedimentation. Include Outfall ID #, location, description of the problem, any remediation taken, and the ultimate receiving water body.

Minimum Control Measure #6: Section III.C:
As noted in Part IV.G.2.j of the General Permit, specify any planned municipal construction projects or opportunities to include water quality BMPs, low impact development, or seek to promote infiltration and recharge.

Minimum Control Measure #6: Section III.D:
Please include a summary of results of any other information that has been collected and analyzed. This includes any type of data, including, but not limited to, dry weather survey data (Part IV.G.2.e).

TOTAL MAXIMUM DAILY LOAD (TMDL) or other Water Quality Determination REQUIREMENTS

Section I:
Complete this section only if your MS4 is subject to an approved TMDL. TMDL requirements may require the implementation of the six minimum control measures to address the pollutants of concern, and/or additional structural storm water controls or measures that are necessary to meet the provisions of the approved TMDL. Be sure to identify the approved TMDL and assess the progress towards meeting the requirements for the control of storm water (Part IV.G.2.d).

Provide a progress report: present status and discussion of activities that have been accomplished or will be carried out during the next reporting cycle to satisfy the requirements of the TMDL. If applicable assess the appropriateness of the BMPs selected under each of the six minimum control measures to meet the requirements of the TMDL. In determining appropriateness you may want to consider, violations or environmental impacts eliminated or minimized.

Please include assessment parameters/indicators that will be used to measure the success of the selected BMPs. Also include a discussion of any proposed changes to BMPs or measurable goals.

RI DEPARTMENT OF TRANSPORTATION

RIPDES SMALL MS4 2007 ANNUAL REPORT

ATTACHMENTS

A: University of Rhode Island Cooperative Extension 2007 Progress Report – Storm Water Phase II Public Outreach, Education, Involvement and Participation

B: RIDOT Outfall ArcGIS Shapefile (folder)
RIDOT Outfall Map (IDDE.pdf)
RIDOT Outfall Mapping Status (Outfall_Mapping_BasinStatus.pdf)
RIDOT Outfalls Database (RIDOT_Outfalls.mdb)

C: RIDOT Dry Weather Discharge Database

D: RIDOT Illicit Discharge Detection and Elimination (IDDE) Plan

E: RIDOT Physical Interconnections

F: RIDOT Structural BMP Database

G: RIDOT 2007 Final Inspections

RIDOT Public Notice