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**Municipality/Organization:** Town of Halifax

**EPA NPDES Permit Number:** MA041035

**MassDEP Transmittal Number:** W-040977

**Annual Report Number Year 8  
& Reporting Period:** April 1, 2010 – March 31, 2011

## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2011)

### Part I. General Information

**Contact Person:** Robert Badore **Title:** Highway Surveyor

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**Mailing Address:** 60 Hemlock Lane, Halifax, MA 02338

Certification:

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

**Signature:** 

**Printed Name:** Robert Badore

**Title:** Highway Surveyor

**Date:** June 8, 2011

## Part II. Self-Assessment

In general, the Town of Halifax's Stormwater management activities for the eighth year of the General Permit (April 2010 through March 2011) were in conformance with the Notice of Intent (Massachusetts DEP form BRP WM 08A) and schedule previous submitted. The Town has developed a Stormwater Management Plan with program priorities including:

1. Achieving regulatory compliance, particularly EPA and DEP Phase II NPDES permit requirements;
2. Incorporating Stormwater protection measures into municipal activities;
3. Focusing activities on target pollution reduction (e.g. Section 303.d. waters and protecting the Town's water supply);
4. Ensuring that the Program is current and innovative; and
5. Providing Program administration.

The Water Quality Stewardship element of the program will focus on the protection of the local water supply and addressing the State's Section 303.d waters located within Halifax. To this end, staff will continue to develop and improve the Program activities to reduce storm water pollution to the maximum extent practicable and eliminate prohibited non-stormwater discharges, while facilitating understanding and involvement in stormwater management by various Town departments. Program priorities will also focus on increased efforts to reduce target pollutants and restore local water bodies.

The Town is committed to working with local watershed associations to advance their goals and objectives. Another high priority of the staff is to keep abreast of the latest technology and approaches to achieve stormwater management. Program activities will also strive to encourage environmental stewardship and continue to build on partnerships with other agencies, neighboring towns, and the community for active participation in accomplishing the Program mission.

During Permit Year Eight, the Town continued to map out the Town's stormwater system, reviewed current regulations, improved local good housekeeping programs and performed community outreach.

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

**1. Public Education and Outreach**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 8</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 9</b>
1 Revised	Partnership with local Watershed Associations	Con. Comm. Highway, BOH	Regular meeting attendance	Taunton River Watershed Association (TRWA)	Continued updating, seek alternative funding sources (such as Section 604b and 319 grants and SRF funding)
2 Revised	Develop brochures	Highway, Water	Quarterly mailings	Water department mailings and water quality updates	Continued mailings; Postings of results on Town web site
3 Revised	Web site public service postings	IT, Highway	Web site publication and maintenance	Posting of TRWA and Comm of MA information	Posting of TRWA and Comm of MA information
Revised					
Revised					
Revised					

**1a. Additions**


## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
4	Water Quality Testing	Highway	2 rounds of water quality sampling of priority water bodies 1 round of water quality sampling and targeted wet weather sampling Annually	No funding available	Seek funding from town meeting and initiate dry weather and wet weather field screening of outfalls after mapping
Revised					
5	Community Cleanup Day	Highway		Conducted in spring 2009	Scheduled for spring 2010
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

## 2a. Additions




### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
6 Revised	Catch Basin/Outfall and Receiving Water Mapping	Highway	GIS Mapping	Continue GPS surveying of outfalls and catch basins	Continue GPS surveying of outfalls and catch basins and obtain town meeting funding
4 Revised	Water Quality Testing	Highway	Testing of Priority Water Bodies	No funding available	Seek funding and initiate dry weather and wet weather field screening of outfalls after mapping
7 Revised	Regulatory Review	Highway, Planning, Health, ConCom	Regulatory Revisions and Actions	Continued to review applicable Stormwater and aquifer protection regulations	Make appropriate changes to regulations and by-laws
8 Revised	Permit Enforcement	Highway, Planning, Health, ConCom	Local Construction Site Oversight and Enforcement	Ongoing to comply with local by-laws and state and federal statutes and regulations	Ongoing to comply with local bylaws and state and federal regulations
9 Revised	Misconnection and Illegal Dumping and Correction	Highway, Health	Connectivity Mapping and By-law Enforcement and fines	Continue GIS mapping and continues local bylaw enforcement	Continued GIS mapping and enforcement of local by-laws
Revised					

### 3a. Additions

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**4. Construction Site Stormwater Runoff Control**

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
7	Regulatory review	Highway, Planning, Health, ConCom	Regulatory revisions to bylaws as necessary	Review of applicable Stormwater and aquifer protection regulations	Make appropriate changes to regulations and by-laws
Revised					
8	Permit enforcement	Highway, Planning, Health, ConCom	Local construction site oversight and enforcement	Ongoing to comply with local bylaws, state and federal requirements	Ongoing to comply with local bylaws, state and federal requirements
Revised					
10	Improved As-Built Review	Highway, Planning	Electronic As-Built Submittals on Town GIS System	Continued GIS Mapping	Work to develop new data base to match current GIS
Revised					
Revised					
Revised					
Revised					

**4a. Additions**


### 5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
7	Regulatory review	Highway, Planning, Health, ConCom	Regulatory revisions to by-laws as necessary	Review applicable Stormwater and aquifer protection regulations	Continue to consolidate regulations and investigate areas for revisions
Revised					
8	Permit enforcement	Highway, Planning, Health, ConCom	Local construction site oversight and enforcement	Ongoing work in order to comply with local by-laws and state and federal requirements	Ongoing work to comply with local by-laws and state and federal regulations
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

### 5a. Additions


**6. Pollution Prevention and Good Housekeeping in Municipal Operations**

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
11 Revised	Improved street sweepings	Highway		Semi-annual collections	Semi-annual collections
12 Revised	Improved catch basin cleanings	Highway		Annual collections	Annual collections
13 Revised	Household hazardous waste days	Highway		Year-around collection at recycling center	Year-around collection at recycling center
14 Revised	Drain stenciling	Highway		GIS mapping underway to locate catch basins	Continue GIS mapping and stencil drains in aquifer protection areas
18 Revised	Employee training	Highway	Workshop attendance	Attend “Roads Scholar” and Plymouth County Highway Association workshops	Implement suggested improvements and continues to attend workshops
Revised					

**6a. Additions**




7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
6 Revised	GIS Mapping	Highway	GIS Mapping of Priority Waters and Drainage Patterns	DEP scope of work approval	Continue GIS mapping
4 Revised	Water Quality Testing	Highway	Semi-annual water quality testing	DEP scope of work approval	Initiate dry weather and wet weather field screening of outfalls after mapping
15 Revised	Stormwater modeling	Highway	Need assessment for Category 5 Water Bodies	DEP scope of work approval	Continue to map using GIS project
16 Revised	Misc. Structural BMPs as needed	Highway	i.e. construction improvements	None to date	To be determined
17 Revised	Misc. Non-Structural BMPs as needed	Highway	i.e. Bylaw enforcement, fees and fines	None to date	To be determined

7a. Additions


**7b. WLA Assessment**

GIS mapping continues and water quality testing continues.

#### **Part IV. Summary of Information Collected and Analyzed**

The Town has reviewed the local, state and federal bylaws relative to stormwater and aquifer protection, and appears to be adequately regulated and in conformance with the Massachusetts Stormwater Management Policy. Minor revisions may be required for informing local project proponents of the Phase II one-acre NPDES requirement.

The funding and focus of project activities continues to be the outfall pipes located in the watershed areas of the Massachusetts Section 303d water bodies located in Halifax (Muddy Pond, Elm Street Pond, Plymouth Street Pond, Winnetuxet Pond and Monponsett Pond).

The Town continues to provide updates to the public through water bill mailings and postings on the Town's web site and will continue to work with local watershed associations on possible funding sources and ways in which to promote volunteerism.

The Town has taken part in employee training seminars sponsored by the Plymouth County Highway Association (PCHA) and the Baystate Roads Scholar program and will continue to improve its good housekeeping programs.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

(Since beginning of permit coverage unless specified otherwise by a \*\*, which indicates response is for period covering April 1, 2010 through March 31, 2011)

**Programmatic**

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

**Education, Involvement, and Training**

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> <li>▪ days sponsored **</li> <li>▪ community participation **</li> <li>▪ material collected **</li> </ul>	(#)	
School curricula implemented	(# or %)	
	(tons or gal)	
	(y/n)	

**Legal/Regulatory**

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
<ul style="list-style-type: none"> <li>▪ Illicit Discharge Detection &amp; Elimination</li> </ul>					



▪ Erosion & Sediment Control						
▪ Post-Development Stormwater Management						
Accompanying Regulation Status (indicate with "X")						
▪ Illicit Discharge Detection & Elimination						
▪ Erosion & Sediment Control						
▪ Post-Development Stormwater Management						

**Mapping and Illicit Discharges**

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and	
	(est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and	
	(est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

**Construction**

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	
Site inspections completed **	(# or %)	
Tickets/Stop work orders issued **	(# or %)	

Fines collected **	(# and \$)
Complaints/concerns received from public **	(#)

**Post-Development Stormwater Management**

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)
Site inspections (for proper BMP installation & operation) completed **	(# or %)
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)
Low-impact development (LID) practices permitted and encouraged	(y/n)

**Operations and Maintenance**

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)
Qty of structures cleaned **	(#)
Qty. of storm drain cleaned **	(%, LF or mi.)
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**		(\$)
• Hourly or per basin contract rate **		(\$/hr or \$ per basin)
• Disposal cost**		(\$)
Cleaning Equipment		
• Clam shell truck(s) owned/leased		(#)
• Vacuum truck(s) owned/leased		(#)
• Vacuum trucks specified in contracts		(y/n)
• % Structures cleaned with clam shells **		(%)
• % Structures cleaned with vacor **		(%)

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or in mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)	
▪ Fertilizers	(lbs. or %)



▪ Herbicides	(lbs. or %)
▪ Pesticides	(lbs. or %)
Integrated Pest Management (IPM) Practices Implemented	(y/n)

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

**Water Supply Protection**

Storm water outfalls to public water supplies eliminated or relocated	# or y/n
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n