Municipality/Organization:	Newbury		
EPA NPDES Permit Number:	MAR041212		
MassDEP Transmittal Number:	W-040791		
Annual Report Number	Year 10		
& Reporting Period:	April 1, 2011 – March 31, 2012		

# NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

#### Part I. General Information

Contact Person: Mr. Doug Packer	·
Title: Newbury Conservation Agent/Con	servation Commission Chairman
Telephone #: (978) 465-0862 X310	Email: conscom@townofnewbury.org
Mailing Address: 25 High Road, Newbu	ary, MA 01951

#### **<u>Certification</u>**:

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.

11.

Signature:	month	
Printed Name:	Tracy Blais	
Title:	Town Administrator	
Date:	May 1, 2012	

Part II. Self-Assessment

None

# Part III. Summary of Minimum Control Measures

## 1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
1-1	Article/brochure about stormwater to be included in the tax bill once annually	Planning Board	Newsletter/Brochure distributed to all households in Newbury.	Deliver throughout permit term during Permit Year 9.	Continue to deliver during Permit Year 10.
Re- vised	Continued Participation in the Greenscapes North Shore Program	Greenscapes North Shore Program	Annual Contract with	Fiscal 2011-2012 have continued relationship with MVPC Greenscapes Program for delivery of materials to Newbury households during permit year 9.	Fiscal 2012-2013 we will continue a relationship with MVPC Greenscapes Program for delivery of materials to Newbury households during permit year 10.
1-2	Educate dog owners about picking up dog waste	Town Clerk	Distribute Fact Sheet to Dog Owners.	Board of Health to team with Town Clerk to distribute fact sheets to dog owner during Permit Year 9.	Board of Health to provide Fact Sheets to the Town Clerk for distribution to dog owners during Permit Year 10.
1-3	Stormwater education program for school children	Stormwater Advisory Committee	Inquire about presentation to Middle or Elementary school children.	Connect with local education about the value of the program and need for its implementation during Permit Year 9.	Make arrangements within the local schools for their participation, including science students in the outflow testing program during Permit Year 10.
1-4	Maintain pet waste clean-up signs at schools, parks, and beaches.	Highway Department	Signs posted.	Work with Board of Health to continue to maintain signage regarding pet waste during Permit Year 9.	Post and maintain signage regarding pet waste during Year 10.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
1-5	Annual update of SWMP at a televised Selectmen's meeting	Highway Dept. and/or ConComm	Update Board of Selectmen on SWMP status.	Updates to Board of Selectmen have and shall continue during Permit Year 9.	Town Administrator has a seat on the Stormwater Management Committee. Town Administrator shall inform selectmen of progress during regularly scheduled Selectmen's meeting, which are typically filmed, during Permit Year 10.

## 2. Public Involvement and Participation

BMP	BMP Description	Responsible	Measurable Goal(s)	Planned Activities –	Planned Activities –
ID #		Dept./Person		Permit Year 9	Permit Year 10
		Name			
2-1	Form Stormwater	Highway	Form Committee	Stormwater Management	Stormwater Management
	Advisory Committee	Dept.,	within 12 months of	Bylaw passed at Annual	Committee established and
		ConComm,	submission of NOI.	Town Meeting in May	actively engaged with the
		Planning,	Meet twice annually	2009. Advisory Committee	Federal Clean Water Act
		Health	thereafter during	has dissolved and	complying with the rules of the
			permit term.	implementation of the	Phase II National Pollutant
				Bylaw responsibility has	Discharge Elimination System
				been assumed by the	(NPDES) Stormwater Program
				Planning Department, who	for Permit Year 10.
				subsequently created a	
				Stormwater Management	
				Committee during Permit	
				Year 9.	

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
2-2	Comply with state public notification guidelines at MGL Ch. 39 s. 23B.	Town Clerk	Notices posted in library and current locations.	All Planning Board and Stormwater Management Meetings comply with the Open Meeting Law during Permit Year 9.	All Planning Board and Stormwater Management Meetings comply with the Open Meeting Law during Permit Year 10.
2-3	Stencil catch basins with "don't dump" message	Highway Department	Identify and prioritize catch basins to be stenciled with "Don't Dump" message.	Catch basins were all identified and lettered as necessary during Permit Year 9.	Catch basins will continue to be re-stenciled as necessary during Permit Year 10.
2-4	Household Hazardous Waste Collection	Town Clerk	Track number of brochures picked up by Town residents	Town Clerk distributes between 1600-1700 brochures with the transfer station permits during Permit Year 9.	Town Clerk will continue to distribute brochures with the issuance of transfer station permits during Permit Year 10.

## 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
3-1	Conduct dry weather outfall screening	Stormwater Management Committee	Locate Outfalls within regulated area during first year of permit term. Percent of Outfalls screened.	Stormwater Management Committee partnered with the Parker River Clean Water Association (PRCWA) to establish an outfall dry weather screening plan in Permit Year 9.	The Stormwater Management Committee and the PRCWA to establish an Outflow testing schedule during Permit Year 10 for Permit Year 11.
3-2	Map stormwater outfalls	Highway Department	Locate outfalls on a map within regulated area.	Mapping of Stormwater outfalls identified during Permit Year 8. Pipe sizes and Orientation determined during seasonal cleaning in Permit Year 9.	The Town will comply with requirements as established by the NPDES General Permit during Permit Year 10 for Permit Year 11.
3-3	Assess need for stormwater GIS layer	Highway Department	Decision on whether to go forward with a stormwater GIS within first two years of the permit.	Stormwater Management Committee assessed need for GIS layer and determined that they will defer to Assessor's Paper Maps in Permit Year 9.	Task 3-3 Complete.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
3-4	Develop and implement plan to identify and remove non-stormwater discharges	Highway Department Planning Board	Number of illicit connections found and removed. Present to Town Meeting by end of seventh permit year	The Stormwater Bylaw has been completed and was accepted at Annual Town Meeting in May 2009. The Stormwater Management Bylaw will be overseen and managed by the Stormwater Management Committee	Illicit connections are addressed in the Stormwater Bylaw and the Stormwater Management Committee is in the process of developing enforcement protocol for Permit Year 10.
3-5	Develop a bylaw to require inspection of construction for correct connection to a municipal sewer	Building Inspection Dept.	Draft By-Law for properties connected to a municipal sewer system by end of first permit year.	effective Permit Year 9. The Stormwater Bylaw has been completed and was accepted at Annual Town Meeting in May 2009 and is owned by the Planning Department. The municipal sewers are owned and operated by Newburyport for Plum Island and some limited properties on the mainland.	Task 3-5 Complete.
3-6	Installation of vacuum sewers on Plum Island	Board of Health	Connection of every household on Plum Island to sewer system	Newbury continues to enforce water and sewer hook-ups and will continue to do so until all households are compliant for Permit Year 9.	Newbury continues to enforce water and sewer hook-ups and is in Superior Court with the last of the households in violation for Permit Year 10.

## 4. Construction Site Stormwater Runoff Control

BM PID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
4-1	Construction site Erosion Sediment Control Bylaw for construction sites greater than 1 acre in area	Conservation Commission	Draft By-law by end of first permit year.	The Stormwater Bylaw has been completed and was accepted at Annual Town Meeting in May 2009.	Task 4-1 Complete.
4-2	Require a waste management plan at construction sites larger than one acre.	Conservation Commission	Draft By-law by end of first permit year and present to Town Meeting in second permit year.	This requirement is referenced in the Stormwater Bylaw and enforced through the accompanying Regulations.	Task 4-2 Complete.
4-3	Review site plans for stormwater impacts	Planning Board & Conservation Commission	Policies for Site Plan Review developed. Commence Site Plan reviews by end of second permit year.	The Conservation Commission reviews the Stormwater Management Plan when a Notice of Intent has been filed for a particular project. If the project or a portion thereof does not fall in the jurisdiction of the Commission, then the responsibility falls upon the Planning Board as outlined in the Stormwater Bylaw.	Task 4-3 Complete.
4-4	Consider public input	Conservation Commission	Number of Public Hearings held	Completed	Task 4-4 Complete.

BM P ID	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
#		Name			
4-5	Inspect erosion and sediment controls	Planning Board or their Designee	Develop procedure by end of first permit year, including inspection checklist. Commence reviews by end of second permit year.	The Stormwater Bylaw requires the applicant to provide a maintenance schedule that becomes the checklist for inspection commencing in Permit Year 9.	Task 4-5 Complete.

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

BM P ID #	BMP Description	Responsible Dept./Perso n Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
5-1	Develop a draft bylaw to apply Standards 2, 3, 4, 7, and 9 of the Massachusetts Stormwater Policy to the entire Town. Present to Town Meeting	Conservatio n Commission and/or Planning Board	Present to Town Meeting by end of seventh permit year	Completed by acceptance of the Stormwater Bylaw at Annual Town Meeting in May 2009.	Task 5-1 Complete.
5-2	Specify a stormwater BMP manual to be used for consistent design and performance standards	Planning Board	Select BMP manual by end of sixth permit year.	Completed by acceptance of the Stormwater Bylaw at Annual Town Meeting in May 2009.	Task 5-2 Complete.
5-3	Develop draft bylaw that ensures long-term maintenance of private structural BMPs. Present to Town Meeting	Planning Board	Compliance with regulations, present to Town Meeting by end of second permit year.	Completed by acceptance of the Stormwater Bylaw at Annual Town Meeting in May 2009.	Task 5-3 Complete.

6.	<b>Pollution Prevention and</b>	d Good Hous	ekeeping in M	<b>Iunicipal Operations</b>
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BM P ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
6-1	Identify sensitive receptors within the Town	Highway Department	List of sensitive receptors developed, staff notified by the end of the first permit year.	Measure completed.	Task 6-1 Complete.
6-2	Street sweeping	Highway Department	Percent of Streets swept annually.	During Permit Year 9, streets will be swept in the spring and as necessary during the summer and fall.	Street sweeping will be completed during the spring, summer and fall as scheduled by the Highway Department during Permit Year 10.
6-3	Sidewalk sweeping	Highway Department	Percent of Sidewalks swept annually.	Sidewalks will be swept as scheduled during Permit Year 9.	Sidewalks will be swept as scheduled by the Highway Department during Permit Year 10.
6-4	Roadway deicing	Highway Department	Amount of deicing compounds used.	Quantity of deicing compounds documented during Permit Year 9.	Quantity of deicing compounds documented by the Highway Department during Permit Year 10.
6-5	Minimize impacts from vehicle washing	Highway Department	Establish if further vehicle washing controls are needed and if so, evaluate and select the appropriate controls (i.e. containment area).	Continue use of biodegradable soaps and other environmentally conscious procedures during Permit Year 9.	The Town will continue their use of biodegradable soaps and other environmentally conscious procedures during Permit Year 10.

BM PID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
6-6	Minimize impacts from vehicle maintenance	Highway Department	Amount of hazardous materials used.	Continue employee training, signage, materials inventory, and following procedures during Permit Year 9. The Town has also minimized impacts through the repair of the Town Barn structure during Permit Year 9.	Continue employee training, signage, materials inventory, and following procedures during Permit Year 10.
6-7	Maintain the storm drain system	Highway Department	Number of catch basins cleaned annually	Cleaned and tracked catch basins in the Fall for Permit Year 9. Note that during regular maintenance, pipes entering and exiting catch basins were documented for size and "clocked" as to entry and exit.	Clean and track catch basins in the Fall for Permit Year 10.
6-8	Minimize pesticide and fertilizer use for parks and other landscaped areas	Highway Department	Training conducted; on the amount of herbicides/fertilizers used.	Highway Department and licensed subcontractors follow green landscaping procedures during Permit Year 9.	The Highway Department and licensed subcontractors shall follow green landscaping procedures during Permit Year 10.
6-9	Control of illegal dumping	Highway Department	Number of signs posted; number of sites cleaned up.	Continue monitoring, cleaning- up dump sites and posting signs during Permit Year 9.	Continue monitoring, cleaning- up dump sites and posting signs during Permit Year 10.

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

The MADEP has issued a "Draft Pathogen TMDL for the Parker River Watershed." Because it is a draft, the WLA are not final. However, the Town of Newbury is currently employing the following BMPs that will reduce pathogens to the Parker River Watershed.

BM PID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
1-1	Article/brochure about stormwater to be included in the tax bill once annually	Greenscapes North Shore Coalition	Newsletter/Brochure distributed to all households in Newbury.	Fiscal 2011-2012 Partnership with Greenscapes North Shore Program for delivery of materials to Newbury households during Permit Year 9.	Fiscal 2012-2013 Partnership with Greenscapes North Shore Program for delivery of materials to Newbury households during Permit Year 10.
1-2	Educate dog owners about picking up dog waste	Town Clerk	Distribute Fact Sheet to Dog Owners.	Team with Board of Health to distribute fact sheets to dog owner during Permit Year 9.	Team with Board of Health to distribute fact sheets to dog owner during Permit Year 10.
1-4	Maintain pet waste clean-up signs at schools, parks, and beaches	Highway Department	Signs posted.	Highway department continues to maintain signage regarding pet waste during Permit Year 9.	Highway department continues to maintain signage regarding pet waste during Permit Year 10.
2-3	Stencil catch basins with "don't dump" message	Highway Department	Identify and prioritize catch basins to be stenciled with "Don't Dump" message.	Catch basins continued to be identified and re-lettered as necessary during Permit Year 9.	Catch basins continued to be identified and lettered as required during Permit Year 10.
3-1	Conduct dry weather outfall screening	Highway Department	Locate Outfalls within regulated area during first year of permit term. Percent of Outfalls screened.	Partnered with PRCWA to create schedule for standard intervals of dry weather screening to occur during Permit Year 9.	The Stormwater Management Committee and the PRCWA to establish an Outflow testing schedule during Permit Year 10 for Permit Year 11

BM P ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
3-2	Map stormwater outfalls	Conservation Commission	Locate outfalls on a map within regulated area.	Measure completed for Permit Year 9.	Measure completed for Permit Year 10.
3-4	Develop and implement plan to identify and remove non-stormwater discharges	Board of Health	Number of illicit connections found and removed.	The Stormwater Management Bylaw has been developed and addresses the removal of illicit connections and discharges for Permit Year 9.	Illicit connections are addressed in the Stormwater Bylaw and the Stormwater Management Committee is in the process of developing enforcement protocol for Permit Year 10.
3-5	Develop a bylaw to require inspection of construction for correct connection to a municipal sewer	Building Inspection Dept.	Present to Town Meeting by end of seventh permit year	The Stormwater Bylaw has been completed and was accepted at Annual Town Meeting in May 2009 and is owned by the Planning Department.	Task 3-5 Complete.
3-6	Installation of vacuum sewers on Plum Island	Board of Health	Connection of every household on Plum Island to sewer system	Newbury continues to enforce water and sewer hook-ups and will continue to do so until all households are compliant for Permit Year 9.	Newbury continues to enforce water and sewer hook-ups and is in Superior Court with the last of the households in violation for Permit Year 10.
6-2	Street sweeping	Highway Department	Percent of Streets swept annually.	During Permit Year 9, streets will be swept in the spring and as necessary during the summer and fall.	Street sweeping will be completed during the spring, summer and fall as scheduled by the Highway Department during Permit Year 10.
6-3	Sidewalk sweeping	Highway Department	Percent of Sidewalks swept annually.	Sidewalks will be swept as scheduled during Permit Year 9.	Sidewalks will be swept as scheduled by the Highway Department during Permit Year 10.

BM P ID	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Planned Activities – Permit Year 9	Planned Activities – Permit Year 10
# 6-7	Maintain the storm	Name Highway	Number of catch	Cleaned and tracked catch	Clean and track catch basins in
0-7	drain system	Department	basins cleaned annually	basins in the Fall for Permit Year 9. Note that during regular maintenance, pipes entering and exiting catch basins were documented for size and "clocked" as to entry and exit.	the Fall for Permit Year 10.

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

• Further refinement of the stormwater system through "clocking" during cleanout.

#### 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, 2009 through March 31, 2012)

#### 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)	Y
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> <li>days sponsored **</li> </ul>	(#)	
<ul> <li>community participation **</li> </ul>	(# or %)	
<ul> <li>material collected **</li> </ul>	(tons or gal)	
School curricula implemented	(y/n)	

# Legal/Regulatory

	In Place	Reviewing		Draft	
	Prior to	Existing		in	
	Phase II	Authorities	Drafted	Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
Illicit Discharge Detection & Elimination					
Erosion & Sediment Control					
<ul> <li>Post-Development Stormwater Management</li> </ul>					
Accompanying Regulation Status (indicate with "X")		·		·	·
<ul> <li>Illicit Discharge Detection &amp; Elimination</li> </ul>					
<ul> <li>Erosion &amp; Sediment Control</li> </ul>					
<ul> <li>Post-Development Stormwater Management</li> </ul>					

## Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	95
Estimated or actual number of outfalls	(#)	TBD
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
<ul> <li>Paper/Mylar</li> </ul>	(%)	100
<ul> <li>CADD</li> </ul>	(%)	
<ul> <li>GIS</li> </ul>	(%)	
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	(%)	23
% of population on septic systems	(%)	77

## 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-	(%)	None
construction stormwater control		
Site inspections (for proper BMP installation & operation) completed **	(# or %)	None
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	None
Low-impact development (LID) practices permitted and encouraged	(y/n)	Yes

### **Operations and Maintenance**

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	At least once
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	At least once
Qty of structures cleaned **	(#)	All
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		
<ul> <li>Annual budget/expenditure (labor &amp; equipment)**</li> </ul>	(\$)	
Hourly or per basin contract rate **	(\$/hr or \$	\$10/basin
	per basin)	
Disposal cost**	(\$)	Included in
-		Hourly rate
		above

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 vector **	(%)

		Response	
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	At least twice	
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	At least twice	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)		
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)		
Annual Sweeping Costs			
<ul> <li>Annual budget/expenditure (labor &amp; equipment)**</li> </ul>	(\$)		
Hourly or lane mile contract rate **	(\$/hr. or		
	ln mi.)		
• Disposal cost**	(\$)		
Sweeping Equipment			
Rotary brush street sweepers owned/leased	(#)	100%	
Vacuum street sweepers owned/leased	(#)	1	
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 %)	
<ul> <li>Herbicides</li> </ul>	(lbs. or %)	N/A
Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	None

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl	
	% CaCl <sub>2</sub>	
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% MgCl <sub>2</sub>	
	% CMA	
	% Kac	
	% KCl	
	% Sand	
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)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	Yes
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Yes

# 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	

## 7b. WLA Assessment

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

#### 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	
days sponsored **	(#)
<ul> <li>community participation **</li> </ul>	(# or %)
<ul> <li>material collected **</li> </ul>	(tons or gal)
School curricula implemented	(y/n)

# Legal/Regulatory

	In Place	Reviewing		Draft	
	Prior to	Existing		in	
	Phase II	Authorities	Drafted	Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
Illicit Discharge Detection & Elimination					
Erosion & Sediment Control					
Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with "X")	·	·			·
<ul> <li>Illicit Discharge Detection &amp; Elimination</li> </ul>					
<ul> <li>Erosion &amp; Sediment Control</li> </ul>					
<ul> <li>Post-Development Stormwater Management</li> </ul>					

## 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)	
<ul> <li>Paper/Mylar</li> </ul>	(%)
<ul> <li>CADD</li> </ul>	(%)
<ul> <li>GIS</li> </ul>	(%)
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	
<ul> <li>Annual budget/expenditure (labor &amp; equipment)**</li> </ul>	(\$)
Hourly or per basin contract rate **	(\$/hr or \$
	per basin)
<ul> <li>Disposal cost**</li> </ul>	(\$)
Cleaning Equipment	
• Clam shell truck(s) owned/leased	(#)
• Vacuum truck(s) owned/leased	(#)
Vacuum trucks specified in contracts	(y/n)
<ul> <li>% Structures cleaned with clam shells **</li> </ul>	(%)
<ul> <li>% Structures cleaned with vactor **</li> </ul>	(%)

	(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	
<ul> <li>Annual budget/expenditure (labor &amp; equipment)**</li> </ul>	(\$)
Hourly or lane mile contract rate **	(\$/hr. or
	ln mi.)
<ul> <li>Disposal cost**</li> </ul>	(\$)
Sweeping Equipment	
Rotary brush street sweepers owned/leased	(#)
Vacuum street sweepers owned/leased	(#)
Vacuum street sweepers specified in contracts	(y/n)
<ul> <li>% Roads swept with rotary brush sweepers **</li> </ul>	%
<ul> <li>% Roads swept with vacuum sweepers **</li> </ul>	%

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

<ul> <li>Fertilizers</li> </ul>	(lbs. or %)
<ul> <li>Herbicides</li> </ul>	(lbs. or %)
<ul> <li>Pesticides</li> </ul>	(lbs. or %)
Integrated Pest Management (IPM) Practices Implemented	(y/n)

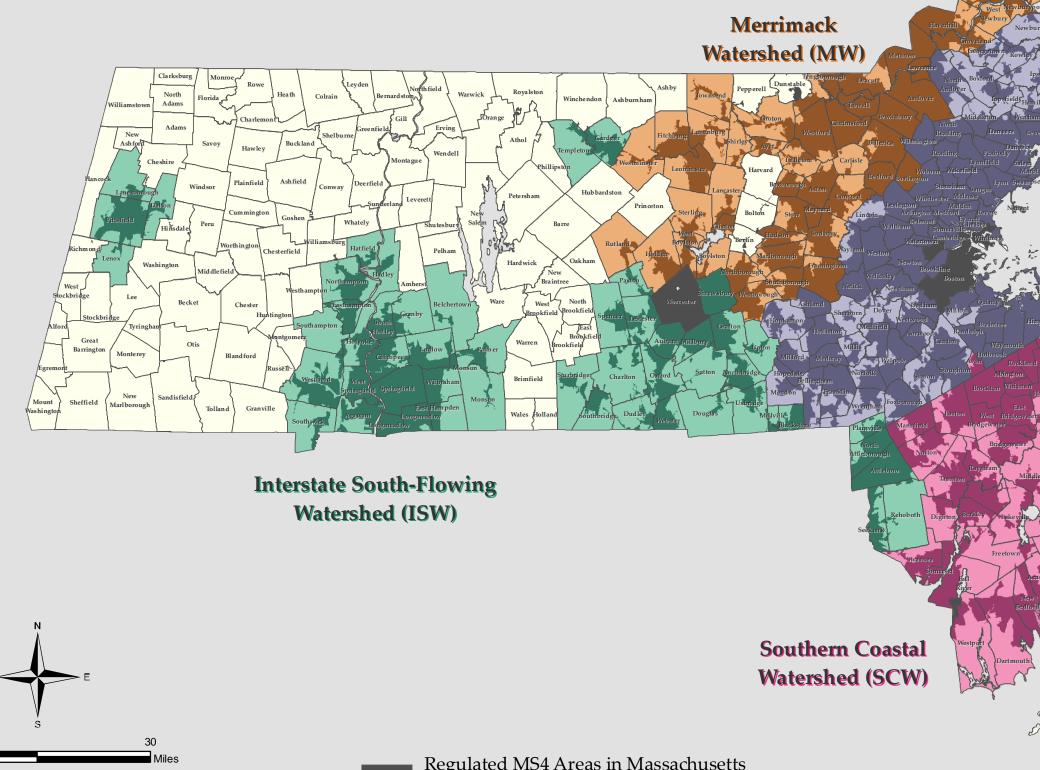
	(Preferred Units) Response
Average Ratio of Anti-/De-Icing products used **	% NaCl % CaCl <sub>2</sub>
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% MgCl <sub>2</sub> % CMA % Kac % KCl % Sand
Pre-wetting techniques utilized **	(y/n or %)
Manual control 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	

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# Regulated MS4 Areas and Applicable Watershed-Specific General Permits in Massachusetts



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Map created by EPA Region 1 GIS Center August 17, 2010 Map Tracker ID 7117 Data Sources: Navteq



Regulated MS4 Areas in Massachusetts (Based on 2000 Census)



# Northern Coastal Watershed (NCW)

