Municipality/Organization: COHASSET, MASSACHUSETTS

EPA NPDES Permit Number:

MassDEP Transmittal Number: W-

Annual Report Number & Reporting Period: **Year 9** **April 1, 2011 – March 31, 2012**

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

Part I. General Information

Contact Person: Paul Shea Title: Cohasset Stormwater Agent

Telephone #: 781-383-4119 Email: paulshea@cape.com

Mailing Address: Cohasset Conservation Commission, 41 Highland Avenue, Cohasset Town Hall, Cohasset, MA 02025

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: Paul Shea

Title: Cohasset Stormwater Agent

Date: March 31, 2012

Part II. Self-Assessment

The required self-assessment has been completed, and it has been determined that the Town of Cohasset is in compliance with all the permit conditions.

The Town of Cohasset, Massachusetts, has a Stormwater Management Bylaw, and Stormwater Management Rules & Regulations, which were adopted by the Town of Cohasset in 2008. The Cohasset Stormwater Management Regulations became effective in January of 2009. The purpose of these stormwater management regulations, which are under the jurisdiction of the Cohasset Conservation Commission, is to protect downgradient wetland resource areas (coastal and freshwater wetlands), upland areas, adjacent and bordering properties, from increases in stormwater runoff impacts from impervious surface areas; and from negative water quality impacts associated with stormwater runoff from impervious surface areas. The Cohasset Conservation Commission requires the filing of complete stormwater permit applications, along with advertised public hearings, in order to properly review the stormwater applications, the proposed stormwater management designs, low impact development proposals, stormwater runoff management and mitigation, and to review the proposed best management practices for stormwater management of stormwater runoff. The Cohasset Stormwater Agent works for the Cohasset Conservation Commission, and is responsible for reviewing all stormwater management applications filed with the Town of Cohasset, and the Cohasset Conservation Commission. The Cohasset Stormwater Regulations are far more restrictive than the federal - EPA NPDES permit regulations, and the state - Massachusetts Department of Environmental Protection (DEP) stormwater regulations. The Cohasset Stormwater Regulations include the application review of proposed small projects, which result in an increase of 500 square feet or greater of new impervious surface areas, an increase of new stormwater runoff, the need for best management practices in the management, collection, and treatment of stormwater runoff volumes, within the Town of Cohasset. Best management practices are recommended for stormwater management of impervious surface areas for all proposed residential, commercial, and industrial projects with the Town of Cohasset, no matter what the size of the proposed project. The Cohasset Conservation Commission voted in December of 2011 to appoint Paul Shea, Independent Environmental Consultants, Inc., to act as the Stormwater Agent for the Town of Cohasset.

The Town of Cohasset has implemented numerous municipal stormwater management projects in order to reduce the impacts from stormwater runoff within Cohasset. The Town of Cohasset under a 319 Grant from Massachusetts Coastal Zone Management has constructed forty five raingardens throughout the town, in an effort to manage, collect, and treat existing untreated stormwater runoff volumes within the town. The Town of Cohasset has also built numerous vegetated drainage swales to treat existing stormwater runoff from impervious surface areas within the town.

1. **Implementation of measures such as installing rain gardens or other Low Impact Development (LID) applications to**

alleviate existing stormwater problems and water quality problems within he Town of Cohasset:
Mass. DEP 319 NPS Grant
The Town was awarded a Massachusetts DEP 319 Nonpoint Source Pollution (NPS) grant (DEP Project # 07-06/319) to be used to compliment ongoing sewer work (in progress) around Little Harbor and Inner Little Harbor (impaired waters), and DEP issues a Notice to Proceed for this three year grant on February 1, 2008. The total award was $250,000 which includes a required match of $100,000 from Town Funds. Three BMPs (two raingardens and one structural BMP) were constructed, a culvert replaced on Beach Street, and the drainage network around Little Harbor expanded by the addition of pipes and catch basins in the Fall of 2009 under Construction Contract #BMP-09-01. The second phase of this project, Construction Contract #BMP-09-02, was awarded and work is in progress.

2. **The Town received another Massachusetts DEP 319 Nonpoint Source Pollution (NPS) grant (DEP Project #10-04/319) to be used for stormwater improvements in the Little Harbor, Cohasset Cove, and Cohasset Harbor areas. The total award was $300,000, which includes a required match of $120,000 from Town funds. The monies will be used to protect and to improve water quality through the construction of BMP solutions.**

3. **In addition, the Stormwater Committee have worked closely with the Cohasset Center for Student Coastal Research (CSCR) to provide grant funding for the testing of stormwater samples collected at Little Harbor (impaired waters) outfalls. The 319 grant projects also include a public outreach and education component to explain the project and the effectiveness of Stormwater BMPs to residents and to encourage participation in reducing non-point source pollution.**

4. **To date over 45 BMPs have been installed under Mass DEP 319 NPS Grants, which includes BMPs constructed under the Town's first DEP 319 NPS Grant Project (DEP Project #03-12/319)**

5. **The Town of Cohasset is currently reviewing the status of the constructed raingardens under the 319 grants, in order to assess the need for maintenance of the raingardens.**

Coastal Pollutant Remediation Grant Program/Coastal Zone Management (CZM) BMP Implementation within the James Brook Watershed

1. **The Town was awarded a Coastal Pollutant Remediation (CPR) grant for BMP Design & Implementation within the James Brook Watershed (Grant #ENV 08 CZM 02). The total award was $62,000, which includes a required match of $15,570 (25%) from Town funds. The purpose of the grant is to improve the water quality and protection of Cohasset**

Cove through the construction of stormwater control and treatment systems within the James Brook watershed, part of the South Coastal Watershed. The designs include LIDs strategies to capture and minimize runoff flows and pollutants loadings into the Jacobs Meadow salt marsh and Cohasset Cove. A total of 5 stormwater BMPs were constructed under this grant program: 3 raingardens, 2 constructed wetlands, and a Filtera tree box filter.

Adoption of bylaws or other regulatory controls to manage and prevent additional stormwater issues.

1. **Town meeting approval of the Stormwater Management Bylaw at the 2008 Spring Town Meeting.**

2. **The Stormwater Bylaw came into effect on July 10, 2008. The Stormwater Bylaw and the associated Stormwater Management Rules & Regulations establish minimum requirements and procedures to control: impacts from increased stormwater runoff; decreased groundwater recharge; and elimination of non-point source pollution associated with new development and redevelopment. Any project proposing an increase in impervious surfaces greater than 500 square feet in size must first obtain a stormwater management permit from the Cohasset Conservation Commission.**

3. **The Cohasset Conservation Commission appointed Paul Shea, Independent Environmental Consultants, Inc., to act as the Stormwater Agent in December of 2011. The Stormwater Agent reviews all stormwater management applications for development and redevelopment projects in the Town of Cohasset.**

4. **In addition, Paul Shea, Independent Environmental Consultants, Inc., assists the Town of Cohasset with, when requested, technical assistance on stormwater management issues.**

Environmental improvements have been made to the James Brook channel at Elm Street in Cohasset in order to improve flooding conditions, and to improve tidal flushing within Jacobs Meadow. New tide gates have been installed at Cohasset Harbor where James Brook flows into Cohasset Harbor, in order to improve flood conditions, overall tidal flushing of Jacobs Meadow.

A new culvert was installed at Border Street in order to improve stream flow, and to improve tidal flushing into the upgradient wetlands.

Cohasset Harbor (coastal/marine waters) has been granted the designation of a No Discharge Zone from the U.S.

Environmental Protection Agency, in an effort to protect the marine waters and marine environment of Cohasset Harbor from potential environmental pollution impacts, water quality impacts, from unauthorized discharges of pollutants, into the coastal/marine tidal waters of Cohasset Harbor. The Cohasset Harbormaster is responsible for the environmental monitoring of activities within the coastal/marine tidal waters of Cohasset Harbor.

The Cohasset Conservation Commission is responsible for protecting all public water supplies within the Town of Cohasset, including Lily Pond (surface water supply – municipal public drinking water supply/reservoir), Aaron River Reservoir (surface water supply/reservoir), and all municipal wells (groundwater supply) drinking water supply, within the Town of Cohasset. The Cohasset Conservation Commission is also responsible for protecting Straits Pond, Area of Critical Environmental Concern (ACEC).

New FEMA Flood Zone Maps (2012) have been prepared for the Town of Cohasset based upon the most current flood zone data for the Town.

A Town Stormwater Advisory Committee was established in January of 2010. The members of the Stormwater Advisory Committee are Noel Collins, Ross Rosano, and Jim Fitzgerald. The purpose of the Stormwater Advisory Committee is to conduct public education activities to support stormwater remediation; provide opportunities for public participation in stormwater and watershed remediation discussions in association with the Board of Selectmen, and the Conservation Commission; conduct an annual inventory of flood prone areas in Cohasset on behalf of the Selectmen and interested Town Committees as a supplement to the Final Flood Control Master Plan of 2009; seek funding sources including grants for stormwater remediation; provide assistance to the town employees responsible for preparing the required reports to the EPA and others.

Cohasset Cove continues to be a water quality impaired water. The Town continues to perform water quality tests on the lower portion of James Brook and the stormwater structures leading into James Brook. After storm events, Fecal coliform and Enterococci bacteria levels are high within the sampled sites. The Gulf River, the other major water body emptying into Cohasset Cove also continues to be monitored by volunteers from CSCR and the EPA. A source of the bacteria is a storm drain discharging into the Gulf River in North Scituate Village. Cohasset continues to work with Scituate officials to upgrade septic systems in the area to reduce the pollutant load.

The Little Harbor and Inner Little Harbor sewer connection project is still in progress.

Town DPW employees have been trained in proper street sweeping, catch basin cleaning, and GPS to locate structures.

Coughlin Environmental Services, LLC has prepared a Flood Control Master Plan (FCMP) for the Town of Cohasset. Recommendations for installations of BMPs within the James Brook watershed, and the Treats Pond/Atlantic Avenue area were part of this flood management plan.

The Cohasset Conservation Commission is seeking ways to fund the future maintenance and reconstruction of the existing 45 raingardens that have been constructed in the Town of Cohasset, for the purpose of stormwater management, and water quality protection.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

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
1.1	Health Notes to Cohasset Mariner	Cohasset BOH	4 articles per year	Health Notes relating to stormwater were published in the Cohasset Mariner	Continue to publish at least 4 articles per year.
Revised					
1.2	Informational Mailing	Town of Cohasset	Households reached	Water Commission, BOH, North and South River Watershed Association "Greenscapes" mailed to all residents	Continue to mail "Greenscapes" to all residents.
Revised					
1.3	Beach and Stream Cleaning Day	DPW, Residents, High School Students	2 collections per year	Two (2) of clean up days	Have two (2) cleanup days.
Revised					
1.4	Provide information on the Town Website	Town of Cohasset	Revise/update quarterly	2012 Flood Prone Area Report posted on Town website Minutes of Stormwater Advisory	Continue to post Stormwater Advisory Committee meeting minutes on Town website
Revised					
1.5	Provide summary of Flood Control Master Plan	Town of Cohasset	Information posted on website	Summaries on Town website	Update information on Town's website as necessary
Revised					
1.6	New FEMA Flood Zone Maps	Town of Cohasset, Cohasset Building Department	Information available		Keep flood zone information updated
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
2.1	Collect samples from stormdrain outfalls after storm events	Conservation Commission and CSCR	Reports of water quality	Perform wet weather sampling of James Brook/Jacobs Meadow area, and Little Harbor area as part of LID projects	.Perform wet weather sampling of James Brook/Jacobs Meadow area, and Little Harbor area as part of LID projects
Revised					
2.2	Volunteer Monitoring Program Water Quality	CSCR and Cohasset BOH		See Item 2.1above.	Continue monitoring of Cohasset Harbor, Gulf River, and North Scituate Village. Sample stormwater outfalls in Little Harbor.
Revised					
2.3	Beach and Stream Cleanup Day	High School Students, Girl Scout and Boy Scout Groups, and Residents	2 clean ups	Citizen volunteers picked up litter and debris and filled five loads of one-ton pick up trucks, materials disposed of at the Cohasset Transfer Station.	Continue with organized clean up days.
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
3.1	Cohasset Harbor – No Discharge Zone (U.S. EPA)	Lorren Gibbons, Cohasset Harbormaster	Eliminate discharges of pollutants into the marine waters of Cohasset Harbor.	U.S. EPA, and Massachusetts Department of Environmental Protection	Environmental monitoring of activities within the marine waters of Cohasset Harbor by the Cohasset Harbormaster, and the Cohasset Conservation Commission.
Revised					
3.2	Elimination of all illicit discharges within the Town of Cohasset	Cohasset Conservation Commission, Cohasset Board of Health, Cohasset Dept. of Public Works and Cohasset Harbormaster	Eliminate all known illicit discharges within the Town of Cohasset.		Environmental evaluations of all illicit discharges within the Town of Cohasset. Elimination of all point source pollutant loading areas, and the installation of best management practices – mitigation and protection measures.
Revised					
3.3	Connectivity Mapping	Cohasset DPW Carl Sestito	Complete field form. Put information into GIS catch basin and outfall mapping. Number of basins and outfalls measured.	No significant amount of data collected. No additional personnel.	Connection to gather connectivity data.
Revised					
3.4	Illicit Connection Regulation	Cohasset BOH	Number of connections reported and removed.	No additional illicit connections discovered.	Continue to enforce regulation.
Revised					
Revised					

Revised					

3a. Additions

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
	Cohasset Stormwater Management Regulations & Bylaw	Cohasset Conservation Commission – Paul Shea	Collection and treatment of all new proposed stormwater runoff from new impervious surface areas, from development and redevelopment projects.	Cohasset Stormwater Management Regulations & Bylaw adopted in 2008. Permit reviews started in January of 2009.	Stormwater runoff management and control of stormwater runoff impacts during the construction phase of construction projects. Recommended use of BMPs and LID projects.
Revised					
	Cohasset Planning Board Regulations	Cohasset Planning Board			Stormwater runoff management and control of stormwater runoff impacts during the construction phase of construction projects
Revised					
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
5.1	Maintenance of all BMPs – detention basins, infiltration trenches, stormceptors, raingardens, vegetated swales.	Development - Homeowners Associations Carl Sestito, Director of Cohasset Dept. of Public Works	Ongoing maintenance	Development – Homeowners Associations – legal agreements	Ongoing maintenance – semi-annual inspections and maintenance of stormwater management facilities, and stormwater management BMPs.
Revised					
5.2	Cohasset Stormwater Bylaw Enforcement	Cohasset Conservation Commission, Paul Shea	Implementation of the Bylaw	Permit reviews started in January , 2009. Stormwater Advisory Committee was established in January, 2010	Implement and Enforce the Bylaw
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
6.1	Cleaning and maintenance of stormwater catch basins in Cohasset.	Carl Sestito, Director of Cohasset Dept. of Public Works Homeowners Associations			Bi-annual cleaning and maintenance of all town stormwater catch basins
Revised					
6.2	Street sweeping, cleaning, and removal of sand from all town roadways.	Carl Sestito, Director of Cohasset Dept. of Public Works Homeowners Associations			Bi-annual street sweeping, cleaning, and removal of sand from all town roadways.
Revised					
6.3	Maintenance and restoration of existing raingardens and vegetated drainage swales.	Carl Sestito, Director of Cohasset Dept. of Public Works Homeowners Associations			Annual evaluation of soils and plantings and replacement of soils and plantings if needed.
Revised					
6.4	Rain Garden Installation	Cohasset Conservation Commission, Cohasset Town Manager	Construct more BMPs		Construct more BMPs, maintain the existing raingardens.
Revised					
6.5	Develop signage to protect resource areas	Cohasset Water Commission	Posting of signs	Installation of signs and replacement if necessary.	Maintain all signs.

Revised					
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
7.1	Raingardens throughout Cohasset, including Little Harbor, James Brook Watershed	Carl Sestito, Director of Cohasset Dept. of Public Works	Reduce TSS and bacterial load from outfalls.		Maintain raingardens.
Revised					
7.2	Vegetated drainage swales throughout Cohasset	Carl Sestito, Director of Cohasset Dept. of Public Works	Reduce TSS and bacterial loads from outfalls.		Maintain vegetated drainage swales.
Revised					
7.3	Upgrade catch basins in Little Harbor	Carl Sestito, Director of Cohasset Dept. of Public Works	Reduce TSS and bacterial loads to Little Harbor.		Upgrade catch basins.
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

The BMPs chosen were designed and constructed in accordance to the Massachusetts Stormwater Management Policy. Progress will be closely tracked, and modifications and improvements will be implemented as required.

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 **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in 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**")					
▪ 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 vactor **	(%)	

	(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 ln 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 ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % $CaCl_2$ % $MgCl_2$ % 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	