

**Municipality/Organization:** DOVER

**EPA NPDES Permit Number:** MAR041107

**MassDEP Transmittal Number:** X251365

**Annual Report Number** Year 9  
**& 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: Craig S. Hughes

Title: Superintendent of Streets

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Mailing Address: 2 Dedham Street, P.O. Box 250, Dover, MA 02030

### 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: David W. Ramsay

Title: Town Administrator

Date:

4/26/12

## **Part II. Self-Assessment**

During this Permit year, the Town of Dover continued the good housekeeping and operational procedures that were implemented during (or prior to) previous Permit years, such as street sweeping, sidewalk sweeping, catch basin cleaning, and storm drain jetting.

The Town continues to minimize the tonnage of salt (sodium chloride) used on roadways by blending it with sand.

The Town continues to approach stormwater management and protection from new developments by using a Comprehensive Permit process. As part of this, the Town inspects constructed stormwater structures (such as detention basins) as well as stormwater management from areas currently under construction.

The Town will continue to look for available public education and outreach materials, as well as additional training opportunities in the next Permit year.

The Town will continue to await the Final Northern Coastal MS4 Permit to determine the level of compliance that will be required in the next Permit year.

**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 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
1.1	BMP Description	Engineering	None	None	None
Revised					
1.2	Press Releases	Engineering	None	None	None
Revised					
1.3	Groundwater	Engineering	Locating wells and septic systems	None	None
Revised					
1.4	Hazardous Waste Collection	Volunteers	Places, dates, & time of pickups	None	The Town has a HHW Collection event scheduled for April 28, 2012, and may host a second event in Year 10.
Revised					
1.5	Watershed Management	Engineering	Part of Planning Board R&R	A groundwater protection agent was appointed prior to this Permit year.	Continue to fund and support the groundwater protection agent position
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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2.1	Storm Committee	None	None	None	None planned.
Revised					
2.2	Adopt-A-Stream	None	None	None	None planned.
Revised					
2.3	Adopt-A-Street	None	None	None	None planned.
Revised					
2.4	Stormwater Management Plan	Engineering	Completed	Components of the Stormwater Management Plan have been incorporated into the Town's Comprehensive Permit.	Continue to require Comprehensive Permit for developments and construction in Town.
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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3.1 Revised	Map Drain Systems	Engineering	Show on street maps	Outfalls and drainage structures were mapped prior to Year 9 by a Highway Department intern.	Expand mapping program based on requirements of Final Northern Coastal Watershed MS4 Permit.
3.2 Revised	Capital Budget and Planning	Superintendent of Streets	Inspect Outfalls	Three existing detention basins within the Town are inspected during and after each storm event.  Approximately 1,200 feet of 12-inch storm drain pipe was jetted in Year 9 by Araco Sewer & Drain Service, Inc., of South Easton, MA.	Continue to inspect detention basins. Goal is to clean 1,500 feet of storm drain pipe each year.
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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4.1 Revised	Town Regulations	Superintendent of Streets	Control Runoff	<p>The Town has several Chapters of Code in place which address water resources and/or stormwater. These include:</p> <ul style="list-style-type: none"> <li>○ Chapter 116 (Groundwater Protection Districts): Requires that road salt, pesticides, and fertilizers be stored inside to prevent a release, and also requires that new lots that propose more than 10% impervious surface provide on-site recharge.</li> <li>○ Chapter 181 (Dover Wetlands Protection): Protection of wetlands and surface water bodies</li> <li>○ Chapter 248 (Subdivision of Land), Article V: Establishes standards for new storm drain construction, including pre-and post-development flow calculations; requires Stormwater Management Plan for new development; establishes erosion and sedimentation control standards;</li> <li>○ Chapter 263: Rules and Regulations supporting Chapter 181, the Wetland Bylaw.</li> </ul> <p>No changes were made to any of these Chapters during this Permit year.</p>	Continue to review building permit plans against established checklist and enforce existing Code with Town’s Comprehensive Permit.
4.2 Revised	Site Plan Review	Engineering	Send checklist comments to designers	Require designers to use the checklist before submitting permit plans. Eight site plans were reviewed during this Permit year by Town Engineer and/or Superintendent of Streets.	Continue Process

4.3	Site Inspections	Engineering & Superintendent of Streets	Foundation inspection for foundation drain and outlet	Continued to require contractors to call for an inspection prior to backfilling. Two developments under construction were inspected during this Permit year. No fines or stop work orders were issued. Each of the developments is still in construction, and the Town will continue to monitor the condition of all existing stormwater control methods and structures.	Continue Process
Revised					
Revised					

**4a. Additions**


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

<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 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
5.1 Revised	By-laws and Planning Board R&R	Engineer & Planner	Adopt By-Laws and Regulations	As noted, all Code related to stormwater was adopted prior to this Permit year.	Continue to enforce existing Code.
5.2 Revised	Design Standards	Planning Board ZBA	Check Infrastructure Construction	Eight new building foundations were inspected by the Town Engineer or Superintendent of Streets in Year 9 to observe the nature of the foundation drain and outlet.	Continue to administer existing inspection program.
5.3 Revised	Final Inspection	Engineer	Inspection of Infrastructure	Two developments are still under construction.	Inspect the two developments upon construction completion.
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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.1 Revised	Coordination of Town Departments	Selectmen	Compliance with Phase II	Interdepartmental communication, only. There have been no events of non-compliance.	Town will review Final Northern Coastal MS4 Permit and develop a new Stormwater Management Plan.
6.2 Revised	Questionnaire on Department Activities	Engineering	Review of Answered Questionnaire	Volumes of deicing materials used are monitored. A mix of sand and salt was used for deicing. 846.25 tons of salt and 217 tons of sand were used during this Permit year. Ice pellets of calcium chloride were used on sidewalks around public buildings. No liquid calcium was used. All lawns are treated with organic fertilizers.	Continue monitoring of products or materials that can potentially cause stormwater pollution.
6.3 Revised	Street Cleaning	Superintendent of Streets	Schedule Operations	Each street in town was swept a minimum of once using Town equipment and personnel. High-traffic areas such as main roads were swept twice. Sidewalks were swept by the Town's power broom. The street sweepings are composted.	Continue annual cleaning efforts.
6.4 Revised	Catch Basin Cleaning	Superintendent of Streets	Street Schedule	Each of the Town's 1,029 catch basins was cleaned by B.M.C. of Pinehurst, MA. A dozen of these basins were cleaned a second time, as needed. The sweepings remain at the Highway Department where they are composted after being tested.	Continue annual cleaning efforts.
6.5 Revised	Employee Training	Superintendent of Streets; Director of Parks & Recreation	Training for Equipment Operation	Highway Department personnel did not attend any training events.	Continue to look for additional training options, such as equipment manufacturers, insurance companies, and consulting firms.

Revised					
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**6a. Additions**


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

<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 9</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
7.1 Revised	Check Outfalls	Superintendent of Streets	Schedule Dates	The Town of Dover previously located, mapped and inspected three outfalls from the MS4 urbanized area.	Town will continue monitoring all three outfall locations.
7.2 Revised	Identify Illicit Discharges	Engineer	Gather Samples for Lab Tests	No illicit discharges were located during this Permit year.	Continue IDDE program.
7.3 Revised	Establish TMDL's	Engineer	Identify Pollutant Source, if any	None.	Contingent on requirements in the Final Northern Coastal Watershed MS4 Permit.
7.4 Revised	Pollutant Removal	Engineer	Treatment Units at Key Locations	No infiltration-based stormwater units were installed during this Permit year.	Town will continue to require infiltration and treatment based on % impervious surface proposed.
Revised					
Revised					

**7a. Additions**


**7b. WLA Assessment**

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

No analytical samples were collected during this Permit year.

**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, 2011 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)	
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 **	(#)	0
▪ 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	(%)	100
Estimated or actual number of outfalls	(#)	3
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	3
Outfalls inspected/screened **	(# or %)	3
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	0
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) **	(#)	8
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(# or %)	8
Tickets/Stop work orders issued **	(# or %)	0
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)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	2
Qty of structures cleaned **	(#)	1,053
Qty. of storm drain cleaned **	(%, LF or mi.)	1,200 LF
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost

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 vector **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost
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 <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	80%      20%
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	Y
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 #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

### 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	