

**Municipality/Organization:** **Town of Needham**

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**EPA NPDES Permit Number:** **MAR041237**

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**MaDEP Transmittal Number:** **W-041019**

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**Annual Report Number**                      **Year 12**  
**& Reporting Period:**                      **April 1, 2014 – March 31, 2015**

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## **NPDES Phase II Small MS4 General Permit Annual Report**

### **Part I. General Information**

**Contact Person:** Richard P. Merson    **Title:** Director, Dept. of Public Works

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**Telephone #:** 781-455-7550    **Email:** RMerson@needhamma.gov

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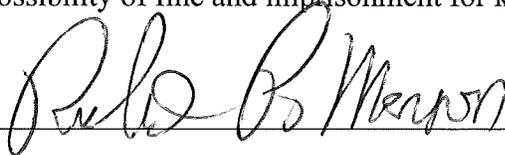
**Mailing Address:** Public Service Admin. Building 500 Dedham Ave., Needham, MA 02492

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#### 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:** Richard P. Merson

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**Title:** Director, Public Works Department

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**Date:** May 1, 2015

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quickly. Mapping is an ongoing effort for all communities and we work to update the map as budget and staff time allows.

- The Town has undertaken extensive illicit discharge detection and elimination efforts, even beginning before the 2003 permit was issued, that have resulted in reductions of pollution to local waterbodies. Before EPA's MS4 permit was released, the Town was well ahead of others by beginning to find and remove illegal connections to the drain. Needham has completed an inventory of all outfalls, including photographs and documentation of conditions at the time of inspection. In addition, each year, the Town video inspects approximately 10% of their drainage system to identify potential illicit connections. In recent years, no connections have been identified, however, we think this approach is a thorough way to inspect for illicit discharges. In addition, we video inspect approximately 10% of the sewer system to assess condition and identify obstructions to flow. This effort allows us to find locations in need of rehabilitation or repair to reduce exfiltration (and infiltration). Town staff knowledgeable about illegal dumping and illicit discharges are in the field, overseeing construction (including projects with sewer and drain connections), and watch for illegal dumping to the drainage system.
- We have worked with Charles River Watershed Association to mitigate sources of bacteria found by watershed sampling.

#### Construction Site Runoff Control/Post Construction Stormwater Management

- Town staff thoroughly review proposed projects for compliance with the Massachusetts Stormwater Management Handbook as required by the Memorandum of Understanding between MassDEP/EPA and the Town. This MOU requires new development and redevelopment in the Charles River watershed (entire Town) to meet the Mass. Handbook. The Town enforces consistent standards beyond "Maximum Extent Practicable" for projects and require infiltration of 1" of the roof areas on projects.
- Town staff inspects construction sites throughout projects, from pre-construction to completion, to ensure both erosion and sediment controls are properly maintained during construction and post-construction stormwater runoff is managed properly in accordance with local code and permits.
- Town projects look for opportunities to install xeriscaping and promoting infiltration through installation of structural BMPs, such as the Newman School work recently completed and the planned efforts for replacement of the garden in Memorial Park.

#### Pollution Prevention and Good Housekeeping in Municipal Operations

- Needham has instituted practices that go well beyond the 2003 MS4 permit requirements to prevent pollution from municipal operations. We have employed a predictive catch basin cleaning program that results in annual cleanings from a substantial portion of our total catch basins. We gather information about the basins at the time of cleaning, including depth to sump, condition, and material built up. We also video inspect a substantial portion (almost 10%) of the drainage system annually to identify problems that cause impediment to stormwater flow and/or need repairs.

### 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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
1-1	Classroom education on Storm Water	DPW Director	<ul style="list-style-type: none"> <li>- Teachers instruct classes and present materials gathered in year one.</li> <li>- Volunteer outreach to youth groups and Public Schools</li> </ul>	Needham DPW host at the DPW yard on Dedham Ave. “Touch the Trucks” display for the elementary schools comprising all children grades K-5. on June 1, 2014, and hosted a field trip to the Water Treatment Plant on November 5, 2014 for the Pollard Elementary School	Continue presentations and truck displays along with (Catch Basin Cleaner and Vector truck) at 2 elementary schools.
1-2	Flyer and Brochure Distribution and Web Site Link	DPW Director	<ul style="list-style-type: none"> <li>- Supply the DPW, Town Hall, and Public Library with a Flyer and Fact Sheet</li> <li>- Provide a Web Link on the Town’s Web Site to the Charles River Watershed Web Site</li> </ul>	A flyer aimed at what local business can do to help, and a “What you can do...” fact sheet were supplied at all suggested locations. (PSA Building, Town Hall, and Public Library).	Re-distribute current flyers and fact sheets, establish a link on the Town web-site to the Charles River Watershed web-site.
1-3	Using the Media	DPW Director	<ul style="list-style-type: none"> <li>- One local cable public service announcement</li> <li>- one yearly press release</li> <li>- one annual storm water article</li> </ul>	One Press release article released by Board of Health Department <ol style="list-style-type: none"> <li>1) Health Matters, 3/19/15</li> <li>2) Non Municipal partners to publish articles on Storm Water Management in local media</li> </ol>	Continue to issue press releases in local paper, create new and updated cable program.

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2-1	Adopt-a-Stream Programs	DPW Director	- Clean adopted local water bodies, - adopt a stream program continued	Adopted water bodies are cleaned on an annual basis by the DPW at street crossing.	Continue to clean and have cleaned adopted local water bodies.
2-2	Stencil Storm Drains	DPW Director	- Stencil 50 storm drains per year - maintain records	97 designated storm drains were stenciled in the summer of 2014	Continue current program for 2015
2-3	Community Hotline	DPW Director	- Residents use hotline and DPW personnel investigate illegal dumping reports	Hotline is direct number to the Needham Water & Sewer Division, posted on the Town website 781-455-7550 between 8am-5pm. After 5pm, contact Needham Police at 781-455-7570	Illegal Dumping reports are immediately inspected. Areas are noted and random checks ensued.
2-4	Storm Water Committee	DPW Director	Hold annual meetings	Last meeting held on 4/09/2015	Continue to hold annual meetings and discuss current issues
2-5	Pet Waste By-Law	DPW Director	Post signs near parks and other areas where the town by-law is applicable	Signs are posted at areas that are problematic with pet waste deposits. These signs will be replaced if they are destroyed or vandalized. Amendment 3.7.7 to existing Town bylaw stating for that pet waste on public areas and catch basins is prohibited and is finable. The Town also constructed a new dog park in August 2014. Residents are required to dispose of any dog waste in a designated dog waste dispenser.	Continue to Post signs where applicable.
Revised					

3-3	Septic System Controls (Board of Health)	DPW Director	# of systems, # regularly maintained, # of educational flyers, # of trained people, # of failed systems	<ul style="list-style-type: none"> <li>• 340 Private septic systems remain in Town, 12 abandoned and connected to Town sewer               <ol style="list-style-type: none"> <li>1. 674 Webster St</li> <li>2. 5 Glendale Rd</li> <li>3. 980 Greendale Ave</li> <li>4. 73 Rybury Hillway</li> <li>5. 26 Fay Lane</li> <li>6. *133 Brookside Rd (new tank installed)</li> <li>7. 100 Wilson Lane</li> <li>8. 67 Ridgeway Ave</li> <li>9. 1129 Webster</li> <li>10. 28 Mercer Rd</li> <li>11. 276 Cedar St</li> <li>12. 23 Cheney St</li> </ol> </li> </ul>	Continue Current Program
Revised					

**3a. 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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
5-1	Policy for Post Construction Runoff	Town Engineer	- Develop town-wide policy for post-construction runoff control, a storm drain connection permit requirement - Develop and implement standard construction details and policies	<ul style="list-style-type: none"> <li>• Continued implementation of Board of Selectmen / NPDES Procedure, Standard Construction Specifications, Details and Policies</li> <li>• Memorandum Of Understanding (MOU) with EPA signed June 1996</li> </ul>	Continue Standard Construction Specifications and Details along with development of new Stormwater Management Procedures.
5-2	BMP Inspection and Maintenance	Town Engineer	- Inspect all Town maintained BMPs annually, - Document # of problems identified and remedied and changes in effluent	Continued Inspection of BMPs - DPW water quality swale - Water Quality Tanks installed at Broad Meadow, Pollard School, Newman School and Elliot Schools - Detention Basins at RTS and Bridle Trail, Rosemary Pool (Servicing Library Parking lot, and High School also). -Infiltration Basin on Heath St. development.	Continue to inspect and document issues
Revised					
Revised					

6-5	New Pipe and Structure Installations	DPW Director	- Replace 10 catch basins and 475' of drain pipe/yr.	Replaced 5 catch basins, repaired 42, repaired 4 drain M/Hs 4. Added 14 double CB grates and installed 3 leaching galleys. Replaced 30' of 12" PVC drain pipe. Installed 10' of 8" PVC pipe, and 60 of 12" ADS drain pipe.	Continue Current Program
6-6	Investigate Town Owned BMPs for Retrofit Opportunities	DPW Director	- Inspect 7 structural BMPs annually Implement two retrofit projects by year five	Inspected April 2, 2015	Continue to meet requirements
6-7	Integrated Pest Management	DPW Director	Continue established program in the future	Continue established program with Norfolk Mosquito Control. As submitted in year 2 report.	Continue established program in the future

**6a. Additions**


- Dog Waste Neighborhood Information Letters (BMP 1-5)
- Stencil Storm drains (BMP 2-2)
- Pet Waste Bylaw (BMP 2-5)
- Outfall Testing Program (BMP 3-1)
- Predictive Catch basin Program (BMP 6-1)
- Street cleaning (BMP 6-2)
- Pipe inspections (BMP 6-3)
- Pipe cleaning (BMP 6-4)

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

*Samples of the debris were analyzed and found that sediment concentrations did not exceed the Unlined Landfill Limits pursuant to MassDEP Policy # COMM-97-001 Reuse and Disposal of Contaminated Soil at Massachusetts Landfills. The Catch basin material was hauled to Crapo Hill Landfill in New Bedford, Massachusetts.*

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

**Programmatic**

Stormwater management position created/staffed		(y/n)	Yes
Annual program budget/expenditures	Purchase of Services =	\$	\$65,000
	Expenses =		\$61,545
	Salaries =		\$336,885

**Education, Involvement, and Training**

Estimated number of residents reached by education program(s) via Town web site...		(# or %)	50%
Stormwater management committee established		(y/n)	Yes
Stream teams established or supported		(# or y/n)	N/A
Shoreline clean-up participation or quantity of shoreline miles cleaned		(y/n or mi.)	N/A

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	295
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	N/A
▪ CADD	(%)	100%
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	Information available from Engineering Dept.
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	94%
% of population on septic systems	(%)	6%

### Construction

Number of construction starts (>1-acre)/ This section includes 16 site plans from the Planning Board and 3 Municipal Construction Projects that require sedimentation control measures. All plans are reviewed by the Engineering Division. Inspections are performed by DPW Inspectors	(#)	19
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public	(#)	0

### Post-Development Stormwater Management

Vacuum street sweepers specified in contracts <i>(The Town owns one vacuum and one mechanical street sweepers)</i>	(y/n)	No
<i>(The Town contracts out the services of two additional mechanical sweeper/ year for the bi-annual sweeping program)</i>		

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers 45,870 lbs used this last year, a 4.2 % percent increase from previous year 43,860 figure	(lbs. or %)	45,870 lbs
▪ Herbicides	(lbs. or %)	0.5 gallons
▪ Pesticides	(lbs. or %)	20 lbs

Anti-/De-Icing products and ratios <i>(These products are temperature driven. Note that the volume of product usage is up from the previous year due to the increase in storms from the 2012-13 winter season)</i>	% NaCl	4,720 tons
	% CaCl <sub>2</sub>	
Meltdown 30	% MgCl <sub>2</sub>	29,780 gallons
Ice Ban	% CMA	
	% Kac	
	% KCl	
	% Sand	425 tons
Pre-wetting techniques utilized	(y/n)	yes
Manual control spreaders used	(y/n)	yes
Automatic or Zero-velocity spreaders used	(y/n)	yes
Estimated net reduction in typical year salt application	(lbs. or %)	0 % reduction
Salt pile(s) covered in storage shed(s)	(y/n)	yes
Storage shed(s) in design or under construction	(y/n)	yes