

**Municipality/Organization:** Town of Bedford, Massachusetts

**EPA NPDES Permit Number:** MAR 041028

**MassDEP Transmittal Number:** W-X233180

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

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

**Part I. General Information**

**Contact Person:** Adrienne St. John **Title:** Public Works Engineer

**Telephone #:** (781) 275-7605 **Email:** astjohn@bedfordma.gov

**Mailing Address:** 314 Great Road Bedford, MA 01730

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 Reed

**Title:** Town Manager

**Date:** April 29, 2011

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

The Town of Bedford is aware of the new Endangered and Threatened Species list, but has not determined that any Town activities or discharges have had a negative impact on the species. The Department of Public Works and Trails Committee filed two projects with the Bedford Conservation Commission and the Natural Heritage Endangered Species Program. Both filings received approval.

The Town continues to collect field information to document vernal pools, especially those near outlets from roadways or parking lots. No new vernal pools were certified in Year 8.

To date, the Town's streams appear to be clearer of sediment as noted in visual inspections at Great Road, Bridge Street, Burlington Road and along bike path stream crossings. Wetland areas are being protected. The Bedford Conservation Commission recaptured the 25-foot buffer in 5 major development projects, where this buffer had either been paved or disturbed.

**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 Revised	Residential Flyer	DPW/SuAsCo	Distribute to 75% of homes	Handed out SuAsCo post cards at Bedford Day. These address pet waste, lawn maintenance and prohibiting catch basin disposal of household/lawn waste.	Continue to have stormwater information available at local events.
1-2 Revised	Education Program	DPW/SuAsCo	Teach in 5 <sup>th</sup> grade	Bedford High School participated in Assabet River Environmental Innovators Contest which educated students about water quality and stormwater issues in the SuAsCo watersheds.	Continue as directed by new NPDES permit
1-3 Revised	Develop web site	DPW	Have in place by 7/05	Website is continually changing to offer information and links to stormwater sites.	Continue to add pertinent information, Town projects, EPA links, helpful tips
1-4 Revised	Stormwater flyer to businesses	DPW/SuAsCo	Distribute to 50%	No specific work targets to businesses in Year 8	Continue as directed by new NPDES permit
1-5	Stormwater video	DPW	Show video on local cable station.	Shown extensively in years 6 & 7. Goal met.	Research for new video

**1a. Additions**

1a-6	Pet Waste Dispensers	DPW	Distribute to 75% of local dog owners	Handed out 150 canisters and 200 refill packs of pet waste bags on Bedford Day.	Continue popular program
1a-7	Public Education	DPW		Increase public awareness for proper pet waste disposal practices.	Continue to distribute pet waste postcards from SuAsCo at public events.

## 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 Revised	Stormwater Display	DPW/SuAsCo	3 mos. at library, Town Hall, Schools		Continue to mark catch basins and deliver door hangers to explain benefits of keeping stormwater clean.
2-2 Revised	Local Stormwater Committee	Selectmen, DPW Cons Com. Planning	Form committee by 12/04	Town staff and committee members attended several stormwater seminars, sponsored by SuAsCo, consulting firms, watershed associations and manufactures representatives. Assisted local Scout troops with annual clean up day in spring and site specific clean up projects with Eagle Scouts.	New Planning Director to start in July. Plan to work collaboratively on review of existing bylaws to allow for more LID practices as part of the upcoming permit.
2-3 Revised	Stormwater meetings	DPW/SW Committee	Meet 3x/year	Met regularly with Cons. Comm. Administrator, commissioners to address stormwater violations or complaints. Included Code Enforcement as needed.	
Revised					
Revised					

## 2a. Additions

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### 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
3-2 Revised	Map SW outlets	DPW	75% capture rate	Continued to map outlets (77 GPS'd in year 8). Constantly digitizing As-Built drawings to incorporate information on private properties.	Continue to GPS outlets and note condition of pipe and if any dry weather flow.
3-3 Revised	Identify critical resources	DPW, Cons Comm	Map, notify abutters, develop BMP	Constructed 1 Rain Garden using previous design to eliminate direct untreated discharge to Concord River basin.	Construct more rain gardens.
3-4 Revised	Perform water quality testing	DPW	3 sites-residential, municipal, commercial	No testing in year 8	Follow requirements from new NPDES Permit for both dry and wet weather sampling.
3-5 Revised	Local bylaw-illicit discharges	DPW/Selectmen, Planning		Draft bylaw written. Adopted new sewer use bylaw at Town Meeting which will allow DPW to enter private homes to check for illegal connections.	Continue as directed by new NPDES permit and consider addition of a hotline for reporting by the public.
Revised					
Revised					

### 3a. Additions

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#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-1 Revised	Develop awareness of construction site issues	DPW, Code, Cons Comm.	Write guidelines, distribute to builders	Continue to require Erosion and Sedimentation controls in place for site work. Required stone entrances for construction sites, infiltration of roof runoff on all new buildings. Use hydro excavations for DPW projects. Provide “Does your Construction Site Need a Stormwater Permit?” to contractors requesting other permits from DPW.	Monitor EPA’s website to track NPDES CGP status for any new construction sites disturbing greater than one acre. Confirm implementation of SWPPP’s at any construction inspections. Continue as directed by new NPDES permit
4-2 Revised	Control construction site waste	DPW, Code, Cons Comm.	Reduce litter, erosion, dust, sediment	Require weekly trench paving on utility and road projects to maintain cleaner job sites and reduce erosion. Perform routing inspections of road, utility, site and subdivision projects.	Continue as directed by new NPDES permit
4-3 Revised	ESC plans for disturbances > 5,000 s.f.	Code, DPW, Cons Comm.	Draft bylaw by 7/07	Tree protection and silt sacks now required on all Town projects, even if no wetlands on site.	Continue this practice.
Revised					
Revised					

#### 4a. Additions

4a-4	Employee Training	DPW		Educate foreman for highway, water and sewer on inspection of construction sites and to report any stormwater runoff issues that are encountered.	
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### 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 Revised	Develop by/law to address stormwater impacts	Selectmen, Planning, DPW, Cons. SW Comm.	In place by 12/05	Working with consultant to publish “Low Impact Development BMP Handbook” to give to developers as a way to direct design engineers to stormwater treatment systems that are concise, achievable and approved by Town.	Incorporate provisions for compliance with Massachusetts Stormwater Standards #3 through 7.
5-2 Revised	Promote infiltration	Planning, DPW, Code, Cons Comm.	No increase in flood levels or locations	Still require infiltration of roof runoff on new structures or major building additions. Recommend rain gardens and bioretention during plan reviews.	Continue
5-3 Revised	Expand grass plots, reduce pavement widths	DPW, Planning	Improve infiltration	Still require LID techniques during plan review. Allow reduced pavement width on some smaller housing projects, or reinforced turf for emergency access roads.	Continue
5-4 Revised	Research rain barrels	DPW	Distribute to 10 households for pilot program	Goal met in year 7	May continue in future years.

### 5a. Additions

5a-5	Keep current with regulations	Cons. Comm. Planning board, DPW		Continued to attend workshops, seminars, trade shows to understand and follow DEP regulations.	Continue
5a-6	Organize local stormwater permits	Cons. Comm., DPW		Maintaining data base of stormwater management plans for Cons. Comm. to track maintenance and reporting.	Add new filings as permitted.
5a-7	Repair failing catch basins	DPW		Rebuilt 150 catch basins that were collapsing. Decreases amount of sediment in drainage system.	Continue as funding is available

## 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 Revised	Street sweeping, CB cleaning	DPW	2x per year in critical areas	Continued with program. Swept all roadways at least once, Great Road, industrial and municipal properties swept monthly except for winter months. Used vacuum truck to clean stormwater treatment units and critical catch basins. Reduced amount of winter sand. Removed debris from ditches along Gray Terrace, Notre Dame Road, Wiggins Ave, North Road	Continue as directed by new NPDES permit
6-2 Revised	Inspect older sewer mains	DPW, MWRA	TV 1 mile per year	Performed I/I repairs: cement line 680 v.f. of manholes, sealed 480 joints, lined 2,200 l.f. of sewer mains, grouted 60 leaking sewer laterals	Continue
6-3 Revised	Promote/use alternative fertilizers & pesticides	DPW, Cons Comm.	Reduce nitrogen loading	Increased organic fertilizers: 30 tons organic, 5 ton petroleum based. Reduced fertilizer phosphorus by 25% in year 8, will reduce to zero phosphorus during 2011.	continue
6-4 Revised	Develop spill prevention plan	DPW, Fire, DEP	Purchase spill control equipment	In place	Regularly check inventory
6-5 Revised	Site better snow dump	DPW	Locate site by 12/05	Used snow dump twice in year 8 to haul snow from center of town and intersections as needed. Swept area	Continue as needed

### 6a. Additions

6a-6	Provide yard waste disposal opportunities	DPW		Town landfill open on Saturdays from April thru November to bring yard waste to municipal compost site.	Remove pile(s) of yard waste and debris dumped in wetland.
6a-7	Provide Town Sewer	DPW	Install new sewer mains to reduce # of septic systems.	Provided sewer service to 10 additional homes.	Continue efforts until Town is 100% sewer.



**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
Revised					
Revised					
Revised					
Revised					
Revised					

**7a. Additions**

7a-2	Geese Management	DPW/Recreation		Use of dogs to control geese in areas of public water, including Shawsheen Wellfield and Springs Brook Park.	Efforts to control geese waste in waterways will continue during the year as needed.
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**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)	Y
Annual program budget/expenditures **	(\$)	\$10,000
Total program expenditures since beginning of permit coverage	(\$)	\$60,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

**Education, Involvement, and Training**

Estimated number of property owners reached by education program(s)	(# or %)	95%
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	250
Shoreline cleaned since beginning of permit coverage	(mi.)	2,500 ft
Household Hazardous Waste Collection Days <ul style="list-style-type: none"> <li>▪ days sponsored **</li> <li>▪ community participation **</li> <li>▪ material collected **</li> </ul>	(#)	8
School curricula implemented	(# or %)	15%
	(tons or gal)	450 gal
	(y/n)	Yes

**Legal/Regulatory**

In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Review	Adopted
<b>Regulatory Mechanism Status (indicate with "X")</b>				
		x	x	
	x			
	x			
<b>Accompanying Regulation Status (indicate with "X")</b>				
		x	x	
	x			
	x			

**Mapping and Illicit Discharges**

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls of the 733 outlets, 330 are Town owned as described by the Permit	(#)	733
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	10
▪ CADD	(%)	5
▪ GIS	(%)	85
Outfalls inspected/screened **	(# or %)	52
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	733
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	1
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	95%
% of population on septic systems	(%)	5%

### Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	4
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	85
Site inspections completed **	(# or %)	85
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	1

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	75%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	10
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

### 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 **	(#)	1710
Qty. of storm drain cleaned **	(%, LF or mi.)	400 lf
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	25 ton
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	compost

Basin Cleaning Costs			
• Annual budget/expenditure (labor & equipment)**	(\$)		\$17,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)		\$9.49/basin
• Disposal cost**	(\$)		0
Cleaning Equipment			
• Clam shell truck(s) owned/leased	(#)		0
• Vacuum truck(s) owned/leased	(#)		1
• Vacuum trucks specified in contracts	(y/n)		0
• % Structures cleaned with clam shells **	(%)		95
• % Structures cleaned with vacor **	(%)		5

	(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)	15
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	100
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	compost
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$10,000
• Hourly or lane mile contract rate **	(\$/hr. or in mi.)	\$83.50/hr
• Disposal cost**	(\$)	0
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0

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

▪ Fertilizers	(lbs. or %)	25%
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	25%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	Y

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl	85%
	% CaCl <sub>2</sub>	10%
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% MgCl <sub>2</sub>	
	% CMA	
	% Kac	
	% KCl	
	% Sand	5%
Pre-wetting techniques utilized **	(y/n or %)	Y
Manual control spreaders used **	(y/n or %)	Y
Zero-velocity spreaders used **	(y/n or %)	Y
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	+5%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	-5%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	N
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	1
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	1
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	N