

Municipality/Organization: Town of Bedford, NH

EPA NPDES Permit Number: NHR041036

MassDEP Transmittal Number: N/A

Annual Report Number Year 7  
& Reporting Period: April 1, 2009 – March 31, 2010

## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2010)

### Part I. General Information

Contact Person: James Stanford, P.E. Title: Director of Public Works

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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: James Stanford

Title: Director of Public Works

Date: 4-27-10

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

The Town of Bedford has completed the required self-Assessment and determined that the municipality has addressed each of the six minimum control standards and therefore is in substantial compliance with the permit conditions.

Our active participation with the storm-water group continues to be an important part of our program. This year the group has expanded to include additional communities as well as representatives from the Boston EPA office. We continue to share ideas and are working towards a collective public outreach program.

We will continue implementing existing BMP's for the coming year and will modify as necessary based on new permit requirements.

## 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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
1-1 Revised	Maintain storm water Info and links on Town of Bedford website	DPW/ J. Stanford	Review and update each year; add reference links to NHDES storm water site	Related links are under the Public Works portion of the web-page.	Update links as necessary.
1-2 Revised	Publish info on storm-water program and practices in local newspapers	DPW/ J. Stanford	Publish articles each year in town bulletin and local newspapers	Quarterly Newsletter has again discontinued service in town and therefore we were unable to include articles in this format. Stormwater section included in Master Plan Update.	Will include related articles in other local newspapers. Also anticipate work on multi-community information campaign.
1-3 Revised	Broadcast Public meetings (see BMP 2-2)	DPW/ J. Stanford	1 meeting per year Master Plan update with new stormwater section.	The group meets every 2 months to share information, but these meetings have not been broadcasted. In addition to the group meetings, the new master plan section on stormwater was open for discussion at several public meetings.	Continue discussions during Planning Board meetings: Include BMP 1-4
1-4 Revised					

#### 1a. Additions

1-4	Annual Town Fair (Springfest) – display maintenance equipment and handout stormwater related materials	DPW/ J. Stanford	1 time each year in late spring	Equipment was on display and publications and handouts were available for distribution.	Continue with display – distribute materials.
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## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
2-1 Revised	Conduct public meetings on storm water program and solicit public feedback	DPW/ J. Stanford	Conduct 4 meetings over the 5-year permit term Conduct 2 meetings between year 4 and 5	Stormwater section was included in the master plan update and broadcasted meetings.	The Master Plan will be finalized in 2010 with final presentation to both the Planning Board and Town Council. Meetings will be broadcasted through BCTV.
2-2 Revised	Establish a storm water management group to oversee the storm water management program	DPW/ J. Stanford	Establish group of volunteers during the first 2 years – include residents on group Residents have not been included in the group as of yet	The Stormwater group has been established with several other communities in Southern NH. We met approx. once every two months to discuss storm water issues and share ideas on the program.	Continue active participation with group.
Revised					

### 2a. Additions

2-3	Purchase hybrid vehicles	DPW/ J. Stanford	Replace old gas vehicles with new electric hybrids	Maintained hybrid vehicles.	Continue maintenance of vehicles.
2-4	Help with local groups in trash pick-up program	DPW/P. Belanger	Provide bags and pickup of trash for town clean-up days	Provided bags and trash pick-up with community groups. Also provided town-wide roadside clean-up with contracted staff. Also included a week of roadside pickup using labor from local prison.	Continue participation with local groups.
2-5	Implement Single Stream Recycling at Transfer Station	DPW/ J. Stanford	Reduce municipal solid waste.	Continued operation of single-stream recycling.	Continue with program.

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7	Planned Activities – Permit Year 8
3-1 Revised	Map storm water drainage system and outfalls	DPW/ J. Stanford	Complete mapping by end of 5 year permit term	Outfalls mapped in previous years. Continued review of outfalls and drainage system for GIS conversion. Purchased additional GPS equipment.	Continue with GIS conversion as part of the next permit.
3-2 Revised	Maintain map database on GIS system	DPW/ J. Stanford	Complete with system mapping (BMP 3-1)	GIS system in place. Additional system data collection was completed this past year for full GIS conversion.	Maintenance will be ongoing as data is received.
3-3 Revised	Visually inspect outfalls for dry weather flows	DPW/P. Belanger	Inspect a representative number of outfalls each year. Complete inspection of all outfalls by the end of 5 year permit term.	DPW continued to inspect outfalls this past year. To date only 1 illicit connection has been detected and eliminated.	Continue updating inventory as new developments come in and perform inspections.
3-4 Revised	Implement a sampling and analysis program for dry weather flows	DPW/ J. Stanford	Sample any outfalls identified with dry weather flows under BMP 3-3 above. Complete sampling at identified outfalls as budget permits.	No sampling was done during permit year 7.	Monitor outfalls and test any flows that are detected.
3-5 Revised	Train DPW personnel to recognize illicit discharge	DPW/P. Belanger	Annual training to include information on recognizing and reducing illicit discharges Training began in summer 2004	Conducted training sessions for Public Works employees through the UNH T2 program.	Continue training with additional storm water topics.
3-6 Revised	Review and update Town bylaws and regulations to include illicit discharge ordinance	DPW/ J. Stanford	Years 1 and 2 – review existing ordinances Conduct numerous discussions with Planning Board	Existing regulations are already in place. Review of projects includes stormwater maintenance and incorporation of BMPs. Projects are required to annually report stormwater maintenance activities to Town/PW	Continue with comprehensive review process. Additional discussion as part of Master Plan Update.

### 3a. Additions - Illicit Discharge Detection and Elimination

3-7	GIS mapping of drainage system for new permit	DPW/ J. Stanford	GPS locate and map remaining drainage system as expected in the new permit.	Budgeted and purchased sub-meter GPS unit and software system for entire town system	Begin collecting data on catch basins and drain manholes.
Revised					

### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
4-1	Storm water impact and design review process	Planning Board/R. Sawyer	Continue current new-construction review process involving all appropriate departments	Reviewed new subdivision and site plans for storm water impact. Requested major and minor design changes to control development storm water discharge.	Continue design review process
Revised					
4-2	Visually inspect construction sites for proper erosion control measures	Planning Board/R. Sawyer	Continue to inspect sites, record inspections and track violations	Inspected construction sites. Submitted information to owners and contractors about design storm water control measures. Very little development this past year and no major deficiencies found.	Continue with inspection process
Revised					
4-3	Construction Site Runoff Control	Planning Board/J. Stanford	Review existing regulations to require sediment and erosion control measures on construction sites	Existing regulations are in place. Developments were not allowed to proceed with construction until control measures were satisfactorily in place.	Continue with updating regulations/policies as needed.
Revised					

### 4a. Additions - None

**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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
5-1 Revised	Conduct storm water impact and design review process (in conjunction with BMP 4-1)	Planning Board/R. Sawyer	Continue current review process involving all appropriate departments	Continued design review meetings with Town Personnel approx. every two weeks.	Continue review process
5-2 Revised	Review and update Town bylaws and regulations regarding post construction storm water management provisions	Planning Board/R. Sawyer	Years 1 and 2 – review existing ordinances  Continue review and discussions with stormwater group	Sample ordinances have been proposed in stormwater group communities. Group reviewed proposed regulations and continued to comment on proposed changes.	Continue with regulation /policy update implementation as needed.
Revised					
Revised					
Revised					

**5a. Additions - None**

## 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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
6-1 Revised	Street Sweeping	DPW/P. Belanger	Continue to sweep selected streets annually and increase frequency of sweeping as budget allows. Maintain volume records of material collected.	Swept approximately 25% of Town owned streets. Warm weather enabled early start of sweeping at end of permit year. Additional sweeping is expected for year 8.	Continue with program.
6-2 Revised	Catch Basin cleaning	DPW/P. Belanger	Continue to clean catch basins annually and as needed in areas of high flooding. Maintain volume records of material cleaned from catch basins and swales.	Performed catch basin cleaning on town-owned catch basins in the commercial districts. Also performed street swale maintenance and cleaning.	Continue with program and expand as necessary.
6-3 Revised	Collect household hazardous waste	DPW/S. Crean	Continue hazardous waste collection days at the transfer station Funding will only allow conducting 1 special collection day this year	Conducted 1 hazardous Waste collection day (May 9, 2009) at the Town Transfer Station.	Conduct 1 household hazardous waste collection day – Scheduled for May 22, 2010
6-4 Revised	Collect yard waste	DPW/S. Crean	Continue yard waste drop off at transfer station	Yard waste drop off was in operation throughout the year.	Continue with drop off program.
6-5 Revised	Maintain the storm water management program	DPW/J. Stanford	Maintain written program summary; update as necessary; submit reports annually in accordance with the permit	Tracked annual performance. Completed annual update in compliance with Permit.	Continue with tracking and compliance.
6-6 Revised	Implement Storm Water Pollution Prevention Plan for DPW garage and transfer station	DPW/J. Stanford	Maintain plan at each facility Inspected each site for any deficiencies.	Minor short-time site improvements continue to be made at the transfer station site. Single stream recycling continued to operate. Continue to clean areas of debris to avoid trash, etc from uncontrolled runoff.	Continue with additional minor improvements.



6-7	Develop and implement training program for proper installation of erosion control barriers	DPW/J. Stanford	Review existing procedures  Expand training topics to include all areas of roadway maintenance.	Conducted training sessions for Public Works employees through the UNH T2 program.	Include training materials with our program outlined in BMP 3-5
Revised					

**6a. Additions**

6-8	Constructed new shed for storage of road salt	DPW/ J. Stanford	Reduce amount of salt that is washed off-site.  Continue to maintain salt shed	Salt shed was in full operation. Winter loading of salt was done under cover of the new shed.	Continue with operation as discussed.
Revised					

**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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
7-1	Monitor and sample discharges to impaired water ways	DPW/ J. Stanford	Monitor discharges and collect samples of discharges to impaired waters as budget allows	We have not identified any direct discharges into the 3 impaired water ways. But continue to monitor roadside swales.	Continue monitoring of swales near impaired waters and expand the program as necessary.
Revised			Monitor indirect discharges.		
Revised					
Revised					

**7a. Additions - None**

**7b. WLA Assessment**

Mapping did not identify any direct discharges into the 3 impaired waterways, however there were a few indirect overflow structures that ultimately flow into Riddle Brook. We continue to monitor these areas.

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

Additional mapping was done in permit year 7. The program continues to benefit by our participation in the storm water group created with other southern New Hampshire communities. Although the permit covers individual municipalities, the group continues to approach stormwater from a regional perspective. In anticipation of the new permit and expected requirement to expand mapping of entire drainage system, we purchased a sub-meter GPS and related software system. System structures are already mapped within the GIS system - this new equipment will allow for locating pipe inverts.

**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, 2010)

**Programmatic**

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	no
Annual program budget/expenditures **	(\$)	\$5,000
Total program expenditures since beginning of permit coverage (not including system re-construction)	(\$)	\$50,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General fund & Bond funds

**Education, Involvement, and Training**

Estimated number of property owners reached by education program(s)	(# or %)	30%
Stormwater management committee established	(y/n)	no
Stream teams established or supported	(# or y/n)	no
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	no
Shoreline cleaned since beginning of permit coverage	(mi.)	unknown
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> <li>▪ days sponsored **</li> <li>▪ community participation **</li> <li>▪ material collected **</li> </ul>	(#) (# or %) (tons or gal) (y/n)	1 day 2% 950 gal no
School curricula implemented		

**Legal/Regulatory**

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
<ul style="list-style-type: none"> <li>▪ Illicit Discharge Detection &amp; Elimination</li> </ul>	X				

▪ Erosion & Sediment Control	X			
▪ Post-Development Stormwater Management		X		
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination		X		
▪ Erosion & Sediment Control	X			
▪ Post-Development Stormwater Management		X		

### Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	367
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	65%
Mapping method(s)		
▪ Paper/Mylar	(%)	10%
▪ CADD	(%)	10%
▪ GIS	(%)	80%
Outfalls inspected/screened **	(# or %)	20%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
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)	1
% of population on sewer	(%)	15%
% of population on septic systems	(%)	85%

### Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	1
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	1
Site inspections completed **	(# or %)	100%

Tickets/Stop work orders issued **	(# or %)	1
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	0

**Post-Development Stormwater Management**

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	unknown
Site inspections (for proper BMP installation & operation) completed **	(# or %)	unknown
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	yes
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)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	250
Qty. of storm drain cleaned **	(%, LF or mi.)	480 LF
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	147 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	recycle

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$15,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	Per day
• Disposal cost** - RECYCLE	(\$)	Unknown
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	yes
• % Structures cleaned with clam shells **	(%)	0
• % Structures cleaned with vector **	(%)	250

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1/year
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	5/year
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	50 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	recycle
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$20,000/yr
• Hourly or lane mile contract rate **	(\$/hr. or In mi.)	In-house
• Disposal cost**	(\$)	unknown
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % Roads swept with rotary brush sweepers **	%	30%
• % 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 %)	unknown
▪ Herbicides	(lbs. or %)	unknown
▪ Pesticides	(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented	(y/n)	no

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl	50%
	% CaCl <sub>2</sub>	0%
	% MgCl <sub>2</sub>	0%
	% CMA	0%
	% Kac	0%
	% KCl	0%
	% Sand	50%
Pre-wetting techniques utilized **	(y/n or %)	no
Manual control spreaders used **	(y/n or %)	yes
Zero-velocity spreaders used **	(y/n or %)	no
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/in mi. or %)	unknown
Estimated net reduction or increase in typical year sand application rate **	(±lbs/in mi. or %)	unknown
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	no
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	no
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	no
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	no