

Municipality/Organization: Town of Bedford, NH
EPA NPDES Permit Number: NHR041036
MassDEP Transmittal Number: N/A
Annual Report Number Year 8
& Reporting Period: April 1, 2010 – March 31, 2011


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

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: Russell R. Marcoux
Title: Town Manager
Date: 4-22-11

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. We continue to share ideas and are working towards a collective public outreach program.

Public Outreach continues to be an important aspect of the program as well. This past year in addition to displays at Town Fair, we are currently participating in a Town-wide scavenger hunt as part of Earth Day education. There are a number of stations throughout the Town focusing on the environment including a station set-up at the Recycling shed.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
1-1	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.
	Revised				
1-2	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 discontinued service in town and therefore we were unable to include articles in this format.	Work on multi-community information campaign.
	Revised				
1-3	Broadcast Public meetings (see BMP 2-2)	DPW/ J. Stanford	1 meeting per year Master Plan update with new stormwater information.	The group meets every 2 months to share information, but these meetings have not been broadcasted. Masterplan committee had a few Public Hearings and was accepted by Town Council.	Continue discussions during Planning Board meetings: Include BMP 1-5
	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.
1-5	Earth Day Scavenger Hunt	DPW/ J. Stanford Bedford Middle School	2 week period in late spring	Various Stations throughout town including the recycling shed at the transfer station.	Participate in the activity each year. Expand the display to include additional literature.

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 – Permit Year 9
2-1	Conduct public meetings on storm water program and solicit public feedback	DPW/ J. Stanford	Conduct 4 meetings over the 5-year permit term	Stormwater information was included in the master plan update and meetings broadcasted through BCTV.	Solicit public input for Town-wide drainage system upgrade project.
	Revised		Conduct 2 meetings between year 4 and 5		
2-2	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 including 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.
2-6	Scavenger Hunt	DPW/ J. Stanford	Educate School Children on importance of recycling.	Educational campaign for Earth Day including recycling.	Continue with program and expand participation.

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 – Permit Year 9
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. Training and set-up of 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. Funding approved 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 8.	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 through T2 and EPA online training	Conducted IDEE web broadcast training sessions for Public Works employees.	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.

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.	Funding approved for entire drainage system GIS and management system	Continue collecting data on catch basins and drain manholes.
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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 – Permit Year 9
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. More activity this year with development. Planning staff along with contracted inspectors were very aggressive in ensuring compliance.	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. Contracted inspectors monitored sites for routine maintenance of erosion control.	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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
5-1	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
Revised					
5-2	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					
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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
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. Additional sweeping is expected for year 9.	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 Continue yard waste drop off at transfer station	Conducted 1 hazardous Waste collection day (May 22, 2010) at the Town Transfer Station.	Conduct 1 household hazardous waste collection day – Scheduled for June, 2011
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.	Single stream recycling in operation. Continue to clean areas of debris to avoid trash, etc from uncontrolled runoff.	Continue with keeping site clean.

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. This year's training included salt reduction through use of improved application equipment.	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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
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 Monitor indirect discharges.	We have not identified any direct discharges into the 3 impaired water ways. But continue to monitor roadside swales. Town approved funding for drainage improvements near impaired waters.	Continue monitoring of swales near impaired waters and expand the program as necessary.
Revised					
Revised					

7a. Additions - None

7b. WLA Assessment

We have not identified any direct discharges into the 3 impaired waterways, however there were a few indirect overflow structures that ultimately flow into Riddle Brook. Additional bond funds were approved this year for two drainage/road projects in adjacent areas to impaired waters. These funds will be used in conjunction with the new permit requirements.

Part IV. Summary of Information Collected and Analyzed

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 in early 2010. System structures are already mapped within the GIS system - this new equipment will allow for locating pipe inverts. The Town appropriated additional funds this year for full computer mapping and computer based management system.

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)	no
Annual program budget/expenditures **	(\$)	\$5,000
Total program expenditures since beginning of permit coverage (not including system re-construction)	(\$)	\$40,000
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		
▪ days sponsored **	(#)	1 day
▪ community participation **	(# or %)	3.5%
▪ material collected **	(tons or gal)	2,140 gal
School curricula implemented	(y/n)	y
Middle School conducted town-wide scavenger hunt including transfer station		

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	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) **	(#)	4
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	4
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 **	(#)	227
Qty. of storm drain cleaned **	(%, LF or mi.)	1,188 LF
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	250 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)	\$120/hr
• Disposal cost** - RECYCLE	(\$)	0
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	yes
• % Structures cleaned with clam shells **	(%)	1
• % Structures cleaned with vactor **	(%)	99

(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)	4/year
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	396 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

Average Ratio of Anti-/De-Icing products used **		(Preferred Units)	Response
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl		50%
	% CaCl ₂		0%
	% MgCl ₂		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 %)		140 lbs.
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
<ul style="list-style-type: none"> • Treatment units induce infiltration within 500-feet of a wellhead protection area 	# or y/n	no