

Municipality/Organization: Town of Bedford, NH
EPA NPDES Permit Number: NHR041036
Mass DEP Transmittal Number: N/A
Annual Report Number & Reporting Period: Year 13
April 1, 2015 – March 31, 2016

**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2016)**

Part I. General Information

Contact Person: James Stanford, P.E. **Title:** Director of Public Works
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Mailing Address: 24 North Amherst Road Bedford, NH 03110

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 Sawyer
Title: Town Manager
Date: 4/29/2016

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.

The Town has a full time employee overseeing our stormwater program. 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 and tours to scout troops at our recycling facility, the Town continued our active participation in the McQuesten Brook Stream Team – the team’s annual brook clean-up was held on June 1, 2015 it was a rainy day, but there was still a good turnout. Also as part of our participation in the Stream Team, we were awarded a grant for a major drainage improvement project including installation of single span bridge and removal of a house to accommodate bank restoration and returning the property to natural state. All of which is part of the McQuesten Brook stream restoration project.

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-1	Maintain storm water Info and links on Town of Bedford website	DPW// M. McLaughlin	Review and update each year; add reference links to NHDES storm water site	Additional Related links under the Public Works portion of the Town web-page have been added. The Town is in the process of implementing a new Website. Once completed additional stormwater sites will be added.	Update links as necessary.
Revised					
1-2	Publish info on storm-water program and practices in local newspapers	DPW// M. McLaughlin	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// M. McLaughlin	1 meeting per year	The group meets every 2 months to share information, but these meetings have not been broadcasted.	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// M. McLaughlin	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// M. McLaughlin Bedford Middle School	Scavenger Hunt began in permit year 8 and continued into permit year 9 for 2 weeks.	Scavenger Hunt did not occur in permit Year 13, but expect to resume next year.	Participate in the activity each year. Expand the display to include additional literature.
1-6	McQuesten Brook Watershed Brook Clean-up – Website and postings	DPW/ M. McLaughlin	Team has a Public Kiosk and outreach advertisements.	Team has a Public Kiosk and outreach advertising for the June 1, 2015 clean-up.	Maintenance of site Kiosk board and continue with public participation in the brook clean-up.

1-7	Youth Group Presentations- Recycling Topics	DPW/M. McLaughlin	Conduct 1 outreach Presentation per year	Conducted site visit and presentation on Recycling to local Girl Scout group on Importance of recycling.	Continue to offer presentation to Youth groups.
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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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
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 and NPDES permit update was discussed at Town Council meeting broadcasted through BCTV.	Continue to solicit public input for Town-wide drainage system upgrades.
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	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			Residents have not been included in the group as of yet.		

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/E. Lacerte	Provide bags and pickup of trash for town clean-up days	Provided bags and trash pick-up with community groups. Also provided Merrimack River – Heritage Trail pickup with town staff.	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	Destination Imagination project participation – recycling.	DPW/ M. McLaughlin	Educate School Children/Town on importance of recycling.	Review educational campaign including new solar signage at Transfer Station.	Complete recycling sign/campaign at Transfer Station

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
3-1	Map storm water drainage system and outfalls	DPW/ M. McLaughlin	Complete mapping by end of 5 year permit term	Outfalls mapped in previous years. Continued review of outfalls. Conversion of paper outfall data to GIS completed and is expanding to include entire drainage system.	Continue with GIS conversion as part of the next permit.
Revised					
3-2	Maintain map database on GIS system	DPW/ M. McLaughlin	Complete with system mapping (BMP 3-1)	GIS system in place.	Maintenance will be ongoing as data is received.
Revised					
3-3	Visually inspect outfalls for dry weather flows	DPW/E. Lacerte	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. In permit year, an illicit connection to the drain system was detected and eliminated. The connection was an overflow/dry connection from a private septic system.	Continue updating inventory as new developments come in and perform inspections.
Revised					
3-4	Implement a sampling and analysis program for dry weather flows	DPW/ M. McLaughlin	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 13.	Monitor outfalls and test any flows that are detected.
Revised					
3-5	Train DPW personnel to recognize illicit discharge	DPW/E. Lacerte	Annual training to include information on recognizing and reducing illicit discharges	Public Works did not attend any training seminars specific to stormwater in 2015. Other seminars on road maintenance were attended.	Continue training with additional storm water topics.
Revised			Training through T2		
3-6	Review and update Town bylaws and regulations to include illicit discharge ordinances	DPW/ J. Stanford	Years 1 and 2 – review existing ordinances	Existing policies are already in place. Review of projects includes stormwater maintenance and incorporation of BMPs.	Continue with comprehensive review process.
Revised			Conduct numerous discussions with Planning Board		

3a. Additions - Illicit Discharge Detection and Elimination

3-7	GIS mapping of drainage system for new permit	DPW/ M. McLaughlin	GPS locate and map remaining drainage system as expected in the new permit.	Funding approved in 2011 for entire drainage system GIS and management system – work continued on GIS conversion of data.	Continue collecting data on catch basins and drain manholes. Preparing RFP For distribution in summer 2016?
3-8	Participate with McQuesten Brook Watershed - Canine Sniffing Services to investigate watershed	DPW/ M. McLaughlin	Incorporate these services into IDDE program.	Scheduling of canine services not available in 2016.	Participate in program. Reschedule program 2016
3-9	Hire new in-house engineering technician for Town's Stormwater program including IDDE	DPW/ J. Stanford	In-house technician for Stormwater program.	Full Time position funded and filled for the Stormwater program.	Continue funding engineering technician position.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
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. 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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
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	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			Continue review and discussions with stormwater group		
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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
6-1 Revised	Street Sweeping	DPW/E. Lacerte	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. Maintained the new Regenerative Air sweeper purchased July 2014. Additional sweeping is expected for year 2016.	Continue with program.
6-2 Revised	Catch Basin cleaning	DPW/E. Lacerte	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/J. Spooner	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 30, 2015) at the Town Garage.	Conduct 1 household hazardous waste collection day – Scheduled for May 7, 2016
6-4 Revised	Collect yard waste	DPW/J. Spooner	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/ M. McLaughlin	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/ M. McLaughlin	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 sites clean. Make any necessary changes.
6-7	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. Purchased 2 new zero-velocity spreaders.	Continue with operation as discussed. Purchase 1 additional zero velocity spreader.

Revised
6a. Additions - None

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
7-1	Monitor and sample discharges to impaired water ways	DPW/ M. McLaughlin	Monitor discharges and collect samples of discharges to impaired waters as budget allows	We have not identified any direct discharges into the 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					

7a. Additions

7-2	Member of McQuesten Brook Stream Team. Grant awarded to study brook.	DPW/ M. McLaughlin	Study Brook restoration. Apply for grant to make improvements.	Attended continuing meetings with stakeholders. Various agencies participating in the project.	Plan on attending brook clean-up scheduled for June 2016
Revised				McQuesten Brook Geomorphic Assessment and Watershed Restoration Plan Implementation – bridge installation and house removal.	Continue assisting with this project.

7b. WLA Assessment

We continue to fund an in-house engineering technician for the stormwater program. During this past year we reviewed available data for the upcoming revised stormwater permit.

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, work continued on full computer mapping and computer based management system (outfalls have already been converted to GIS) as well as digital conversion of old street plans. Town representatives are continuing to participate in the McQuesten Brook stream team and implement the McQuesten Brook Geomorphic Assessment and Watershed Restoration Plan.

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, 2015 through March 31, 2016)

Programmatic

		Response
Stormwater management position created/staffed	(y/n)	yes
Annual program budget/expenditures **	(Preferred \$) Units	5,000
Total program expenditures since beginning of permit coverage	(\$)	70,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		Bond and General Fund

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)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	No
Shoreline cleaned since beginning of permit coverage	(mi.)	0
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	20%
▪ material collected ** Various types of containers not easily converted into tons or gal	(tons or gal)	
School curricula implemented	(y/n)	No

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft 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

		Response
Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(Preferred Units)	367
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	70
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 **	(#)	1
Illicit discharges identified (Since beginning of permit coverage)	(#)	2
Illicit connections removed **	(#); and (est. gpd)	1
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	2
% of population on sewer	(%)	15
% of population on septic systems	(%)	85

Construction

		Response
Number of construction starts (>1-acre) **	(#)	20
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(Preferred Units) (%)	100
Site inspections completed **	(# or %)	20
Tickets/Stop work orders issued **	(# or %)	0
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 **	(#)	200
Qty. of storm drain cleaned **	(%, LF or mi.)	1,600 LF
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	64 yards
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Crush/recycle
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$33,500
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	120/Hr
• Disposal cost**	(\$)	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 **	(%)	100

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) **	(Preferred Units) (times/yr)	4
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	390 yds
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Recycle
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$20,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	In-house
• Disposal cost**	(\$)	unknown
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	0
• Vacuum street sweepers owned/leased	(#)	1
• Vacuum street sweepers specified in contracts	(y/n)	No
• % Roads swept with rotary brush sweepers **	%	0
• % Roads swept with vacuum sweepers **	%	30

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

Response

<p>Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)</p>	<p>(Preferred Units) % NaCl % CaCl₂ % MgCl₂ % CMA % Kac % KCl % Sand</p>	<p>50 0 0 0 0 0 50</p>
<p>Pre-wetting techniques utilized **</p>	<p>(y/n or %)</p>	<p>No</p>
<p>Manual control spreaders used **</p>	<p>(y/n or %)</p>	<p>Yes</p>
<p>Zero-velocity spreaders used **</p>	<p>(y/n or %)</p>	<p>Yes</p>
<p>Estimated net reduction or increase in typical year salt/chemical application rate</p>	<p>(±lbs/ln mi. or %)</p>	<p>Unknown</p>
<p>Estimated net reduction or increase in typical year sand application rate **</p>	<p>(±lbs/ln mi. or %)</p>	<p>Unknown</p>
<p>% of salt/chemical pile(s) covered in storage shed(s)</p>	<p>(%)</p>	<p>100</p>
<p>Storage shed(s) in design or under construction</p>	<p>(y/n or #)</p>	<p>No</p>
<p>100% of salt/chemical pile(s) covered in storage shed(s) by May 2008</p>	<p>(y/n)</p>	<p>Yes</p>
<p></p>	<p></p>	<p></p>
<p></p>	<p></p>	<p></p>