

Municipality/Organization: Town of Northbridge

EPA NPDES Permit Number: MAR041144

MaDEP Transmittal Number: W-040823

Annual Report Number
& Reporting Period: 01 April 2012 – 31 March 2013

NPDES PII Small MS4 General Permit Annual Report

PART I: GENERAL INFORMATION

Contact Person: James Shuris, P.E., MBA 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: Theodore D. Kozak

Title: Town Manager

Date: 23 April 2013

Part II. Self-Assessment

The following are highlights of the major accomplishments during the prior 12-month period:

Waste motor oil recycling: Since 2008, waste oil recycling continues to be conducted on a weekly basis (excluding January and February) by the Blackstone Valley Regional Recycling Center that is operated by the Town of Douglas on a regional basis. This facility is located behind the Northbridge Main Fire Station at 93 Main Street, Whitinsville, MA.

Winter road sand reduction: A very significant 2012 – 2013 winter season with a total snow/ice accumulation of 87-inches and twenty-four (24) events required larger quantities of road salt and sand to provide safe roads/sidewalks for over 81-miles of roads and 20-miles of sidewalks. A total of 700 tons of winter sand (and 2,870 tons of salt) was used during this season as compared to winter 2011 - 2012 whereas 50 tons of winter sand was used. Historically, 2,231 tons of sand was used during the 2002 – 2003 winter season; 1,046 tons during 2003 – 2004; 2,065 tons during 2004 – 2005; 1,432 tons during 2005 – 2006; and 100 tons during 2006 – 2007, and 361 tons of sand that was used during the winter of 2010 – 2011. Although very problematic, our goal remains to completely eliminate the use of winter sand. You will find that we used less winter sand during the very significant 2012 – 2013 winter season than compared to milder winter seasons mentioned above.

Public Education and Outreach: This element of the program has primarily made use of cable TV notices posted on the Town's local access channel. Notices have provided tips on lawn care including use of fertilizers and other lawn products, car washing, proper disposal of pets' wastes, proper disposal of motor oils and solvents, maintenance of storm drains and detention basins and similar environmentally responsible practices. These cable notices run continuously throughout the year and are seasonally adjusted for the time of year. In addition, the Town has partnered with the Blackstone River Watershed Association to post links to the association's educational information. The following publications are available:

A Homeowner's Guide to Protecting Water Quality in the Blackstone River Watershed

A Small Farm Owner's Guide to Protecting Water Quality in the Blackstone River Watershed

A Horse Owner's Guide to Protecting Water Quality in the Blackstone River Watershed

The Best Development Practices Guidebook

Household Hazardous Waste Collection Event: Due to a lack of funds this event was not performed during this time. Future plans will be based on available funds.

Public Involvement and Participation: The Town routinely assists in picking-up and disposing of trash and refuse left within the public ways throughout the Town.

Illicit Discharge Detection and Elimination: No reports were received and no evidence of illicit discharges was observed. Periodic checks along stretches of the Blackstone and Mumford Rivers revealed no signs of discharges.

Construction Site Storm Water Runoff Control: A number of active projects continue in the Town. Particular emphasis has been given to insure that the various projects are aggressively complying with the erosion control provisions of their project approvals. Frequent site visits are conducted by the Planning Department, DPW and Town consultants, particularly during and following storm events to insure that all erosion control and stormwater measures are in place. As problems are identified, appropriate project management personnel contact has been made with appropriate project management to relate deficiencies and seek corrections. The Planning Board utilizes outside consultants to perform periodic inspections and document compliance with requirements. We are requiring compliance with the "General Construction Permit" and require that developers submit a copy of their Notice of Intent required under the General Permit. Additionally, we are requiring them to submit an erosion control operations and maintenance plan prior to start of work on the project.

Post Construction Stormwater Management in New Development and Redevelopment: A local Stormwater Management By-Law, developed by the Northbridge Planning Board was adopted by the Town at the spring annual town meeting on May 6, 2008. This By-Law establishes a local Stormwater Authority. The Stormwater Authority finalized the implementation of regulations for the program. Additionally, the Planning Board approved Post-Construction Stormwater Management provisions and Stormwater Management Disturbance By-Laws at the 2011 Fall Town Meeting.

The Best Development Practices Guidebook has been completed and includes a set of guidelines for developers, designers and project reviewers intended to improve the quality of development. The Guidebook describes the required and preferred design & construction practices relating to stormwater management, erosion & sediment control, landscape design, and site planning

Pollution Prevention and Good Housekeeping in Municipal Operations: A feasibility study, conceptual design and environmental permitting effort have been completed for the redevelopment of the existing DPW Facility located at 11 Fletcher Street and all local environmental permits were favorably received to construct a 19,000sf DPW Facility with an estimated total project cost of \$7.8M. However, due to the cost of the project, the Town has decided not to move forward with this project. Therefore, the Town continues to provide routine "day-to-day" pollution prevention and good housekeeping operations measures.

General Comments and Observations: James Shuris, P.E., MBA was hired as the Director of Public Works in August 2011 and Robert Van Meter was hired as DPW Highway Superintendent in December 2011 due the retirements of the former staff, and they continue to concentrate on providing best management approaches to all stormwater related issues. Understanding that this program requires a significant level of Town-related efforts will continue to be a challenge given the current level of in-house resources. Therefore, we continue to promote intern-type college- and/or vocational- level project based participation with local universities and/or vocational schools. Local volunteers will also be solicited as necessary. This work will include inventory, observation and/or

recordkeeping of stormwater systems and the analysis of same. The Town of Northbridge is fully committed to meet the terms of the NPDES permit and implementing the Stormwater Management Plan.

Regional Stormwater Management Community Innovation Challenge (CIC) Grant: In a pro-active effort to expedite and expand our Stormwater Management Plan (and goals), the Town of Northbridge recently joined a coalition with thirty (30) Central Massachusetts towns and allocated sufficient funds to support a **Regional Stormwater Management Community Innovation Challenge (CIC) Grant** that was awarded through the CIC. Tasks included in this program will include: training; education; database development; mapping integration; development of sump pump discharge policies, stormwater prevention, salt/sand application decision tree, stormwater BMP toolbox, RFP for general consulting, and methodology to reach a common goal; professional engineering services; tablet computer devices (with accessories and service); water quality meters and mapping tools (i.e. utilizing the professional services of PeopleGIS and Tata & Howard).

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 10 (Reliance on non-municipal partners indicated, if any)
1-1 Revised	Business/industry contacts	DPW	Number of contacts	
1-2 Revised	Community Organizations	DPW	Number of contacts	Local watershed association has been active with river and stream cleanup efforts.
1-3 Revised	School contact	DPW	Number of student contacts	High school environmental group has been performing water testing and stream monitoring.
1-4 Revised	DELETED			
1-5	Household hazardous waste collection	DPW/Recycling Committee	Number of pounds collected	No funds available for this program. Will continue to seek funds for 2013 - 2014.

1a. Additions

1-6	Pollution Prevention Tips on Cable TV	DPW	Number of notices per year: Notices run continuously. Approximately 10 notices rotate.	DPW has posted pollution prevention tips on local cable channel. Various tips, seasonally appropriate are run on cable year round.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)
2-1 Revised	Volunteer stream cleanup	DPW/Conservation Commission	Number of participants	Middle school environmental performed river and pond clean-up in fall 2009
2-2 Revised	Volunteer stream monitoring	DPW/Conservation Commission	Number of volunteer hours partnership with BRWA	Cable TV solicitation for volunteers have been run without response. No direct organizational contact made to date
2-3 Revised	Stormwater video	DPW/Conservation/ Cable TV	Complete Jan 2005	The video "After the Storm" has been shown on local cable television several times.
Revised				

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)
3-1 Revised	Storm sewer map	DPW	Completion by Dec 03	Participated in the states MassGIS buy-up program for 2009 aerial of Northbridge –in preparation certain drainage structures were marked in the field to assist in the completion of the storm drain mapping
3-2 Revised	Map updates	DPW	Complete 2006	Undocumented drainage structures have been marked for easy identification/location following aerial photography in spring 2009.
3-3 Revised	Stormwater By-Law	Planning/DPW	Complete Jan 06	Stormwater Bylaw adopted locally – Planning Board held public hearing on stormwater management regulations
3-4 Revised	Non-storm discharges Illicit connection By-Law	DPW DPW	Complete Jan 06 Completed June 06	
Revised				

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) - Permit Year 10 (Reliance on non-municipal partners indicated, if any)	
4-1 Revised	Sedimentation & Erosion Control Guide	Building/Planning Depts.	Completion Spring 2008 Adoption & Compliance	Existing Erosion Control Zoning By-Law to be reviewed and amended. Copies of similar documents from other municipalities have been obtained and are under review.	In 2009 the Best Development Practices Guidebook was completed and is being implemented.
4-2 Revised	Erosion Control By-law	Building/Planning Depts.	Update - Spring 2008 Adoption & Compliance	Existing by-law has been reviewed and identified for update and revision.	Prepare Erosion Control By-Law revisions for Town Meeting action continues.
4-3 Revised	Inspection & Enforcement	Building/Planning Depts.	Number of inspections	Most project sites are inspected on a weekly basis or more often as conditions warrant. Inspections done by Planning Dept., Building Dept, consultant, Conservation Commission.	Continue site inspections, documenting conditions and directing corrective actions as needed.
Revised					The Best Development Practices Guidebook was completed in 2009.

4a. 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 10 (Reliance on non-municipal partners indicated, if any)
5-1 Revised	Develop Guidebook	Building/Planning Depts./ConCom/DPW/BOH.	Completion & Enforcement	The Best Development Practices Guidebook was completed in 2011.
5-2 Revised	By-law Revisions	Building/Planning Depts.	Adoption	Stormwater Management By-Law has been adopted by Town Meeting as well as the adoption of Post-Construction Stormwater Management provisions and Stormwater Management Disturbance By-Laws.
Revised				

5a. Additions

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 10 (Reliance on non-municipal partners indicated, if any)	
6-1 Revised	Employee Education	DPW	Number of man-hours of training	Development of standard operating procedures continues.	
6-2 Revised	SPCCP Update	DPW	Completion July 2005 Completion Jul 2013	Funding not provided to complete update. We will continue to seek appropriate funding to do so.	
6-3 Revised	Motor oil recycling	DPW	Number of gallons Approx 110 Gal	All used motor oil from Department activities has been recycled. Has been added to oil collected by the Recycling Committee	
6-4 Revised	Reduce winter sand use	DPW	Average tons per storm @ 30 Tons	Total use of sand was increased due to the significant winter season resulting in 87-inches of snow/ice and 24 events when compared to the last "very mild" winter season.	Winter 2012 - 2013 Salt: 2,870 Tons Sand: 700 Tons
6-5 Revised	Construct vehicle wash facility	DPW/Town Meeting	Complete Nov 2007 Complete 2012.	Revised funding for redevelopment of existing DPW Facility at 11 Fletcher Street was appropriated. Currently under feasibility study, conceptual design and NOI for presentation at Fall 2012 Town Meeting. This design will an inside vehicle wash facility. Due to the cost estimate to perform this redevelopment – the Town decided not to move forward with this project.	Feasibility, conceptual design, all environmental permits and a cost estimate at \$7.8M was completed. However, the Town decided not to move forward due to the high cost estimate for this project
Revised					

6a. Additions

6-6	Seek alternatives to provide sufficient DPW Facility	DPW	2013	The DPW Director and the Building, Planning & Construction Committee will move forward and seek alternate "low-cost" measures to redevelop the existing DPW Facility/Site.	
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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 10 (Reliance on non-municipal partners indicated, if any)	
7-1 Revised	Stream monitoring	DPW/Conservation/BOH	Completion date: Two times per year	No volunteers have come forward.	
7-2 Revised	Locate MS4 discharges	DPW	Completion date: January 1, 2004 July 2006	Summer 2006 located approximately 200 additional drainage structures	This effort will be included in 3-2 above.
7-3 Revised	Survey agricultural activities	DPW/Conservation	Completion date: September 15, 2004 July 1, 2005	Contact made with 8 agricultural property owners. No replies to date.	Will provide follow up information on improving agricultural activity impact on stormwater.
7-4 Revised	Septic system survey	DPW/Board of Health	Completion Date: N/A	Board of Health relies on Title V inspection guidelines	
Revised					

7a. Additions

7b. WLA Assessment

No data available at this time.

Part IV. Summary of Information Collected and Analyzed

The town has completed a GIS based map of the stormwater collection system. Development of the map made use of existing record drawings and other documentation. It is estimated that approximately 80% of the system is covered by the new map. GIS locating equipment has been procured that will be used to locate undocumented stormwater collection system components. Particular emphasis will be placed on identifying outfalls not currently documented. This effort continues and is expected to be completed in the next 3 to 5 years with periodic updates. With the recent hiring of a new DPW Director and DPW Highway Superintendent, we continue to need additional time and/or training concerning the use of the GIS equipment and how to perform map update. It remains our intent to use intern and/or part-time/temporary employees to update our maps depicting drainage structures in areas of town that were not mapped but were surveyed/painted for ease of location. Funding for a town-wide aerial survey will also be requested to user services contract to perform a Comprehensive Wastewater Management Plan (CWWP) – which when complete will survey the Town's sewer collection systems and mapping, which when complete will provide opportunities to coordinate information for stormwater systems mapping.

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

Stormwater management position created/staffed	Not at this time	
Annual program budget/expenditures	No fixed amount allocated	

Education, Involvement, and Training

Estimated number of residents reached by education program(s). <i>Primarily by Cable TV notices</i>	70%	
Stormwater management committee established	No	
Stream teams established or supported	None	
Shoreline clean-up participation or quantity of shoreline miles cleaned	None	
Household Hazardous Waste Collection Days <ul style="list-style-type: none"> ▪ days sponsored 	Collection event held in September 2007	Future intent is to conduct such events on an annual basis.

<ul style="list-style-type: none"> ▪ community participation ▪ material collected 	200 families	2007
School curricula implemented	N/A	
	No	

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control	X		Under Review and/or Revisions	
▪ Post-Development Stormwater Management		X		
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination (included in bylaw)				X
▪ Erosion & Sediment Control	X	X		
▪ Post-Development Stormwater Management		X		

Mapping and Illicit Discharges

Outfall mapping complete	80%			
Estimated or actual number of outfalls (<i>Estimated</i>)	134			
System-Wide mapping complete	80%			
Mapping method(s)				
▪ Paper/Mylar				
▪ CADD				
▪ GIS. <i>Paper maps and record drawings used to develop stormwater map.</i>	80%			
Outfalls inspected/screened	None			
Illicit discharges identified	None			
Illicit connections removed	None			
% of population on sewer (<i>estimated</i>)	82%(9,924)			
% of population on septic systems (<i>estimated</i>)	18%(3,344)			

Construction

Number of construction starts (>=1-acre)	2	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	90%	
Site inspections completed. <i>On the average all sites are inspected weekly.</i>	100%	
Tickets/Stop work orders issued	0	
Fines collected	0	
Complaints/concerns received from public	6	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control.	N/A	
Site inspections completed	N/A	
Estimated volume of stormwater recharged	N/A	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	1/yr	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	1/yr	
Total number of structures cleaned (<i>Approximate number</i>)	750	
Storm drain cleaned (<i>Not documented</i>)	N/A	
Qty. of screenings/debris removed from storm sewer infrastructure	150CY	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)	Stockpiled awaiting beneficial use decisions.	
Cost of screenings disposal	N/A	

Average frequency of street sweeping (non-commercial/non-arterial streets)	1/yr	
Average frequency of street sweeping (commercial/arterial or other critical streets)	3/yr	
Qty. of sand/debris collected by sweeping	N/A	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)		
Cost of sweepings disposal	N/A	

Anti-/De-Icing products and ratios. <i>Significant increase in use of sand versus last year. Approximately 466% increase from prior year primarily due to the a very significant winter season with 24 snow/ice events and 87-inches of accumulation.</i>	92% NaCl 5% CaCl ₂ 3% Sand	
Pre-wetting techniques utilized. <i>Liquid CaCl₂ applied at spinner discharge of spreader</i>	Yes	
Manual control spreaders used	Yes	
Automatic or Zero-velocity spreaders used	No	
Estimated net reduction in typical year salt application	None	
Salt pile(s) covered in storage shed(s). <i>Mixed sand/salt in working pile uncovered</i>	Yes	
Storage shed(s) in design or under construction. <i>The design of new Public Works facility.</i>	No	
<i>Estimated net reduction in typical year road sand application (5 year average)</i>	98%	