

Municipality/Organization: Town of Northbridge

EPA NPDES Permit Number: MAR041144

MaDEP Transmittal Number: W-040823

**Annual Report Number
& Reporting Period:** No. 9: 01 April 2011 – 31 March 2011

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: April 26, 2012

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 mild 2011 – 2012 winter season combined with good availability of road salt enabled us to significantly reduce the amount of winter road sand spread on our 80-miles of roads. Only 50 tons of winter road sand were used during winter 2011 - 2012 compared to approximately 361 tons of sand that was used during the winter of 2010 – 2011. 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. Although very problematic, our goal remains to completely eliminate the use of winter sand.

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 Stormwater 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 has been initiated for the redevelopment of the existing DPW Facility located at 11 Fletcher Street. When completed, this facility will incorporate all of the required environmental protection features lacking in the current facility. This engineering related work will continue throughout the summer of 2012 to provide a reliable final design/construction estimate for the Fall 2012 Town Meeting.

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. Therefore, their efforts will concentrate on providing best management approaches to all stormwater related issues. Understanding that this program requires a significant level of Town-related efforts will be a challenge given the current level of in-house resources. Therefore, it will be necessary to promote 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.

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)	
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 seek funds for 2012.	

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 8 (Reliance on non-municipal partners indicated, if any)	
2-1 Revised	Volunteer stream cleanup	DPW/Conservation Commission	Number of participant participants	Middle school environmental performed river and pond clean u 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 tv 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 8 (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 Completed May 08	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		

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 8 (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 8 (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 8 (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 @ 150 Tons	Total use of sand was reduced by 86% when compared to last winter season.	Winter 11-12 Salt: 1400 Tons Sand: 150 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.	Feasibility, conceptual design and NOI parameters currently underway Redevelopment of the existing DPW Facility currently underway.
Revised					

6a. Additions

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)	
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 will need additional time and/or training concerning the use of the GIS equipment and how to perform map update. It is 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 to more accurately identify and locate these drainage structures.

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		
▪ days sponsored	Collection event held in September 2007	Future intent is to conduct such events on an annual basis.
▪ community participation	200 families	2007
▪ material collected	N/A	
School curricula implemented	No	

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")					In Place Prior to Phase II	Under Review	Drafted	Adopted
▪ 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%(9,914)	
% of population on septic systems (<i>estimated</i>)		18%(3,339)	

Construction

Number of construction starts (>1-acre)	5	
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 reduction in use of sand versus last year. Approximately 86% less than prior year</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>Will be included in design of new Public Works facility.</i>	No
Estimated net reduction in typical year road sand application (5 year average)	98%

