TOWN OF NORTHBRIDGE

OFFICE OF THE TOWN MANAGER
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Michael J. Coughlin, Jr.
Town Manager

05

April 29, 2005

U. S. Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, MA 02114-8127

CERTIFIED MAIL
7004 1160 0005 2259 5070

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street
Worcester, MA 01608

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7004 1160 0005 2259 5087

RE: NPDES Phase II Annual Report, Permit Number MAR041144

Enclosed herewith please find one copy of our annual report of activities under the Stormwater Management Program.

Our point of contact for this report is the Director of Public Works, Mr. Richard R. Sasseville. He may be contacted by phone at 508-234-3581 or by email at rsasseville@northbridgemass.org.

Sincerely,

Michael J. Coughlin, Jr.
Town Manager

Enclosure

Municipality/Organization:	**Town of Northbridge**
EPA NPDES Permit Number:	**MAR041144**
MaDEP Transmittal Number:	**W-040823**
Annual Report Number & Reporting Period:	**No. 2: March 04-March 05**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person:	Richard R. Sasseville	Title:	Director of Public Works
Telephone #:	508-234-3581	Email:	rsasseville@northbridgemass.org

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: Michael J. Coughlin

Printed Name: Michael J. Coughlin, Jr.

Title: Town Manager

Date: 4/29/05

Part II. Self-Assessment

In our last report we indicate that we were awaiting a determination regarding potential impact on listed species or critical habitat from the U.S. Fish and Wildlife Service. e have received a reply from Fish and Wildlife indicating that there are no impacts on listed species or critical habitats.

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

Waste motor oil recycling: During calendar year 2004, the Town's Recycling Committee collected 2,000 gallons of used motor oil, which was sent for recycling. Additionally, 55 gallons of used antifreeze, 13 cubic yards of used paint products, 1,537 fluorescent tubes, various mercury bearing wastes, batteries containing heavy metals and 9.31 tons of electronic components were also collected and disposed of in environmentally responsible fashion.

Winter road sand reduction: The total amount of winter road sand used on Town roads has been significant. The total amount used in 2002-2003 was 2,231.12 tons compared to 1,045.80 tons during the winter of 2003-04. During winter 2004-2005, 2,065 tons of sand were used on Town roads. Based upon 58 sanding events, five sanders using three loads per event, the average load used approximately 2.3 tons of sand. This is up slightly from the average to two tons per load for last winter. The slight increase is attributed to a shortage of road salt during early winter.

Public Education and Outreach: This element of the program has primarily made use of cable TV notices posted on the Towns 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 and similar environmentally responsible practices. The Town also acquired a copy of the video "After the Storm" which was produced by the Weather Channel and the USEPA. This video was shown on local community access cable approximately 20 times during the Fall of 2004.

Public Involvement and Participation: Cable TV notices have been posted soliciting volunteer involvement in various activities with limited response. In May 2004 a volunteer clean up of the shoreline of Arcade Pond was conducted. Approximately 8 volunteers walked the perimeter of the pond and removed trash, litter and debris. Two dump truck loads of material were remove and disposed.

Illicit Discharge Detection and Elimination: Approximately 80 percent of the existing stormwater system components have been mapped. The Town has procured a GPS locator that will allow us to plot the location of undocumented stormwater outfalls. Time limitations and the need to additional training on both the GPS equipment and the mapping software have delayed field work. A final draft of an "Illicit Discharge" bylaw has been completed and is ready for Town Meeting action. It

is anticipated that the new bylaw will be presented at the fall 2005 Annual Town Meeting.

Construction Site Stormwater Runoff Control: There are currently 13 active projects 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, particularly during and following storm events to insure that all erosion control and stormwater measures are in place. When problems have been identified 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: Development of local by-law governing post development stormwater management measures is in draft form and is under review. Anticipate that the finalized bylaw will be presented to Town Meeting for adoption in Fall 2005. A guidebook has been drafted and is under review to address detailed requirements of the program.

Pollution Prevention and Good Housekeeping in Municipal Operations: The major emphasis in this area has been on improving housekeeping practices in municipal operations. Plans for design and construction of a new Public Works facility are on hold due to lack of funds and higher priorities. Additionally, review and update of our current SPCCP is underway has been delayed pending availability of funds for these consultant services. Informal training of employees is on-going.

General Comments and Observations: This program requires a significant level of effort for the Town. No additional resources have been provided to meet the requirements of the program. Reliance on volunteers, both individual and in the form of existing and new committees is a major component of the effort. There is a level of technical expertise required to review program requirements and analyze data. Some communities have chosen to contract for that expertise, in tight financial circumstances it is beyond the resources of many localities. Within existing constraints, the Town is fully committed to meeting 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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
1-1	Business/industry contacts	DPW	Number of contacts	Slow start with no formal contact s made	
Revised					
1-2	Community Organizations	DPW	Number of contacts 35 persons	Healthy lawns seminar held. Approximately 35 persons attended.	Make contact with garden clubs and other organizations offering information from available sources
Revised					
1-3	School contact	DPW	Number of student contacts	Contact made with high school environmental group faculty advisor. They have conducted limited monitoring of storm water outfalls	Offer informational program to high school environmental group. Solicit participation in other activities.
Revised					
1-4	Storm drain stenciling	DPW	Number of drains stenciled	Cable TV solicitation for volunteers have been run without response.	Will make direct contact with Scout organizations and local watershed associations to solicit volunteers
Revised					
1-5	Household hazardous waste collection	DPW/Recycling Committee	Number of pounds collected	Agreement has been reached with a state contractor for a collection event in April 2005	Collection event scheduled for April 16, 2005.
Revised					

1a. Additions

1-6	Pollution Prevention Tips on Cable TV	DPW	Number of notices per year	DPW has posted pollution prevention tips on local cable channel. Various tips, seasonally appropriate are run on cable year round.	Continue tips with seasonal themes using info from EPA web sites

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
2-1	Volunteer stream cleanup	DPW/Conservation Commission	Number of participants	Volunteer cleanup of Arcade Pond held in May 2004 removed two dump truck loads of trash and debris.	Will make direct contact with Scout organizations and local watershed associations to solicit volunteers
Revised			10		
2-2	Volunteer stream monitoring	DPW/Conservation Commission	Number of volunteer hours	Cable TV solicitation for volunteers have been run without response. No direct organizational contact made to date	Will make direct contact with Scout organizations and local watershed associations to solicit volunteers
Revised					
2-3	Stormwater video	DPW/Conservation/ Cable TV	Complete Jan 2005	The video "After the Storm" was obtained and shown approximately 20 times on local cable TV during fall 04	Complete locally produced video by end of year
Revised					
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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
3-1	Storm sewer map	DPW	Completion by Dec 03	A GIS based map of the stormwater system has been prepared using available maps/plans and drawings. Approximately 80% of system	Updates will be made as new information is gathered. New subdivisions will be added as completed.
Revised					
3-2	Map updates	DPW	Complete 2006	Portable GPS equipment has been procured.	This equipment will be used to locate and record undocumented outfalls and system components. Hope to use college intern.
Revised					
3-3	Stormwater by-law	DPW/Conservation	Complete Jan 06	Illicit discharge bylaw has been finalized and is planned for Fall Town Meeting 2005.	Adoption at Fall Town Meeting in 2005.
Revised					
3-4	Non-storm discharges	DPW	Complete Jan 06	Conservation Commission has been provided with a copy of the NOI. No formal meetings held to date	Solicit support and assistance of ConCom to develop a draft by-law for presentation to Town Meeting in Fall 2005.
Revised	*Illicit connection by-law*	DPW	Complete 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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
4-1	Sedimentation & Erosion Control Guide	Building/Planning Depts.	Completion Dec 2005	Preliminary research has been conducted. Copies of program documents from other municipalities have been obtained and are under review.	Continue development of local guidebook leading to completion and implementation by planned date.
Revised					
4-2	Erosion Control By-law	Building/Planning Depts.	Completion Dec 2005	Existing by-law has been reviewed and identified for update and revision.	Prepare by-law revisions and updates for Town Meeting action. Seek technical assistance from regional planning commission.
Revised					
4-3	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					
Revised					

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
5-1	Develop Guidebook	Building/Planning Depts.	Complete Dec 2005	Preliminary research has been conducted. Copies of program documents from other municipalities have been obtained and are under review.	Continue development of local guidebook leading to completion and implementation by planned date.
Revised					
5-2	By-law Revisions	Building/Planning Depts.	Complete Dec 2005	Existing by-law has been reviewed and identified for update and revision.	Prepare by-law revisions and updates for Town Meeting action. Seek technical assistance from regional planning commission.
Revised					
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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
6-1	Employee Education	DPW	Number of man-hours of training	Informal training provided on an occasional basis	Develop standard operating instructions for various activities. Seek professional training from outside sources.
Revised					
6-2	SPCCP Update	DPW	Completion July 2005	Current SPCCP under review.	Continue review and update of plan. Seek funding for professional review.
Revised					
6-3	Motor oil recycling	DPW	Number of gallons	All used motor oil from Department activities has been recycled. Has been added to oil collected by the Recycling Committee	Continue recycling activities.
Revised					
6-4	Reduce winter sand use	DPW	Average tons per storm	Significant reduction in the amount of sand used. 02/03 = 2,231.12 tons, or 3 tons/load, 03/04 = 1,045.80 tons, or 2 tons/load..	Continue to reduce winter road sand usage as conditions will allow.
Revised					
6-5	Construct vehicle wash facility	DPW/Town Meeting	Complete Nov 2007	Town Meeting warrant article prepared to fund site investigation study for new DPW facility. Wash facility to be included in new DPW	Continue to work toward funding of design and construction of new facility. Financial constraints will make implementation difficult.
Revised					
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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
7-1	Stream monitoring	DPW/Conservation/BoH	Completion date: Two times per year	Volunteers have been solicited via cable TV notices without success. Stream monitoring not yet begun	Direct contact with local environmental organizations will be made seeking assistance.
Revised					
7-2	Locate MS4 discharges	DPW	Completion date:: January 1, 2004	GPS equipment procured. Survey not completed . Estimated completion July 1, 2006	This effort will be included in 3-2 above.
Revised			July 2006		
7-3	Survey agricultural activities	DPW/Conservation	Completion date: September 15, 2004	Nine agricultural activities have been identified rather than the two originally estimated. Draft letter has been developed. No contact made to date	Contacts will be made with information from EPA sources provided.
Revised			July 1, 2005		
7-4	Septic system survey	DPW/Board of Health	Completion Date: September 15, 2004	Contact made with Board of Health. Schedule being developed.	Complete survey by planned completion date.
Revised			December 31, 2006		
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 percent 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 heretofore documented. It is anticipated that the Town will be completed in quadrants over the next two to three years and the system map will be updated periodically as information is gathered. At this point we need to obtain additional training on use of the GIS equipment and on how to update the maps.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	No	
Annual program budget/expenditures	No fixed amount.	

Education, Involvement, and Training

Estimated number of residents reached by education program(s). *Primarily by Cable TV notices*	70%	
Stormwater management committee established	No	
Stream teams established or supported	None	
Shoreline clean-up participation or quantity of shoreline miles cleaned	May 2004	Approx 1 mile
Household Hazardous Waste Collection Days		
▪ days sponsored	Scheduled April 16, 2005	
▪ community participation	N/A	
▪ material collected	N/A	
School curricula implemented	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		
▪ Post-Development Stormwater Management		X		
Accompanying Regulation Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination (included in draft bylaw)			X	
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		

Mapping and Illicit Discharges

Outfall mapping complete	80%	
Estimated or actual number of outfalls *(Estimated)*	134	
System-Wide mapping complete	80%	
Mapping method(s)		
▪ Paper/Mylar		
▪ CADD		
▪ GIS. *Paper maps and record drawings used to develop stormwater map.*	80%	
Outfalls inspected/screened	None	
Illicit discharges identified	None	
Illicit connections removed	None	
% of population on sewer *(estimated)*	75%(9,900)	
% of population on septic systems *(estimated)*	25%(3,325)	

Construction

Number of construction starts (>1-acre)	12	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	90%	
Site inspections completed. *On the average all sites are inspected weekly.*	100%	
Tickets/Stop work orders issued	0	
Fines collected	0	
Complaints/concerns received from public	9	

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 *(Approximate number)*	750	
Storm drain cleaned *(Not documented)*	N/A	
Qty. of screenings/debris removed from storm sewer infrastructure	N/A	
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	74% NaCl 1% $CaCl_2$ 25% Sand	
Pre-wetting techniques utilized. *Liquid $CaCl_2$ applied at spinner discharge of spreader*	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). *Mixed sand/salt in working pile uncovered*	Yes	
Storage shed(s) in design or under construction	No	
Estimated net reduction in typical year road sand application	33%	

We need information on testing and monitoring of streams and water bodies. What types of tests should be used? Who can perform these tests? Where can we obtain test kits? Can these tests be easily and accurately be performed by volunteers with minimal training and technical background?