



Town of Northborough

Office of the Town Engineer

63 Main Street

Northborough, Massachusetts 01532-1994

Office (508) 393-5015 Fax (508) 393-6996

April 28, 2011

Glenda Velez

U.S. EPA

5 Post Office Square – OEP06-01

Boston, MA 02109-3912

RE: NPDES Phase II – Annual Report

Dear Ms. Velez,

Enclosed please find the annual report for the Town of Northborough's NPDES Phase II Small MS4 General Permit for year eight (8). Please note the Engineering and Public Works Departments continue to be severely reduced in staff and budget due to very difficult economic times and although we intend to comply fully with terms of our permit we have not been able to accomplish all the goals of our original permit. I believe we have incorporated each of the requested review items in this report. Please do not hesitate to call me at (508) 393-5015 with any questions. A hard copy has also been mailed to you and the DEP.

Sincerely,

Fred Litchfield

Town Engineer

cc: MASS DEP, Fred Civian
Town Administrator, John Coderre
Public Works Director, Kara Buzanoski
Town Planner, Kathy Joubert
file

Municipality/Organization: Northborough, Massachusetts

EPA NPDES Permit Number: MAR041143

MassDEP Transmittal Number: W- 035921

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: Frederic E. Litchfield **Title:** Town Engineer

Telephone #: (508) 393-5015 **Email:** flitchfield@town.northborough.ma.us

Mailing Address: 63 Main Street, Northborough, Massachusetts 01532

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: Frederic E. Litchfield

Title: Town Engineer

Date: 4-28-2011

Part II. Self-Assessment

The Town of Northborough has completed the required self –assessment and have determined our municipality is in compliance with all permit conditions, except for the following provisions:

- Part 1.1c Due to continued budget constraints the Auto Repair Shop brochures were not mailed to each of the local impacted businesses.
- Part 1.1g The Stormwater Flyer was not distributed to the businesses within the municipality due to continued budget constraints.
- Part 1.1h The Stormwater Media information packet has not been completed due to continued budget constraints.

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
1a	Distribute/Post Nonpoint Source Pollution Posters	Engineering Department	Post in all schools and Town Buildings	Posters were created and posted in each of the municipal buildings	Maintain posters as necessary.
1b	Air Stormwater Message on Local Cable Channel	Engineering Department	Post one message every month	Stormwater messages have aired on local cable channels but not as frequently as originally intended.	Stormwater messages on cable more frequently.
1c	Obtain and Distribute auto repair shop brochures	Engineering Department	Distribute to all impacted local businesses	Brochures were available but not distributed due to budget constraints for printing and mailing.	Try to increase awareness to automobile repair shops thru visits by staff if mailing is not to funded in the future.
1d	Add Stormwater information to Town's website	Engineering Department and GIS Manager	Update information quarterly to address seasonal concerns	New website has been created with links to stormwater information.	Continuously maintain stormwater links.
1e	Stormwater flyer to community residents	Engineering Department and SuAsCo Watershed Community Council	Flyer distributed to 75% of residents and compiled and considered municipal and multi-watershed-wide "survey" results	A stormwater flyer is available.	The stormwater flyer may go to some residents in the future as part of other Town utility bill mailings but will not reach all residents due to the fact that not all residents are on Town sewer or water.
1f	Stormwater Lesson Plan for Fifth Grade Students	Engineering Department and SuAsCo Watershed Community Council	Develop and distribute lesson plan to implement at the Grade 5 level, and lesson plan is taught in one or more Grade 5 classrooms in the community	The stormwater lesson plan for Fifth Grade Students was created by the SuAsCo Watershed Community Council and delivered to the school administrator's office.	The stormwater lesson plan has been implemented in the school curriculum for the fifth and sixth grade.

1a. Additions

1g	Stormwater Flyer to Community Businesses	Engineering Department and SuAsCo Watershed Community Council	Flyer distributed to minimum of 50% of businesses in municipality, and stormwater logo displayed by one-half of businesses receiving the flyer	The stormwater flyer for community businesses was not distributed due to continued budget constraints.	Stormwater flyers will be delivered by staff if budget constraints allow in the future.
1h	Stormwater Media Campaign	Engineering Department and SuAsCo Watershed Community Council	Media Information packet delivered to the local media, and 4 press releases generated and issued to local media and major media outlets	Media information has not been distributed to local media primarily due to staff reductions and limitations on reduced staff time.	Media information will be distributed as staff time allows in the future.
1i	Stormwater Video	Engineering Department and SuAsCo Watershed Community Council	Show stormwater video at a minimum of one public meeting, and air stormwater video at least once on local cable station	The stormwater video and power point presentation was completed by the SuAsCo Watershed Community Council and was delivered to the local cable access channel but has not appeared due to technical difficulties with the renovation and expansion of the Regional High school which is where the studio is located.	The power point presentation is expected to be aired later this year and will be shown during a Conservation Commission public hearing within this calendar year.

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
2a	Stormwater Traveling Display	Engineering Department and SuAsCo Watershed Community Council	Stormwater display circulates around the community for a minimum of 3 months in permit year #1, and stormwater display is posted at a minimum of 3 different public locations in permit year #1, and stormwater display is also used in future permit years for posting in public places or at stormwater events	The stormwater display was again utilized during several town events with staff answering questions.	The stormwater display will continue to circulate between municipal buildings as time and staffing allows.
Revised					
2b	Stormwater poster contest for Fifth Grade Students	Engineering Department and SuAsCo Watershed Community Council	Poster contest is held and entries are received, judged and displayed	The information for the stormwater poster contest was delivered to the school administrator's office but was not implemented as there was a conflict with another poster contest during that time period.	The Engineering Department staff will contact the School Administration to attempt to have the poster contest inserted into the curriculum in the future.
Revised					
2c	Stormwater Photo Contest for High School Students	Engineering Department and SuAsCo Watershed Community Council Students	Photo Contest is held and entries are received, judged and displayed	The information for the stormwater photo contest was delivered to the School Administrator's office but was not implemented due to the retirement of the photography instructor.	The photography contest will be requested again in the future once an instructor is hired.
Revised					

2d	Revised	Implement Hazardous Materials Collection Day	Engineering Department	Collect materials from residents one day per year	The Town has continued to hold one Household Hazardous Waste Collection event each year in the fall.	The Town has added the collection of metal items to the annual event in the fall and another event in the spring in order to make it more attractive for more residents.
2e	Revised	Implement an Annual Volunteer Stream Clean-up Day	Engineering Department	Hold stream clean-up day once per year	The Town has held a spring Town cleanup event each year and fall stream cleanup each year.	The Town will continue to support the Town cleanup each spring and stream cleanup each fall as the budget allows and volunteers are still available.

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
3a	Map Outfalls and Receiving Waters	DPW Director, GIS Manager *Assistant DPW Director's position has been eliminated	Prepare draft map in 1 st year and map 25% of outfalls each following year	Outfalls were mapped on paper plans and filed away for future use but staff time and budget constraints continue to prevent any further work on these maps to date.	Staff time and or volunteers will be utilized in the future to complete the mapping.
Revised					
3b	Review Existing Bylaws and Regulations	DPW, Engineering Department, Planning Department	Determine whether bylaws & regulations meet EPA requirements	All existing bylaws and regulations were reviewed and it was determined a bylaw prohibiting illicit discharges to the municipal storm drain system was necessary.	Completed.
Revised					
3c	Develop Illicit Discharge Detection & Elimination Plan	DPW, Engineering Department, Planning Department	Make recommendations for plan & begin implementation by the fourth permit year	An illicit discharge plan is being developed in accordance with the guidance manual developed by the New England Interstate Water Pollution Control Commission	To customize the plan to meet the needs of the Town of Northborough.
Revised					
3d	Develop/Modify General Illicit Discharge Bylaw	DPW, Engineering Department, Planning Department	Propose recommendations for developing a new bylaw or modifying the existing bylaw & make presentations for Town Meeting action	An illicit discharge bylaw was developed in year 4 and adopted at Town Meeting in year 5.	The bylaw was forwarded to the Attorney General's Office for review. Completed
Revised					

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
4a	Review Existing Regulations, and Monitoring & Enforcement Procedures	DPW, Engineering, Department, Planning Department	Determine whether required EPA requirements are met	All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action is required.	This item has been completed.
Revised					
4b	Develop/Modify Regulations, and Monitoring & Enforcement Measures	Department of Public Works, Engineering Department	Propose recommendations for modifying existing regulations & practices	All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action is required.	This item has been completed.
Revised					
4c	Present New Regulations for Town Meeting Action	DPW, Engineering Department, Planning Department	Make presentations for Town Meeting action	No Town meeting action is required. All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action is required.	No Town meeting action is required. This item has been completed.
Revised					
4a	Review Existing Regulations, and Monitoring & Enforcement Procedures	DPW, Engineering Department, Planning Department	Determine whether required EPA requirements are met		

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
5a Revised	Review Existing Regulations, and Monitoring & Enforcement Measures	DPW, Engineering Department, Planning Department	Determine whether required EPA requirements are met	All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action is required.	This item has been completed.
5b Revised	Review/modify Regulations, and Monitoring & Enforcement Measures	DPW, Engineering Department, Planning Department	Propose recommendations for modifying existing regulations & practices	All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action will be required.	This item has been completed.
5c Revised	Present New Regulations for Town Meeting Action	Engineering Department, Planning Department	Make presentations for Town Meeting action	No Town meeting action is required.	No Town meeting action is required.

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
6a Revised	Implement Street Sweeping Program	Department of Public Works	Sweep every street once per year	The DPW sweeps all streets within the town once per year with some streets being swept additionally as needed.	Maintain current sweeping program, new replacement sweeper authorized by Town Meeting April 2011.
6b Revised	Implement Catch Basin Cleaning Program	Department of Public Works	Clean & Inspect all catch basins within five year permit cycle	All catchbasins have not been cleaned as originally intended. Approximately 55% have been cleaned to date due to budget constraints.	A clamshell truck was purchased and the catchbasin cleaning program has been renewed.
6c Revised	Perform Site Visits to Examine Existing Practices at Facilities	Department of Public Works, Engineering Department	Target all applicable municipal facilities and visit each annually	Site visits have been performed at each municipal facility annually.	Maintain annual site visits.
6d Revised	Train Municipal Employees at Each Facility	Department of Public Works, Engineering Department	Target all applicable municipal facilities and provide annual refreshers	Annual refreshers have been performed by upper level staff annually.	Maintain annual refreshers.
6e Revised	Perform Follow-ups to Ensure Required Practices are Met	Department of Public Works, Engineering Department	Target all applicable municipal facilities and visit each annually	Follow-up visit have been performed as necessary.	Maintain follow-up visits as necessary.

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
7a Revised	Prioritize Stormwater System Mapping Along the Assabet River	DPW, GIS Manager	Map outfalls discharging to the Assabet River by the fourth permit year	All outfalls continue to be mapped on paper.	Volunteers and/or staff will be utilized to locate all outfalls and prepare a map layer as part of our GIS system as time and budget allow.
7b Revised	Perform Dry Weather Inspections of Outfalls Along the Assabet River	DPW, GIS Manager	Inspect outfalls discharging to the Assabet River during dry weather by the fifth permit year	Due to continued budget constraints outfalls are inspected as needed by the DPW.	Once all outfalls are located by GPS and shown on the Town's GIS system they will each be inspected annually as staff time and budget allow.

7b. WLA Assessment (N/A)

Part IV. Summary of Information Collected and Analyzed

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)	
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored ** ▪ community participation ** ▪ material collected **	(#)	
School curricula implemented	(# or %)	
	(tons or gal)	
	(y/n)	

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				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	
Site inspections completed **	(# or %)	
Tickets/Stop work orders issued **	(# or %)	
Fines collected **	(# and \$)	
Complaints/concerns received from public **	(#)	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vacor **	(%)	

(Preferred Units)		Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of:
 ("N/A" = never used; "100%" = elimination)

▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

(Preferred Units)		Response
Average Ratio of Anti-/De-Icing products used **	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	

• Treatment units induce infiltration within 500-feet of a wellhead protection area		# or y/n
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Sincerely,

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