# Town of Northborough

Office of the Town Engineer
63 Main Street
Northborough, Massachusetts 01532-1994
Office (508) 393-5015 Fax (508) 393-6996


MAY 5 2009

May 1, 2009

Glenda Velez
U.S. EPA - CIP
One Congress Street – Suite 100
Boston, MA 02114

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 six (6). Please note the Engineering and Public Works Departments have been 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 will also be mailed to you and the DEP on Monday May 4, 2009.

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

**Mass DEP Transmittal Number:** **W- 035921**

**Annual Report Number & Reporting Period:** **Year 6**
**April 1, 2008 – March 31, 2009**

# NPDES PII Small MS4 General Permit Annual Report
## (Due: May 1, 2009)

**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: Fred Litchfield

Printed Name: Frederic E. Litchfield

Title: Town Engineer

Date: 5-1-2009

**Part II. Self-Assessment**

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

Part 1.1c Due to budget constraints the Auto Repair Shop brochures were not mailed to each of the local impac
Part 1.1g The Stormwater Flyer was not distributed to the businesses within the municipality due to budget cons
Part 1.1h The Stormwater Media information packet has not been completed due to 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)<br><br>(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. | Increase effort to show 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 | Stormwater information was on the website temporarily but due to some technical difficulties and reduced staff this information has not been maintained. | Although the technical difficulties have been repaired the staffing issue remains a problem, but additional effort may allow for more updates to be posted. |
| 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 was intended to be mailed to most of the residents in the spring of 2004 with a tax bill but legal issues prevented that task from being accomplished. | 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 lack of residents 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 but not implemented due to curriculum conflicts. | The stormwater lesson plan is anticipated to be implemented in the school curriculum in the future. |

| | | | | | |
|---|---|---|---|---|---|
| 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 budget constraints. | Stormwater flyers will be delivered by staff if budget constraints continue 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 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) (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 utilized during several town events with staff answering questions. | The stormwater display will continue to circulate between municipal buildings as time 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 | 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 order to make it more attractive for more residents. |

| | | | | | |
|---|---|---|---|---|---|
| 2e | 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. |
| Revised | | | | | |

## 3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) (Reliance on non-municipal partners indicated, if any) | Planned Activities |
|---|---|---|---|---|---|
| 3a | Map Outfalls and Receiving Waters | Assistant DPW Director, GIS Manager | Prepare draft map in 1st 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 have prevented 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. | |
| 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 has been forwarded to the Attorney General's Office for review and approval is expected within the next few months. |

## 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) (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 review ed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action will be required. | Hold public hearing with the Planning Board and the Conservation Commission to coordinate language in each bylaw. |
| 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 review ed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action will be required. | Hold public hearing with the Planning Board and the Conservation Commission to coordinate language in each bylaw. |
| Revised | | | | | |
| 4c | Present New Regulations for Town Meeting Action | DPW, Engineering Department, Planning Department | Make presentations for Town Meeting action | No Town meeting action will be required. | No Town meeting action will be required. |
| Revised | | | | | |

## 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) (Reliance on non-municipal partners indicated, if any) | Planned Activities |
|---|---|---|---|---|---|
| 5a | 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 review ed and found to be adequate with minor revisions by each Board or Committee. No Town meeting action will be required. | Hold public hearing with the Planning Board and the Conservation Commission to coordinate language in each bylaw. |
| Revised | | | | | |
| 5b | 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. | Hold public hearing with the Planning Board and the Conservation Commission to coordinate language in each bylaw. |
| Revised | | | | | |
| 5c | Present New Regulations for Town Meeting Action | Engineering Department, Planning Department | Make presentations for Town Meeting action | No Town meeting action will be required. | No Town meeting action will be required. |
| Revised | | | | | |

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) (Reliance on non-municipal partners indicated, if any) | Planned Activities |
|---|---|---|---|---|---|
| 6a | 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 as budget allows. |
| Revised | | | | | |
| 6b | 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 25% have been cleaned to date due to budget constraints. | A clamshell truck is anticipated for purchase within the next fiscal year and the catchbasin cleaning program should be renewed. |
| Revised | | | | | |
| 6c | 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. |
| Revised | | | | | |
| 6d | 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. |
| Revised | | | | | |
| 6e | 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. |
| Revised | | | | | |

## 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) (Reliance on non-municipal partners indicated, if any) | Planned Activities |
|---|---|---|---|---|---|
| 7a | 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 to the Assabet River have been mapped on paper and filed away. | 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. |
| Revised | | | | | |
| 7b | 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 | Approximately 10% of the outfalls to the Assabet River are inspected annually and as needed by the DPW. | Once all outfalls to the Assabet River 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)

(This section has not been completed at this time due to time constraints but will be completed in the future.)

### 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 ** | (# or %) | |
| ▪ material collected ** | (tons or gal) | |
| School curricula implemented | (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 vactor ** | (%) | |

| | (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:<br>("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 **<br><br>(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas) | % NaCl<br>% $CaCl_2$<br>% $MgCl_2$<br>% CMA<br>% Kac<br>% KCl<br>% Sand | |
| 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 | |