

Municipality/Organization: Northborough, Massachusetts

EPA NPDES Permit Number: MAR041143

MassDEP Transmittal Number: W- 035921

Annual Report Number Year 9
& Reporting Period: April 1, 2011 – March 31, 2012

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

Contact Person: Frederic E. Litchfield Title: Town Engineer

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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: Frederic E. Litchfield

Title: Town Engineer

Date: 4-30-2012

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 3.3a 72% of all outfalls and receiving waters within the Town have been field verified
- Part 6.6a The Town did purchase a new street sweeper during FY2012 as a replacement for an aging piece of equipment which allows us to maintain the current street sweeping program but due to staff limitations the program has not been expended.
- Part 7.7a Less than 1% of all outfalls within the Town which contribute to the Assabet River remain unverified due to limited access

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 9 (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 9 (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 | 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. |
| Revised | | | | | |
| 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) – Permit Year 9 (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 9 (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. |
| 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 9 (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 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 | | | | | |
| 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. | This item has been completed. |
| Revised | | | | | |
| 5c | Present New Regulations for Town Meeting Action | Engineering Department, Planning Department | Make presentations for Town Meeting action | No Town meeting action is required. | This item has been completed. |
| 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) – Permit Year 9 (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 sweeper purchased in FY2012 as a replacement of an aging piece of equipment to maintain the program. |
| 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 40% have been cleaned to date due to budget constraints. | A clamshell truck was purchased and the catchbasin cleaning program has continues. |
| 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 visits 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 9 (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 continue to be mapped on paper and the Town’s GIS system. | 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 | 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. |
| Revised | | | | | |

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, 2011 through March 31, 2012)

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:
 (“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 ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas) | % NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % 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/l _n mi. or %) | |
| Estimated net reduction or increase in typical year sand application rate ** | (±lbs/l _n 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 | |
|---|----------|--|