

City of Newton



DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE COMMISSIONER

1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

David B. Cohen
Mayor

MAY 5 2009

April 30, 2009

Glenda Velez
U.S. Environmental Protection Agency – CIP
One Congress Street, Suite 1100
Boston, MA 02114

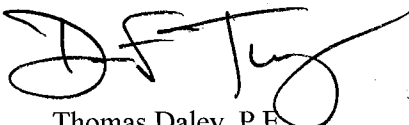
Subject: City of Newton, MA
NPDES Phase II Small MS4 General Permit Annual Report No. 6
EPA NPDES Permit No: MAR 041080
MaDEP Transmittal No: W-039247

Enclosed please find our Annual Report No. 6 submitted in accordance with our NPDES Phase II Small MS4 General Permit. The City of Newton has implemented a stormwater management program designed to reduce discharge of pollutants from the municipal separate storm sewer system to the "maximum extent practicable" to protect water quality.

The City's stormwater management plan consists of the six minimum control measures. Each control measure has associated Best Management Practices (BMPs) and measurable goals that have been implemented during the course of the permit term. It is through the implementation and evaluation of these BMPs that the City will ensure that the objectives of the Phase II NPDES program will be met.

Newton will continue with our stormwater management program as noted in this report and proactively address the remaining indirect illicit discharges.

Sincerely,


for Thomas Daley, P.E.
Commissioner of Public Works

Attachments:

NPDES Phase II Small MS4 General Permit, Annual Report No. 6

Municipality/Organization: City of Newton, MA

EPA NPDES Permit Number: MAR 041080

MaDEP Transmittal Number: W-W-039247

Annual Report Number

& Reporting Period: No. 6: April 2008 – April 2009

NPDES PII Small MS4 General Permit Annual Report April 2009

Part I. General Information

Contact Person: Thomas Daley, P.E

Title: Commissioner of Public Works

Telephone #: 617-796-1008

Email: tdaley@newtonma.gov

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: David B. Cohen

Title: Mayor

Date:

4/30/09

Part II. Self-Assessment

The City of Newton, Massachusetts has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for Minimum Control Measure #3 Illicit Discharge Detection and Elimination (IDDE). The City has found bacteria contamination in some of its storm drains and brooks, particularly in areas where sanitary sewer infrastructure is aging, underdrains are co-located, and underground pathways or conduits to our drainage systems exist. Newton is proactively finding and eliminating illicit connections to the storm drainage system. In addition, we feel that our Comprehensive Stormwater Plan presents an effective program to address IDDE in more detail than this permit.

The following is provided to highlight key accomplishments made in Permit Year 6 with respect to MS4 General Permit goals and objectives.

Administrative

- Budgeted \$700,000 in FY09 and the upcoming FY10 for stormwater management and capital projects.
- Drafted and proposed an Illicit Discharge to Storm Drains Ordinance. A copy of which is provided in Attachment A of this report.

Programmatic & Drainage System

- A sanitary sewer and underdrain rehabilitation contract was completed in the fall of 2008. National Water Main Cleaning Company was awarded the contract which includes heavy sewer and manhole cleaning, joint testing and sealing, cured-in-place liners and sealing of underdrain access ports.
- Another sanitary sewer and underdrain rehabilitation project is in the design phase and is expected to go out to bid in July 2009.

Pollution Prevention & Good Housekeeping

- Our 2008 Household Hazardous Waste (HHW) collection program ran from May 21st through October 18th. Last year, we collected 287 Tons of HHW and Universal waste products that may otherwise find its way into the trash. More information available at: <http://www.ci.newton.ma.us/DPW/recycling/default.asp>
- The City of Newton strives for good housekeeping practices at our DPW yards. An internal audit of DPW Yards and Parks and Recreation facility was conducted on April 15th and 16th, 2009.
- Newton monitors 143 stormwater discharge points to the Charles River, including the many brooks that feed into the Charles, by conducting wet and dry weather sampling.
- Sections of storm drains are routinely inspected (CCTV) and cleaned for maintenance (i.e., sediment) and water quality issues (based upon bacteria sampling data) by DPW crews.

Public Education and Involvement

- Numerous activities and events listed in the following table.

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 6 (Reliance on non-municipal partners indicated, if any)	Pla Per
1.1	Develop Stormwater Press Release	Engineering, M. Rose	Submit annual press release to newspaper / CATV.	Published “Tips for Draining your Pool” in early October 2008 in the Newton Tab (copy of press release provided in Attachment B).	Rec New pre vid Cha New
Revised					
1.2	Develop Stormwater Web Site	Engineering, M. Rose	Prepare web site on stormwater issues.	Complete.	Non Cor
Revised					
1.3	Develop Stormwater Brochures	Engineering, M. Rose	Distribute brochures with water/sewer bills	Newton purchased the Year 5 package from the SuAsCo’s Stormwater Community Assistance Program. We also distributed brochures on phosphorus (from CRWA) and soils testing at an Organic Gardening lecture in April 2009. Copies of the literature and how we put them to use, are provided in Attachment B.	BM bro con nee
Revised					
1.4	Provide Stormwater News on City’s web site	Engineering, L. Taverna & M. Rose	Post stormwater and/or project news once per year	Newton DPW’s Stormwater web page.	Ma wel
Revised					

1.5	Revised	Establish Volunteer Database	Environmental, M. Rose	Solicit volunteer educators to promote awareness of water quality.	Volunteer database established and is used mostly to encourage participation in Annual Charles River Clean-up and for storm drain marking.	None, BMP complete.
1.6	Revised	Partner with Schools	Environmental, M. Rose	Obtain and distribute educational resources to schools.	We continued to offer specialized School Education Programs (see Attachment B). During this permit period, "Dwayne the Drain" lesson was taught to all the 3rd grade classes at the Ward Elementary School. We also assisted several HS students with their environmental service projects.	Continue with implementation of various school education and partnering programs.
1.7	Revised	Develop Education Program	Environmental, M. Rose	Implement stormwater pollution prevention program	Mayor Cohen proclaimed March as "Alternatives to Pesticides Month". From April to June 2008, DPW launched an educational program at numerous locations throughout the City with stormwater brochures and surveys (and a chance to win prizes). On April 27, 2009, Green Decade Newton Coalition and Newton DPW hosted a lecture on Organic Gardening (see Attachment B survey results & info). Every April, DPW offered rain barrels to residents at a discount (made possible by a state grant). Residents picking up rain barrels are given a stormwater brochure.	Continue promoting water conservation, organic and environmentally-friendly lawn care methods and fertilizer efforts.
1.8	Revised	Partnering with Watershed Associations	Engineering, L. Taverna M. Rose	Promote meetings with Charles River Watershed Association (CRWA).	Newton DPW actively supports CRWA programs and initiatives including "Find It and Fix It", technical workshops and the Annual Charles River Clean-up. We also gave a presentation as part of a Stormwater Financing Workshop for the Assoc. to Preserve Cape Cod in Jan. 2009.	Maintain active participation in CRWA programs.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
2.1 Revised	Establish Stormwater Citizen Advisory Committee	Engineering, F. Russell	Committee to meet once per year, publish results	BMP Completed in prior years.	None.
2.2 Revised	Implement Public Meetings for Citizen Input	DPW, T. Daley M. Rose	Hold meetings once per year, publish results.	Public meeting held on September 17, 2008 regarding automated trash collection and single stream recycling. See also March and April programs discussed in BMP 1.7 on the previous page.	None, at this time.
2.3 Revised	Encourage Citizen Communication and Reporting	Engineering, L. Taverna	Establish stormwater hotline for illicit discharges.	Customer service center and phone number established at City Hall. All stormwater questions and comments directed to Engineering or Utilities.	BMP Complete. Continue with current citizen communication and reporting.
2.4 Revised	Network with Local Community Groups	Engineering, M. Rose T. Daley	Observe outfalls, report illicit discharges & stream clean-up.	Friends of Crystal Lake recently formed. Friends of Hemlock Gorge currently work independently to protect this natural resource area. DPW supports these groups' efforts with trash collection, storm drain marking and other needs as they arise.	Continue to provide support to these groups and foster communication and a partnership approach with the City.
2.5 Revised	Implement Storm Drain Marking Program	Utilities, T. Jerdee	Volunteers mark catch basins with decals.	Permanent storm drain markers were installed along side of catch basins in the City. Storm drain stenciling was also completed in Newton Centre.	BMP Complete. Continue with storm drain marking program.
2.6 Revised	Promote Community Clean-Up day	Human Services B. Droz	Promote annual community clean-up day	Newton Serves held April 27, 2008. Volunteer groups target specific areas of the City for clean-up. For more info, see: www.ci.newton.ma.us/Human%20Services/NewtonServes/default.html M. Rose was on the Charles River Clean-up Steering Committee for the past 3 years.	Continue with annual community clean-up day. See also BMP 1.8

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
3.1 Revised	Establish Stormwater System Map	Engineering, T. Jerdee	Update GIS information, locate all outfalls.	BMP previously completed.	BMP Complete.
3.2 Revised	Establish Stormwater Database Management System	Utilities, T. Jerdee	Add stormwater information to Hansen database.	BMP previously completed.	BMP Complete.
3.3 Revised	Locate and Inspect all Outfalls	Utilities, T. Jerdee & M. Rose	Collect outfall data for Hansen database.	BMP previously completed.	Continue with monitoring and sampling program.
3.4 Revised	Review existing Ordinances and determine whether they adequately prevent Illicit Discharges	Engineering, L. Taverna	Propose to BOA revisions to stormwater ordinance/ policies, as appropriate	A Draft IDDE Ordinance has been prepared and is provided in Attachment A.	Continue working to have ordinance adopted.
3.5 Revised	Identify Illicit Discharge Sources	Utilities, T. Jerdee F. Russell	Identify bacteria sources via visual and CCTV inspections, dye and/or pressure tests.	DPW continually monitors and investigates potential indirect and direct illicit discharges to our storm drainage infrastructure. During this permit period, approx. 7,500 LF of storm drains were inspected by CCTV.	Continue with efforts to find and remove indirect (underdrains) and direct illicit discharges.
3.6 Revised	Establish Illicit Discharge Hotline	Engineering, L. Taverna M. Rose	Receive and track citizen reports of illicit discharges.	Hotline established (customer service center). One call received regarding an oil sheen observed on Cheesecake Brook.	BMP Complete. Continue to encourage citizen reporting of illicit discharges.

3.7	Train Employees	Utilities, T. Jerdee	Employees to help identify illicit discharges.	BMP Complete.	BMP Complete.
Revised					
3.9	Monitor City's infrastructure for illicit discharges and non-point source pollution	Utilities, T. Jerdee Engineering M. Rose	Observe major outfall discharges.	A comprehensive outfall monitoring program has been in place for several years. See Attachment C for sampling data and dry weather inspection dates.	Continue with implementation of IDDE program.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
4.1 Revised	Review existing Ordinances and determine whether they adequately regulate construction site stormwater runoff	Engineering, L. Taverna	Obtain Law Dept's opinion regarding existing practice and appropriateness of regulating construction site stormwater runoff.	Currently, there are numerous mechanisms through which new construction site runoff is prevented and controlled. These mechanisms include: an existing Ordinance (Sec 30-5c and 5d), DPW / Eng. Division Policy and the Special Permit approval process. Nearly all construction projects regardless of size are required to provide soil erosion control measures. DPW has two inspectors who ensure the measures shown on Approved Site Plans are implemented.	BMP Complete.
4.2 Revised	Implement Review of Construction Documents	Engineering, J. Daghlain	Establish policy for submittal of erosion control plans.	BMP Complete. Continue with plan reviews for building permits.	BMP Complete. Continue with plan reviews for building permits.
4.3 Revised	Implement Construction Inspection Program	Engineering, J. Daghlain	Develop guidelines, training, inspection of construction sites > 1 acre.	All construction sites inspected by Engineering. BMP guidelines followed.	Continue with inspection of all construction sites. Develop training for construction inspectors.
4.4 Revised	Educate Developers on Proper Erosion Control Techniques	Engineering, J. Daghlain / M. Rose	Distribute erosion control procedures to all applicants.	Engineering requires erosion control BMPs for all construction. Wall poster of proper erosion control techniques posted at permit application counter.	BMP Complete. Continue with implementation.
4.5 Revised	Provide opportunity for citizen review and input on construction projects	Engineering, J. Daghlain	Ensure citizen review procedures for construction projects > 1 acre.	Citizen input of construction projects occurs during Conservation Commission, Land Use, and Board of Survey public hearings. Citizen review also occurs when Environmental Impact Reports are required.	BMP Complete. Continue with implementation.

4.6	Revised	Establish Information Management System	Engineering, J. Daghlion	Track construction reviews and construction inspections.	An inspector is assigned to all construction projects over 1 acre (as well as many <1 ac). This person maintains a personal field log book of key events.	BMP complete. Continue with implementation.
4.7	Revised	Establish Standards for Erosion and Sedimentation Controls	Engineering, J. Daghlion	Establish adaptation of MADEP SWMP Standard 8	Engineering requires implementation of MADEP SWMP Standard 8 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
5.1 Revised	Review existing Ordinances and determine whether they adequately regulate post construction stormwater runoff	Engineering, L. Taverna	Obtain Law Dept's opinion regarding existing practice and appropriateness of regulating post construction stormwater runoff	Refer to BMP 4.1	Collaborate with Planning Department, Conservation Commission and DPW to determine if a new ordinance is necessary to further enhance our current practices.
5.2 Revised	Develop Stormwater Management Policy	Engineering, L. Taverna	Establish policy to establish minimum BMPs for developers.	BMP Complete. Continue with implementation.	BMP Complete. Continue with implementation.
5.3 Revised	Develop Stormwater Operations and Maintenance Policy	Engineering, J. Daghlia	Establish policy to establish minimum operations and maintenance plans.	Engineering requires the submittal of stormwater operations and maintenance plans for all construction > 1 acre. About 5 per year received for review.	BMP Complete. Continue with implementation.
5.4 Revised	Implement Controls to Minimize Impacts to Water Quality	Engineering, J. Daghlia / M. Rose	Implement use of structural and non-structural BMPs.	DPW/Eng. requires developers to implement MADEP Stormwater Standards (1-8) for applicable projects. Separate and supplemental requirements are outlined for smaller construction projects in the City's Stormwater Management Policy.	BMP Complete. Continue with implementation and stormwater recharge requirements.
5.5 Revised	Encourage Reducing Directly Connected Impervious Surfaces	Engineering, J. Daghlia	Encourage the use of grass swales and filter strips.	Recommended to developers during development review team meetings.	Continue to recommend for all construction projects > 1 acre. Continue to be a resource for developers and homeowners on alternatives to asphalt pavement.

5.6	Determine Capacity of Stormwater System Elements	Engineering, J. Daghlian	Perform capacity analysis for wet weather events.	A sewer and drainage study of the Old Farm Road System Evaluation project was completed. This southeastern corner of the City has historically been plagued with flooding and SSO's issues.	Many recommendations in this study will be designed and implemented in FY10.
Revised					
5.7	Review existing Ordinances and determine whether they adequately regulate recharges to groundwater	Engineering, J. Daghlian	Obtain Law Dept's opinion regarding existing practice and appropriateness of regulating recharges to groundwater	Current practices include on-site stormwater recharge requirements. See Attachment A. Obtain Law Dept's opinion on current stormwater policy.	BMP Complete.
Revised					
5.8	Implement Use of Groundwater Recharge Rates	Engineering, J. Daghlian	Explore adaptation of MADEP SWMP Standard 3	Engineering requires implementation of MADEP SWMP Standard 3 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.
Revised					
5.9	Implement Post Development Peak Discharge Rates	Engineering, J. Daghlian	Implement adaptation of MADEP SWMP Standard 2	Engineering requires implementation of MADEP SWMP Standard 2 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.
Revised					
5.10	Implement Requirements for Removal of 80% TSS	Engineering, J. Daghlian	Implement adaptation of MADEP SWMP Standards 4 & 7	Engineering requires implementation of MADEP SWMP Standard 4 & 7 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.
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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
6.1 Revised	Develop Staff Training Program	Environmental, E. Gentile	Train staff on spill prevention control, vehicle maintenance, and lawn care.	BMP Complete.	None.
6.2 Revised	Develop Stormwater Pollution Prevention Plan	Environmental, E. Gentile	Develop spill prevention control procedures.	A self-audit of DPW Yards was conducted in April 2009. Spill prevention procedures and spill kits are on premises. In general, good housekeeping practices are currently in place; however, improvements can be made.	Recommend developing a stormwater pollution prevention plan for DPW Yards.
6.3 Revised	Develop Flood Mitigation Plan	Utilities, T. Jerdee	Develop plan, perform exercises.	BMP Complete.	Continue field exercises and update the flood mitigation plan, as needed.
6.4 Revised	Establish Inspection Procedures	Utilities, T. Jerdee	Inspect storm drain system using visual inspection and CCTV.	Inspected and cleaned 10,500 linear feet of storm drain system with City's CCTV truck.	Continue to inspect storm drain system.
6.5 Revised	Incorporate BMPs into Standard Procedures	Utilities, T. Jerdee Highway, S. Tocci	Establish BMPs for municipal operations and maintenance.	Stormwater BMPs are designed into new or redevelopment projects for City-owned property, most recently would be the NNHS project.	BMP Complete. Review needs for other stormwater retrofit / improvement projects.
6.6 Revised	Establish Maintenance Procedures	Utilities, T. Jerdee	Vector/flush storm drains to remove sedimentation	BMP Complete.	BMP Complete. Continue with implementation.

6.7	Revised	Establish Maintenance Procedures	Utilities, T. Jerdee	Clean drainage brooks to remove sedimentation.	Cleaned 3,000 linear feet of drainage brooks.	Continue with annual maintenance of drainage brooks.
6.8	Revised	Establish Maintenance Procedures	Utilities, T. Jerdee	Clean catch basins every 2 years.	Approximately 5750 catch basins were cleaned during this reporting period.	Continue with catch basin cleaning program.
6.9	Revised	Establish Maintenance Procedures	Highway, S. Tocci	Sweep streets 2 times per year.	Streets were swept 5 times in 2008 and in some locations more than 5 times.	Continue with street sweeping program.

6.10	Revised	Establish Maintenance Procedures	Highway, S. Tocci	Calibrate salt spreaders annually.	Salt spreaders calibrated fall 2008.	Calibrate salt spreaders fall 2009.
6.11	Revised	Implement Household Hazardous Waste Program	Environmental, E. Gentile	Collect waste oil, antifreeze, paint, pesticides.	Household Hazardous Waste (HHW) is collected two days per week from May through October. See attached memo from Env. Affairs on results.	BMP Complete. City will continue to operate HHW collection facility.

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
7.1 Revised	Check Criteria for Meeting TMDL	Engineering M. Rose	EPA criteria for TMDLs checked.	Participated in MaDEP Advisory Group Sub-committee on the phosphorus TMDL for the Charles River.	Work towards reducing phosphorus load from Newton's brooks and conduits to the Charles River.
Revised					
Revised					
Revised					
Revised					

7a. Additions – N/A

7b. WLA Assessment – N/A