

MAY 1 2009

Annual Report

9

APR 28 2009

**National Pollutant Discharge
Elimination System (NPDES)
Phase II Stormwater Management Plan
2008 Annual Report – Year 6
NPDES Small MS4 NHR041033**

Seabrook, New Hampshire

Prepared for:

Town of Seabrook
Department of Public Works
P.O. Box 456
Seabrook, New Hampshire 03874-5942

Prepared by:

AECOM
300 Baker Avenue, Suite 290
Concord, Massachusetts 01742

Reports Submitted to:

United States Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, Massachusetts 02114

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095

April 2009

75727

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION AND BACKGROUND	1-1
2.0 SELF-ASSESSMENT REVIEW OF COMPLIANCE WITH THE PERMIT CONDITIONS ...	2-1
3.0 ASSESSMENT OF THE APPROPRIATENESS OF THE SELECTED BMPS.....	3-1
4.0 SUMMARY OF MINIMUM CONTROL MEASURES	4-1
4.1 PUBLIC EDUCATION AND OUTREACH	4-1
4.2 PUBLIC PARTICIPATION AND INVOLVEMENT	4-1
4.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION.....	4-1
4.4 CONSTRUCTION SITE RUNOFF CONTROL MEASURES	4-10
4.5 POST-CONSTRUCTION RUNOFF CONTROL MEASURES	4-10
4.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING.....	4-12
5.0 SUMMARY OF THE RESULTS OF ANY INFORMATION THAT HAS BEEN COLLECTED AND ANALYZED	5-1

LIST OF TABLES

<u>Table No.</u>	<u>Page</u>
4-1 Annual Evaluation.....	4-2

APPENDICES

- A. Comments from the Town of Seabrook to USEPA Regarding the Draft 2008 MS4 Permit
- B. Outfall 50 Sampling Summary Memo
- C. Letter from USEPA Indicating Transfer Station Coverage Under the 2008 MSGP
- D. Permanent Catch Basin Marker Information
- E. Dog Waste Management Brochure
- F. "Earth Day, Plus Seven" Event Article from Newburyport News

1.0 INTRODUCTION AND BACKGROUND

In 1990, The United States Environmental Protection Agency (USEPA) began implementing stormwater management requirements under the NPDES program. These requirements, known as Phase I of the NPDES stormwater program, were intended to reduce pollution in stormwater discharges for large urban areas with populations of 100,000 or greater.

On December 8, 1999, the Phase II Rule of the NPDES stormwater program was published to address Municipal Separate Storm Sewer Systems (MS4s) within urban areas of populations less than 100,000 that were not addressed under the Phase I program. Objectives of the Phase II rule are for the MS4s to develop, implement and enforce a 5-year stormwater program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.

On May 1, 2003 the USEPA issued the General Permit for Stormwater Discharges from MS4s. The general permit requires that the stormwater program for each MS4 submit an annual evaluation. The following report contains information regarding the activities on the stormwater program for the previous year. The report contains the information required in the general permit as follows: (a) Self-Assessment Review of Compliance with the Permit Conditions; (b) Assessment of the Appropriateness of the selected Best Management Practices (BMPs); (c) Assessment of the Program towards Achieving the Measurable Goals; (d) Summary of the Results of Any Information that has been Collected and Analyzed; (e) Discussion of Activities for the Next Reporting Cycle; (f) Discussion of any Changes in Identified BMPs or Measurable Goals; and (g) Reference any Reliance on another Entity for Achieving any Measurable Goal. The 2003 MS4 Permit expired in May 2008, although municipalities covered under that Permit were instructed to continue to operate under its terms and conditions.

In December 2008, the USEPA published the Draft 2008 NPDES MS4 Permit in the Federal Register. The Town of Seabrook participated in the public comment period for the Draft 2008 MS4, both independently and as part of the Seacoast Stormwater Coalition (the Coalition). Copies of the comments submitted to USEPA by the Town of Seabrook and by the Coalition are included in *Appendix A*. The USEPA indicated in January 2009 that if a Final 2008 MS4 Permit was not issued by May 2009, that MS4 communities should submit an Annual report as in Permit Years 1 through 5. As such, this Annual Report covers the first year beyond expiration of the 5-year MS4 Permit term, referred to hereafter as "Year 6".

2.0 SELF-ASSESSMENT REVIEW OF COMPLIANCE WITH THE PERMIT CONDITIONS

The Town of Seabrook filed a NPDES Phase II Stormwater Management Plan in March 2003. On August 13, 2003, the USEPA sent a letter to the town stating that the stormwater program was currently in compliance with the conditions of the General Permit. On May 1, 2004, May 1, 2005, May 1, 2006, May 1, 2007, and May 1, 2008, the Town submitted the Annual Reports for Years 1, 2, 3, 4, and 5, respectively, to the USEPA and the NH DES. The 2003 MS4 Permit expired in May 2008, although municipalities covered under that Permit were instructed to continue to operate under its terms and conditions. USEPA developed a Draft 2008 NPDES MS4 Permit and published it in the Federal Register on December 23, 2008; the public comment period for this Draft 2008 NPDES MS4 Permit closed on February 20, 2009. The USEPA is reviewing the comments received, which may impact the conditions of the 2008 Final MS4 Permit. The USEPA is expected to issue the 2008 Final MS4 Permit sometime in mid- to late-2009. In the interim period, USEPA has required that MS4s submit an annual report for the period April 1, 2008 to March 31, 2009. This Annual Report covers the first year beyond expiration of the 5-year MS4 Permit term, referred to hereafter as "Year 6".

The Town of Seabrook has completed the required self-assessment for the Year 6 Annual Report and has determined that the municipality continues to be in compliance with all the permit conditions. The Town continued improvements focused on the goals established for its 5-year Permit term, including: inspection of high-priority outfalls; investigation for new outfalls; construction and commissioning of a leachate storage tank at the Solid Waste Transfer Station; inspections at the Solid Waste Transfer Station; and expanding the focus on stormwater pollution prevention at the Department of Public Works (Department) Highway Facility. The Department continued its catch basin cleaning program, cleaning more than 1,000 catch basins, and educating residents near those basins of the activity by the use of doorknob hangtags. The Department also continued activities that were initiated in previous years, such as beach cleanup, subdivision inspection, outfall inspection (including three new outfalls and the 15 high-priority outfalls), storm drain stenciling and marking, activity in the Seacoast Stormwater Coalition, and distribution of stormwater educational brochures and materials. The Department completed an illicit discharge inspection at Outfall 50 (see report in *Appendix B*) Mechanical street sweeping by F.W. Hale in Year 6 included Centennial Street, Washington Street, and some portions of Walton Road, and was complemented by hand-sweeping of other curbed roadways by Department staff.

A significant objective accomplished in Year 6 was securing coverage for the Town's Solid Waste Transfer Station under the USEPA's 2008 NPDES Multi-Sector General Permit (MSGP). A copy of the

MSGP coverage letter from USEPA is included in *Appendix C*. The facility's coverage (under Sector N: Scrap Recycling Facilities) was effective as of March 2009. Requirements under the 2008 MSGP are more expansive than the previous Permit, so much focus in 2009 will be training staff in the additional analytical sampling and inspection requirements and implementing these items.

The Town actively participated in the public comment period for the USEPA's Draft NPDES Small Municipal Separate Storm System (MS4) Permit, which was issued in December 2008, both on its own and in conjunction with the Seacoast Stormwater Coalition (the Coalition).

Work in Year 6 included maintenance and improvement of stormwater infrastructure. This involved design of drainage corrections at: Groveland Avenue; the area of Atlantic Avenue at Lawrence Street; Worthley Avenue; and Phoenix Avenue. The Town also performed pipe cleaning (i.e., jetting) of storm drain infrastructure on Portsmouth Avenue (during which significant quantities of floatables and debris were removed from the system), Forest Court, and Route 1A near a stormwater pump station. Stormwater drainage infrastructure at the Solid Waste Transfer Station (including catch basins) was cleaned and flushed. Significant improvements were made to roadway and piping near Outfalls 22 and 78 on Old New Boston Road and on New Zealand Road- including curbing repair and replacement- in order to improve drainage. Finally, the town invested over \$15,000 in maintenance and reconditioning of pumps at two stormwater pump stations (located on Route 1A [Ocean Boulevard] near the welcome center and at River Street). This maintenance was required to maintain the functionality of these important stormwater management components.

The Department of Public Works and the Seabrook Conservation Commission (SCC) worked together to install approximately 400 permanent catch basin markers (shown in *Appendix D*), the purchase of which was discussed in the Town's Year 5 report and was made possible by a New Hampshire Department of Environmental Services Pet Waste Grant received by the SCC. A flier was also developed using these grant funds, which was distributed with dog license renewals in Town in March 2009 (refer to *Appendix E*).

Identification and mapping of stormwater outfalls, catch basins, pipes and other BMP structures was completed in Town in previous years of this Permit. However, the Town expanded on these efforts by completing inspections of 15 high-priority stormwater outfalls (defined as those discharging to impaired waters [such as Cain's Brook]) in the area of Cain's Brook near Route 1. The Cain's Brook and Mill Creek Management Plan was updated by the SCC in Year 6 to comply with new impaired waters documentation requirements. The updated Plan will soon be made available on the Town's website.

Additional efforts related to restoration of Cain's Brook include a new conservation easement and dam maintenance agreement for Noyes Pond.

The SCC was instrumental in a very successful trash pick up on Route 1 in Town, held on April 29, 2008 and therefore called "Earth Day, Plus Seven". Over 120 volunteers, SCC members, Town law enforcement officers, the Department of Public Works, other Town Departments, the Blue Ocean Society, Town Selectmen, and representatives from NH DES participated in the cleanup event, which collected 2,868 pounds of trash from ditches along the highway. Numerous Seabrook commercial establishments, community organizations, schools, and professional businesses also participated. This litter would otherwise be washed into Cain's Brook, creating further impairment and eventually entering Seabrook's famous salt marsh and popular beach areas. The Seabrook Recreational Center hosted a Spring Vacation Camp at the same time as the cleanup. The Camp educated children in the third grade and beyond about how litter has the potential to impact water and the environment. The children decorated reusable tote bags that were given to every volunteer. "Earth Day, Plus Seven" represented a true community-based education and stewardship event that involved many different levels of the public. An article about the cleanup published in the online version of the Newburyport News (included in *Appendix F*) further expanded the reach of the public-education portion of the event.

Several members of the Department of Public Works staff (at both the Solid Waste Transfer Station and the highway facility) attended training classes at the New Hampshire Public Works Academy, an educational organization coordinated by the Technology Transfer Center at the University of New Hampshire. Many of these training courses review fundamentals of spill prevention and control, as well as stormwater pollution prevention tools and Best Management Practices for highway facilities and Solid Waste Transfer Stations.

The Seabrook Planning Board gained approval to add a Stormwater Operations and Maintenance Manual to the list of stormwater Best Management Practices required by a developer. The objective of the Stormwater O&M Manual is to ensure that systems function as designed. The Manual will be reviewed by the Planning Board and approved as part of the review of the post-construction stormwater management system. The O&M Manual is incorporated in the Stormwater Pollution Prevention Plan (SWPPP) for developments required to produce these documents. Submittal and approval of an O&M Manual is a condition for approval of a subdivision or site plan.

In Year 6, the Department gathered information about a variety of alternatives to the current methods for disposing of household hazardous wastes. The objectives are to integrate good planning activities into collection of these materials and to centralize the collection of HHW materials at a fixed location for proper disposal. The Department is considering implementing an alternative collection program in 2009.

Going forward beyond Year 6, the Town will continue to consider the effects of global climate change on surface waters and stormwater management (e.g., requirements for changes in normal water and flood elevations, culverts, and road grade) as well as innovative Best Management Practices. Several drainage system improvement construction projects are scheduled for completion. The Town will continue to promote the concept of cluster zoning development to reduce areas of disturbance and extent of pavement. In Year 6, the Town began updating the infrastructure portion of the 2000 Master Plan, which includes stormwater facilities, and these updates will continue beyond Year 6.

The Town will continue to file for grants from various sources, including the New Hampshire Department of Environmental Services (NHDES), the New Hampshire Estuary Project (NHEP), and the Seacoast Stormwater Coalition, subject to availability, to continue achieving the Town's goals for stormwater management.

3.0 ASSESSMENT OF THE APPROPRIATENESS OF THE SELECTED BMPS

Most of the best management practices (BMPs) selected for the stormwater program were appropriate for the town of Seabrook. The town reviewed BMPs, reconsidered BMPs and determined that the following should be done to best incorporate public education, public participation and good housekeeping for municipal operations. This Chapter includes BMPs that have been revised or modified in Years 1 through 6.

COMMENTS ON APPROPRIATENESS

BMP ID Number	BMP Description
1.1	Distribute Information – Develop stormwater flyer to businesses with stormwater facilities on site Distribute Information – Include info on benefits of back-yard stream clean-up with West Nile Virus fact sheet

The BMP for the distribution of information was revised to provide a separate Stormwater Fact Sheet instead of only revising the West Nile Fact Sheet. The goal was also revised to include distribution to the Town Hall, Recreation Building, Public Library and interested parties. The BMP for the distribution of the stormwater flyer was updated to take into account that the goals will be met earlier in the SWMP.

In Year 4, this BMP was further revised to include leaving informational door hangers at residential locations during catch basin cleaning activities. These door hangers educate residents about the importance of being diligent about preventing materials from entering the stormwater system. This was continued in Year 5, with approximately 400 locations receiving door hangers and in Year 6, during which hangers were left at approximately 1,000 catch basins.

BMP ID Number	BMP Description
1.4	Classroom participation – Solid Waste Transfer Station Tours

The BMP for classroom participation was determined to be more appropriate as volunteer work in catch basin stenciling and litter clean up, then as a Solid Waste Transfer Station tour. Seabrook’s classroom participation goal was expanded to allow for activities in which kids can have a ‘hands on approach’ to stormwater management.

BMP ID Number	BMP Description
1.6	Other – Develop a program to promote, publicize and facilitate public reporting of illicit discharges or discharges

The BMP for developing a program to promote, publicize and facilitate public reporting of illicit discharges or discharges was revised since Seabrook is now working with the Coalition to develop a public education plan for illicit discharges. This cooperative and shared role has proven to be more cost-effective for many seacoast MS4 communities than each community developing its own illicit discharge detection and elimination (IDDE) system.

BMP ID Number	BMP Description
2.2	Volunteer Monitoring – Involve schools and neighborhood associations in future monitoring projects.

In Year 4, the Town of Seabrook used the Town’s website, www.seabrook.org, as a resource for soliciting volunteers from the community. For example, the Seabrook Conservation Commission (SCC) is presently posting a notice requesting volunteers for the Cains Brook Habitat Assessment. This was continued in Years 5 and 6, with the SCC being an active partner with the Department in stormwater management.

BMP ID Number	BMP Description
2.2	Volunteer Monitoring – Promotional Items

The BMP for volunteer monitoring was expanded from providing promotional materials to Stormwater Stakeholders to also providing the volunteers with the Stormwater Educational material.

BMP ID Number	BMP Description
2.5	Other – Post Outfalls

The BMP for posting the outfalls was revised to be completed by the Department staff. The SCC was too concerned about safety and liability to task this to volunteers.

BMP ID Number	BMP Description
3.1	Stormwater System Mapping – Map Outfalls

The BMP for outfall mapping was updated to reflect that the BMP was completed in Year 3.

BMP ID Number	BMP Description
3.2	Rules and Regulations – Strengthen ordinance prohibiting non-stormwater discharges into storm sewer system Rules and Regulations – Develop enforcement procedures for non-storm water discharges into storm sewer system

The BMP for Rules and Regulations was updated to reflect that the Town has exceeded its goal and implemented an ordinance in Year 3. The Rules and Regulations were adopted on May 25, 2005 as the Municipal Stormwater Drainage System Rules and Regulations, and were incorporated into Seabrook’s Code as Chapter 218A. The BMP goal was revised to include monitoring the implementation of the Rules and Regulations.

BMP ID Number	BMP Description
3.4	Post Removal Evaluation and Assessment – Program to inspect and report on conditions after illicit connection have been removed

The responsible department for implementing the BMP for post-illicit connection removal evaluation and assessment was updated to be the Code Enforcement Officer. However, efforts completed in Year 5 by the Department demonstrate the leadership role the Department has taken on the detection and elimination of illicit discharges. Going forward, follow-up inspections of illicit discharges will need to be a joint effort between Department and the Code Enforcement Officer.

BMP ID Number	BMP Description
5.1	Regulatory Mechanism

The BMP for a regulatory mechanism for post construction stormwater management was updated to reflect that the Town has exceeded its goal and implemented an ordinance in Year 3. The ordinance was adopted on May 25, 2005 as the Municipal Stormwater Drainage System Rules and Regulations.

BMP ID Number	BMP Description
5.1	Shoreland Protection

The Town evaluated this BMP in Year 4, and determined that adequate shoreland protection is included in New Hampshire Revised Statutes Annotated (NH RSA) 483-B. As such, it was not included in the Stormwater Rules and Regulations, and is no longer considered an appropriate BMP for the Town of Seabrook.

BMP ID Number	BMP Description
5.2 and 5.3	Review BMP Designs Site Inspection/ Enforcement Procedures

In Year 4, the party responsible for implementing this BMP was revised to include both the Department and the Planning Board, as both parties play a role in review and inspection of BMPs included in Stormwater Pollution Prevention Plans (SWPPPs). In Year 5, the Department extended additional offers to the Planning Board to assist with reviews of SWPPPs that are submitted.

BMP ID Number	BMP Description
5.4	O & M Procedures

The BMP for O & M procedures was updated to reflect that the Seabrook Municipal Stormwater Drainage System Rules and Regulations adopted on May 25, 2005 includes stormwater operation and maintenance procedures. In Year 6, the Planning Board expanded stormwater management requirements to include the development and approval of a Stormwater Operations and Maintenance Manual for all sites. The objective of the Stormwater O&M Manual is to “ensure that systems function as designed”. The Manual is reviewed by the Planning Board and approved as part of the review of the post-construction stormwater management system. The O&M Manual is incorporated in the Stormwater Pollution Prevention Plan (SWPPP) for developments required to produce these documents. Submittal and approval of an O&M Manual is a condition for approval of a subdivision or site plan.

BMP ID Number	BMP Description
6.2	Stormwater System Operation and Maintenance – Storm sewer system and drainage facility inspection program

The BMP for stormwater system operation and maintenance was amended to include inspection of drainage facilities by the Department instead of an outside source. This has been effectively implemented, with these inspections incorporated into daily Department staff activities by Year 5. In Year 6, the Department submitted a Notice of Intent to be covered by- and received coverage under- the USEPA’s 2008 NPDES Multi-Sector General Permit (MSGP). The conditions of Sector N of the 2008 MSGP (covering Scrap Metal Recycling facilities) are considerably more expansive than the previous Permit. As a result Department staff will need to incorporate the new, increased responsibilities (such as increased analytical sampling) into the inspection activities that are already completed.

BMP ID Number	BMP Description
6.3	Municipal Industrial Operations – Wastewater Treatment Facility Control Municipal Industrial Operations – Transfer Station Permitting

The BMP for municipal industrial operations was revised to review the Wastewater Treatment Facility Control permit status in Year 4 and to indicate that the responsible Town entity to complete this activity was the Wastewater Treatment Facility operator. In addition, the BMP was amended in Year 4 to include that stormwater management at the transfer station is covered under the 2003 MSGP. In Year 6, the primary regulatory driver for stormwater pollution prevention at the transfer station is the 2008 MSGP.

BMP ID Number	BMP Description
6.5	Parks and Open Space - Fertilizer and pesticide management controls

The BMP for fertilizer and pesticide application and management controls was extended until Stormwater Year 4 to allow the Department to work with other departments to develop the management program and record keeping procedures. In Year 6, the Department continued to evaluate the effectiveness of fertilizer and pesticide application and management goals in conjunction with the SCC.

4.0 SUMMARY OF MINIMUM CONTROL MEASURES

The USEPA required the town to meet six control measures. The following outlines the progress of the town in achieving the measurable goals beyond the fifth and final Permit year. The annual evaluation of BMPs is also detailed in Table 4-1, Annual Evaluation. Table 4-1 also discusses activities that will be continued if the Final 2008 NPDES MS4 Permit is not issued, and identifies any changes in the identified BMPs or measurable goals.

4.1 PUBLIC EDUCATION AND OUTREACH

This year, the town of Seabrook continued distributing the stormwater educational materials developed in Stormwater Year 2. The stormwater poster and several brochures were maintained at the Town's Recreation Building, Town Hall and Public Library. The poster, brochure, and stormwater fact sheets were posted on the Town's website at www.seabrooknh.org, under the Public Works Department's page. The Town expanded distribution of educational materials to include placing door hangers on residential locations when catch basins near those homes were cleaned.

During Year 4, the Town began developing a Plan to locate illicit connections and remove them from the system, which will include a mechanism for the public to report illicit connections. In Year 5, the Department developed a mailing and sent it to 385 businesses that maintain on-site stormwater facilities, such as catch basins. This mailing informed these businesses that the Department would perform inspections of selected facilities in 2008 with the goal of ensuring that inappropriate materials are not being discharged to the stormwater system and that stormwater infrastructure is being maintained properly. However, no inspections of selected commercial and industrial facilities were completed in Year 6.

4.2 PUBLIC PARTICIPATION AND INVOLVEMENT

The town's public participation and involvement this year focused on working as a partner with the Seabrook Conservation Commission. This organization has been effective at recruiting volunteers for stream cleanup and litter pickup events, and has long worked with the Department to stencil storm drains. In Year 5, the Department and SCC teamed together to stencil approximately 25