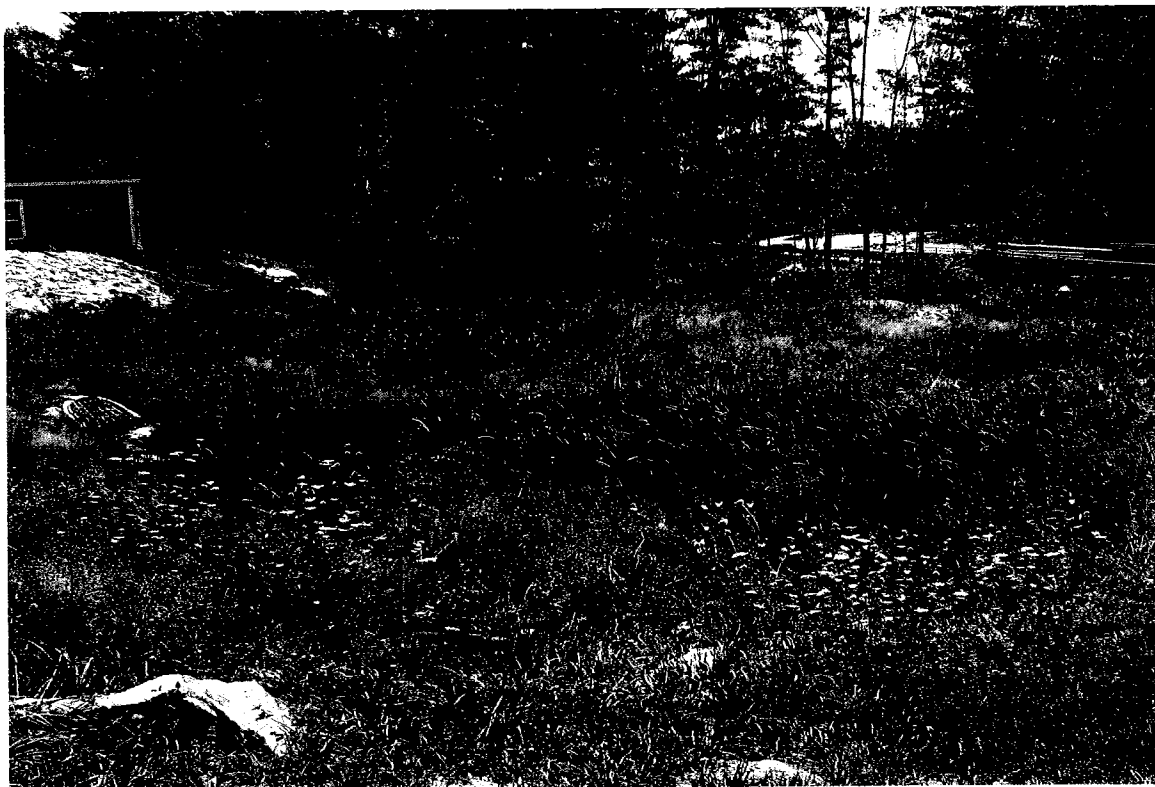


CITY OF MANCHESTER, NEW HAMPSHIRE



Stormwater Management Program

Annual Report

May 1, 2008 through April 30, 2009

Kevin A. Sheppard, P.E.
Public Works Director

Frederick J. McNeill, P.E.
Chief Engineer



Commissioners
William A. Varkas
Joan Flurey
William F. Houghton, Jr.
Robert R. Rivard
Henry Bourgeois

MAY 1 2009

CITY OF MANCHESTER
Highway Department
Environmental Protection Division

P

April 29, 2009

EPA – Region 1
Attn: Thelma Murphy
Office of Ecosystem Protection (CIP)
One Congress Street
Boston, Massachusetts 02114-2023

#09-15-EPC

RE: NPDES II Small MS4 General Permit Annual Report -
EPA NPDES Permit Number: NHR041017

Dear Ms. Murphy:

Enclosed is the annual Stormwater Management Program report for the year ending April 30, 2009 for the City of Manchester, New Hampshire. This document completes the annual program reporting requirements for the sixth year of the program.

Included are updates and new information regarding the Six Minimum Controls and Best Management Practices as required in the approved program.

Attached is a sheet with each task description, the status of the BMP and completion date if applicable. All the required tasks as outlined in the original program have been implemented.

The annual report requires an assessment of the BMPs to determine the degree of effectiveness. This information is contained throughout the report.

If you should have any questions or concerns in regards to this report please give our Stormwater Program Coordinator, Robert Robinson, a call at (603) 665-6899.

Sincerely,

Kevin A. Sheppard, P.E.
Public Works Director

Cc: Jeff Andrews – NHDES – Concord, NH
Frederick J. McNeill, P.E. – City of Manchester
Robert Robinson – City of Manchester

Manchester's Stormwater Management Program Summary

BMP Task Listing and Current Status for 2009

BMP#	Description	Develop	Implement	End Date	Priority
1-1	Assign SW Coordinator	8/1/2003	5/17/2003	7/30/04	Complete
1-2	Add SW Info to City's Website	10/1/04	Ongoing	3/21/04	Complete
1-3	Outreach with Local watershed groups	10/1/04	Ongoing	7/30/04	Complete
1-4	Brochures available DPW & library	7/1/04	Summer 04	7/1/06	Complete
1-5	Signage @ Urban Ponds (Reposted as Needed)	9/1/03		3/21/04	Complete
1-6	Pet Waste Brochure & Signage	7/30/04	Draft done 3/04	7/1/06	Complete

2-1	Comply with State Public Notice	Complied with Ordinance and Regulations Notices			
2-2	Annual Household Haz-waste Day	Yearly - Info provided by Recycling Coordinator			Complete
2-3	Collect Used Oil, batteries & tires	Yearly - Info provided by Recycling Coordinator			Complete
2-4	Urban Forestation "Green Street Program"	Mike Baer	Ongoing - 90 trees for year 2008		Complete
2-5	Stormwater & Combined Sewer Hotline	665-6899	9/1/03	7/30/2004	ASAP

3-1	Present Draft Storm Sewer Ordinance	Adpoted	12/1/03	7/30/2005	7/30/2006	Complete
3-2	Dry weather screening of outfalls 2X/5yrs		4/1/04	Summer 04	9/30/2005	Complete
3-3	Develop & Implement Illicit Discharge Protocol		1/1/04	Ongoing	7/30/08	Complete
3-4	Map Outfalls & Receiving Waters		Ongoing updates of City's GIS			Complete

4-1	Ordinance - Erosion, Sediment & Construction Material	12/1/2003 Adopted Ordinance & Regulations			Complete
4-2	Develop Procedure for Public Comment	9/1/03 Outline City Protocol for SWMP			Complete
4-3	Check Erosion & Construction Material Onsite	(Developed winter of 2003) List used at inspections			Complete

5-1	Ordinance for Runoff Controls for Developments	12/1/2003	Adopted Ordinance & Regulations		Complete
5-2	Recommend BMP Manual for Planners & Developers	8/1/2003	Outlined in Regulations - 6(A), 1-4		Complete

6-1	Install Silt Fence Around Snow Dump	9/30/2003	11/1/2005	Annually	Complete
6-2	Track CB Cleaning Program, Priority Basins Annually	8/1/03	9/15/03	Ongoing	Complete
6-3	Sweep Streets 3X Annually	9/1/2003	Before Phase II	Ongoing	Complete
6-4	SOPs for Disposal of CB and Street Sweeping Residuals	8/1/2003	Visit 6/26/03	In Practice	Complete
6-5	Minimize Salt Usage, Maintain Cover Over Salt Storage	12/1/2003 (1)	Nov-05	Ongoing	Complete
6-6	Program to Clean Pond Inlets and Trash Racks	8/15/03	Tank Inspections	Annually	Complete
6-7	Develop/Implement Employee Education Program	9/1/2003		Ongoing	Complete
6-8	Design & Construct Pond Specific P2 Projects	8/31/03	Nutts Pond	12/4/2007	Complete
6-9	BMPs for Derryfield Country Club	12/31/03	Spring/Summer 04	7/30/2006	Complete

(1)	Although the City covers salt piles, calibrates sander/salt spreaders and provides snow fence around snow dumping areas, there is no formal program. Salt is applied as needed and completely weather dependant. The City has done a pilot study in the Nutts Pond sub watershed and salt application rates and what can be done to reduce this impact. A pollutant-load watershed model was developed for this watershed. Watershed Sediment Loading Reduction brochure was developed and was sent to all the commercial property owners to try and reduce salt. A follow-up survey was conducted to determine the effectiveness of the program. A one page informational brochure was developed for residents with additional information on how they can protect the pond. This informational brochure will be posted at the kiosk.				
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**City of Manchester, New Hampshire
Storm Water Management Program Annual Report
May 1, 2008 through April 30, 2009**

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Attachment I – Street Sweeping Schedule

Attachment J – Baffle Tank Semi-Annual Cleaning Log

Attachment K – Engineering Staff & Sewer Crew Training Logs

Certification Statement

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.

Kevin A. Sheppard

Date: 4/27/09

for Kevin A. Sheppard, P.E.
Public Works Director

BMP #1 Public Education and Outreach

#1-1, Assign Stormwater Coordinator - (BMP completed)

Current Status: The City of Manchester hired the stormwater coordinator on May 17, 2003. The title for this position is Environmental Permits Coordinator.

BMP Effectiveness Evaluation: The Coordinator position allows the City to review, implement and enforce requirements of the stormwater program effectively. The responsibility of the position meets, but in many cases exceeds the level of expectations of the regulatory agencies. The hiring of the Coordinator has fulfilled all the requirements of the five-year program, one year ahead of schedule.

Future Goals: To continue to carry out the requirements of the stormwater program. To expand the program through implementation of stormwater practices that goes beyond the five-year program requirements.

In year seven, the coordinator expects to perform an inspection of most outfalls along the Piscataquog and Merrimack Rivers as was performed in year six.

The Coordinator believes that the continued development of inter-departmental cooperation between the Planning, Building, Parks & Recreation, Health and Highway Departments can expand to enhance the existing stormwater program.

To utilize the City's engineering inspection staff to a greater degree when they do construction site inspections related to infrastructure. Each year they learn more about the stormwater program and implementation of BMPs for erosion and sediment control. Training was conducted on April 9th and 10th.

#1-2, Add Stormwater Information to the City's Website – (BMP Completed)

Current Status: The City of Manchester uploaded the initial stormwater website on October 7, 2003 consisting of four pages. Since then the website has expanded considerably. The total number of pages accessible within the stormwater site is well over fifty, which includes outside pages, related to stormwater, and associated pdf files.

The Urban Pond website is a site linked and referenced throughout the stormwater website. The Urban Pond site is an example of how stormwater controls can improve and enhance the quality of local ponds and lakes. The websites for stormwater and urban ponds were updated this reporting year.

BMP Effectiveness Evaluation: This BMP continues to be a highly effective means of providing stormwater information for public access. Several cities and towns within New Hampshire and New England have reviewed and commented on the extensiveness and material included in Manchester's website.

Future Goals: To update the websites for changes to the stormwater program based on the next MS4 permit requirements. More pages will be added to inform the public of the status of the required tasks as outlined in the program.

#1-3, Conduct Outreach with Local Watershed Organizations – (Implemented & Ongoing)

Current Status: The City has provided funds for equipment and water analyses for the two watershed organizations (Crystal Lake Preservation Association – CLPA and the Pine Island Pond Environmental Society – PIPES). This commitment will continue through the seventh year of the Stormwater Program.

The Urban Pond Coordinator position was terminated in February of 2005 and was carried within the Planning Department through December 2005 when it was subsequently eliminated. There is no longer anyone assigned to coordinate these activities.

Without the Urban Pond Coordinator, outreach has continued through the Environmental Permits Coordinator and also the NHDES Coordinator for the Volunteer Rivers Assessment Program (VRAP - Jennifer Drociak).

The City has budgeted for the pond sampling. The level of sampling and analysis that was done when the Urban Pond Coordinator was with the City will remain the same. This work will be completed by the watershed organizations along with the Environmental Permits Coordinator and the NHDES, VRAP Coordinator.

BMP Effectiveness Evaluation: The outreach was highly effective. The City's Environmental Permits Coordinator, the NHDES, VRAP Coordinator and Conservation Commission will continue various aspects of the Urban Pond Program in the absence of the Urban Pond Coordinator. This program continues sufficiently to be effective for the City of Manchester.

Future Goals: To continue the support for the watershed organizations, participate in their annual meetings, support the sampling and analyses efforts and continue to update the website.

#1-4, Make Brochures Available at the DPW and Public Libraries – (BMP Completed)

Current Status: The City has a limited number of previously developed brochures that are still available. These will be used for the continued education of the public. These brochures will be targeted toward individuals/groups that would best benefit from this information.

The City continues to stock a moderate supply of bookmarks, EPA children's crossword place mats, rulers with 10 "Earth Care Tips" and pencils. These are distributed at Earth Day events and other environmental days.

The City has developed and printed brochures explaining the “Wastewater Treatment Process” (provided in the first stormwater report), when visiting classrooms to teach students. These will continue to be given during classroom educational sessions.

BMP Effectiveness Evaluation: There have been no surveys or feedback forms developed to gauge the effectiveness of this BMP. The department has received limited feedback from its citizens.

Future Goals: To continue the outreach to the students. The City will continue to provide tours of the WWTP and training with students on wastewater and stormwater from the three different high schools in Manchester. This program was started in 2007 and has become an annual event. The EPD also participates in the Science Fair judging with the Manchester Water Works on an annual basis. The City is working with an eagle scout to do an environmental project in the Nutts Pond watershed. The project will be documented in next year’s annual report. To develop and provide informational brochures that can be mailed with the 24,000 customer accounts during the seventh year of the program. The mailer will advertise the website, stormwater hotline and places where information can be obtained.

#1-5, Develop, Install & Maintain Signage at Urban Ponds – (BMP Completed)

Current Status: The signage information that was presented in the first report is still applicable. There are issues with vandalism, but these signs are repaired in the spring when the Parks & Recreation department begins to prepare the Urban Pond areas for public usage. During the 2008 spring and summer seasons the signs at the ponds were replaced. Some new informational signs were added. The Plexiglas was replaced with some new Lexan which is more durable and will stand up to vandalism better. The kiosks were repainted.

BMP Effectiveness Evaluation: It is difficult to gauge the effectiveness of this BMP. The signs are only effective if read. The kiosks are at the popular entrance areas of each pond and are easily accessible. The individuals who frequent the area most will probably maintain more of the sign’s information through subconscious familiarity. The renewed kiosks will be more effective getting the message across.

Future Goals: The goal is to maintain these signs in serviceable and readable condition. The kiosks will be updated, repaired, and painted to help get information to the residents that are using the ponds.

#1-6, Distribute Pet Waste Brochures with Dog Licenses & Increase Signage at Parks – (BMP Completed)

Current Status: There are signs for “No Fouling By Pet Waste” erected at the entrances of the urban ponds and also at City Parks. These signs reference the City ordinance that enforces this law.

In 2005, 10,500 brochures were mailed to all registered dog owners within the City of Manchester. The City Clerk has additional brochures that are given to all newly registered dogs. Residents who are renewing their dog licenses do not receive an additional brochure.

There is also signage at the ponds that indicate it is improper to feed ducks. This will help prevent geese and birds from fouling the shores of the ponds that the residents frequent.

BMP Effectiveness Evaluation: Studies have been undertaken in several metropolitan areas to determine the effectiveness of "Pet Waste" brochures. It has been determined that approximately 65% of the dog owners will clean up after their pets regardless of whether or not they have been informed via a brochure. Twenty percent of dog owners can be encouraged to pick up after their pets where they didn't previously through the encouragement of informational brochures. There will always be 15% of pet owners who will continue to ignore the law even if provide information on a continuing basis.

Manchester is hoping that the original brochures encouraged the uninformed 20% (approximately 2,000 dog owners to clean up after their pets) where they hadn't before.

Our department continues to be encouraged and hopeful that pet owners are responding as there has been little evidence of animal waste during our shoreline surveys for illicit discharges and the pond cleanups.

Future Goals: To keep residents informed in regards to their obligations handling their pet waste. Resupply the City Clerk's office with brochures when requested. Continue visual field observations for problem areas when higher amounts of pet waste are noted. Review kennels and animal shelters for compliance with pet waste disposal practices.

BMP #2 Public Participation

#2-1, Comply with State Public Notification Laws - (BMP Implemented & Ongoing)

Current Status: The City of Manchester continues to comply with all Public Notification Laws regarding the Stormwater Management Program process. The meetings that EPD scheduled in the early stages of ordinance development, with the Planning Board and the Department of Public Works Highway Commission, were announced on the weekly agenda for those perspective meetings, posted at City Hall, the Department of Highways and posted on the City's website.

Examples of public announcements announced in the local newspaper were included in previous year's reports.

Manchester went beyond the newspaper public notice and mailed agendas and draft documents to developers, contractors and engineering firms that usually do business within the City. The City incorporated many of the comments into the draft Ordinance and the Regulations.

In addition to the Public Notification Law, the City of Manchester has a guide that all departments, boards, committees and the Mayor and Aldermen must abide by. It references the rules on Meetings, the Formation of Committees, and Rules for Ordinances, Resolutions and Orders, Access to Public Records and Meetings, and Minutes and Records Available for Public Inspection. These Rules comply with the State of New Hampshire Public Notification Laws as outlined in RSA 47:6, and RSA 91-A:1 through RSA 91-A:6. This guidebook is available in all departments for reference should questions arise in regards to the implementation of Public Notice Law regulations.

Future Goals: To continue the public notification policy whenever any changes are made to the ordinance, or when substantial changes are made to the Regulations.

#2-2, Hold Annual Household Hazardous Waste Day (Implemented & Ongoing)

Current Status: The City of Manchester held two Household Hazardous Waste Days in Manchester during 2008. These dates have always fallen on the second Saturday of May and the second Saturday of October. The first collection was held on May 10, 2008 and the second was held on October 11, 2008. The date of collection is mentioned on the City's website, announced on flyers at Public Works and various other kiosks throughout the City and also announced in the newspaper the week of the collection. On the City's website is an alternative household products list. This list is included as Attachment A.

The City also sends out residential yard waste curbside collection schedules via sewer and/or water billing. It is also posted on the City's website. This helps prevent residents disposing of their leaves and yard wastes in brooks, streams and wetlands. The City provides information on yard waste and composting on the City's website. This information is included as Attachments B and C.

The following material amounts of wastes were collected during 2008:

Spring collection: Hazardous materials consisting of the following components: Paint waste (10,200 lbs), Aerosols (900 lbs), Waste Oxidizing Liquid (200 lbs), Waste Caustic Alkali Liquids (400 lbs), Waste Corrosive Liquids (200 lbs), Waste Pesticides Liquid (1,200 lbs), Waste Mercury (8 lbs), State Regulated Oil Waste (2,000 lbs), Environmental hazardous substances (10 lbs), Acid filled batteries (900 lbs), Haz-waste solid (5 lbs), Non DOT, Non-RCRA Regulated Material (5,700 lbs).

Total waste stream collected:

Total Collected – 21,813 Pounds

Fall collection: Hazardous materials consisting of the following components: Waste Lithium Battery (12 lbs), Paint waste (22,000 lbs), Aerosols (600 lbs), Waste Oxidizing Liquid (100 lbs), Waste Oxidizing Solid (200 lbs), Waste Corrosive Liquids (340 lbs), Waste Pesticides Liquid (610 lbs), Waste Pesticides Solid (2,000 lbs), Waste Cadmium Compounds (200 lbs), Waste Potassium Hydroxide (150 lbs), Waste Mercury (25 lbs), Waste Flammable Liquids (4,400 lbs), Non DOT Regulated Material (4,400 lbs).

Total waste stream collected:

Total Collected – 35,037 Pounds

During the course of 2008, Manchester also collected 167.3 tons of universal waste (consisting mainly of TVs, CRTs and computer peripherals).

BMP Effectiveness Evaluation: The collection of universal wastes this reporting year has increased by more than 60 tons compared to last year's report. This increase can be attributed to the State of New Hampshire landfill ban on televisions and computer monitors that went into affect on July 1, 2007. During this year we expect a large increase in the disposal of televisions with the change to digital broadcasting. This change will affect the whole country.

The household hazardous waste collection is possibly the most successful environmental program conducted semi-annually throughout Manchester. This program recovers a huge waste stream that could potentially be dumped in off road areas near brooks and ponds.

The City notifies all residents who receive a sewer bill regarding the pick up of yard waste and spring clean ups. It is also posted on the City's website. This notification should help in the prevention of people dumping leaves and grass-clippings along roadsides and brooks, which help reduce nutrients that move into the Merrimack River from the tributary streams.

Future Goals: Manchester will hold two hazardous waste collection days during the 2009 calendar year. One on May 9th and the other on October 10th.

#2-3, Continue Regular Used Oil, Battery and Tire Collection – (BMP Ongoing)

Current Status: The City collected 71.64 tons of tires, 2,060 gallons of used oil and 3.92 tons of used automotive batteries during 2008.

Future Goals: Continue the same level of accessibility and collection hours as currently established.

#2-4, Continue Urban Forestation through “Green Streets” Program - (Ongoing)

Current Status: The City of Manchester, through the Parks and Recreation “Green Streets Program,” sold and installed 90 trees during 2008. There were fewer trees planted this year than in the previous year. We expect this trend to continue based on the current economy. A Green Roof was installed in September of 2007 on the roof at City Hall using the GreenGrid system. The plants were sampled for heavy metals as a baseline to help determine uptake. The only metal that was detected was zinc. This is due to the zinc orthophosphate in the drinking water used for corrosion control. The plants were sampled again on October 7, 2008 for heavy metals. The two metals that were detected were lead and zinc. The concentration for lead was 2.5 ppb and the concentration for zinc was 38 ppb. The baseline concentration for lead was less than 1.3ppb and the baseline concentration for zinc was 35 ppb.

Future Goals: To continue the program as currently established. Assure the public is aware of the availability of this service through the City of Manchester. The City will sample the plants on the Green Roof for metal uptake on an annual basis.

#2-5, Publicize & Maintain Stormwater & Combined Sewer Hotline – (Ongoing)

Current Status: The City established the Stormwater / CSO Hotline on August 26, 2003. The phone number is (603) 665-6899. The City previously sent envelope stuffers with the 23,700 bills (residential, commercial and industrial customers) informing these users of the storm water hotline and how it can be used to address environmental concerns. Information on the hotline will be provided anytime a stormwater flyer is mailed with the residential billing. The hotline number is also provided on the City’s stormwater website and on the Environmental Permits Coordinator’s business cards. The hotline is now the Environmental Permits Coordinator’s main phone number.

BMP Effectiveness Evaluation: This BMP is effective after the residents receive a flyer in the mail. The impact of the flyer drops significantly a few weeks after receipt. Staff that answers the phones provides the stormwater hotline phone number or a direct transfer when a concern is received by any citizen. By having the hotline number as the Environmental Permits Coordinator’s main phone number this should help with the overall effectiveness of the hotline.

Future Goals: To continue using the website, flyers, brochures and other methods to inform the public of the stormwater hotline.