

CITY OF MANCHESTER, NEW HAMPSHIRE



MAY - 2 2006



Stormwater Management Program Annual Report

May 1, 2005 through April 30, 2006



**City Of Manchester
Department of Highways
Environmental Protection Division**

300 Winston Street
Manchester, New Hampshire 03103-6826
(603) 624-6595 Fax (603) 628-6234

Frank C. Thomas, P.E.
Public Works Director

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

April 27, 2006

Ms. Thelma Murphy
U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, MA 02114-8127

#06-002-EPC

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

Dear Ms Murphy:

Herein is the annual Stormwater Management Program report for the year ending April 30, 2006 for the City of Manchester, New Hampshire. This document completes the annual program reporting requirements for this third year of the program.

Included are updates and new information regarding the Six Minimum Controls; Best Management Practices (BMPs) as outlined in the programs required tasks.

There are two excel spreadsheets with task description, implementation status of the BMP, priority of task and completion dates if applicable. At the bottom of this chart is a brief explanation of some of the BMPs.

The annual report requires an assessment of the BMPs to determine the degree of effectiveness. This report completes the third year of the program. The three-year history now allows the City to evaluate the effectiveness of many of the program tasks.

If you should have any questions or concerns in regards to this report please give our Storm Water Program Coordinator, Rick Cantu, a call at (603) 624-6513.

Sincerely,

Frank C. Thomas, P.E.
Director of Public Works

Cc: NHDES – Concord, NH
Fred J. McNeill, P.E. – City of Manchester

Manchester's Storm Water Management Program Summary

Priority Listing In-House

BMP#	Description	Develop	Implement	End Date	Priority	Completed
1-1	Assign SW Coordinator	8/1/2003	5/17/2003	7/30/04	A	5/17/03
1-2	Add SW Info to City's Website	10/1/04 (1)	Ongoing	3/21/04	C	10/7/2003
1-3	Outreach with Local watershed groups	10/1/04 (2)	Ongoing	7/30/04	B	Ongoing
1-4	Brochures available DPW & library	7/1/04 (3)	Summer 04	7/1/06 (3)	D	Summer 04/ ongoing
1-5	Signage @ Urban Ponds	9/1/03 (4)		3/21/04	B	9/25/2003
1-6	Pet Waste Brochure & Signage	7/30/04 (5)	Draft done 3/04	7/1/06	C	1/28/2005

2-1	Comply with State Public Notice	Ongoing - provide notice when NOI & SWMP are effective.				City Protocol
2-2	Annual Household Haz-waste Day	Ongoing - Info provided by Recycling Coordinator				May 14 & Oct 08
2-3	Collect Used Oil, batteries & tires	Ongoing - Info provided by Recycling Coordinator				12/31/05
2-4	Urban Forestation "Green Street Program"	Mike Baer	Ongoing -	126 trees for the year 2005	C	12/31/05
2-5	Stormwater & Combined Sewer Hotline	665-6899	9/1/03	7/30/04 (6)	ASAP	A

3-1	Present Draft Storm Sewer Ordinance	In Process	12/1/03 (7)	7/30/2005	7/30/2006	A	2/4/04
3-2	Dry weather screening of outfalls 2X/5yrs		4/1/04 (8)	Summer 04	9/30/2005	B	Completed
3-3	Develop & Implement Illicit Discharge Protocol		1/1/04 (9)	Ongoing	7/30/08	A	8/1/03
3-4	Map Outfalls & Receiving Waters		Ongoing, develop system to assure data is updated in GIS				12/12/2005

Priority list is **A** being **most important** with **D** being **least important**
Notes listed below correspond to their numbered counterpart above.

(1)	City Storm Water Website is expansive. URL - http://www.manchesternh.gov/CityGov/dpw/EPD/stormwater/home.html
(2)	Crystal Lake Association, Dorrs Pond Preservation Society, Pine Island Pond Environmental Society - Determine how we will continue supporting these groups now that the Urban Ponds Coordinator position has ended.
(3)	Assess existing brochures developed to date.. Additional brochures to be developed in year 2006. Distribute billing inserts three times over the coming year.
(4)	Signs have been erected and now are on the annual maintenance list.
(5)	Completed in 2005. Brochures given to new dog owners or mailed to first time dog owners.
(6)	Published in 2005. Will send out three bill stuffers in 2006 with the storm water hotline information.
(7)	Ordinance went before City Council and passed the first hurdle. It will be adopted after review in 'Bills on Second Reading' - June 2006
(8)	One round completed by the State of New Hampshire field staff. Follow up inspection completed by EPD staff. The plan is to do one outfall screening on an annual basis and include the 1 Screening in Summer 2004 during low
(9)	Train Street crews in Detection of Illicit Discharges. Review EPA/Center for Watershe Protection Manual and incorporate any chages into the City's existing protocol.

Manchester's Storm Water Management Program Summary

Priority Listing In-House

BMP#	Description	Develop	Implement	End Date	Priority	Completed
4-1	Ordinance - Erosion, Sediment & Construction Material http://www.manchesternh.gov/CityGov/dpw/HWY/files/93BAE5B68943418C9C4287770185F97C.pdf	12/1/2003 (10)	6/21/2004	City's New Manual	B	In Draft Ordinance
4-2	Develop Procedure for Public Comment	9/1/03 (11)	Outline City Protocol for SWMP		B	8/1/2003
4-3	Check Erosion & Construction Material Onsite	(Developed winter of 2003)	List used at inspections		B	In Use
5-1	Ordinance for Runoff Controls for Developments	12/1/2003	Included in the Draft Ordinance		B	In Draft Ordinance
5-2	Recommend BMP Manual for Planners & Developers	8/1/2003	Manuals outlined in BMP #5-2 pg, 15		A	DPW manual
6-1	Install Silt Fence Around Snow Dump	9/30/03 (12)	11/1/2005	Annually	A	11/1/05
6-2	Track CB Cleaning Program, Priority Basins Annually	8/1/03 (13)	9/15/03	Ongoing	A	12/31/05
6-3	Sweep Streets 3X Annually	9/1/2003 (14)	Before Phase II	Ongoing	B	Min 3X/yr.
6-4	SOPs for Disposal of CB and Street Sweeping Residuals	8/1/03 (15)	Visit 6/26/03	In Practice	B	Submitted Grant
6-5	Minimize Salt Usage, Maintain Cover Over Salt Storage	12/1/03 (16)	Nov-05	Ongoing	B	11/1/05
6-6	Program to Clean Pond Inlets and Trash Racks	8/15/03 (17)	Baffle Tank Sched	Annually	B	4/1/06
6-7	Develop/Implement Employee Education Program	9/1/03 (18)		Ongoing	A	3/22/06
6-8	Design & Construct Pond Specific P2 Projects	8/31/03 (19)	2000 with SEPP	Ongoing	B	CEI Contract
6-9	BMPs for Derryfield Country Club	12/31/03 (20)	Spring/Summer 04	7/30/2006	C	8/1/04

Priority list is A being **most important** with D being **least important**
 Notes listed below correspond to their numbered counterpart above.

(10)	Included in the Draft Ordinance
(11)	Public Hearing on Ordinance on October 3, 2005. Received and incorporated public comments.
(12)	Snow is piled in an unused lot. The silt fence is left after snow season. The fence is checked in November and fixed if necessary.
(13)	Sheet has been designed and was used in last reporting year and this reporting year.
(14)	Keeping with the existng schedule that has been in place for many years. Mild winter means more street sweeping than usual.
(15)	Current practice is adequate. Looking to obtain a grant to enhance the process.
(16)	Current practice is carried forward. Annual calibration of sander/salter before season begins. Snow melter used if warranted.
(17)	Checklist developed and in use. List submitted with last years report and again this year. Adding structures as they are installed.
(18)	Crews have been trained every year. Newsletter reaches all City Employees. The City's website has many beneficial links.
(19)	CEI is designing final Supplemental Environmental Projects Programs project for Nutts Pond. Awaiting information on Grant & Permits.
(20)	Review of Country Club practices completed. Will develop a spill program for the maintenance garage. Will review grounds for erosion.

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.

Frank Thomas

Date: 4/27/06

Frank C. Thomas, P.E.
Director of Public Works

BMP #1 Public Education and Outreach

#1-1, Assign Storm Water Coordinator - (BMP completed)

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

BMP Effectiveness Evaluation: This position allows the City to remain in compliance with the requirements of the program. The City has taken the lead in the regional storm water group. Without the Storm Water Coordinator position Manchester would have a difficult time complying with the program requirements. The position has allowed the City to meet or exceed the level of expectations of the regulatory agencies.

Future Goals: To continue the implementation of the five-year program and complete the outlined tasks within the time frame specified in the original submission. To expand the program to review storm water issues not outlined in the tasks that are required under the program.

The coordinator expects to perform annual inspection of the outfalls along the Piscataquog and Merrimack Rivers. The 15 outfalls identified by the New Hampshire Department of Environmental Services will receive additional random inspections.

There are two Industrial Pretreatment personnel available to assist the Storm Water Coordinator to track illicit discharges. There are also staff available from the Highway Department sewer crews

The Engineering inspection staff is trained to report back to the Storm Water Coordinator any failures noted with construction BMP compliance during their field inspections.

The jet vac, sewer crews have been trained to identify instances of varying pollutants found in catch basins and drainage swales. When these are found, the Storm Water Coordinator is notified and a follow up on the notification completed.

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

Current Status: The City of Manchester uploaded the initial storm water website on October 7, 2003 consisting of four pages. Over the past two and a half years the site has continued to grow. The site is now home to an expanding site and can be accessed at the following url: <http://www.manchesternh.gov/CityGov/dpw/EPD/stormwater/home.html>

The home page has informational links to the six minimum controls and a link to a draft copy of the proposed Ordinance and Regulations.

The Citizens awareness page has links to three BMP control pages of the six minimum control requirements.

The Public Education and Outreach page has links to Manchester's recycling program and to the EPA's, "Stop Pointless Personal Pollution" activities site.

The Public Participation page has links to Manchester's Urban Pond Program website and also to EPA's Storm Water Outreach Materials website.

The Urban Pond web site is an extension of the Supplemental Environmental Projects Programs and contains extensive information on the health of the Urban Ponds. This is an important sub link, as one of the main storm water program functions is to assess, monitor and improve the environmental quality of the City's ponds.

The Illicit Discharge page briefly outlines the steps the City takes in tracking Illicit Discharges. This web page is a synopsis of the 10-page protocol for Illicit Discharges developed in September 2003 and submitted with the first storm water report in May of 2004.

The Construction Site Runoff Controls page has nine outside links to BMPs used in other areas of the country.

The Post Construction Runoff page has 13 links to structural BMP informational sites. The page also has 12 links to non-structural BMPs sites.

The "Contractor Requirements" page has links to the EPA's Notice of Intent page and the ENOI filing page. There is also a link to an example Storm Water Pollution Prevention Plan. A short slide show on contractor obligations regarding the Storm Water Program can be found on this page.

The left navigation bar has a link to a "Frequently Asked Questions" page with 14 commonly asked questions and accompanying answers.

BMP Effectiveness Evaluation: This BMP is proving to be highly effective in regards to having a central location with storm water information for public access. In reviewing several municipal storm water web sites (Attachment A) throughout the U.S., Manchester believes it has one of the top informational sites currently published.

Future Goals: To continue to expand upon the information contained in the site. To review the site quarterly to assure the information is up-to-date and relevant. The City would also like to include a student page with more informational links to activities that target elementary and middle school age students.

#1-3, Conduct Outreach with Local Watershed Organizations –

Current Status: Storm drain stenciling was completed at Pine Island Pond on May 14, 2005.

The Urban Ponds Program Coordinator interacted with local watershed organizations within Manchester that included the Dorrs Pond Preservation Society, the newly formed

Pine Island Pond Environmental Society (PIPES), the Crystal Lake Society and the Piscataquog Watershed Association.

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

The City is applying for a Healthy Communities Grant to support the watershed organizations over the next two years. A copy of the one-page screening application is included as Attachment B. The application was approved and the City will proceed on the full grant submission for May 26, 2006.

BMP Effectiveness Evaluation: The outreach was effective through 2005. It is anticipated that the Conservation Commission will become more interactive with these watershed groups. This task could lose ground over this reporting year as there is no designated person or department to pick up where the Urban Pond Coordinator left off.

Future Goals: To review all tasks performed by the Urban Pond Coordinator. Rank the Urban Pond tasks by priority of need and results produced. Sit with the Supplemental Environmental Projects Programs committee to determine how best to carry on the functions that have produced good results and support storm water management. Decide to what extent the Storm Water Coordinator will interact with these organizations. Determine how these functions are best incorporated into the storm water program. Make these findings part of the five-year close out report required by the SEPP program. Manchester also plans to submit the full grant request if the initial proposal makes it through the screening process.

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

Current Status: The City continues to rely on the brochures previously developed and recently proposed to continue to educate the public. These brochures will again be made available during environmental events within the City and placed at other public locations.

The City provides the RiverSmart's brochure titled, "10 Tips for Conserving Water" at the EPD billing office.

The City distributes bookmarks, EPA children crossword place mats, rulers with 10 "Earth Care Tips" and pencils for Earth Day celebration.

The City provides students with the City made brochure explaining the "Wastewater Treatment Process" (provided in the first storm water report), when visiting classrooms to teach students.

As stated in last year's goals, a two-sided envelope stuffer (Attachment C) was designed and costs for preparation of 24,000 brochures were obtained. In review of this brochure and discussions with the SEPP committee, it was decided to cut the brochure in thirds and provide some information over three billing cycles, rather than bombard the users with one overwhelming brochure.

BMP Effectiveness Evaluation: It is difficult to gage the effectiveness of this BMP. We have received token feedback from the general public. We know the information is getting out to the public. It is unclear if the handouts are being read and used as intended.

Future Goals: To finalize the information on the bill stuffer brochure. Assure that each 1/3 section is brief, but informative. To begin placing these brochures within the sewer bills by the 1st billing cycle in July of 2006. Advertise the website, storm water hotline and places where information can be obtained. Develop a notification for next year's billing cycles.

#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.

BMP Effectiveness Evaluation: It is difficult to gage 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.

Future Goals: The goal is to maintain these signs in serviceable and readable condition. Do at least one survey at a popular location (Crystal Lake) to determine if the people surveyed can list what is presented at the kiosks and park signage.

#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.

Last year 10,500 brochures were mailed to all registered dog owners within the City of Manchester. There are 1,2000 brochures remaining. The clerks give out these brochures to all newly registered dog owners, or walk-ins that are registering a dog for the first time. Once these brochures are exhausted, a new supply will be provided to the City Clerk's office.

BMP Effectiveness Evaluation: We have fielded several calls in regards to this brochure. Many were positive, but some stated that we should clean up all our Combined Sewer Overflow (CSO) discharges before worrying about the dog waste.

During our summer survey of the riverbanks and annual sampling of CSOs along the river we have found infrequent incidents of animal waste left behind by the owners.

Future Goals: To keep residents informed in regards to their obligations handling their pet waste. Resupply the City Clerks office with brochures. To perform continuing visual observations for problem areas when we do our field investigations. To target kennels and animal shelters for compliance with pet waste disposal practices.

ATTACHMENT A

Storm Water Web Site Evaluations

<http://www.asist.net/site/links/city.htm> - Is a site with example Storm Water databases. The rating system is for 0 being the worst it could be to 5 being extremely good.

City Name	Site Rating	Informational Rating
Albuquerque, NM	2	4
Colorado Springs, CO	1	4.5
Birmingham, AL	3.5	2
Huntsville, AL	2	1.5
Phoenix, AZ	2	1.5
Tempe, AZ	1.5	1
Berkley, CA	2	1
Sacramento, CA	4	4
San Diego, CA	4	4
San Diego County, CA	4	4
San Joaquin, CA	3	3
Santa Monica, CA	4	0
Denver, CO	3	1
Jacksonville, FL	4	0
Orlando, FL	5	2
Lodi, CA	3	3
Los Angeles, CA	4	5
Los Angeles County, CA	4	4.5
Manchester, NH	4	4
Orange County, CA	4	4
Placer County, CA	3	2
Pleasanton, CA	3	0
Roseville, CA	4	4
San Antonio, TX	2	4
Willington, VT	1	1
Tallahassee, FL	2	2
Venice, FL	1	1
Metro Atlanta, GA	4	4
Griffin, GA	3	3
Boise, ID	5	3
Bowling Green, KY	5	2

ATTACHMENT B

Organization Name: Environmental Protection Division (EPD)

Project Title: Manchester Urban Ponds Water Quality Monitoring and Restoration Program

Address: 300 Winston Street, Manchester, NH 03103

Project Contact: Rick Cantu – phone: (603) 624-6513, fax: (603) 638-6234 e-mail: rcantu@manchesternh.gov
Jen Drociak – phone: (603) 647-1826, fax: (603) 271-7894, e-mail: jdrociak@des.state.nh.us

Dollar Amount Requested from EPA: \$20,000 (To be distributed among the six urban ponds currently reviewed within the Urban Ponds Restoration Program. Sampling & analytical equipment will be purchased for the PIPES and CLPA. These ponds are monitored under the guidance of the NHDES VLAP).

Dollar Amount of Matching Funds: \$4,000 (20% provided by EPD Supplemental Environmental Program)

Dollar Amount of Total Project Budget: \$24,000

List of Organizations Partnering on the Project: Crystal Lake Preservation Association (CLPA), Pine Island Pond Environmental Society (PIPES), Doors Pond Preservation Society (DPPS), City of Manchester Conservation Commission (MCC), City of Manchester Environmental Protection Division (EPD) and the New Hampshire Department of Environmental Services (NHDES).

Project Summary Information

A. Three urban pond organizations exist in Manchester. The City has been the driving force in data collection, analysis, review and preparing reports for these ponds over the past six years. Manchester seeks this grant to turn over the stewardship of these ponds to the above named organizations. The groups vary in the stage of organizational growth and ability to assume the full responsibility for continuing the monitoring of their respective ponds. The organizations will be trained in water quality sampling technique, native and exotic plant identification, nutrient impacts, awareness of suspect runoff and discharges, pollution prevention measures and water quality measures that can be taken around their homes. These groups will assume the overall stewardship of their ponds. Owner/abutters will be educated on actions they can take in maintaining and improving the existing water quality of their ponds. The current state of these ponds is listed on the below websites:

<http://www.manchesternh.gov/CityGov/dpw/EPD/SEPP/Pond/Crystal.html>

<http://www.manchesternh.gov/CityGov/dpw/EPD/SEPP/Pond/Dorrs.html>

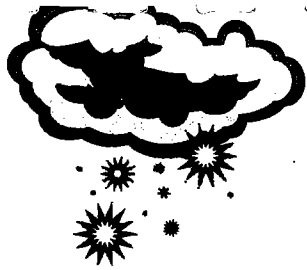
<http://www.manchesternh.gov/CityGov/dpw/EPD/SEPP/Pond/PineIsland.html>

These ponds are in southwest corner, southeast corner and northern fringes of the Manchester Urban Compact area. These bodies of water reflect the impact of recreational/residential use (Crystal Lake); industrial use and airport runway impacts (Pine Island Pond) and commercial/strip mall use (Dorrs Pond).

B. The primary target program is the water quality monitoring and analyses. The grant will support the cost of analysis by the NHDES Laboratory Services lab, the purchase of sampling and field test kits and neighborhood outreach. This data-gathering step is critical to determine water quality trends over time, plan and implement best management practices and restoration projects

Outreach is a component of educating the citizens who abut the ponds. The residents will receive information by newsletter, website, e-mail distribution lists, community access television, etc. of meetings, clean up activities, restoration opportunities and the general health of their ponds. Outreach will be provided through the website and also press releases.

The anticipated measurable results will be increased association participation, improved water quality, a reduction in invasive species, visible small embankment restoration, a chronology of analytical test results and transfer from a public overseen project to a resident neighborhood project.



Storm Water Hotline

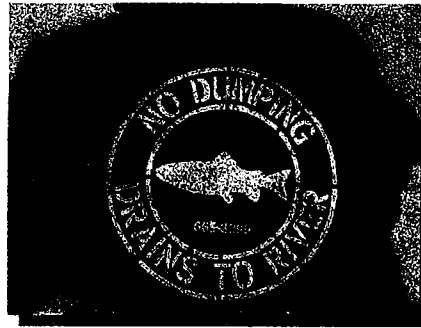
(603) 665-6899

The Storm Water Hotline is an emergency phone line when you cannot contact anyone at the Highway or EPD offices. This phone line is mainly used on nights and on weekends. Call the other contact numbers found on this brochure first if your complaint is during normal business hours.

Inform us if you see any construction activity that allows dirt to flow into storm drains, rivers or wetlands. If you see piles of trash, demolition debris or other suspicious materials piled at construction sites give us a call.

If you believe something doesn't seem right at a construction site call and discuss it with us. We will investigate and determine if a violation is taking place.

We rely on your eyes and input, as it is impossible for us to be everywhere at once. We are always receptive to your concerns and issues.



These two symbols will start showing up in your neighborhoods near the catch basins and storm drains.

Whatever you put into these structures goes directly to the Merrimack River.

They are only meant to collect rain and sand. If you keep these clean, you keep the river clean.



ATTACHMENT C



Storm Water Management Updates

Department of Highways

Storm Water Coordinator

Rick Cantu

Phone: 603-624-6513

Hotline: 603-665-6899

Fax: 603-628-6234

Highway Tel: 603-624-6444

BMP #2 Public Participation

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

Current Status: The City of Manchester continues to comply with all Public Notification Laws through the development of the Storm Water 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 and DPW, and posted on the City's website.

Included at the end of this section is a copy of the Storm Water Ordinance public notification (Attachment D) as announced in the local newspaper.

Manchester also took an additional step beyond the minimum requirements and notified developers, contractors and engineering firms that usually do business within the City. A copy of the public notification brochure that went to these companies is included as Attachment E. Also included as Attachment F is the mailing list for those who directly received the brochure via mail.

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, 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: A Storm Water Ordinance and supporting Regulations have been finalized via the internal City and public hearing processes. The public hearing was conducted, comments received and a final draft completed. During this reporting year the goal will be to implement the Ordinance with supporting Regulations.

#2-2, Hold Annual Household Hazardous Waste Day

Current Status: The City of Manchester held two Household Hazardous Waste Days in Manchester during 2005. These dates have always fallen on the second Saturday of May and the second Saturday of October. The first collection was held on May 14, 2005 and the second was held on October 8, 2005. 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. The following material amounts were collected during the 2005-reporting year.

Spring Haz-waste clean up – Hazardous materials consisting of the following components: Waste Oxidizing Liquid, Waste Caustic Alkali Liquids, Waste Corrosive Liquids, Pesticides Liquid, Pesticides Solid, Mercury Waste, Non-RCRA, Non-regulated Hazardous Waste, Solid, Non-RCRA, Non-regulated Hazardous Waste, Liquid.

Total Collected - 3,350 Pounds

Waste Oil Collected – 330 Gallons

Fall Haz-waste clean up – Hazardous materials consisting of the following components: Waste Oxidizing Liquid, Waste Caustic Alkali Liquids, Waste Corrosive Liquids, Pesticides Liquid, Pesticides Solid, Mercury Waste, Non-RCRA, Non-regulated Hazardous Waste, Solid, Non-RCRA, Non-regulated Hazardous Waste, Liquid.

Total Collected - 4,350 Pounds

Waste Oil Collected – 110 Gallons

During the course of the 2005 reporting year, Manchester also collected 39.71 tons of universal waste (consisting mainly of TVs, CRTs and computer peripherals).

BMP Effectiveness Evaluation: This has been one of the more successful programs conducted semi-annually throughout Manchester. There are still remote areas within Manchester that serve as illegal drop-off sites for citizens that refuse to make the effort to travel to the recycling center. The program's success is evident when any citizen brings their waste to the drop off center and witnesses the vast piles of refuse the City collects on a continual basis.

The City notifies all residents who receive a sewer bill regarding the pick up of yard waste and spring clean ups. This notification should help in the prevention of people dumping leaves and grass-clippings along roadsides and brooks and help reduce nutrients that move into the Merrimack River from the tributary streams. A copy of this notification is included as Attachment G.

Future Goals: Manchester expects to hold two haz-waste collection days during the 2006 calendar year. One on May 13th and the other October 14th.

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

Current Status: The City collected 64.29 tons of tires, 1,660 gallons of used oil and 4.5 tons of used automotive batteries during the 2005 calendar year. This was in addition to the materials collected on the haz-waste collection days listed above.

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

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

Current Status: The City of Manchester, through the Parks and Recreation “Green Streets Program,” sold and installed 128 trees during the calendar year of 2005. There were two fewer trees planted this year than in the previous year.

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.

#2-5, Publicize & Maintain Stormwater & Combined Sewer Hotline

Current Status: The City established the Storm Water / 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. This notice will be provided again this year over the period of mid-July through late November (over the course of the 11-week billing cycle – see BMP #1-4).

The hotline number is also provided on the City’s storm water website.

BMP Effectiveness Evaluation: This BMP is effective after initial receipt of the notice. However, as weeks pass, the residents tend to lose the information and inquire with issues to other departments (i.e. police, fire for basement flooding, highway dispatch etc). After that period, the calls drop off dramatically until there are probably only one or two calls every month. There is still the misconception that the hotline is to be used for flooding issues during periods of heavy rains. This is outside the intended use for the storm water hotline for erosion complaints.

Future Goals: Mention the storm water hotline number on each of the three separate mailings that are going to the residents over the course of this year. To continue to advertise the hotline at every opportunity.



ATTACHMENT D

CITY OF MANCHESTER
Office of the City Clerk



Leo R. Bernier
City Clerk

Carol A. Johnson
Deputy City Clerk

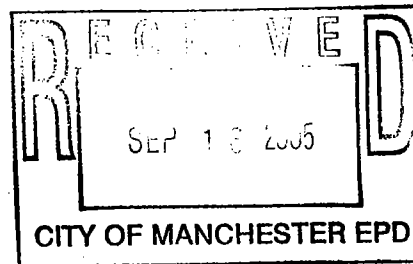
Paula L-Kang
Deputy Clerk
Administrative Services

Matthew Normand
Deputy Clerk
Licensing & Facilities

Patricia Piecuch
Deputy Clerk
Financial Administration

September 13, 2005

Union Leader Corporation
Attention: Rosa Gonzalez
P. O. Box 9555
Manchester, NH 03108-9555



Dear Ms. Gonzalez:

Enclosed is a Legal Notice to be published in *The Union Leader* on Friday, September 16, 2005.

Should you have any questions, please do not hesitate to contact me at 624-6480.

Sincerely,

Paula L-Kang
Deputy Clerk

Enclosures

ATTACHMENT D

LEGAL NOTICE

CITY OF MANCHESTER, NH

A Public Hearing will be held on Tuesday, October 4, 2005 at 5:30 PM in the Aldermanic Chambers of City Hall, One City Hall Plaza, Manchester, New Hampshire for the purpose of hearing those wishing to speak for or against the following ordinance amendment:

“Amending the Code of Ordinances of the City of Manchester by adding a new Chapter 54: Storm Water to Title V: Public Works.”

Copies of the proposed Ordinance Amendment is available for viewing at the Office of the City Clerk (east wing), One City Hall Plaza, Manchester, New Hampshire.

s/Leo R. Bernier
City Clerk

ESQUIRE, First Justice of said Court, this day, September 7, 2005.

John R. Buonomo
Register of Probate

(UL — Sept. 16, 23, 30)

Legal Notice ✓

CITY OF MANCHESTER

The following regulations governing standing, stopping and parking, as approved by the Committee on Traffic/Public Safety, in accordance with the provisions of Chapter 335 of the Sessions Laws of 1951 and the Ordinances of the City of Manchester were adopted at a meeting of the Board of Mayor and Aldermen held on September 6, 2005 as follows:

Section 70.36 Stopping, Stand, or Parking Prohibited

STOP SIGNS:

On Janet Court at Mooresville Road (NWC).

NO PARKING:

On Beech Street, east side, from Webster Street to a point 205 feet north

On Lincoln Street, west side, from Valley Street to a point 400 feet north.

On Lincoln Street, east side, from Valley Street to Auburn Street.

On Villa Street, south side, from a point 25 feet east of Belmont Street to a point 35 feet east.

RESCIND STOP SIGNS:

On Lincoln Street at Valley Street (NWC, SEC).

RESCIND NO PARKING:

On Lincoln Street, west side, from a point 300 feet north of Valley Street to a point 105 feet north (ORD. #8071).

On Lincoln Street, east side, from Summer Street to Valley Street (ORD. #3234).

REPEALING PROVISIONS

That all rules and regulations now in effect in accordance with the provisions of an Ordinance "Chapter 70 Motor Vehicles and Traffic" as adopted August 6, 2002, with subsequent amendments thereto and inconsistent with the traffic rules and regulations herein adopted, be repealed.

s/Leo R. Bernier, City Clerk

(UL — Sept. 16)

Legal Notice ✓

CITY OF MANCHESTER, NH

A Public Hearing will be held on Tuesday, October 4, 2005 at 5:30 PM in the Aldermanic Chambers of City Hall, One City Hall Plaza, Manchester, New Hampshire for the purpose of hearing those wishing to speak for or against the following ordinance amendment:

"Amending the Code of Ordinances of the City of Manchester by adding a new Chapter 54: Storm Water to Title V: Public Works."

Copies of the proposed Ordinance Amendment is available for viewing at the Office of the City Clerk (east wing), One City Hall Plaza, Manchester, New Hampshire.

s/Leo R. Bernier
City Clerk

(UL — Sept. 16)

Legal Notice

The Town of South Berwick, Maine is requesting bids for one new diesel pick up truck meeting the specifications listed on page two of the bid form. All bids must be accompanied by a manufacturers specification sheet for the entire vehicle. Bids will be accepted until 10 a.m. on Sept. 28, 2005 at which time they will be publicly opened and read. To receive bid form call PWD, Terry Oliver 207-384-3300.

(UL — Sept. 15, 16, 17)

Legal Notice ✓

CITY OF MANCHESTER, NH

The Board of Mayor and Aldermen of the City of Manchester, NH adopted the following Ordinance at a meeting held on September 6, 2005:

"Amending Section 33.026 (WWTP Operator Trainee) of the Code of Ordinances of the City of Manchester."

s/Leo R. Bernier
City Clerk

2005.

For additional information, call 1-800-852-3345, ext. 6891.

EQUAL OPPORTUNITY EMPLOYER
(UL — Sept. 15, 16, 18)

Legal Notice ✓

CITY OF MANCHESTER, NH

The Board of Mayor and Aldermen of the City of Manchester, NH will be considering the following Ordinances at a meeting to be held on October 4, 2005:

Amending Chapter 30: City Officials and Employees of the Code of Ordinances of the City of Manchester by adding §30.49 Office of Independent City Auditor and §30.50 Duties of Independent City Auditor.

Amending Sections 36.15 Issuance of Warrant for Collection; Notice to City Auditor and 36.17 Abatement Before Payment of the Code of Ordinances of the City of Manchester by replacing the term City Auditor with the term Independent City Auditor and Finance Office.

Amending Sections 36.16 Records and Reports of Abatements, 36.18 Abatement After Payment, and 36.35 Special Account for Taxes and Assessments of the Code of Ordinances of the City of Manchester by replacing the term City Auditor with the term Finance Office.

Repealing Sections 35.107 (Y, Z, AA, AB and AC) Duties of Finance Officer and 35.018 Audit of the Code of Ordinances of the City of Manchester.

Amending Chapter 32, Conservation Commission, Section 32.092 Composition; Terms, of the Code of Ordinances of the City of Manchester.

Amending Section 33.025 (Community Health Nurse) of the Code of Ordinances of the City of Manchester.

Amending Chapter 70: Motor Vehicles and Traffic of the Code of Ordinances of the City of Manchester by amending Section 70.40 Towing by increasing the towing fees.

Amending the Code of Ordinances of the City of Manchester by creating a new section within Chapter 111: Amusements establishing regulations for noise activities conducted in outdoor concert venues throughout the city and inserting new penalties in Section 111.99: Penalty to enforce these regulations.

Amending Chapter 115: Solicitations, Sales, Peddlers, and Fairs of the Code of Ordinances of the City of Manchester by inserting new definitions and application requirements.

Authorizing the Mayor to Dispose of Certain Tax Deeded Property Known as West Haven Road, Map 0922/Lot 0039-A.

s/Leo R. Bernier, City Clerk

(UL — Sept. 16)

Legal Notice

Request For Quotations Chemical Root Control Services Town of Derry, New Hampshire Fall 2005

The Town of Derry, New Hampshire Department of Public Works, Sewer Division, is requesting quotes for the application of licensed root control agents to approximately 5000 linear ft of 8 inch diameter main line sanitary sewers in order to kill root growth present in the lines and to inhibit root growth without permanently damaging the vegetation producing the roots.

Quotes are to be submitted to the Town of Derry, New Hampshire, Department of Public Works, Sewer Division, Municipal Center, 14 Manning Street, 2nd Floor, Derry, New Hampshire 03038, attention Thomas A. Carrier, Superintendent, on or before September 30, 2005.

Bidder information is available by contacting the Derry Department of Public Works, 14 Manning Street, Derry, NH 03038 or by calling 603-432-6147.

(UL—Sept. 14, 15, 16)

Legal Notice

THE STATE OF NEW HAMPSHIRE
Northern District of
Hillsborough County
300 Chestnut Street
Manchester, NH 03101 2490
603 669-7410

qualified to be entered at or before the time a bid is offered. The successful bidder(s) will be required to execute a purchase and sale agreement immediately after the close of the bidding. The balance of the purchase price shall be paid within thirty (30) days from the sale date in the form of a certified check, bank treasurer's check or other check satisfactory to Mortgagee's attorney. The Mortgagee reserves the right to bid at the sale, to reject any and all bids, to continue the sale and to amend the terms of the sale by written or oral announcement made before or during the foreclosure sale. The description of the premises contained in said mortgage shall control in the event of an error in this publication.

Dated at Manchester, New Hampshire, on September 9, 2005.

MORTGAGE ELECTRONIC
REGISTRATION SYSTEMS, INC.

By its Attorneys,

HARMON LAW OFFICES, P.C.

Kristin A. Hedvig, Esquire

78 West Merrimack Street

Manchester, NH 03101

(603) 669-7963

(UL — Sept. 16, 23, 30)

Legal Notice

MORTGAGEE'S NOTICE OF SALE OF REAL PROPERTY

By virtue of a Power of Sale contained in a certain mortgage given by Aaron M. Centrella and Rebecca A. Centrella ("the Mortgagors") to Option One Mortgage Corporation, dated September 15, 2004 and recorded with the Belknap County Registry of Deeds at Book 2090, Page 467 (the "Mortgage"), which mortgage is held by Option One Mortgage Corporation, the present holder of said Mortgage, pursuant to and in execution of said power and for breach of conditions of said Mortgage and for the purposes of foreclosing the same will sell at:

Public Auction

on

Monday, October 10, 2005

at

3:00 p.m.

Said sale being located on the mortgaged premises and having a present address of 9 Leisure Drive, Gilford, Belknap County, New Hampshire. The premises are more particularly described in the Mortgage.

For mortgagors' title see deed recorded with the Belknap County Registry of Deeds in Book 1831, Page 949.

NOTICE

PURSUANT TO NEW HAMPSHIRE RSA 479:25, YOU ARE HEREBY NOTIFIED THAT YOU HAVE A RIGHT TO PETITION THE SUPERIOR COURT FOR THE COUNTY IN WHICH THE MORTGAGED PREMISES ARE SITUATED, WITH SERVICE UPON THE MORTGAGEE, AND UPON SUCH BOND AS THE COURT MAY REQUIRE TO ENJOIN THE SCHEDULED FORECLOSURE SALE.

The Property will be sold subject to all unpaid real estate taxes and all other liens and encumbrances which may be entitled to precedence over the Mortgage. Notwithstanding any title information contained in this notice, the Mortgagee expressly disclaims any representations as to the state of the title to the Property involved as of the date of the notice of the date of sale. The property to be sold at the sale is "AS IS WHERE IS".

TERMS OF SALE

A deposit of Five Thousand (\$5,000.00) Dollars in the form of a certified check or bank treasurer's check or other check satisfactory to Mortgagee's attorney will be required to be delivered at or before the time a bid is offered. The successful bidder(s) will be required to execute a purchase and sale agreement immediately after the close of the bidding. The balance of the purchase price shall be paid within thirty (30) days from the sale date in the form of a certified check, bank treasurer's check or other check satisfactory to Mortgagee's attorney. The Mortgagee reserves the right to bid at the sale, to reject any and all bids, to continue the sale and to amend the terms of the sale by written or oral announcement made before or during the foreclosure sale. The description of the premises contained in said mortgage shall control in the event of an error in this publication.

Dated at Manchester, New Hampshire, on September 9, 2005

STAKEHOLDER INPUT

(Owner/Operator/Developer/Contractor)

The Storm Water Ordinance and Rules & Regulations are in the last phase of the adoption process. This is the public's opportunity to review the documents and to provide comment at the public hearing scheduled for Tuesday, October 4, 2005 in the Aldermanic Chambers at City Hall.

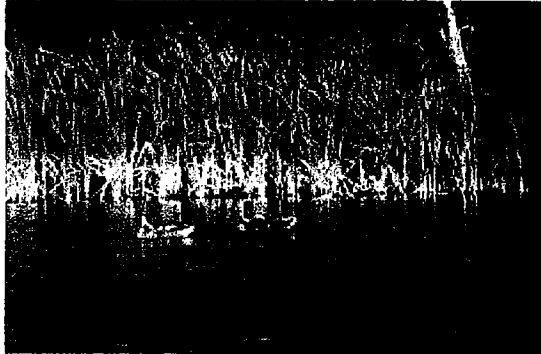
Property owners who plan to develop their land, operator/contractors who perform the site activity and developers who design plans will all be impacted by the implementation of this ordinance.

The Storm Water regulations are already in place at the National EPA level with required implementation by the Phase II communities.

This will be your chance to comment on the content and intent of both the Storm Water Ordinance and the Storm Water Rules & Regulations before the City formally adopts them and they are enforced accordingly.

These documents may be viewed on the City's website at:

<http://www.manchesternh.gov/CityGov/dpw/EPD/stormwater/home.html>



Storm water threatens natural habitats.

For questions on the public hearing content, call:

**Environmental Protection Division
Rick Cantu, Environmental Permits
Coordinator**

Phone: 603-624-6513

Cell: 603-765-0320

Fax: 603-628-6234

CITY OF MANCHESTER



STORM WATER ORDINANCE PUBLIC HEARING

***Tuesday, October 4, 2005
5:30 PM***

***Aldermanic Chambers
City Hall, One City Hall Plaza***

ATTACHMENT F

Name	Address	City/State	Zip
Windsor Industries Corp	P.O. Box 250 24 Wright Ave	Merrimack NH	03054
Metcalf & Eddy	701 Edgewater Rd	Wakefield, MA	01880
CEI Environmental	64 Dilla St	Milford, MA	01757
HTA, Inc	150 Dow St	Manchester, NH	03101
Teton Environmental	263 Wilson Crossing Rd	Auburn, NH	03032
Waterford Development Corp.	175 Highland Ave	Needham, MA	02494
Kelly Construction, Co. Inc	750 E. Industrial Park Dr.	Manchester, NH	03109
Jewett ConstructionCo. Onc	32 Harriman Hill Rd	Raymond, NH	03077
JGE Enterprises, Inc	24 Eastman Ave	Bedford, NH	03110
Hutter Construction, Corp	810 Turnpike Rd	New Ispwich, NH	03071
Englewood Construction, Corp	15 Harvey Rd	Bedford, NH	03110
Eclipse Construction, Inc	19 Harvey Rd	Bedford, NH	03110
Eames Corporation	633 Mast Rd	Goffstown, NH	03045
Maple-Leaf Construction Co. Inc.	5 Congress St.	Nashua, NH	03062
Continental Paving, Inc	1 Continental Dr	Londonderry, NH	03053
A.W. Rose Construction, LLC	33 South Commercial St	Manchester, NH	03101
T.F. Moran	554 Union St	Manchester, NH	03101
Harry Wetherbee	358 Quaker Dr	Weare, NH	03281
Turner Group Engineers	27 Locke Rd	Concord, NH	03301
VHB Engineering	Kilton Rd	Bedford, NH	03110
Nobis Engineering	18 Chenell Dr	Concord, NH	03301
Haley & Aldrich, Inc	340 Granite St	Manchester, NH	03101
GZA Environmental	380 Harvey Rd	Manchester, NH	03103
Dufresne- Henry Engineers	175 Canal St	Manchester, NH	03101
CPI Environmental Services	Route 106	Belmont, NH	03220
CDM Engineers	1001 Elm St.	Manchester, NH	03101
Aries Engineering	46 South Main St	Concord, NH	03302
Wright-Pierce	99 Main St	Topsham, ME	04086
Woodward & Curan, Inc	41 Hutchins Dr.	Portland, ME	04102
R.H. White ConstructionCo. Inc	41 Central St	Auburn, MA	01501
Lamontagne Builders, Inc	317 South River Rd	Bedford, NH	03110
Pichette Bros Construction	714 Rimmon Rd	Manchester, NH	03102
ProCon Construction	1359 DW Highway	Hooksett, NH	03106
RJC General Contractors	905 Mammoth Rd	Manchester, NH	03103
Sierra Development	251 Rockingham Rd	Auburn, NH	03032
Thibeault Corporation of NH	603 Mammoth Rd	Londonderry, NH	03053
White Birch Construction	224 Spruce St.	Manchester, NH	03101
Twine Construction, LLC	12 Highland Farms Dr	Bedford, NH	03110

**YARD WASTE NOTICE FOR
MANCHESTER RESIDENTS
2006 YARD WASTE
CURBSIDE PICKUP
SCHEDULE**

SPRING CLEANUP!!!

April 10 through May 19

-WEEKLY PICKUP-

SAME DAY AS USUAL RECYCLING PICKUP DAY

MID-SEASON!!!

May 22 through October 20

- EVERY OTHER WEEK PICKUP-

SAME DAY AS USUAL RECYCLING PICKUP DAY

FALL CLEANUP!!!

October 23 through December 1

-WEEKLY PICKUP-

SAME DAY AS USUAL RECYCLING PICKUP DAY

CHRISTMAS TREE PICKUP

JANUARY 1 through JANUARY 12

-WEEKLY PICKUP-

SAME DAY AS USUAL RECYCLING PICKUP DAY

ATTACHMENT G

The City of Manchester provides its residents with the convenient "**Dunbarton Road Recycling Center**" for the drop off of yard waste and recyclables. The center will be opened Monday through Friday, 7:30 a.m. – 3:00 p.m. and the first and third Saturday of each month 7:00 a.m. – 11:30 a.m. Call 413-6799 for additional information.

*HOLIDAY WEEKS ONE DAY DELAY if your scheduled pickup is ON or AFTER the Holiday!

Corcoran Environmental Services, Inc

67-1 West Merrimack Street
Manchester, NH 03101

Corporate Offices

9 High Street
Kennebunk, ME 04094

For all service related inquiries
please contact us at **1-603-413-6799**




City of Manchester
Yard Waste
Collection Routes





Manchester's Yard Waste Collection Begins April 10th

Spring Clean-Up: April 10th - May 19th

- WEEKLY yard waste collection for all residents
- Collection occurs on the SAME DAY as your trash & recycling
- Must be placed curbside by 7:00 am

Mid-Season: May 22nd - October 20th

- BI-WEEKLY yard waste collection
- **GREEN** sections begin week of May 22nd
- **RED** sections begin week of May 29th
- Collection occurs every other week, on the SAME DAY as your trash & recycling
- Must be placed curbside by 7:00 am

Fall Clean-Up: October 23rd - December 1st

- WEEKLY yard waste collection for all residents
- Collection occurs on the SAME DAY as your trash & recycling
- Must be placed curbside by 7:00 am

**Remember: Manchester now recycles EVERY WEEK
on the SAME DAY as your trash collection**

- Detailed yard waste information available at www.ManchesterNH.gov -
 Go to the Recycling page found on the "Services" tab, and click on Yard Waste



NEWSPAPER ADVERTISEMENT IN THE MANCHESTER UNION LEADER
CORRESPONDS WITH THE YARD WASTE MAILER FOR CURBSIDE SCHEDULE

ATTACHMENT G

BMP #3 Illicit Discharge Detection and Elimination

#3-1, Develop & Present Draft Storm Sewer Ordinance – (BMP Completed)

Current Status: The City staff, after several internal reviews, held a public hearing on the Storm Water Ordinance. This meeting was held October 4, 2005. The transcript of that meeting is included as Attached H.

A concerned Developer was present at the meeting and voiced concerns. We also received comments from a private citizen and addressed these. Thelma Murphy, of the EPA, also provided comments and Manchester incorporated the suggestion into the updated Ordinance. Copies of the comments received are included as Attachment I, J and K, respectively.

There have been issues with conflict of EPA regulations stating that only an Ordinance or a similar regulatory mechanism (but not both) could be used to enforce storm water protections. This issue has since been cleared with the EPA that both documents are appropriate if a municipality decides to go that route.

The New Hampshire Municipal Association (NHMA) commented on Goffstown's Ordinance and stated that they didn't believe there was enabling legislation on the State level to have a legally binding storm water ordinance. In a follow up letter from the NHMA, they stated that a municipality was given broad enough powers from the State of New Hampshire to develop and implement a Storm Water Ordinance. The NHMA cautioned in regards to the language regarding the enforcement of the Ordinance. The NHMA recommends that towns review the language concerning enforcement authority and assure that it does not conflict with other departments (zoning, planning, health etc.).

BMP Effectiveness Evaluation: Until the ordinance is adopted the BMP is ineffective. We have had a few issues come up that, due to the lack of an Ordinance, the storm water program could not enforce regulations in regards to obvious violations.

Future Goals: The previous goal was to have the Ordinance and Regulations adopted by August 1, 2005. This did not happen. Currently, we are hoping to have the 'Bills on Second Reading' by May with adoption of the Ordinance in June or July of 2006. We would then allow public comment on the Regulations and adopt these shortly after the public comment was received and incorporated to the extent practicable.

#3-2, Continue Dry Weather Screening of Outfalls – (BMP Completed)

Current Status: This is the most improved BMP of this annual report. Last year we were concerned that this BMP wasn't getting the attention required. Over 2005 all the outfalls along the Merrimack River were inspected twice (once by the State of New Hampshire Department of Environmental Services [NHDES] and once by the City). The NHDES took coliform samples of discharging outfalls during their dry weather inspections. The City followed up on these reports by going back and reinspecting and

resampling these locations. The City further made a determination of possible sources of the coliform bacteria found. The NHDES findings, (Attachment L), is included at the end of this section.

The Piscataquog River was inspected once by the NHDES and the City did a follow-up review on the areas cited in the NHDES report. The City did not complete the entire Piscataquog River within the border of Manchester.

All the urban ponds were reviewed for illicit discharges with coliform samples being taken in suspect areas once during the 2005 reporting year.

The State's GPS locations were verified during the City's follow up and the picture log from the state was matched to that of the City. These were filed for future reference.

BMP Effectiveness Evaluation: This task has been very effective this year. All pipes found along both sides of the Merrimack River and problem areas of the Piscataquog have been noted, pictures taken and logged. Follow up was done on the NHDES findings (Attachment M). The BMP required two inspections over a five-year period. This was done over this past reporting year.

The success of the urban pond detection of pollutants of concern can be reviewed in the City's annual Urban Pond report or by visiting the urban pond website at: <http://www.manchesternh.gov/CityGov/DPW/EPD/SEPP/Pond/Home.html> This site outlines the sampling performed at the ponds over the past five years in association with Urban Ponds Program.

Future Goals: The City plans to do another complete survey of both rivers and the urban ponds during the low flow season of August or September of 2006. The initial survey was done in 2000 and included in the Malcolm-Pirnie report. It has been difficult at times to match up the coordinates of their outfall findings with what we have encountered in the field. There have been places where they have noted one pipe, and we have found three. I have included an example log (Attachment N) from our findings as we have made an attempt to match up our findings with the initial report. Note that some of the Malcolm-Pirnie PPO numbering system have an additional (a) and sometimes a (b) designation associated with the designated pipe. This is due to Manchester finding more than one pipe in that location.

The goal for the next two years of the five-year program will be to assign a number, accompanying reference picture and GPS location to each outfall found along both rivers. We will also assign a brief description to each finding. This way there will be no confusion when future inspectors do pipe inspections along these rivers. The pictures will be linked to the new reference numbers for verification purposes.

The urban ponds will be inspected during the 2006 reporting year and sampled as necessary. The drains will be cataloged in each Urban Pond file folder with findings, coordinates and pictures.

#3-3, Develop and Implement System for Detection & Elimination of Illicit Discharges – (BMP Completed)

Current Status: This program was developed and submitted with the year one report. The program is a good baseline document for detecting illicit discharges. The document has not been updated or changed.

BMP Effectiveness Evaluation: This BMP is effective in providing guidance when trying to determine the source of an illicit discharge.

At the end of this section is a report on how an illicit discharge, discovered by the City of Manchester's Health Department (Attachment O) was tracked down and rectified. The process that was used to track down and illicit discharge was similar to those outlined in the Illicit Discharge Manual and this report is included as Attachment P.

Future Goals: Our goal is to continue aggressively responding to illicit discharges as they are found. Also, the City wants to continue to monitor the outfalls as outlined in BMP #3-2, for any illicit discharge connection.

Over this year the City will also review the guidance manual developed by the 'Center for Watershed Protection' that was provided by the EPA in August 2005. These recommendations will be compared to the current program. The program will be modified to incorporate procedures into our current Illicit Discharge Program.

#3-4, Map Outfalls and Receiving Waters – (BMP Completed)

Current Status: The City had CDM map the outfalls from the Malcolm-Pirnie findings in early 2001. CDM has developed an extensive GIS mapping system for the City to include both sewage and drainage systems. This mapping has been extended to include tax maps, and City assessing information and water department infrastructure.

Once annually, the City commissions CDM to input all the new growth and City sewer extension updates into the GIS and make it a dynamic mapping system rather than a dated static system. The City's engineering department will load information from city repairs within the collection system. Errors to the present system that are found in the field are also modified within the GIS.

BMP Effectiveness Evaluation: This tool has proved invaluable to our Storm Water Management Program. It is being used to track cleaning of lines, location of baffle tanks, sectioning off catch basin cleaning areas and for review to determine potential locations for illicit discharges.

Future Goals: The City wants to continue development of the GIS system use. Aerial Ortho photos were used to determine a tree count before an extensive cutting took place. In last year's annual report, the City wanted to develop a protocol for entering information on the GIS. This has been completed and is included as Attachment Q at the end of this section.

ATTACHMENT H

10/04/2005 Special BMA (PH-Storm Water Ordinance)

1

**SPECIAL MEETING
BOARD OF MAYOR AND ALDERMEN
(PUBLIC HEARING – STORM WATER ORDINANCE)**

October 4, 2005

5:30 PM

Mayor Baines called the meeting to order.

Mayor Baines called for the Pledge of Allegiance, this function being led by Alderman Shea.

A moment of silent prayer was observed.

The Clerk called the roll.

Present: Aldermen Roy, Gatsas (late), Guinta (late), Sysyn, Osborne, Porter,
O'Neil (late), Lopez, Shea, DeVries (late), Garrity, Smith, Thibault and Forest

Mayor Baines advised that the purpose of the special meeting is to hear those wishing to speak in favor of or in opposition to a proposed ordinance amendment; that the Clerk will present the proposed ordinance amendment for discussion at which time those wishing to speak in favor will be heard, followed by those wishing to speak in opposition; that anyone wishing to speak must first step to the nearest microphone when recognized and recite his or her name and address in a clear, loud voice for the record, that each person will be given only one opportunity to speak; and any questions must be directed to the Chair.

The Clerk presented the proposed ordinance amendment:

“Amending the Code of Ordinances of the City of Manchester by adding a new Chapter 54: Storm Water to Title V: Public Works.”

Mayor Baines requested that Rick Cantu, Environmental Permits Coordinator, make a presentation.

Rick Cantu, Environmental Permits Coordinator, stated I am the Storm Water Coordinator and Environmental Permits Coordinator. I work with the Storm Water Program. I am going to go through a little presentation here. I will give you some background as to why we are doing this and then we will show you some photographs on what it will help abate down the road and then we can open it up to discussion. On March 10, 2003 the EPA had the Phase II Storm Water Program adopted. This was required of 45 communities in New Hampshire because of the density of population. Manchester submitted their program. This is a copy of

the program here, it is quite an extensive document, with the requirements that we had to accomplish as part of this five-year program. The EPA received the program in late July and then on August 5 they acknowledged receipt of the program and we became officially that NH number. That is our program number. The program has been accepted by the EPA. The EPA expected the adoption of six minimum controls. Those were public education, public participation, illicit discharge detection and elimination, construction site runoff controls, post-construction storm water management and pollution prevention and housekeeping for municipal operations. On your desks I have left some of these. It breaks down everything we had to do. The one that is highlighted in yellow...this is what we are doing now, the ordinance. As you can see it is quite extensive what we had to do as part of this program and it is ongoing. It is not completed yet. Every year we submit a program to the EPA, a report. That sub package that you is #3, the illicit discharges that requires the development of a storm water ordinance. We developed this draft as was required by July 2005. That was completed and the final adoption has to be by July 30, 2006. The ordinance review went through several of the Phase I communities. The Phase I Program is the same as the Phase II Program. The only thing is that it required cities of 100,000 or more in 1990 to adopt this program. Manchester at that time had 96,000 or 97,000 so we fell under that threshold and we didn't have to do that but now we are in Phase II, which is the same as Phase I. So instead of starting from scratch we went through all of the Phase I communities and looked at their ordinances and picked the stuff that was appropriate for Manchester. We looked at the EPA model and then we looked at some of the smaller community's storm water ordinances. That copulation of ordinances we used to develop our draft ordinance that we are presenting here today. We met with the Highway Department's engineering and EPD staff to do internal review of the ordinance and then we met with the Planning Board in the fall of 2003. We brought forth the idea of this dovetailing with their planning and how it was going to work and the earliest draft ordinance, at that time, was quite a large document. We incorporated all of the suggestions from the input. A lot of the attorneys at various seminars and EPA suggested that we do a broad ordinance and focus on the rules and regulations. The rules and regulations are ongoing and growing where the ordinance is kind of locked in place for a period of time and the staff felt that this approach was sound. So we reduced the ordinance to reflect that intent. You have a 10 or 12 page document and then the

rules and regulations, which were the original ordinance were moved over and they are much broader in detail and scope. The two documents were sent out again for internal review and then finalized. The ordinance has 13 sections. Just quickly they are purpose, definitions, administration, prohibited discharges, permit procedures and requirements, general permit provisions, eligibility, waivers, design and management standards, industrial discharges, access and inspections, notification of spills and discharges and violations enforcement and penalties. An example of the ordinance section would be waivers. This is word for word what is being proposed in the ordinance. As you can see it is about a paragraph long. When you go to the rule and regulation that reflects that, you will see under general that is the part of the ordinance and then that is where we put in the conditions for the waiver. Those could change. The EPA could change those. We may find there is something we missed as this program develops. This is fairly new. That gives us the opportunity to work with these and change them as needed. It goes through the different things that are required to get a waiver. Before we go to this I wanted to show some of the things that we see outside every day. This will give you an idea of what we are looking at. These are some of the best management standards. You can see silt fence. If we didn't have this stuff up a lot of the dirt would wash right into the streams and brooks and bogs and things like that. Here you can see it is just an open net that could have potential problems. Here is some more stuff where they abated it. We had some issue with things running in here and asked them to abate that further. Down the side of the street you can see if the construction site is not properly taken care of the water runs off and erodes neighbor's properties. This is dirt that runs down to a local catch basin from a construction site that didn't have proper controls. Here they were doing the project on the I-93 bridge widening and didn't have proper controls and a big ravine washed a lot of dirt out into the street. Here we have a silt fence that failed. It had hay bales but nobody had looked after and they hadn't done the inspections after it rained and a lot of the silt had gone into the Cohas Brook. These are local projects where the upstream area...this was nicely laid and all of the rip wrap and everything was tight. They moved upstream and they didn't have the protection so it moved all of the dirt down so all of the work that was done came to naught. That kind of shows you down lower how that mud travels. Here is another small detention pond on a site. If you are not controlling upstream here you can see that the dirt and sediment starts to move into the pond so the pond becomes useless. Here is

a site where they didn't finish their looming and seeding and with the next rain storm a lot of this stuff would wash off down into the brook. So these are the things that this ordinance will give us the local control to cite the developers and get them working quicker to prevent this from happening. Right now we do inspections but we don't have the authority locally. It is EPA mandated and if we were to call the EPA for them to get out here it could take two, three, four or five months and by that time the project is done and closed and people are living there. That is what the ordinance is here for and I will answer questions if anyone has them.

Alderman Lopez stated I just want to make sure that I am following you correctly here. Ordinances from Page 2 until 11 are what you are speaking of. You are amending the Code of Ordinances by adding a new Chapter 54 Storm Water but when you talk about Storm Water Rules & Regulations, that is already in place or is that what you want to put in place in addition to the ordinance?

Mr. Cantu responded no those are not in place. The ordinance will give us the ability, if you look under administration it will give the Public Works Director the ability to adopt the rules and regulations.

Alderman Lopez asked but if we are looking at the ordinances and of course this is a public hearing here and that is what we are dealing with. We are not dealing with the Storm Water Rules & Regulations is that correct?

Mr. Cantu answered yes that is correct.

Alderman Lopez stated those are something that probably later on could be enacted into an ordinance correct.

Mr. Cantu responded they could but I think you would want to keep them as rules and regulations because they will evolve and change.

Alderman Lopez asked but we are not approving the rules and regulations.

Mr. Cantu answered right.

Alderman Lopez stated I just want to make sure that that is clear in my mind.

Kevin Sheppard, Deputy Public Works Director, stated Section 54.03 under Administration allows the Director of Public Works to institute the rules and regulations per this ordinance. Our plan was to get the ordinance passed, review the rules and regulations and implement them under the authority of the Public Works Director.

Alderman Lopez asked to implement the rules and regulations. But that is a policy isn't it? That is not an ordinance. We are only dealing with ordinances.

Mr. Sheppard answered correct. They are two different things. The ordinance and then the rules and regulations. Tonight we are acting only on the ordinance.

Alderman Shea asked, Kevin, who is going to enforce these particular rules and regulations or ordinances as it were and how are they going to do it.

Mr. Sheppard answered right now we have inspection staff as part of our staff at the Highway Department who go out to construction sites looking at the sewers, the roads and the improvements. This will be part of their work also. There will be a checklist to take a look at storm water prevention measures on the sites. Rick Cantu makes occasional site visits to look at these measures so there are people in place.

Alderman Shea stated let's assume that some of these regulations are not properly followed. I am reading through this. There is upwards of a \$10,000 fine. I realize that but is there a process that is going to be used in order to educate or to instruct or to help out? I mean you are not going to go to a particular site obviously but have you done any of that or is that going to be formulated or are we talking about something to be developed?

Mr. Sheppard responded Rick can probably expand on that a little bit further but we have worked with existing sites. We are not looking to go out there and start fining people. We want to educate people. Rick actually has information on the City's website about this. We are trying to get information out to the engineers and contractors out there to let them know what is going on. I spoke to Rick a little bit earlier and on the first site visit if there is an issue we are going to talk to the contractor and get it fixed. If we go back and it is not fixed maybe...Rick can maybe go through because we have been through this.

Mr. Cantu stated I actually do site inspections now. I fill out a report and if there is something missing or that needs to be worked on I pass it on to the contractor. Right now they comply out of being congenial but we don't have any enforcement powers. They really don't have to comply with our request. I would say that 90% to 95% work with us. There are always the few that say we don't need to listen to you. So this gives us the enforcement power on a local level so it doesn't get way out of hand.

Alderman Shea responded maybe I am just separating this and if I am you can stop me but there are a lot of instances in different areas of the City where people, and this may not concern this at all, are underneath their car changing their oil and doing things of that nature. Does this impact...I know it impacts storm water but is this connected as well to it? Is this going to be enforced as well? This is a problem because there are a lot of people in different areas of the City that are working on their own cars that are draining the oil and the oil is going down into the sewer and so forth. I have had constituents calling me about that particular problem. Is this part and parcel of that as well or is this separate?

Mr. Cantu replied when we get calls we actually try and address that through the industrial pre-treatment program but if they are small private residences and not a commercial industry or anything like that it is in the rules and regulations of the prohibited discharges. There is a whole list that goes from swimming pools to car waste to pesticides. It is pretty much all covered.

Alderman Thibault asked, Kevin, what we are talking about here...if a contractor is going out to build a house he is going to have to go see you people for a permit to do this type of work over there or is there any permit available presently for this type of thing.

Mr. Cantu stated currently this is programmed for anybody who disturbs an acre or more of land. If somebody is disturbing two acres, let's say six houses they are required right now to file an NOI, which is a notice of intent to EPA. They developed the Storm Water Pollution Prevention Plan.

Alderman Thibault asked they have to do that with the City.

Mr. Cantu answered no with the EPA but we have no authority to enforce that. All we are doing is dovetailing that program at the requirement of the EPA to adopt this so there is some local control. If there is an issue what they will do when they submit their NOI with the EPA, we will get a copy. Anything less than one acre will not be covered under this program unless it abuts a stream or a sensitive area.

Alderman Smith asked, Kevin, why do we allow developers to build a detention pond. I think is a big factor in a lot of developments today. You have stagnant water that doesn't move and stuff like that. What is the purpose of allowing them to have a detention pond?

Mr. Sheppard answered we are looking to keep the pre-run off, the same as the post run off, from sites so there is no impact down stream or to abutters to properties. There are detention ponds in subdivisions and a lot of times they are not City owned or our responsibility. Typically it is an easement and the City has flow right easement through that for the City. Typically it is the homeowners of that association that is required to maintain that. A detention pond by design shouldn't be holding water. It should just be retaining water for a period of time and letting it out. At times they aren't maintained by these private organizations and that is something that Rick will also be following up on and taking a look at these different detention ponds.

Mayor Baines called for those wishing to speak in favor.

There were none.

Mayor Baines called for those wishing to speak in opposition.

Andre St. Laurent, Goffstown, NH stated:

First and foremost I am all in favor of the EPA and keeping debris away from streams and wetlands and so on and so forth but we are already doing this on a federal level. For years we have been doing that. What I am seeing and I have read this because Bob asked me to read this but we see a lot of duplication of effort. For instance, if you go to Section 3. Permit Procedure and Requirement it says that no land owner or land operator shall begin any site work on any building, grading, or other land development or any land disturbing activity without first submitting the NOI, which we are doing, to EPA Region I. We are already doing this. The next sentence says the owner must also have received an acknowledgement and have an approved Storm Water Pollution Plan and meet the requirements of the ordinance and the rules and regulations. I see that as a duplication of effort. We are already doing that. I would rather give you people or the Board or whoever our tracking number from the federal government and then you can go in the computer and find us and know that we are doing this versus duplicating efforts. Now it means that I am going to have to submit to the federal government and they are very easy because I go on the computer and within seven days I have a permit. With this ordinance it takes 30 days to get anything from the Board. That is where we are duplicating efforts. That is where if there were something we could reword it would help us. Another place is they want a copy of the NOI and the approved SWPP. Right now on the federal level I handle that. We have a Storm Water Pollution Plan for each site. We have a plan right on site and we have a master plan at the office. If EPA or anyone wants to come and see the site it is there and it is available. Now according to this they want us to send a copy to you people and then you people will approve the SWPP for the related project before beginning any site clearing or construction. Sometimes it is not feasible to do that. Another part also that I have a problem with because any modification or update of the SWPP or the Storm Water Pollution Prevention Plan shall be prepared, signed and sealed by a registered professional engineer. I am not a professional engineer but I have been doing that for years in manufacturing and in construction for the last couple of years. I don't know why we need a registered engineer. I think maybe we could rewrite that. If I am capable of writing a Storm Water Pollution Plan I should be able to modify it. I have a problem with that. I guess it is all in the writing. I would be willing to work with Rick Cantu, whom I have known for years, to rewrite some of that stuff and make it helpful because it looks like it could be done easier. Again, it says within 30 days of receiving an application the Planning Department shall provide one of the following: approval of the permit application or denial. Again, we have been doing that for years and all of our plans have never had to be approved but we have had a visit from EPA on some of our sites and if they see we are doing something wrong, I think this could also be found

through the website. Record keeping for three years. I have no problem with that. We could probably do that because we don't have that many sites but these are the things. I have no problem with, again, EPA and keeping our streams and our wetlands free of debris from general contractors but it is a duplication of effort and I will probably have to hire another guy to keep up with this. We are doing it on a federal level and I think that is sufficient.

Bob Lamontagne, Bedford, NH stated:

I think everything Andre said is true. He is certified to write SWPP's. He has been certified by the EPA and that draft says you have to be a PE. I don't think it is necessary. Another thing is these plans are constantly changing. It sounds like you guys don't want everybody to get the wrong idea that you go to an engineer who develops a plan and you follow it. This plan is constantly changing. Every day a stockpile gets moved or a building gets built or something gets finished up. It is not really practical to get a PE to change the plan. A lot of times the supers on the job have the authority to change the plan. The other thing is if a project gets approved by the Planning Board the SWPP's are always filed by the contractor build the job. Sometimes you don't know who the contractor is when the project gets approved so it is kind of hard to do the SWPP not knowing how the guy is going to build the job. There are a few technicalities that if we could work with your people I think they could be worked out. I think the fee structure...we don't know what that is. There are provisions in there for fees. I can see that going through the roof maybe or a way for the City to collect big amounts of money from developers. I think that is about it.

Mayor Baines advised that all wishing to speak having been heard, the testimony presented will be taken under advisement and considered by the Board of Mayor and Aldermen.

This being a special meeting of the Board, no further business was presented and on motion of Alderman Smith, duly seconded by Alderman Osborne it was voted to adjourn.

A True Record. Attest.

City Clerk

Developer Concerns

Memo

To: Kevin Sheppard
From: Rick Cantu
CC: Tom Seigle, File
Date: 10/17/05
Re: Lamontange Builders Input on Ordinance

I met with Andre St. Laurent of Lamontange Builders on 10/13/05 to go over their concerns with wording in the Ordinance and the Rules and Regulations. They are listed below:

- No specific comments on the Ordinance as it was general in nature and pointed to the more detailed sections of the Rules & Regulations where Andre expressed concerns;
- In the R&R Andre had concerns regarding Section 3 (B), Application Requirements. He wants to know why he has to submit a NOI to the City when he has done one with the EPA. I explained that some developments are submitted by out-of-state firms and their name is used to file the NOI with no idea of how the project is connected to Manchester. It is hard to match up to a local site unless we have the longitude and latitude. If they do provide us with the EPA tracking number, we can find it easy enough. This could easily be amended by adding, "Shall submit to the Department of Highways a copy of the NOI, **or EPA approved permit tracking number**, and approved Storm Water Pollution Prevention Plan..."
- In the same section under (D), Application Procedure (3), we could get by with one copy of the Storm Water Pollution Prevention Plan, as I will use this to keep within their work file. We can change the requirement from two to one
- In Section 4., General Permit Provisions (C), Andre had concerns about using only a P.E. to complete the Storm Water Pollution Prevention Plan. I voiced my concerns about receiving a one and two page Storm Water Pollution Prevention Plan that states they will follow BMPs, EPA regulation, local regulations etc. without listing what specifically they will do at the site. He was comfortable with us designating someone who has experience developing SWPPPs and is approved by the DPW Director. The last sentence could read, "Any update or modification to the Storm Water Pollution Prevention Plan shall be prepared, signed, and sealed by a Registered Professional Engineer, **or by a competent individual individual who has developed SWPPPs and is approved by the Director of Public Works.**"
- In this same section the last paragraph about land disturbance permit be accompanied by a fee raised concerns. We actually do not give out permits. We only write conditions on the Planning Board's approvals. I do not think we want to give out this permit as it is covered by the NOI and

EPA requirements. The fee for review is covered in another section. I had to agree with him that it might be prudent to eliminate this paragraph.

- In item (H) of this same section we would also use the terminology as with the NOI that either contractor submits the NOT to the City or notifies the City that NOT has been submitted with EPA tracking number. We would be able to track in either case.
- In this same section (H), second to the last paragraph, Andre was concerned with the 45-day limit to get as-builts to the City. We talked and he thought that the best would be 120 days. I do not know much about the history of as-build submissions to the Engineering Department, but if this is good for them, we could change it to 120 days.
- In Section 9, Notification of Accidental Discharges and Spills, we had some good discussions. He wanted to know to what extent this was required. If it was required to report a small hydraulic leak that was in the middle of the project and immediately picked up? He also questioned if the case of a diesel or fuel fill with some top off spilling onto the ground would require the notification. He wanted concrete examples in this section. I explained our concerns was any amount of spilled material that leaked outside the permitted containment area, that got into a CB, or reached a wetland, stream, brook, etc. Under (B), release reporting, we could add a second paragraph with this example wording; "For the purpose of clarification the following spills, regardless of size, must be reported:
 - Any size spill that enters a catch basin, culvert, or structure that conveys runoff from the site;
 - Any spill that breaches a silt fence, or other best management control structure;
 - Any material that spills outside a limits of any work area on the site
 - Any material that reaches a wetland, stream, brook, pond etc. whether within the work site or off the work site

We also discussed about keeping a log of small spills that did not meet the above criteria, but may be of some concern if a citizen or employee complaint was logged. We both thought it might be good to log any spill in the daily inspection sheets, and if there was every a question about a certain spill a review of the daily inspection sheet would indicate that there was a small spill and what action was taken to clean it up. This could be written into a third paragraph within this section.

This covered Andre's concerns. Andre thought it would be a good idea to open the Rules & Regulations up to a comment period before adopting them.

Memo

To: File
From: Rick Cantu
CC:
Date: 12/08/05
Re: Artemis Paris Comment on Ordinance and Rules & Regulations

The work or means other. There are six words she wanted to express for clarification.

1. Law – is imposed by a sovereign authority
2. Rule – is more restrictive and less flexible
3. Regulation – often equals rule, carrier stronger implication
4. Statute – law made by a legislative body
5. Ordinance – order governing some detail of procedure or conduct
6. Bylaw – rules for specific types of government

The legal notice only stated that the public hearing was for the Ordinance. This was the only focus of the Public Hearing.

Sections 122.34(3) and 122.26(b) reference that it is an ordinance, or other regulatory mechanism.

Malcolm-Pirnie study said that Manchester must develop a storm system mapping that prohibited through ordinance or other regulatory means illicit discharges.

EPA Fact Sheet addresses BMPs on the Post Construction Ordinance. It was ECFR (1)(E)(F). Artemis asked that I specifically look at ECF 2.7

ATTACHMENT K

Cantu, Rick

From: murphy.thelma@epamail.epa.gov
Sent: Friday, December 02, 2005 2:05 PM
To: Cantu, Rick
Cc: Sheppard, Kevin
Subject: Re: Manchester's SUO and Rules & Regulation



SWaterRules& SWMPOrdinanceSh
RegsClerkFinalRev... ortVerClerkStri...

Hi Rick,

Thank you for letting me review the City's draft ordinance and its supplemental rules & regulations. This appears an effective approach for addressing the requirements of the small MS4 permit.

I have a couple of thoughts to share. On page 2 of the ordinance, it mentions 122.26 which are the regulations for the storm water program. You may also want to include 122.34 which are the requirements for the small MS4 program. Section 53.40 (A) mentions submitting NOI to Region 1, we don't get the NOIs in the Region- they go to Washington. The same paragraph mentions an approved SWPPP, EPA does not approve these plans, so you may want to specify who they plan needs to be approved by. Paragraph (B) of the same section mentions "storm water management plan" are you using this term interchangeable with SWPPP or does it mean something different?

In the rules and regulations there is a mention of "group NPDES permit". We don't issue a permit by that name. It may be referring to the group application process EPA had in the early 1990s, but with the issuance of the 1995 MSGP that process ended.

On page 18 of the rules, there is a reference to conduct comprehensive site evaluations in accordance with 122.26(c)(1). That section of the regulations describes application procedures/requirements for industrial facilities. I don't quite understand the use of that reference in your rules as the requirement for the site evaluation. The requirement to do a comprehensive site evaluation is in the MSGP.

Again, thank you for letting me review this. If you have any questions, please let me know.

Thelma Murphy
Storm Water Coordinator
USEPA - New England
One Congress Street - Suite 1100 (CIP)
Boston, MA 02114
617/918-1615
murphy.thelma@epa.gov

"Cantu, Rick"
<RCANTU@ci.manchester.nh.us>

11/30/2005 02:20 PM

Thelma Murphy/R1/USEPA/US@EPA

"Sheppard, Kevin"
<KSHEPPAR@ci.manchester.nh.us>

Subject
Manchester's SUO and Rules & Regulation

To

cc

ATTACHMENT K

Hi Thelma:

This is a follow up to our conversation this afternoon. As you are aware via conversations with Artemis that she believes the City can either use an Ordinance, or other mechanism to enforce our storm water program. She does not believe that we can augment and reinforce an ordinance with rules and regulations due to the statement of (B) in Section 122.26, under Part 2 (i), Adequate Legal Authority, "Prohibit through ordinance, order or similar means, illicit discharges to the MS4." This same wording is again used in the guidance section on page 203 of section 122.34, but (B) in this instance states, "To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions. I believe this guidance gives us additional capability for enforcement tools in addition to the ordinance.

The State of NH, under Section 49-C:21 of the Administrative code allows Departments, as set up by the City/Town Councils to give authority to Department Heads to develop rules and regulations. "The City shall have departments, divisions and bureaus as may be established by the charger or as the elected body may establish by ordinance.... Each officer shall have supervision and control of his department and of the employees of his department and shall have power to prescribe rules and regulations, not inconsistent with general, the charger, the administrative code...." I believe this authority given by the State allows the City to augment the Ordinance with Rules and Regulations that strengthen the Ordinance.

Another point is that in the City Ordinance in Section 10.07, Rules of Interpretation, (A), AND or OR. Either conjunction shall include the other as if written "and/or," if the sense requires it. This would make Artemis' take on her understanding of OR being non-inclusive (either Ordinance or Rules & Regs, but not both) with AND being all-inclusive (must include the Ordinance and a similar means).

I am attaching our Ordinance and Rules & Regulations, as recently revised for an opinion to Manchester's approach to our storm water program controls. You will note any new material in italicized bold print. Any material that is deleted is in strikeout. We will be doing another internal review of the additions and deletions tomorrow and then making a clean version of all the changes. It will be easier to digest if the Ordinance is reviewed first, then the Rules & Regulations.

We will be meeting with Artemis to go over her concerns possibly on Tuesday.

Could you review each document and let me know if what we are proposing meets with the intent of our Storm Water Program requirement of developing an Ordinance as outlined under minimum control #3, Illicit Discharges? I know as the program matures we will need to make additions or changes to our enforcement documents, and realize it will be much easier to change and correct Rules & Regulations than it would be to change or correct an Ordinance.

Thanks for your time,

Rick(See attached file: SWaterRules& RegsClerkFinalRevStrikeout.doc) (See attached file: SWMPOrdinanceShortVerClerkStrikeout.doc)



Memorandum

To: Rick Cantu

From: Steve Landry, DES Merrimack Watershed Supervisor

Date: August 12, 2005

Re: Merrimack River Illicit Discharge Investigations

The purpose of this memorandum is to provide the City of Manchester with pertinent information documented while surveying outfalls as part of the Illicit Discharge Investigation Program at DES, during the summer of 2005. For the past two months personnel in the Watershed Assistance Section at DES have been systematically surveying the Merrimack River and tributaries in Manchester, NH. Each pipe that outfalls to the Merrimack River and its tributaries have been documented; GPS taken and a detailed field sheet completed.

The investigations were carried out during periods of dry weather. The "dry weather" condition is defined by DES as no more than 0.10 inches of rainfall in the past 48 hours. If an outfall was discharging to surface waters and the flow was steady enough to at least partially fill a sample bottle, a sample was collected and had it analyzed for *E. coli* bacteria.

To date we have documented 105 outfalls with 23 flowing enough to sample. Out of the 23 samples 12 had high counts of *E. coli*. High counts are determined by the laboratory for fresh water as above 88 counts of *E. coli* per milliliter of water. Numbers are set by Surface Water Quality Standards, for more information please see enclosed Bacterial Indicators Standard Operating Procedures. We are waiting for 5 sample results, taken August 11, 2005 which will be available August 15, 2005.

Below is a table of our findings to date for the summer of 2005 (results are for *E. coli* measured in counts per milliliter of water):

Town	Date	Sample ID #	Water Body	Results	Status
Manchester	7/7/2005	MER-1600	Merrimack River	1500	Need to return for resample, investigate, some near CSO's
Manchester	7/7/2005	MER-1630	Merrimack River	2700	
Manchester	7/7/2005	MER-1640	Merrimack River	1500	
Manchester	7/14/2005	MER-1810	Merrimack River	660	Need to return for resample/investigate
Manchester	7/27/2005	MER-2010	Merrimack River	420	Resample/investigate
Manchester	7/27/2005	MER-2150	Merrimack River	<100 (dirty)	
Manchester	7/28/2005	PTR-330	Piscataquog River	240	Resample/investigate
Manchester	7/28/2005	PTR-350	Piscataquog River	250	
Manchester	8/1/2005	PTR-460	Piscataquog River	1260	Resample/investigate check to see if CSO has been separated yet or not, CSO #37
Manchester	8/2/2005	MER-2280	Merrimack River	TNTC*	Resample/investigate
Manchester	8/2/2005	MER-2320	Merrimack River	430	
Manchester	8/2/2005	MER-2370	Merrimack River	650	

* TNTC corresponds to a laboratory result of too many *E. coli* specimens to count.

Of particular concern are MER-2310 and MER-2340. Both of these locations show excessive evidence of being functioning CSO's. MER-2310 is a submerged pipe, and could not be sampled. MER-2340 is not listed in the table above due to *E. coli* results of 60counts/mL. The low count could be because the pipe was flowing with only storm water at the day of sampling. Neither of these pipes had a sign for a CSO, as we have seen in other locations along the Merrimack and Piscataquog Rivers.

DES has a copy of the Malcolm Pirnie (MP) study done on the Merrimack River funded by the City of Manchester. Throughout the investigations we have compared notes with the study's findings. It has to be noted that there are discrepancies between our results and MP's. The common discrepancy has been on the outfall pipes' diameters. In the procedures of the study it was not discussed how measurements were taken. Our procedure is to measure the inside diameter of the pipe with a yard stick or tape measure, when possible to reach the mouth of the pipe. Another discrepancy has been pipe material; distance from the pipe could be the problem. On the plus side the maps of the

River and pipe locations have been very helpful. Our only suggestion would be to provide GPS points for the pipe outfalls in the study.

We hope to work with the City of Manchester to eliminate the high *E. coli* counts flowing into the Merrimack and Piscataquog Rivers. Please see enclosed map of the 12 high *E. coli* outfall pipes, field sheets, daily summaries, Bacterial Indicators SOP, and CD with photographs of the outfall pipes and all of the previous mentioned printed information. If you would like data on all 105 outfall pipes please contact Steve Landry.

Contact information:

Steve Landry, Merrimack Watershed Supervisor

NH Department of Environmental Services

Watershed Assistance Section

29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

Tel (603) 271-2969 * Fax (603) 271-7894

www.des.state.nh.us/wmb/was/

Follow Up on the NHDES Illicit Discharge Report

- 42° 58' 11.3" N - 71° 28' 32.5" W 42° 58' 11.47" N - 71° 28' 32.43" W City GPS
 8/16/2005 **MER-2320** is outfall is the PPO-190 that is reported in the 1-50 section worksheet.
 E. Coli This is before the offramp leading to Second Steet. The pipe had a trickle of
 430 flow < 1/2 gpm. GIS indicates only the turnpike median is drained by this pipe. It
 may be animal waste. \\H\VOL2\DEPTS\EPI \\H\VOL2\DEPTS\EPD **City Pic**
- 42° 59' 27.8" N - 71° 28' 14.4" W
 7/14/2005 NHDES located **MER-1810** on the west bank underneath the Everett Turnpike just
 E. Coli downstream of the railroad abutments. Will have to investigate this further by
 660 boat as access is limited. MER-1810.JPG
- 42° 59' 21.1" N - 71° 28' 10.4" W
 7/27/2005 NHDES located **MER-2010** in the Mill area behind Commercial Street.
 E.Coli We will need to investigate this further. Need to use a boat as access is
 420 limited. No picture included on CD.
- 42° 59' 8.4" N - 71° 28' 9.0" W
 7/27/2005 NHDES located **MER-2150** in the Mill area off the back deck of Jillians Resturant.
 E.Coli This is our Combined Sewer Overflow-045. It does discharge heavily during rains
 <100 with associated trash. It is tied to the Verizon Wireless Arena where we've had
 some previous issues with cleaning of the animals after a circus.
\\H\VOL2\DEPTS\EPI \\H\VOL2\DEPTS\EPI **City Pic**
- 42° 57' 43.6" N - 71° 28' 30.7" W
 8/2/2005 NHDES located **MER-2370** off the Everett Turnpike. Upon further review
 E.Coli it is found that this outfall is located well into Bedford and is a discharge that
 650 is found between two streets. No further action will be taken on this outfall other
 than to notify Bedford. \\H\VOL2\DEPTS\EPI
- 42° 58' 23.6" N - 71° 28' 19.0" W
 8/11/2005 NHDES located **MER-2450** on the east bank downstream of the Queen City Bridge
 E.Coli No coliform results were available at the time of report submission.
 <10 We will identify and test further. **MER-2440** is also in this location.
\\H\VOL2\DEPTS\EPI Not located on the map that was provided.
- 42° 58' 22.8" N - 71° 28' 19.6" W
 8/11/2005 NHDES located **MER-2460** on the east bank downstream of the Queen City Bridge
 E.Coli No coliform results were available at the time of report submission.
 10 We will identify and test further. **Water is warm and there is a CL2 smell**
\\H\vol2\depts\Epd\Us This is our PPO-122 and is a permitted discharge
\\H\VOL2\DEPTS\EPD\ **City Pic** from NYCOA
- 42° 57' 0.0" N - 71° 28' 43.6" W
 8/11/2005 NHDES located **MER-2520 & 2525** on the east bank downstream of the Queen City
 E.Coli Bridge. No coliform results were available at the time of report submission.
 <100 We will identify and test further. This is our Combined Sewer Overflow-042
 <50 \\H\vol2\depts\Epd\Us Bank is steep, will need to be
MER-2525.JPG accessed from the river.



ATTACHMENT N

Round One (1) of the Outfall Inspection Report Log

June 1, 2005 through April 30, 2006

	Date	PPO #	Active	Findings	Pic Link
1	6/7/2005	124	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Low discharge - cooling water from NYCOA?	\\H1\VOL2\IDE
2	6/7/2005	124(A)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe from yard drains near garages	\\H1\VOL2\IDE
3	6/7/2005	123	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Tiny trickle - NYCOA air conditioner?	\\H1\VOL2\IDE
4	6/7/2005	122	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Intake Cooling Water Discharge - NYCOA	\\H1\VOL2\IDE
5	6/7/2005	121	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Abandoned pipe above PPO122 - no sign of activity	\\H1\VOL2\IDE
6	6/7/2005	120	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Old Weir sluice gate that appears unused	\\H1\VOL2\IDE
7	6/7/2005	119	<input type="checkbox"/> Yes <input type="checkbox"/> No	Could not find in location, maybe the 118A?	
8	6/7/2005	118(A)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Corroged Pipe, no discharge, no CBs feeding line	\\H1\VOL2\IDE
9	6/7/2005	118	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Corroged Pipe, no discharge, no CBs feeding line	\\H1\VOL2\IDE
10	6/7/2005	117	<input type="checkbox"/> Yes <input type="checkbox"/> No	Pipe into water, if discharging flow is clear	\\H1\VOL2\IDE
11	6/7/2005	17.5 New	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	New drain cluvert from Riverwalk work - CB feeds it	\\H1\VOL2\IDE
12	6/7/2005	116	<input type="checkbox"/> Yes <input type="checkbox"/> No	Could not find in location stated in GIS mapping	
13	6/7/2005	127	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Perforated rusted corroged drain	\\H1\VOL2\IDE
14	6/7/2005	128	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Brook and CB drain from Riverdale	\\H1\VOL2\IDE
15	6/7/2005	193	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Town line, drains highway CB	\\H1\VOL2\IDE
16	6/7/2005	CSO 009	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clean drainage from CBs in Shiller St. Area	\\H1\VOL2\IDE
17	6/7/2005	191	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drains highway CBs - no drainage large swale area	\\H1\VOL2\IDE
18	6/7/2005	2506-2G	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CB road drain from highway - no discharge	\\H1\VOL2\IDE
19	8/16/2005	190	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	State tested coliform - MER-2320, count was 430	\\H1\VOL2\IDE
20	6/7/2005	2606-26	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CB road drain from highway - no discharge	\\H1\VOL2\IDE
21	6/7/2005	189	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cement drain from highway drainage - clean discharge	\\H1\VOL2\IDE
22	6/7/2005	3502-3F	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CB road drain from highway - no discharge	\\H1\VOL2\IDE
23	6/7/2005	2504-3F	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CB road drain from highway - no discharge	\\H1\VOL2\IDE
24	6/7/2005	2506-3F	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CB road drain from highway - no discharge Plugged	\\H1\VOL2\IDE
25	8/5/2005	CSO-45	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Slight clear drainage - no contamination	\\H1\VOL2\IDE
26	8/5/2005	98	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Under bridge, no discharge	\\H1\VOL2\IDE
27	8/5/2005	99	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Off to the right side of the bridge, no drainage	\\H1\VOL2\IDE
28	8/5/2005	100	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Two pipes out of side of building, neither discharging	\\H1\VOL2\IDE
29	8/5/2005	101	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Two pipes out of side of building, neither discharging	Above
30	8/5/2005	101a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stone archway - may discharge during rains	\\H1\VOL2\IDE
31	8/5/2005	102	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Two pipes out of side of building, neither discharging	\\H1\VOL2\IDE
32	8/5/2005	103	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Some evidence of previous discharge - clean	\\H1\VOL2\IDE
33	8/5/2005	104	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Two pipes out of side of building, neither discharging	See 102
34	8/5/2005	105	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Some evidence of previous discharge - clean	\\H1\VOL2\IDE
35	8/5/2005	106	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Side of building - no sign of discharge	\\H1\VOL2\IDE
36	8/5/2005	106a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Possible 2 disconnected pipes and one abandoned	\\H1\VOL2\IDE
37	8/5/2005	107	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe covered by mudflap - no activity	\\H1\VOL2\IDE
38	8/5/2005	107a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe in wall, covered by vines - no activity	See 107
	8/5/2005	Activity		Lint discharging from dryer vent at E&R Laundry turn over to IPP	\\H1\VOL2\I
39	8/5/2005	108	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Side of building - no sign of discharge	\\H1\VOL2\IDE
40	8/5/2005	109	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe covered by mudflap - no activity	see 109
41	8/5/2005	201	<input type="checkbox"/> Yes <input type="checkbox"/> No	Pipe coming from side of river bank - not discharging	\\H1\VOL2\IDE
42	8/5/2005	202	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe in side of river bank - not currently discharging	\\H1\VOL2\IDE
43	8/5/2005	96	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	30" drain - not active, but runs during rainstorms	\\H1\VOL2\I
44	8/5/2005	95	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe under granite foundation - no discharge	\\H1\VOL2\I
45	8/5/2005	95a	<input type="checkbox"/> Yes <input type="checkbox"/> No	Erosion exposed pipe - not currently discharging	\\H1\VOL2\I
46	8/5/2005	94	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drain to river - not discharging - may be totally inactive	\\H1\VOL2\I
47	8/5/2005	94 a&b	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2 pipes out of building hidden by vines - not discharging	\\H1\VOL2\I
48	8/5/2005	93	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Concrete pipe along riverbank - no signs of any discharge	\\H1\VOL2\I
49	8/5/2005	92	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Broken pipe out of building - not discharging	\\H1\VOL2\I
50	8/5/2005	91	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drain off bldg. - not discharging - may be totally inactive	\\H1\VOL2\I



ATTACHMENT N

Round One (1) of the Outfall Inspection Report Log

June 1, 2005 through April 30, 2006

	Date	PPO #	Active	Findings	Pic Link
51	8/5/2005	91a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	New PVC pipe at end of walkway - not discharging	\\H1\VOL2\
52	8/5/2005	91b	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Opening in wall - not discharging - past activity - clean	\\H1\VOL2\
53	8/5/2005	91c	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Abandoned pipe - no long-term activity - blends in wall	\\H1\VOL2\
54	8/5/2005	90	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe in stone foundation - no long-term activity	\\H1\VOL2\
55	8/5/2005	89	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pipe in stone foundation - no long-term activity	\\H1\VOL2\
56	8/5/2005	88	<input type="checkbox"/> ? Yes <input type="checkbox"/> ? No	Iron pipe into Merrimack - no discharge currently	\\H1\VOL2\
57	8/5/2005	88a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Abandoned pipe - no long-term activity - blends in wall	\\H1\VOL2\
58	8/5/2005	88b	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Stone archway - currently discharging - water smells - test	\\H1\VOL2\
59	8/5/2005	87	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Broken abandoned pipe - no long-term activity	\\H1\VOL2\
60	8/5/2005	86	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stone box discharge - no current discharge	\\H1\VOL2\
61	8/5/2005	85	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Side of building - no sign of discharge	\\H1\VOL2\
62	8/5/2005	84	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Side of building - no sign of discharge	\\H1\VOL2\
63	8/5/2005	83	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Side of building - no sign of discharge	\\H1\VOL2\
64	8/5/2005	82	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Side of building - no sign of discharge - fire sprinkler relief	\\H1\VOL2\
65	8/5/2005	81	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Broken pipe out of building - not discharging	\\H1\VOL2\
66	8/5/2005	81a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	36" drain at the end of Textile St. 1760-3E	\\H1\VOL2\
67	8/5/2005	81b	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Two gated archways - no sign of recent discharge	\\H1\VOL2\
68	9/6/2005	149	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Conc. Headwall - 12" Pipe / no discharge	\\H1\VOL2\
69	9/6/2005	150	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12" Conc pipe draining out of side of bank - Sampled	\\H1\VOL2\
70	9/6/2005	151	<input type="checkbox"/> Yes <input type="checkbox"/> No	Pipe out of side of bank - Sampled - Need to revisit	No Pic
71	9/6/2005	2742-3D	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Rock opening in side of bank - area looked wet no discharge	\\H1\vol2\de
72	9/6/2005	2739-3D	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	A little wet from drainage flow - high iron water	\\H1\VOL2\
73	9/6/2005	2730-3D	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wet area drainage from above CB outlet	2730-3D.jp
74	9/6/2005	152	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Drain pipe from off ramp - flowing	PPO152.jp
75	9/6/2005	19339	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Brook drainage - from off ramp of Everett Turnpike	19339.jpg
76	9/6/2005	200	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	42" RCP discharging between 10 - 15 GPM - sampled	PPO200.jp
77		52 - 53	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	36" Conc & 10" Conc. In side of bldg. No sign of discharge	PPO52-53.
78		55 - 56	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	30" & 12" RCP no sign of discharge	PPO55-56.
79		50	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6" CI pipe from side of building - no discharge	PPO50.jpg
80		54	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	8" CI pipe from foundation - no discharge	PPO54.jpg
81		57,58,59	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Three Stone intake archways - River water no apparent Q	PPO57,58.
82		60	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Small 2" CI pipe in side of wall after 3 archways.	PPO60.jpg
83		62	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	42" RCP drain line. No discharge	PPO62.jpg
84		62A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Square hole in building above PPO 60	\\H1\VOL2\
85		63	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Street drain in bottom of walkway	\\H1\VOL2\
86		67-68	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Two Stone Archways underneath Bridge Street	\\H1\VOL2\
87		88b	<input type="checkbox"/> Yes <input type="checkbox"/> No	Stone Archway listed above - tested No coliform	\\H1\VOL2\
88			<input type="checkbox"/> Yes <input type="checkbox"/> No		
89			<input type="checkbox"/> Yes <input type="checkbox"/> No		
90			<input type="checkbox"/> Yes <input type="checkbox"/> No		
91			<input type="checkbox"/> Yes <input type="checkbox"/> No		
92			<input type="checkbox"/> Yes <input type="checkbox"/> No		
93			<input type="checkbox"/> Yes <input type="checkbox"/> No		
94			<input type="checkbox"/> Yes <input type="checkbox"/> No		
95			<input type="checkbox"/> Yes <input type="checkbox"/> No		
96			<input type="checkbox"/> Yes <input type="checkbox"/> No		
97			<input type="checkbox"/> Yes <input type="checkbox"/> No		
98			<input type="checkbox"/> Yes <input type="checkbox"/> No		
99			<input type="checkbox"/> Yes <input type="checkbox"/> No		

MANCHESTER WATER WORKS LABORATORY

1581 Lake Shore Road Manchester, NH 03109 (60 3)624-6482

COLLECTION DATE:	7/11/05	ANALYSIS DATE:	7/11/05
COLLECTION BY:	EG/AK	ANALYSIS BY:	CAW/KBC/MMP

MHD Bacteria Worksheet

Beach Sites

Sample ID#	Site Location	Well Readings	Total Coliform / 100 mLs	E. coli / 100 mLs
05-4240	Merrimack River / Arms Park	49/47;36/8	2420	76
05-4241	Merrimack River / Victoria St	49/48;38/3	>2420	73
05-4242	Merrimack River / Chauncey Ave	49/47;30/4	2420	50
05-4243	Merrimack River / Intervale CC	49/48;40/3	>2420	81
05-4244	Electric St Dock	49/48;49/48	>2420	>2420
05-4245	Upland St Beach- L	49/48;49/48	>2420	>2420
05-4246	Upland St Beach- R	49/48;49/48	>2420	>2420
05-4247	Trestle	49/48;49/48	>2420	>2420
05-4248	Piscatoquog / Theo Raco Park	49/48;49/48	>2420	>2420
05-4249	Piscatoquog / Bass Island	49/48;49/48	>2420	>2420
05-4250	Crystal Lake- L	49/48;41/12	>2420	110
05-4251	Crystal Lake- R	49/44;11/1	1553	7
05-4252	Melody Pines- L	49/37;11/1	921	13
05-4253	Melody Pines- R	49/34;4/0	770	13
05-4254	Camp Carpenter- R	49/48;7/0	>2420	4
05-4255	Camp Carpenter- L	49/46;6/0	1986	6
Repeat	Merrimack River / Chauncey Ave	49/47;29/8	2420	55
Control-1 Lot#05-6	Negative Control Sterile Water	0/0	0	0
Control-2 Lot#05-20	Negative Culture: <i>Pseudomonas aeruginosa</i>	0/0	0	0
Control-3 Lot#05-21	TC +/- EC - Culture: <i>Klebsiella pneumoniae</i>	48/49;0/0	>2420	0
Control-4 Lot#05-22	TC + / EC + Culture: <i>Escherichia coli</i>	48/49;48/49	>2420	>2420

Comments: Crystal lake Left and ALL Piscatoquog samples (6 sites) >88 E.coli count

*Certified NELAP method and procedure.

Method: 9223 D + UV P/A colilert

Read By: kbc/mmp

**Checked by CAW

Signature: _____ Date: _____

MANCHESTER WATER WORKS LABORATORY
1581 Lake Shore Road Manchester, NH 03109 (60 3)624-6482

COLLECTION DATE: 7/13/05 Resamples	ANALYSIS DATE: 7/13/05
COLLECTION BY: EG/AK	ANALYSIS BY: CAW

MHD Bacteria Worksheet
Beach Sites

Sample ID#	Site Location	Well Readings	Total Coliform / 100 mLs	E. coli / 100 mLs
05-4322	Electric St Dock	49/34;49/7	1540	358
05-4323	Upland St Beach- R	49/39;48/16	2092	456
05-4324	Upland St Beach- L	49/43;49/18	2828	616
05-4325	Trestle	49/39;48/19	2092	520
05-4326	Piscatoquog / Theo Raco Park	49/47;48/13	4840	402
05-4327	Piscatoquog / Bass Island	All;46/11	>4840	304
Repeat	Piscatoquog / Bass Island	49/47;47/13	4840	358
Control-1 Lot#05-6	Negative Control Sterile Water	0	0	0

Comments:

1:1 dilution of samples requiring a multiplier of 2 to MPN table readings based on well count. Samples have a high *E. coli* count.

Method: 9223 D + UV P/A colilert using QuantiTray 2K (MPN)
Read By: CAW

Signature: Cheryl Wood

Date: 7/14/05

MANCHESTER WATER WORKS LABORATORY
1581 Lake Shore Road Manchester, NH 03109 (60 3)624-6482

COLLECTION DATE:	7-25-05	ANALYSIS DATE:	7-25-05
COLLECTION BY:	EG/AK	ANALYSIS BY:	KBC

MHD Bacteria Worksheet
Beach Sites

Sample ID#	Site Location	Well Readings	Total Coliform / 100 mLs	E. coli / 100 mLs
05-4554	Merrimack River / Arms Park	49/48:49/24	>2420	435 *
05-4555	Merrimack River / Victoria St	49/42:7/2	1300	10
05-4556	Merrimack River / Chauncey Ave	49/40:27/2	1120	40
05-4557	Merrimack River / Intervale CC	49/48:23/2	>2420	33
05-4561	Trestle	49/43:9/2	1414	12
05-4558	Electric St Dock	49/45:5/1	1733	6
05-4560	Upland St Beach- R	49/35:5/0	816	5
05-4559	Upland St Beach- L	49/38:4/0	980	4
05-4562	Piscatoquog / Theo Raco Park	49/48:27/4	>2420	44
05-4563	Piscatoquog / Bass Island	49/48:48/19	>2420	260 *
05-4568	Crystal Lake- R	49/42:3/0	1300	3
05-4569	Crystal Lake- L	49/46:6/0	1986	6
05-4566	Melody Pines- L	49/42:5/0	1300	5
05-4567	Melody Pines- R	49/48:9/0	>2420	10
05-4564	Camp Carpenter- R	49/28:1/0	548	1
05-4565	Camp Carpenter- L	49/25:0/0	461	<1
Repeat	Victoria St	49/37:3/2	921	5
Control-1 Lot#05-6	Negative Control Sterile Water	0/0:0/0	<1	<1
Control-2 Lot#05-20	Negative Culture: <i>Pseudomonas aeruginosa</i>	0/0:0/0	<1	<1
Control-3 Lot#05-21	TC +/- EC - Culture: <i>Klebsiella pneumoniae</i>	49/48:0/0	>2420	<1
Control-4 Lot#05-22	TC + / EC + Culture: <i>Escherichia coli</i>	49/48:49/48	>2420	>2420

Comments:

Method: 9223 D + UV P/A Colilert

Read By: KBC

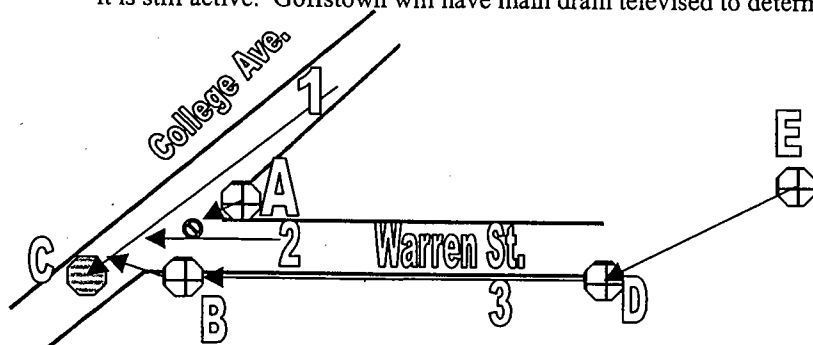
**Checked by

Signature: _____

Date: _____

There is a main Drain manhole[C] on College Ave. that gets the majority of the flow from the large drain [1] on this street. The side street drain from Warren Avenue [3] ties into the main drain pipe. This picks up CB [B, D and E].

CB [A] does not directly tie into the College Ave drain, but flows toward where the blockage was and connects to an unknown pipe [2]. It is believed this pipe was left from the construction in the 1950s and that a few houses are still tied into this "what was once thought as" an abandoned line. The Town of Goffstown crew used a sewer jet to push the blockage from the blocked area out to the main line [1] on College Ave. What was observed was toilet paper and fecal matter. The fecal matter was still in solid clumps and the toilet paper in matted mass to indicate the sewage had not traveled far. It is suspected that one to maybe three or four homes are tied onto the "what was once thought as" an abandoned line and that it is still active. Goffstown will have main drain televised to determine where pipe [2] enters.



The NHDES had reported finding sewage behind Bartlett Elementary School in Goffstown. This was traced back to the shaded manhole above.

In conjunction with this finding, the City of Manchester's Health Department had found high coliform counts along several sites on the Piscataquog River during their routine weekly summer sampling. The storm water department was notified and inspected outfalls within its City of Manchester's border. No source could be found. It was discovered that the source was above the Biron Street location of the Goffstown Town Metering Station. Manchester contacted Goffstown and was informed of the NHDES findings.

Manchester assisted Goffstown with dye testing of the residents along College Avenue and Warren Street. Not all dye testing could be confirmed and not dye was found in the suspect drain. The City of Manchester then used the smoke tester to try to confirm if all houses were tied into the sewer. The drain was then smoke tested, but due to the number of open grated catch basins tied to this drain, no conclusive findings could be uncovered.

Goffstown hired Underground Testing Services to televise the drain and sewers in the area. This is when the #2 pipe (listed in the above diagram) was discovered. It was decided to dig up the street and plug this line (as it was believed abandoned). Goffstown would wait until resident(s) called with back up issues and then would see that these people were hooked up to an active sewer line. No calls were received and the subsequent testing of the Piscataquog shows no coliform.

Manchester will test the outfall from the Bartlett Elementary School, that enters the Piscataquog River above the Biron Street Metering Station, a few times during the spring to assure this problem has been rectified.

ATTACHMENT Q

Cantu, Rick

From: Seigle, Thomas
Sent: Tuesday, January 03, 2006 11:18 AM
To: Cantu, Rick
Subject: FW: Sewer Drain GIS Update process

FYI

From: Brennen, Jayson [mailto:BrennenJD@cdm.com]
Sent: Friday, December 23, 2005 11:03 AM
To: Seigle, Thomas; Davini, Jay
Cc: Laliberte, Joseph; Koziell, Bryson
Subject: Sewer Drain GIS Update process

All,

Based on our meeting today, the following is what I understood the process/responsibilities to be...

1. Bryson will complete all the updates within 2 weeks. At that point, we will load the data into the City's SDE system and all users will be able to have access to it. We will also print out a few sets of updated atlas maps.
2. CDM will figure out the amount of time spent on CDM, HTA, and City edits and will provide two invoices to the City... one to Tom for the HTA updates and one to Jay for the Highway updates. Jay will then approve the Highway updates and forward the invoice to Tom.
3. For the Future Updates....
 - 3a. CDM will complete all updates for CDM work. Once a project's as-builts are complete, CDM will obtain the City's sewer GIS from the SDE system, update the data, and load the data back onto the City's SDE system. It is estimated that updates will take about 2 weeks. During that time, Highway will not make edits.
 - 3b. CDM will update the GIS based on changes found by CDM as part of the preliminary design reports. For future reports, we will build in a small budget into the report. For the past reports, Joe is going to go through to see if there is budget within the studies. For the small ones, we will just take care of it. Like the above, when we make the changes, we obtain the data from the City's SDE system, change it, and reload it.
 - 3c. Highway will handle ongoing daily changes. For example, when Tom finds an error, he will mark it on a map and send it to Jay to update. It is recommended that these be done quarterly depending on the number of changes.
 - 3d. Highway will handle new sewers that are being put in with new subdivisions. However, the process for how the as-builts for these systems flow down to Jay needs to be identified.

Tom, I think the link to the City's GIS Web Application is... <http://ia/giswebsde>. It may be a shortcut on your system. I would have check if your screen resolution is set up correctly to allow you to see the site correctly. Are you around next week? I will stop by or my way in.

Does the above seem correct?

Jayson

4/7/2006

BMP #4 Construction Site Runoff Controls

#4-1, Develop & Present Ordinance to Require Erosion & Sediment Control Plan (to include construction material management plan and plan review for sites disturbing more than one acre) – (BMP Completed)

Current Status: This was included in the draft Ordinance and the Rules and Regulations that was presented in last year's report.

BMP Effectiveness Evaluation: Even though this requirement has been developed and presented, it has yet to receive final approval from the Board of Mayor and Aldermen. Currently any request or enforcement could be challenged as we do not have the ordinance in place.

Future Goals: The same goal would apply here as that outlined in BMP #3-1.

#4-2, Develop Procedure for Receipt and Consideration of Public Comment –

Current Status: The attachments outlined in BMP #2-1 illustrate how the City processes public comment. All comments are taken seriously, the citizens are contacted, the issues discussed and if the suggestion is sound, incorporated into the storm water management program.

Manchester will continue to receive suggestions via the website, phoned comments, statements made at hearings and by letter.

BMP Effectiveness Evaluation: The process used during the public hearing regarding the storm water ordinance was well received and most of the comments were incorporated into a new draft of the ordinance. This process is working well.

Future Goals: The goal is to continue following the City's protocol through the adoption of the Storm Water Ordinance and then apply this same protocol for public review of the proposed Regulations.

#4-3, Check Erosion Control Measures and Construction Material Management on Site Inspection

Current Status: The City continues to use the checklist as outlined in last year's report. This inspection sheet has proven to be a comprehensive document when referring back to conditions that existed at a particular time during project development. The inspection sheet includes information regarding the site, historical rainfall for the past few weeks, and the conditions of BMPs.

The inspection of BMPs is gauged against the Erosion and Sediment Control Plan that was submitted by the developer during the site plan approval process. Any deviance

from the plan is noted and a clean typed copy is made from the field inspection notes, signed by the inspector, and forwarded to the contractor for action. Pictures taken at the site are referenced by link on the sheet and can be easily retrieved in the computer to evaluate the current findings with those from previous reports.

BMP Effectiveness Evaluation: The previous modifications to the field inspection checklist have provided the City with a detailed list of items to inspect during site visits. This checklist works well during field investigation.

Future Goals: The future goal is to continue using this inspection checklist during site visits, document variances and violations from the approved plans, verify these failures via digital photographs, and continue to compile a site folder for each approved project within the City of Manchester.

BMP #5 Post-Construction Stormwater Management in New Development & Redevelopment

#5-1, Develop Ordinance to Require Runoff Controls for New & Re-Development for Projects Disturbing > One Acre

Current Status: This ordinance will be part of the overall Ordinance and Regulations that were drafted for BMP #3-1. Runoff Controls are outlined in Section 4, General Permit Provisions, of the Ordinance and more detailed in the corresponding section of the regulations.

BMP Effectiveness: This BMP is only as effective as voluntary compliance at this stage by the developers and contractors. Once the Ordinance and Regulations are approved the BMP should be highly effective.

Manchester will await the release of the detailed "Post-Construction Guidance" document that the EPA is developing in conjunction with the Center for Watershed Protection. The criteria that applies to Manchester's program will be adopted within the Storm Water Regulations.

Future Goals: The future goal is the same as that which is outlined in BMP 3-1.

#5-2, Recommend a BMP Manual for Use by Planners and Developers

Current Status: This is outlined in the draft Regulations and outlined in Section 6. It references the following manuals:

- 6(A)(1), the New Hampshire Department of Environmental Services Sediment and Erosion Control Manual, "Green Book" (also known as the Rockingham County "Storm Water Management and Erosion Control Handbook for Urban and Developing Area";
- 6(A)(2), City of Manchester's "Standard Specifications for Road, Drain & Sewer Construction";
- 6(A)(3), "Innovative Stormwater Treatment Technologies" – Best Management Practices Manual NHDES, May 2003;
- 6(A)(4), and the "New Hampshire DOT Guidelines for Temporary Erosion and Sediment Control and Storm Water Management" – NHDOT Bureau of Construction; as reference manuals.

BMP Effectiveness: These references are voluntary guidance. The manuals can be an effective approach as most New Hampshire contractors are familiar with the contents of these manuals and refer to these guidelines when developing their sediment and erosion control plans.

Future Goals: To review the possibility of having all the BMP references incorporated into one document.

BMP #6 Pollution Prevention/Good Housekeeping for Municipal Operations

#6-1, Install Silt Fence Around Snow Dump Area

Current Status: Silt fences are currently erected around the snow dumping areas in Manchester. The condition and status of these fences is verified during the month of November. The City has purchased a snow melter and used it over the 2004/2005-winter season. The 2005/2006 season has been a very mild with little snowfall. Rain was the predominant form of precipitation this winter. Due to this the snow melter has not been used this winter.

When the snow melter is used it results in less snow being stockpiled throughout the winter resulting in less stress on the erected snow fences. The snow melter also prevents any sodium chloride in the snow banks from reaching the river as the melt water is discharged to catch basins and sewers in the city's combined sewer areas. This melt water goes directly to the plant. It is believed that some of the sodium chloride is retained in the sludge and not passed through the treatment process.

BMP Effectiveness: The silt fence keeps the trash and sand that is collected with the plowed snow from entering the waterways. The big plus is the snow melter. This has reduced overall stock piling of snow, the intensity of the sodium chloride pollutant to the river and reduced the peak snow runoff volumes in the congested areas of the City where the melter is used.

Future Goals: Continue with the existing program and use the snow melter to its full potential.

#6-2, Continue Catch Basin Cleaning Program, Including Priority Catch Basins

Current Status: The City has placed the catch basin cleaning program on a high priority listing well before the Storm Water Phase II program was initiated. The City contracted to have 1,200 catch basins cleaned by a private company during the 2005/2006 fiscal year. As of the writing of this report, almost 400 basins were cleaned with the rest to be completed before June 15th. The cost for this contract is \$33,000. A contractor report is included as Attachment R.

There is a listing of priority catch basins adjacent to the Urban Ponds and in trouble areas within the City that must be inspected semi-annually, and cleaned if warranted. These basins must remain free of large amounts of debris to assure a reduced pollutant load to the ponds.

The catch basin cleaning listing completed by municipal crews is included as Attachment S. The catch basins surrounding the urban ponds receive top priority.

BMP Effectiveness: The process worked well last year and continues to keep the City ahead of their catch basin cleaning issues around the ponds. In the process we are learning the problem areas within the City and developing a tracking list to put these problem areas in the forefront of inspection. The problem areas are usually learned through calls and complaints by residents. This year's listing of catch basin problem areas is included as Attachment T.

We track sewer calls to determine if roots or other maintenance issues are the cause of the blockages. The log of sewer back up calls and the findings is included as Attachment U.

The sewer problem areas are noted and inspected on a minimum annual basis and sometimes more frequently. Approximately 50% of the City's sewer system is combined and when there are problems with the combined sewer lines, there are problems with the drainage in those systems. The sewer problem areas listing is included as Attachment V.

Future Goals: To continue to prioritize the urban pond catch basins for cleaning and to develop a reliable listing of trends for problem catch basins throughout the city. To continue the financing of the contract with the private contractor to clean additional catch basins within the City.

#6-3, Sweep Streets Three Times Annually

Current Status: The City continues to follow a schedule of street sweeping that was presented in the first year's report. This year, due to the mild winter, the street sweepers have gone out earlier than in previous years. Street sweeping has continued on and off throughout the winter. This will provide additional street sweeping and removal of sand before discharge to the catch basins during this winter season between storms.

We did not meet last year's goals of developing a procedure to measure the amount of sand collected. This was due to the fact that the street sweepers go out to sweep, independent of the sand applied within Manchester, on a particular schedule. Most of the sand found on City streets comes from winter sanding and some small amounts of sediment from erosion on residential lawns. Sand is applied to sidewalks and schoolyards during snowstorms. Salt is applied to the highways during snowstorms. A sand/salt mix is used during icing conditions or ice storms.

The amount of sand applied varies yearly. It is all weather dependent. The sweepers will

pick up aluminum cans, cigarette butts, leaves, paper cups, plastics, articles of discarded clothes, foot-ware and a host of material that is not sand related. When sand is mostly absent from the streets these items make up the bulk of the material collected by the sweeper. When sand is present it may make up the bulk of the material.

Most of the sand is collected off the streets during the first few neighborhood runs immediately after the winter storm season. Otherwise, most of the material collected is what is listed above. Therefore, it would be difficult to determine the amount of sand collected.

BMP Effectiveness: This BMP continues to be quite effective as some sections of the inner City business district are swept on a biweekly basis (far exceeding the required 3 times annually outlined in the minimum program). All sections of the city are currently swept more than three times annually. The mild winter will increase the street sweeping efforts of this reporting year.

Future Goals: To continue the street sweeping program at its current rate.

#6-4, Continue to Follow SOPs for Disposal of Catch basin Cleaning and Street Sweeping Residuals

Current Status: The City continues to place street sweeping debris and catch basin debris up in the rear lot of the recycling facility. The street sweepings are placed on a concrete pad with three-sided cement block walls. These sweepings are dried out, mixed with the gravel/asphalt pile and eventually ground up to make crushed gravel for streets and sidewalks.

The catch basin waste is piled across from the street sweeping debris in a compacted depression. This catch basin waste is allowed to evaporate to a certain extent then it is also mixed with the gravel/asphalt pile and eventually ground up to make crushed gravel for streets and sidewalks.

BMP Effectiveness: This BMP is as effective as designed and provides a reuse for the material collected that would otherwise be sent to landfill. The City will explore ways to improve this BMP.

Future Goals: The City filed a grant request with the State of New Hampshire to build a covered concrete system to better handle the catch basin waste. This request did not make it through the NHDES grant approval process. It will be submitted in the next round of grant applications in hopes of securing funding for this project. The grant request is included as Attachment W.

#6-5, Minimize Salt Usage and Maintain Cover over Salt Storage Area

Current Status: The majority of the salt the City uses for highway treatment in the winter is kept under cover at the Highway Garage. There is also a satellite location up at Dunbarton Road that is active during the winter period. This salt pile is covered with a tarp.

All salting trucks are calibrated once annually before the winter sand/salt application season begins to assure the greatest efficiency and minimal salt use during spreading.

In regard to the issue of salt migrating to the water bodies, the City of Manchester purchased a snow melter during the 2004 season. The melter is capable of melting 135 tons of snow per hour. The snow melter is used in the high-density areas (downtown) where snow can't be plowed on sidewalks.

The sodium chloride associated with the melt water is discharged down manholes connected to the combined sewer system to the wastewater treatment plant. This will keep some of the sodium chloride, associated with the eventual melt, out of the Merrimack River. The sodium chloride that passes through the treatment process is discharged to the Merrimack River on a steady state basis, thus avoiding the peak loading during warm days.

Due to the mild winter and small amount of snow, the snow melter was not used this year.

BMP Effectiveness: Salt usage was greatly reduced due to the light winter and small amount of snowfall. The application of salt is receiving more attention due to the I-93 widening project. The Conservation Law Foundation has a suit against the State of New Hampshire in regards to this widening project. The State is currently working on TMDLs for the water bodies along the I-93 Corridor. The full impact of salt application will be realized once the TMDL study is completed.

Future Goals: To work within the requirements of the TMDL study once that is established and continue to implement the measures outlined in the BMP.

#6-6, Develop/Implement Program for Cleaning Pond Inlets & Trash Racks

Current Status: There are two trash inlet racks at Nutts Pond. Both have been inspected during this reporting year. There are plans underway to retrofit these inlet racks for easier access and cleaning. There are also plans to upgrade the sediment collection system through various BMPs in the Nutts Pond area.

The three, three-chamber baffle tanks at Dorrs Pond, the one, three-chamber baffle tank at Crystal Lake and the Vortech swirl concentrator at Douglas street have all been inspected. The city has devised a checklist for the spring and fall inspection of these units to assure they are cleaned when they begin to get filled with sediment. The baffle tank-cleaning checklist is included as Attachment X.

There is a StormTreat™ System at Crystal Lake that the City is currently operating. It was restarted in May of 2005. The City cleaned the lines, retrofitted the baffle tank and now has the unit on the semi-annual inspection checklist.

The outflow line from the baffle tank was in the second chamber and located six inches off the floor. This orifice could easily become plugged with sand and debris. DPW had a stainless steel, three-sided box made, with an aluminum grate cover. This box is 1-foot high. It prevents the outflow line from becoming plugged and paper material is trapped upon the grate. This installation was completed in early summer. The memo on the maintenance and design of this system are included as Attachment Y.

The City also had 12, daylilies planted around each of the six, StormTreat™ treatment tanks. The outflow lines from the units were closed and a fire hydrant opened to flood the treatment units. This was done so the lilies could take root.

The lines were opened after a week and the six outlet valves throttled to assure the discharge flow from each unit was fairly uniform. These lilies were watered throughout the summer during dry periods. The proposal and lily layout diagram are included as Attachment Z.

BMP Effectiveness: This BMP is highly effective when in operation to reduce the phosphorus and nitrogen that would otherwise be going directly into Crystal Lake. The retrofit to the second chamber has allowed this unit to work as intended and allows flow to continue to move through the system.

Future Goals: To continue to look at the use of baffle tanks in high sediment areas. The City also wants to log the inspections and cleaning of the existing baffle tanks and other treatment units on a continuing basis. To perform a phosphorus and nitrogen analysis of the contents in the baffle tank and compare this to a sample of the treated discharge from the StormTreat System to determine removal efficiencies of the unit.

#6-7, Develop/Implement Employee Education Program

Current Status: The City continues to provide training to the staff who are involved with any aspect of storm water management. Power Point presentations, videos, and

how-to demonstrations were given to the employees during March. Those presentations reflect knowledge gained over this reporting year, and new methods for BMP placement.

The sewer crew training covered the following:

- An overview of how the StormTreat System at Crystal Lake;
- What a watershed is;
- Stormwater impacts on wastewater treatment;
- EPA 'After the Storm' video;
- Battle of non-point source pollution;
- Manchester's non-point pollution sources;
- Pollution in the Merrimack watershed;
- Erosion examples;
- High flows ruin good BMPs;
- Small issues create big problems (Attachment AA).

One training session was held on March 21st and the other March 22nd of 2006.

The second training session focused on the engineering staff that is involved with inspections at construction sites and site design. This training included the following:

- Manchester's non-point source issues;
- Sources of watershed pollutants;
- EPA's NOI overview;
- Examples of poor & failed BMPs;
- Erosion due to lack of BMPs;
- Good BMPs do not guarantee compliance;
- Site review plans paint a rosy picture;
- Small issues that compound problems;
- The ideal world of BMPs;
- StormTreat System operation overview.

The training log is included at the end of this section as Attachment AB. This training session was held on March 20, 2006.

Employee training goes beyond the Department of Public Works employees. The City of Manchester prints and distributes a bi-monthly newsletter entitled "The City Matters" to all City employees. As with last year, copies of the articles for this reporting year are included as Attachment AC.

Teacher training is a very important part of the Storm Water Management Program. The City's 8th grade teachers do receive a fair amount of instruction through the SEPP sponsored "Merrimack River Matters" program. The City has agreed to extend the

Amoskeag Fishways for a second year beyond the end of the Supplemental Environmental Projects Programs, to assure the City's 8th grade teachers are being supported in the environmental training programs. This contract carries through June of 2006.

The City donated in excess of \$500 to the Student Conservation Association to sponsor a citywide "Earth Day" Celebration event scheduled for April 22, 2006. This event will be held at Veteran's Park in the heart of the downtown. The event includes neighborhood cleanups, work on local environmental projects, activities and vendor booths.

Training is extended to storm water coordinators in surrounding communities. Manchester hosts the regional "Storm Water Assessment Team" (SWAT) which is made up of the New Hampshire communities consisting of Auburn, Bedford, Derry, Goffstown, Londonderry, the NHDOT and Manchester. Manchester has invited three other communities (Hamstead, Danville and Sandown) to join the group. The letters of invitation are Included as Attachment AD.

Each meeting session now includes a training module from "The Practice of Watershed Protection" manual entitled "Techniques for protecting our nation's streams, lakes, rivers and estuaries. Minutes of these meetings with reference to the specific modules is included as Attachment AE at the end of this section.

BMP Effectiveness: This BMP continues to grow, and with previous experience, is more effective with each passing year. The students continue to learn more as evidenced by the survey results taken by the Amoskeag Fishways staff. Employees are becoming more familiar and comfortable with the requirements of the Manchester's Storm Water Program. All City employees are kept aware of storm water management issues through the "City Matters" newsletter articles.

Future Goals: To continue supporting the Amoskeag Fishways in some capacity once their contract terminates. To continue the training of City staff regarding the storm water program. Keep storm water issues in the forefront through the efforts of the "City Matters" newsletter. Continue hosting the regional S.W.A.T. meetings.

#6-8, Design & Construct Pond Specific Pollution Prevention Projects

Current Status: The SEPP program required the design and implementation of pollution prevention projects around the ponds. All items, with the exception of the Nutts Pond project, have been completed since the previous reporting year.

The Nutts Pond project anticipates the retrofit of the two existing baffle tanks at the north and south end of the Pond. The design includes the implementation of two forebays on

the two east inlets (one at Home Depot and the other at Henry's Auto Body) to trap the material that currently increases the sediment deltas on the east side of the pond.

A wetland modification and diversion is planned for the area south of Henry's Auto Body to increase wetland detention and uptake of nutrients. The anticipated project cost is in excess of \$330,000. The city is awaiting word on a \$60,000 grant award from the NHDES. Manchester also needs final approval of the wetlands and dredge and fill permits for this work as it is considered a major impact project. It is expected that this project will get underway in mid-summer.

BMP Effectiveness: This BMP continues to be highly effective as tangible results are measured when the various structures are cleaned. Also, the yearly erosion that had been happening in these areas has abated as a result of the implementation of the BMPs for the targeted sites.

Future Goals: Continue the upkeep and inspections of these structures. Include all structures implemented at Nutts Pond site on the semi-annual inspection checklist.

#6-9, Best Management Practices for Derryfield Country Club - (BMP Completed)

Current Status: The City has placed 400 feet of paved cart path in the highest erosion area on the lower end of the golf course (hole #2) as was anticipated in last years report. This has eliminated the erosion in that area.

The Storm Water Coordinator will work with the Parks and Recreation garage supervisor to draft a spill prevention control and countermeasure program to implement BMPs for the maintenance garage.

BMP Effectiveness: This BMP is has brought awareness to the Derryfield staff and analysis indicates little to no net pollution contribution from the site. The large open fields may actually help in the uptake of atmospheric deposited pollutants.

Future Goals: Close out the construction project for the new clubhouse this spring and file the NOT. Review practices at the golf course once during this reporting year to determine if the eroded areas noted in the report are being reduced. Complete a BMP manual for use by staff in the maintenance garage.

May 1, 2005 through April 30, 2006 Catch Basin Cleaning List

This is a listing of all the catch basins cleaned by a private contractor during the period of May 1, 2005 through April 30, 2006. This listing will have more basins added as the contractor progresses beyond the Storm Water Program reporting year ending April 24, 2006.

Date	Street	# of Basins Cleaned
5/6/05	Green Acres Dr	8
	Island Pond	1
	Lynwood Ave	10
	Wedgewood Ln	1
5/7/05	Benjamin St.	18
	Wood Crest	10
5/13/05	Pine Brook St.	14
9/13/05	Monroe St.	2
	Elliot St.	1
	N. River Rd	3
	West Clark	3
	Everett St.	7
	Thayer St.	3
	Readey St.	2
9/20/05	Madaline St.	4
	Ridge Road	1
	Greenfield Rd.	6
	Elm St.	4
10/7/05	North River Rd.	12
10/13/05	West Clark	8
	West River	5
	Victoria St.	7
12/5/05	Elm St.	13
12/9/05	Elm St. (N. of Webster)	16
	West Appleton	2
	Clark St.	1
	North Bay	4
12/9/05	Word St.	12
3/22/06	Robie & Chestnut	19

Private Contractor

Catch Basin Cleaning List

3/28/06	Appleton	2
	Chestnut	17
	Clarke St.	3
	Carpenter St	2
	Ward St.	7
	Ted St	1
	Pelham St.	2
	McCarthy	14
	Edgar St.	2
3/29/06	Chestnut	3
	Trenton	8
3/30/06	McCarthy St	4
	Braeburn Dr	7
	Bay Berry Ln	5
	Trenton St	2
	North Adams	13
	Carpenter St.	2
	Chestnut St.	2
	Clarke St	2
	Appleton St.	2
3/31/06	Bayberry Ln	1
	Huroid St	2
	Morton St.	2
	Merrow St.	2
	Mary Ann Rd	3
	Irwin Dr	5
	Paule Ave	1
4/3/06	Seventh St	2
	Eve St.	5
	Whitney Ave	1
	Exchange Ave	5
	Elgin Ave.	7
4/4/06	Elgin Ave.	7
	Whitney St.	2
4/5/06	Whitney Ave	4
	Boston St	3
	Coral Ave.	12
4/7/06	North Bay St	2
	Ready St	2
	Carpenter St	4

Private Contractor

Catch Basin Cleaning List

	Elm St (East Back)	4
	North River	1
	Ray St.	7
	Clarke St	3
4/10/06	Coral St	7
	Arthur Ave	1
	Camelot Dr	6
	Camelot Circle	4
	Lancelot Ave	4
	Madeline Rd	4
	Clarke St	2
	Ray St	9
	Appleton St	2
	North Bay St.	5
	Union St	17
	Kearney St	2
4/11/06	Willam Gagnon Rd	8
	Chad road	12
4/12/06	Paquette St.	5
	Vassar Ct	8
	Wellesley St	3
	North Gate	11
	North Acres	2
	Union St.	14
	North Bend	2
	North Gate	2
4/14/06	North Gate	2
	North Bond	4
	Steinmetz Dr.	4
	Crestview Circle	4
	Kearney Circle	2
	Highcrest Rd	2
	Imelda Rd	2
	North Acres Rd	2
	Crestview Rd	2
4/20/06	Union St	12
	Appleton St	2
	Clarke St.	1
	Campbell St.	3
	Arah St	3
	Hamel Dr	3

Private Contractor

Catch Basin Cleaning List

4/21/06	Arah St.	11
	Coral Ave.	4
	Kristen Ln	1
	Ridge Rd	4
	Ray St.	5

Total Basins Cleaned during the reporting year by a private contractor.	588
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Stormwater Catch Basin Cleaning Program

Program year May 2005 through April 2006

In accordance with the City of Manchester's Stormwater Management Program, the City is required, under BMP #6-2, to track the catch basins that are cleaned. The Stormwater Program is required to have the pond basins set on a priority-cleaning schedule. This is a listing of the streets where catch basins have been cleaned throughout the City. During this reporting year over 600 catch basins were cleaned in the below listed streets.

It is important to note that not all catch basins on the named streets may have been cleaned. Sometimes there are vehicles parked over the catch basins and that particular catch basin is skipped over during that day of catch basin cleaning maintenance. An outside contractor cleaned most of the catch basins on the listed streets. City of Manchester personnel cleaned all the catch basins around the ponds.

The listing of streets that were cleaned during this reporting year (May 2005 through April 2006) follows:

West Side of the Merrimack River in the City of Manchester

- Only trouble spot catch basins were cleaned on the West Side of the Merrimack River. This area is newly separated and many of the catch basins have been replaced or cleaned under the construction contract

East Side of the Merrimack River in the City of Manchester

- Bradley Street
- Beech Hill Drive
- Beech Hill Avenue
- Gold Street
- Titus Avenue
- Flower Street
- South Beech Street
- Ruggles Street Mystic Street
- Rose Avenue
- Home Avenue
- Slade Avenue
- Purchase Street
- Marguerite Street
- Dorchester Street
- Enfield Street
- Commercial Street
- Coffee Street
- Mulsey Street
- Payson Street
- North State Street
- Textile Court

- Dow Street
- West North Court
- Chandler Street
- West North Street
- West Salmon Street
- West Pennacook Street
- West Brook Street
- Langdon Street
- Hollis Street
- Kidder Street
- Bridge Street to Elm
- Charles Street
- Mechanic Street
- Market Street
- West Central Street
- Franklin Street
- West Merrimack Street
- Plaza Drive
- Old Granite Street
- Depot Street
- West Auburn Street

The following is a listing of streets, they were determined to be priority streets in the Phase I Malcolm-Pirnie study, around the City of Manchester's Urban Ponds. City personnel and City equipment clean these at least twice annually. These are inspected periodically and if additional cleaning is needed a crew, a City crew is dispatched to clean these basins more frequently than twice per year. These were all cleaned once during the second half of 2005 or the spring of 2006 by City of Manchester personnel.

Stevens Pond

- Pennsylvania Avenue
- Delaware Avenue
- Beaver Street (to Bridge Street)
- Maplehurst Street (to Bridge Street)
- Ohio Avenue

Maxwell Pond

- English Village Road
- Garden Road
- Greeley Street (CB 3950 to CB 3948)

Dorrs Pond

- Apple Court

- Hooksett Road (CB 1277 to 1272)
- Poplar Street
- Juniper Street
- Shady Lane
- Campbell Street (Shady Lane to Poplar Street)
- Bicentennial (CB 1289 to CB 1284)
- Crosbie Street (Pickering to Hooksett Road)
- Day Street (Fairfield to Hooksett Road)
- Pickering Street (Barrett Street to Crosbie)
- Livingston Park/Pool lots (Sweep)

McQuestan Pond

- South Main Street (Intersection of Second St to Oneida St.)
- South Main Street (Newgate Circle to Blach Ave.)
- Erie Street

Nutts Pond

- Driving Park Road
- Leclerc Circle
- March Avenue (from Gold St to John E. Devine)
- John E. Devine (From South Willow St.)
- McGrail Circle
- Bradley Street
- Beech Hill Ave. (Beech Hill St. to Bradley)
- Beech Hill Drive (To Bradley)
- Titus Ave. (east from South Beech Street)
- Mystic Street (From Ruggles to Flower)
- Ruggles Street
- Flower Street

Pine Island Pond

- Goffs Falls Road (Gosselin Rd to Come Street)
- Come Street
- Kennedy Avenue
- Coldwell Street

Crystal Lake

- Corning Road (CB 3053 to 3049)
- Corning Road (Intersection of Bryant up toward Bodwell Road)
- West Shore Avenue

Urban Pond Priority CB Cleaning List

Fall 2005 []

[X] Spring 2005

Nutts Pond - Map 4G

May-05

Date Work Completed

March Avenue - 11 CBs

Driving Park Road - 8 CBs

John E. Devine - 8 CBs

Name of Crew: _____

Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

Crystal Lake - Map 6H

May-05

Date Work Completed

Corning Road - 9 CBs

Name of Crew: _____

Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

Dorrs Pond - Map - 4C

June of 2005

Date Work Completed

Juniper Street - 7 CBs

Poplar Street - 14 CBs

Arah Street - 20 CBs

Bicentennial Drive - 6 CBs

Day Street - 8 CBs

Crosbie Street - 6 CBs

Hooksett Road - 6 CBs

Name of Crew: _____

T. Perkins Vactor #1 - D. Richards Vactor #2

Enough of these basins were found to have enough sediment to warrant cleaning. It was decided to clean all the CBs in this pond area regardless of the amount of sediment within each basin.

Pine Island Pond - Map 4I

May-05

Date Work Completed

Gnome Street - 11 CBs

Kennedy Street - 2 CBs

Perimeter Road - 8 CBs

Name of Crew: _____

Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

Maxwell Pond - Map 2D

May-05

Date Work Completed

Garden Drive - 9 CBs

English Village Road - 11 CBs

Greeley Street - 2 CBs

Name of Crew: _____

Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

McQuesten Pond - Map 2G

May-05

Date Work Completed

Erie Street - 10 CBs

South Main Street - 18 CBs (Newgate to Ann Ave)

South Main Street - 10 CBs (Second to Oneida)

Name of Crew: _____

Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

Stevens Pond - Map 5E & 6E

May-05

Date Work Completed

Maplehurst Avenue - 5 CBs

Beaver Street - 3 CBs

Bridge Street - 4 CBs

Pennsylvania Avenue - 5 CBs

Deleware Avenue - 5 CBs

Name of Crew: _____

Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

Urban Pond Priority CB Cleaning List

Fall 2005 [X]

[] Spring 2005

Nutts Pond - Map 4G March Avenue - 11 CBs Driving Park Road - 8 CBs John E. Devine - 8 CBs	Sept/Oct. 2005	Date Work Completed Name of Crew: T. Perkins Vactor #1 - D. Richards Vactor #2 Enough of these basins were found to have enough sediment to warrant cleaning. It was decided to clean all the CBs in this pond area regardless of the amount of sediment within each basin.
Crystal Lake - Map 6H Corning Road - 9 CBs	Sept/Oct. 2005	Date Work Completed Name of Crew: T. Perkins Vactor #1 - D. Richards Vactor #2 Enough of these basins were found to have enough sediment to warrant cleaning. It was decided to clean all the CBs in this pond area regardless of the amount of sediment within each basin.
Dorrs Pond - Map - 4C Juniper Street - 7 CBs Poplar Street - 14 CBs Arah Street - 20 CBs Bicentennial Drive - 6 CBs Day Street - 8 CBs Crosbie Street - 6 CBs Hooksett Road - 6 CBs	Sep-05	Date Work Completed Name of Crew: Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005
Pine Island Pond - Map 4I Gnome Street - 11 CBs Kennedy Street - 2 CBs Perimeter Road - 8 CBs	Sep-05	Date Work Completed Name of Crew: Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005
Maxwell Pond - Map 2D Garden Drive - 9 CBs English Village Road - 11 CBs Greeley Street - 2 CBs	Sep-05	Date Work Completed Name of Crew: Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005
McQuesten Pond - Map 2G Erie Street - 10 CBs South Main Street - 18 CBs (Newgate to Ann Ave) South Main Street - 10 CBs (Second to Oneida)	Sept/Oct 2005	Date Work Completed Name of Crew: Perkins Vactor #1, Richards Vactor #2 Enough of these basins were found to have enough sediment to warrant cleaning. It was decided to clean all the CBs in this pond area regardless of the amount of sediment within each basin.
Stevens Pond - Map 5E & 6E Maplehurst Avenue - 5 CBs Beaver Street - 3 CBs Bridge Street - 4 CBs Pennsylvania Avenue - 5 CBs Delaware Avenue - 5 CBs	Sep-05	Date Work Completed Name of Crew: Basins inspected by Foreman and found to be clean enough to forgo the spring round of cleaning. Inspections done May 2005

[illegible][illegible]

[illegible][illegible]

ATTACHMENT T

2005 Catch Basin Complaint Investigation & Follow Up

Date	CSF #	Time	Address	Problem	Findings
7/1/2005	13489	1015	363 Lowell St.	CB needs to be cleaned	Cleaned CB
7/6/2005	13769	0937	Corner of S. Lincoln & Boisvert St.	CBs need to be cleaned	Cleaned and jetted CBs
7/6/2005	13772	1530	141 Greenwood Ct.	CB needs to be cleaned	Cleaned CB
7/6/2005	13773	1630	Chestnut & Lowell St	CB needs to be cleaned	Cleaned CB
7/8/2005	13782	0831	Sommerville & Grey across from Dentist	CB needs to be cleaned	Cleaned CB
7/11/2005	13793	1444	306 Calef Road	CB needs to be cleaned	Cleaned two CBs
7/19/2005	13854	1431	Corner of Calef Rd and Garfield St.	CBs blocked	Cleaned & jetted 20 CBs in the area
7/19/2005	13852	1407	Corner of Young & Taylor Sts.	CB needs to be cleaned	Cleaned the CB
7/22/2005	13874	0853	635 Cilley Rd	CB needs to be cleaned	Cleaned CB
7/25/2005	13882	1218	181 Platts Ave	CB blocked	Cleaned CB
7/26/2005	13880	1301	34 Nelson St. & corner at Jones St.	CBs need cleaning	Cleaned four CBs in the area
7/27/2005	13892	1213	341 Taylor St.	CBs not taking water	Cleaned two CBs
7/28/2005	13895	0915	Ridge Rd and Union St intersection	CB needs to be cleaned	Cleaned 2 CBs
7/28/2005	13895	0917	442 Merrimack St @ Hall St intersection	Sink hole at CB	Cleaned CB called crew to patch sink hole
7/28/2005	13898	0947	Corner of Concord & Maple Sts	CBs full of sand and washes out onto Maple St.	Cleaned CBs in that area
7/28/2005	13894	0828	Corner of Highland Park & Laydon	CB needs cleaning	Cleaned CB
8/1/2005	13914	1110	Corner of Porter & Sommerville Sts	CBs at intersection need cleaning	Cleaned the CBs
8/1/2005	13915	1146	Corner of Hayward & Pine Sts	Clean CB at Corner	Cleaned CB
8/2/2005	13923	1129	Intersection of Belmont & Central Sts	CBs need to be cleaned	Cleaned two CBs
8/3/2005	13993	1333	Spruce St. (South Back)	CB loaded with sand	Cleaned sand from CB
8/8/2005	13946	0857	244 W. Erie St	CB blocked	Cleaned two CBs
8/10/2005	13971	1500	Intersection of Belmont & Harrison	CBs need to be cleaned	Cleaned the CBs at this intersection
8/10/2005	13969	1242	106 West Baker St	CB needs to be cleaned	Cleaned CB
8/16/2005	13996	1515	Corner of Maple & Auburn St	CB needs to be cleaned	Cleaned CB
8/30/2005	16783	1411	150 Kelly St	CB needs to be cleaned	Cleaned CB
8/31/2005	16787	0914	485 Coolidge Ave.	CB needs to be cleaned	Cleaned CB
9/8/2005	12101	1339	Intersection of Beacon & Spruce	CBs are blocked	Cleaned 3 CBs at intersection
9/12/2005	16818	0714	83 Reservoir Ave.	CB needs to be cleaned	Cleaned 2 CBs
9/19/2005	16846	1236	274 Merrimack St.	CB in front is full of sand	Cleaned CB
9/21/2005	16860	1335	128 Sunnyside St.	Clean CB	Cleaned CB
9/26/2005	16868	1110	1105 Union St	CB not taking water	Cleaned CB
9/30/05	16889	1350	Brown Ave. Entrance to Velcro	CB not taking water	Cleaned CB

ATTACHMENT T

2005 Catch Basin Complaint Investigation & Follow Up

[illegible]

ATTACHMENT U

Sewer Back-Ups - Log for 2005

Number of Sewer Back Up Complaints

January 19 complaints - 10 issues found	February 21 complaints - 11 issues found	March 21 complaints - 9 issues found	April 25 complaints - 8 issues found
1/2 - Bradley St. next to Beech Hill Ave. Grease blockage	2/5 - 22 Val St - grease blockage	3/4 - 165 Filips Glen Dr - MH blocked	4/1 - 1024 Cedar St. - line blocked
1/3 - 628 Green St - blocked line	2/6 - 208 Mystic - blocked line	3/7 - 35 Dutton St - lind full of debris, blocked	4/2 - 206 Glenwood - line blocked @ Harriman
1/5 - 333 Seams Dr. - line blocked	2/12 - 27 Gabrille St - hit object at 85 ft.	3/16 - 205 Wilmot St. - Problem not determined	4/2 - 161 South Beech - Blocked roots
1/5 - 192 Titus St - Grease blockage	2/13 - 75 Log St. - line blocked	3/17 - O'Neil Cntr, S. Elm St. - line plugged by roots	4/8 - March Ave & Cahill - line blocked
1/14 - St. James Ave - blocked line	2/15 - 125 S. Mammoth Rd - line blocked @ church	3/20 - 123 Orange St. - line blocked	4/20 - 274 Ray St. - rocks blocking line
1/16 - 264 Pauquette St - line block	2/17 - 11 Demers St - line blockage	3/23 - Corner of Second & W. Hancock - cover dumped in MH	4/21 - 503 Cedar St. - blocked line
1/17 - 723 Maple St. - blockage buried SMH	2/18 - 98 Ahern St. - Grease blockage	3/24 - 68 Lucille St. - Line blocked	4/28 - 59 Ahern St. - partial grease blockage
1/25 - 25 Conway St - Flooded St. blocked CB	2/19 - 141 Lamprey St. - blocked line	3/28 - Griffith & Glenwood - line blocked, 3-MHs backup	4/30 - 119 Morey St - blocked line
1/28 - Corner Robie/N Adams - flooding, blocked CB	2/20 - 541 S. Main St. - Line blocked	3/31 - 250 River Road - MH backed up, blocked line	
1/29 - 3 S. Bedford St. - smell, partially blocked line	2/21 - 141 Lamprey - Line blocked w/ asphalt		
	2/27 - 114 Gabrielle Ave. - line blocked w/ rags		

May 25 complaints - 8 issues found	June 20 complaints - 8 issues found	July 13 complaints - 3 issues found	August 22 complaints - 3 issues found
5/7 - Gabrielle & S. Willow- blocked line	6/18 - 39 Mammoth Rd - blocked line rocks & sand	7/3 - 38 Hayes - line plugged by bricks	8/12 - 78 Norcross - line blocked by roots
5/9 - 260 Orange St - Partially blocked line	6/26 - 26 Taggart St. - Line blocked by roots	7/18 - 509 Cedar St - blocked line	8/20 - 189 Blodgett - blocked line
5/12 - 548 Holly St. - Cleaned dead end line	6/27 - 333 Seames Dr - line blocked	7/29 - 93 First St - blocked line	8/30 - 49 Richard St - blocked line
5/16 - 46 Westwood Dr. - line blocked	6/27 - 19 Hosley St. - Line blocked by roots		
5/17 - 414 N. Dend Dr. - debris blocking line	6/28 - 503 Cedar - blocked line		
5/18 - Beech St. School - CB in rear of bldg blocked	6/29 - Gingras St Flooded - Blocked CB		
5/23 - 763 Maple St. - line blocked	6/30 - 7 Stevens St. - line blocked grit & grease		
5/26 - 121 Faith Ln - 7 MHs backed up jettied to Hazelton	6/30 - 308 Blodgett St. - line blocked by roots		

September 20 complaints - 5 issues found	October 27 complaints - 6 issues found	November 22 complaints - 10 issues found	December 13 complaints - 4 issues found
9/9 - 238 Youville St - line blocked by roots	10/3 - 583 Beacon St. - partially blocked w/ roots	11/5 - 245 Jobin Dr. - roots, lost cutter @ 65'	12/3 - 43 Russel St. - line blocked
9/13 - 144 Whitney St - line blocked	10/8 - 161 S. Beech - partially blocked w/ roots	11/10 - 361 Fremont St. - blocked line	12/21 - Wellington/Edward J. Roy - line blocked
9/17 - Farmer/Mission Int - MH blocked	10/9 - 36 Miami Ct. - partially blocked w/ roots	11/13 - 220 Bradley St. - line blocked	12/23 - Lingrad St - Line blocked
9/19 - Wellington Rd/ Edward J. Roy - blocked line	10/9 - 974 Iris St. - line plugged w/ roots	11/14 - 216 Head St. - jettied line 3', neet to Televis	12/31 - 154 Hayward St. - Line blocked w/ roots
9/28 - 38 Flint St - Dead end line plugged	10/14 - Walnut/Clark Sts. - Outfall grate cleaned	11/14 - 132 Titus Ave. - line blocked	
	10/15 - Bridge St. Ext. - flooded cleaned grates	11/17 - S. Queen City Ave. - blocked jettied 145' E. from Brown	
		11/18 - Massabesic St. - line blocked w/ grease	
		11/23 - 28 Witt Ave. - plugged with roots	
		11/30 - 45 Westland - line plugged with grease	
		11/30 - 963 Hanover St. - line plugged	

<p style="text-align: center;">City of Manchester Department of Highways Sewer Problem Areas</p>
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SOUTH

1. Miami Court – Houses #6 through #73
2. Porter Street – House #120 (do area resurfaced in 1999)
3. Slade Street – House #7
4. Purchase Avenue – House #67
5. Beech Hill Avenue – Houses #193 through #220
6. Harrington Street – Houses #62 through #87
7. Mitchell Street – From Calef Road to South Beech Street
8. South Gray Street – From Cilley Road intersection in the southerly direction
9. South Lincoln Street – Houses #85 through #177
10. South Taylor Street – Houses #150 through #317
11. Vinton Street – House #36
12. Weston Road – House #239 through #589
13. Lois Street – House #34 through #144
14. Maurice Street – House #39
15. Mystic Street – Calef Road to South Beech Street
16. South Beech Street – House #161 area
17. Westland Ave House #21, House # 130 & House #457
18. Huse Road – Overpass to Mooresville Road
19. South Beech Street – Houses #680 through 700
20. South Willow Street – Rear of Bickfords Restaurant to So. Jewett Street
21. South Willow Street – Gabrielle St (clean south for two manholes)
22. Lennox Avenue – Deadend to South Beech Street
23. Pepperidge Drive – House #135
24. Murphy Street – House #99 to Kevin Street
25. Armand Street – Mitchell Street to Cross Country
26. Morey Street - #173 to Lincoln Street
27. Westwood Drive - # 335 Roots

SIPHONS

1. South Mammoth Street at Bodwell Road
2. Goffsfalls Road (opposite Post Office in the woods)

NORTH

1. Dave Street at Lindahl
2. McCarthy Street (Edgar Street Westerly)
3. Andrew Street (River Road at the dead end)
4. 656 Chestnut Street – Jet Pennacook Street to the Back
5. Coral Avenue – House # 193
6. Harold Street – Houses #64 through #81
7. Haven Hill Road – Dead Ends at House #12 and Dead End at House #60

8. Webster Street – House #345 area that drains to North Street
9. Oak Street – Houses #99 through #280
10. Chestnut Street – House #999
11. North Bay Street – House #443 (dead end to Theodore Street)

CENTRAL

1. Walnut Street – Houses #346 through #500
2. Walnut Street – House #422 (Rear manhole that goes to 949 Union)
3. Union Street – Houses #781 through #880
4. Liberty Street – House #35
5. Pine Street – House #748 (do the line that goes out back)
6. Beech Street – Clean from Harvard Street to Silver Street
7. Maple Street – Clean from Silver to Dave Street
8. Sommerville Street – Houses #263 through #270
9. Cilley Road – Beech Street to Maple Street
10. Green Street – West side of street (Green Street to Union Street)
11. Auburn Street – West side of street (Auburn Street to Beech Street)
12. Laurel Street – Houses #418 through #448
13. Central Street – Houses #533 through #596
14. Pearl Street – Houses #133 through #234
15. Merrill Street – House #15 (Jail problem cups, etc.)

EAST

1. Hanover Street – House #751
2. Portsmouth Avenue – House #25 through #200
3. Woodland Avenue – House #44 through #225
4. Lovering Street – House #329
5. Delaware Avenue – Hanover Street to London Street
6. Maplehurst Avenue – House #152 through #312
7. Maryland Avenue – House #43 through #200
8. Anthony Street – House #178
9. Fremont Street – Hayward Street to #387 Fremont Street
10. Hamblet Street – House #60
11. Clay Street – House #509 to Dead End
12. Talbot Street – House #37 through #75
13. Normand Street – House #315 through House #422
14. Melrose Street – House #178 through #180
15. Valley Street – Street both ways in the 1100 block area
16. Merrill Street – Jewett Street easterly for one manhole
17. Johnson Street – Porter Street to Gray Street (line sag)
18. Hospital Avenue – House #21 through #41
19. Jones Street – House #45 to Benton Street
20. Page Street – Hanover Street to Angelos
21. Bridge Street – Mission Ave to Morse Road

WEST

1. Rose Terrace – House #30
2. Kingston Street – Houses #30 through #70
3. Youville Street – East side back in the #300 House area
4. Warner Street – Houses #82 through 172
5. Dennis Street – The Dead End
6. Lenz Street – The Dead End
7. Dubuque Street – Houses #167 through #250 & Sullivan St. Dead End
8. Dunbarton Road – Houses #65 through #158
9. Garden Drive – Entire Street
10. Lockwood Avenue – Houses #103 through #113
11. Maybrook Street – House #99
12. Bernard Street – House #121
13. Wilkins Street – House # 133 and Houses #172 through #250
14. Carroll Street – House #99
15. Anne Avenue – Houses #25 through #78
16. Westside Interceptor – Rear of Sullivan Tire Southerly to under the on ramp
17. Chapleau Street – Clean at Kimball Street
18. Parker Street – House #104 to the Dead End
19. Brock Street – Charleston Street to Brockton Street
20. Hancock Street – Dartmouth Street easterly
21. Saint Marie Street – House at #237
22. Front Street – Metering Station Manhole to the first manhole north
23. Bismark Street – House #229 to the Dead End

**The New Hampshire Department of Environmental
Services
Pre-Proposal Form For:**

**2006
Watershed Assistance and Restoration Grants**

Submit 5 signed copies of the 2006 Watershed Assistance and Restoration Grants Pre-Proposal form and all attachments via postal mail, or hand delivery, and an electronic copy via e-mail or compact-disk (in Microsoft Word or PDF file formats) to:

NH Department of Environmental Services
Attention: Jeff Marcoux
Watershed Assistance Section
PO Box 95
Concord, NH 03302-0095

For overnight shipping or hand deliveries, our address is 29 Hazen Drive, Concord NH 03301-6509.

E-mail electronic copies to:
jmarcoux@des.state.nh.us

PRE-PROPOSAL DEADLINE :
4:00PM
OCTOBER 7TH, 2005

Link to 2006 Watershed Assistance and Restoration Grants Information Packet
<http://www.des.state.nh.us/wmb/was/docs/2006RFPfinalpartAweb.doc>

1. Proposal Title

Catch Basin Debris Leachate Capture BMP Structure

2. Contact Information

Primary contact person:	Ricardo Cantu – Environmental Permits Coordinator
Organization:	City of Manchester, NH
Street address:	300 Winston Street
City, State, ZIP:	Manchester, NH 03103
Day phone: (603)624-6513	Fax: (603)628-6234 Email: rcantu@manchesternh.gov

Secondary contact person:	Kevin Sheppard – Deputy Director of Public Works
Organization:	City of Manchester, NH
Street address:	227 Maple Street
City, State, ZIP:	Manchester, NH 03103
Day phone: (603)624-6444	Fax: (603)624-6487 Email: ksheppard@manchesternh.gov

Signature of Applicant: _____

Date of signature: _____

3. Proposal Summary

In 200 words or less, describe the proposed project including: the general location (municipalities and watershed); water quality impairment(s); causes or sources of water quality impairment(s); proposed management activities, e.g., education, technical assistance; goal(s) of the project; and how success will be verified.

Project consists of construction of a solid pad, perimeter drainage, underground piping, gated area and, pull-cover system to address rain events and a holding tank. Catch basin debris will be allowed to drain on the pad. Liquid drainage will go through perimeter drains to the holding tank. Tank will be pumped and liquid waste disposed of in the sewer system to be treated at the wastewater plant.

Current disposal site (rear of Manchester Recycling Center on Dunbarton Road) consists of a depression in the ground that is adjacent to an inlet to Black Brook. Catch basin debris currently leaches into the ground. Dissolved metals, organics, nutrients and a host of bacteria could slowly migrate toward Black Brook and then move toward Maxwell Pond

4. Project Location

- A. Town(s): **Manchester, NH**
Is project statewide? **Yes** ☐ **No** X
Does project involve other states? **Yes** ☐ **No** X
- B. What type of water body does it affect? **Stream** ☐ **Lake** ☐ **Estuary** ☐ **Other** X
Waterbody name: **Black Brook to Black Brook Pond (a.k.a. Maxwell Pond)**
- C. Attach a watershed map showing project location **Yes** X

5. Problem/Need

- A. Is the water resource listed as impaired or threatened by causes other than mercury on the 305(b)/303(d) Surface Water Quality Assessment? (List available online at: http://www.des.nh.gov/wmb/was/docs/WAS-impaired_waters.pdf) **Yes** X **No** ☐

Maxwell Pond, 5.5 Acres, ID# NHLAK700060861-02, Use-Aquatic life, Impairment –D.O.

- B. *Provide a clear statement of the types of nonpoint sources and water quality problems or threats to be addressed by the project.*

Dissolved metals, volatile and semi-volatile organics, nutrients and potential bacterial threats that may well be leaching into Black Brook toward Maxwell Pond.

6. Desired Outcome

Provide a concise statement of your desired outcome, or end-state that this project would ideally achieve. Your vision of what total success would "look like". I.e., Anadromous Fish thriving in restored habitat in the Merrimack River.

Project would quantify the amount of lechate collected for wastewater treatment, measure the contaminants of selected composite samples on a quarterly basis (quantify the pollutant types and quantities removed from the environment).

7. Performance Targets

Provide examples of the interim performance targets required to realize the Desired Outcome. Performance Targets are specific changes in behavior or physical condition. Targets can be verified and are directly controlled by the implementer. I.e., Stabilize at least 500-feet of streambank to eliminate excessive sedimentation burying fish habitat.

Do an initial sediment delta analysis at the Black Brook inlet to Maxwell Pond. Measure total metals, volatile/semi-volatile organics, nutrients and surface water bacterial analysis. Monitor structural collection lechate for parameters listed and determine the quantity of material that would no longer have an opportunity to leach to Black Brook and migrate toward Maxwell Pond.

8. About Your Organization

- A. *Please describe your organization's core areas of knowledge or expertise. You may list prior successful projects, or other items that you would include in your organization's "resume".*

Manchester has a five-year history with Supplemental Environmental Project (SEPP). This identified need is an extension of the pollution prevention practices undertaken during SEPP work on other projects. Public Works staff have been involved in a majority of the \$5.6 million dollars worth of projects completed throughout the City.

Successful projects include BMP work at Dorrs Pond, Crystal Lake, the Piscataquog River bank restoration, reestablishment of the storm treat system at Crystal Lake and the ongoing activities in regards to the Urban Ponds Program.

- B. *Within your organization, who would be responsible for managing this project?*

Ricardo Cantu – Environmental Projects Coordinator

9. Public Participation

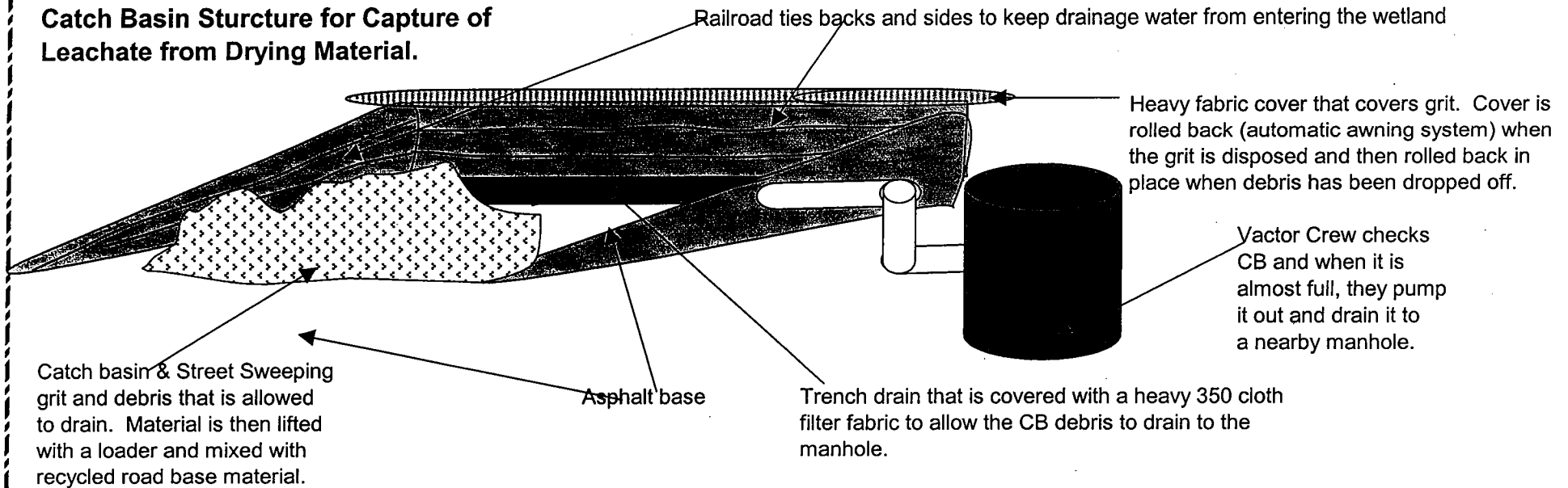
Describe how information and education will be used to enhance public understanding of the project and encourage public participation in selecting, designing, and implementing nonpoint source pollution management measures (i.e. "Train citizens to monitor water quality through volunteer river monitoring program", or "Involve lakeside residents in planting trees and shrubs in the protected shoreland area", etc).

The project would be broadcast on the City's website, news articles would be offered to the Manchester Union and Hippo Press, and an article would be written in the "City Matters" newsletter that reaches all employees of the City of Manchester. The project and results of analysis would be shared among the 37 Phase II Storm Water Communities within the State and the City would make requested presentations at future State/Regional meeting(s).

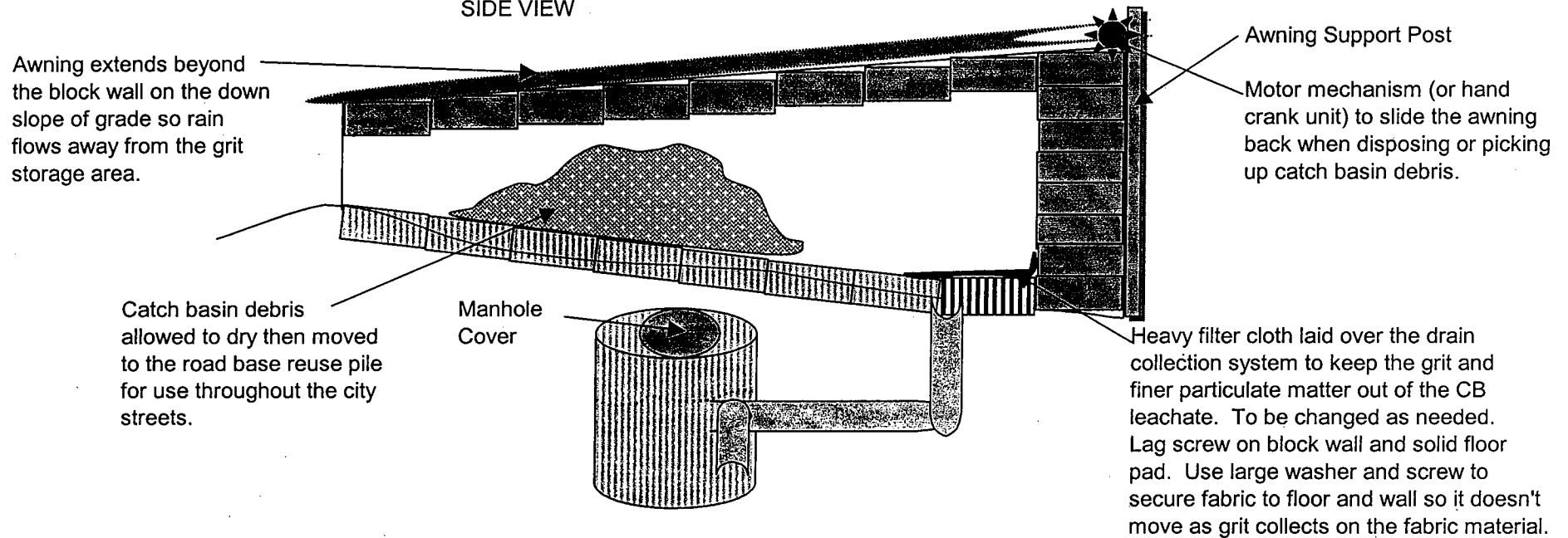
10. Optional Supporting Materials

In addition to the required map attachment (section 4-C), you may choose to attach optional materials such as photographs of the project site, letters from supporters, or other items that you would like us to consider regarding this project pre-proposal.

Catch Basin Sturcture for Capture of Leachate from Drying Material.



SIDE VIEW





☒ Fall

Tank Name - Crystal Lake STS

Inspector(s): - Rick Cantu, Mike Kilrain,

1st Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☒ 4"-

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐

Weed/brush growth around tank: ☐ No

2nd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☒ 1"- 3" ☐ 4"-

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐

3rd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☐ 4"-

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐

Recommendations: Shield put in plac
treat system. First chamber needs to b

If cleaned, how much sand/grit was rem

Tank Name Dorrs Pond - KFC -

Inspector(s): Rick Cantu, Mike Kilrain, F

Inspect Diversion Manhole Sand

Structural Condition: ☒ Excellent ☐

1st Inspection Port Information - To b

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☐ 4"- 6

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐

Weed/brush growth around tank: ☐ Nor

2nd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☐ 4"- 6

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐

Weed/brush growth around tank: ☐ Non

3rd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☒ 4"- 6

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐

Weed/brush growth around tank: ☐ Non

Recommendations: Water boils when
oil. Tank needs to be cleaned be

#1 - 1.5 X 4 X 6 = 36 / 27 = 1.

If cleaned, how much sand/grit was remc



☐ Fall I

Tank Name - Crystal Lake STS

Inspector(s): - Brian Fitzpatrick, Rick Can

1st Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☒ 4"- 6"

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐ \

Weed/brush growth around tank: ☐ Non

2nd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☒ 4"- 6"

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐ \

3rd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☒ 1"- 3" ☐ 4"- 6"

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐ \

Recommendations: Need to protect th
tank. Designed a protector to be compl

If cleaned, how much sand/grit was reme

Tank Name Dorrs Pond - KFC - 16'

Inspector(s): Mike Kilrain, Rick Cantu

Inspect Diversion Manhole Sand

Structural Condition: ☒ Excellent ☐ \

1st Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☐ 4"- 6"

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐ \

Weed/brush growth around tank: ☐ Nor

2nd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☐ 4"- 6"

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐ \

Weed/brush growth around tank: ☐ Nor

3rd Inspection Port Information

Water Appearance in 1st Port: ☐ dry

Depth of sand: ☐ 1"- 3" ☒ 4"- 6"

Does the sand seem to be evenly distrib

Structural Condition: ☒ Excellent ☐ \

Weed/brush growth around tank: ☐ Nor

Recommendations: Water boils wher
oil.

If cleaned, how much sand/grit was reme

Crystal Lake Stormtreat System

Memo

To: Staff
From: Rick Cantu
CC: Supplemental Environmental Projects Programs Committee
Date: 05/10/05
Re: Maintenance Report Stormtreat System at Crystal Lake

On Friday, May 6, 2005, DPW staff performed maintenance on the Stormtreat System at Crystal Lake. Last fall the system was evaluated and it was determined that the feeder line from the baffle tank to the treatment system was plugged.

Plans have the feeder line in the second baffle tank and close to the bottom of the unit. The vector crews cleaned out the baffle tank. The DPW crews also located the wye clean out in the field (6' 8" off the centerline of the overflow manhole cover). The line was jetted from the wye to the Stormtreat System and flow could be seen in the treatment units.

A highway worker entered the second baffle tank to locate the feeder line to the wye connection. Sand had accumulated along the bottom of this tank wall and partially covered the feed hole exit. It was also discovered that a beer can had completely lodged itself within this feeder hole, blocking the exit flow from the tank. The can was removed and the line jetted. The flow was moving well from the baffle tank through the Stormtreat System after this correction.

It was realized that with the current design, the feeder hole may stay clean for only a month or so before becoming plugged again with junk and sediment. Staff discussed the possibility of building a brick wall around the opening on three sides to keep any sand from building up over the exit. We also talked about putting some type of screening or grate over the top of this wall and lagging it down so no sticks, cans or bottles will get into that hole and plug the feed line.

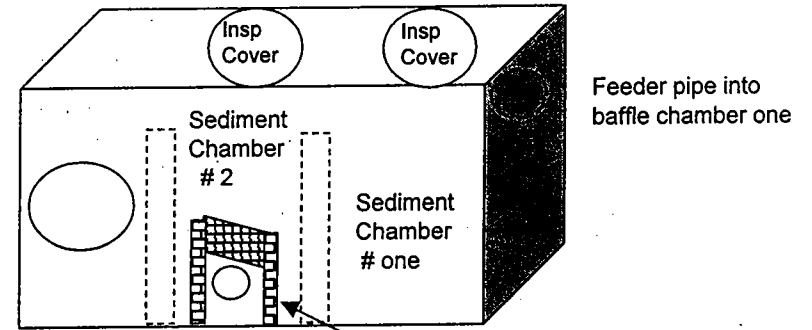
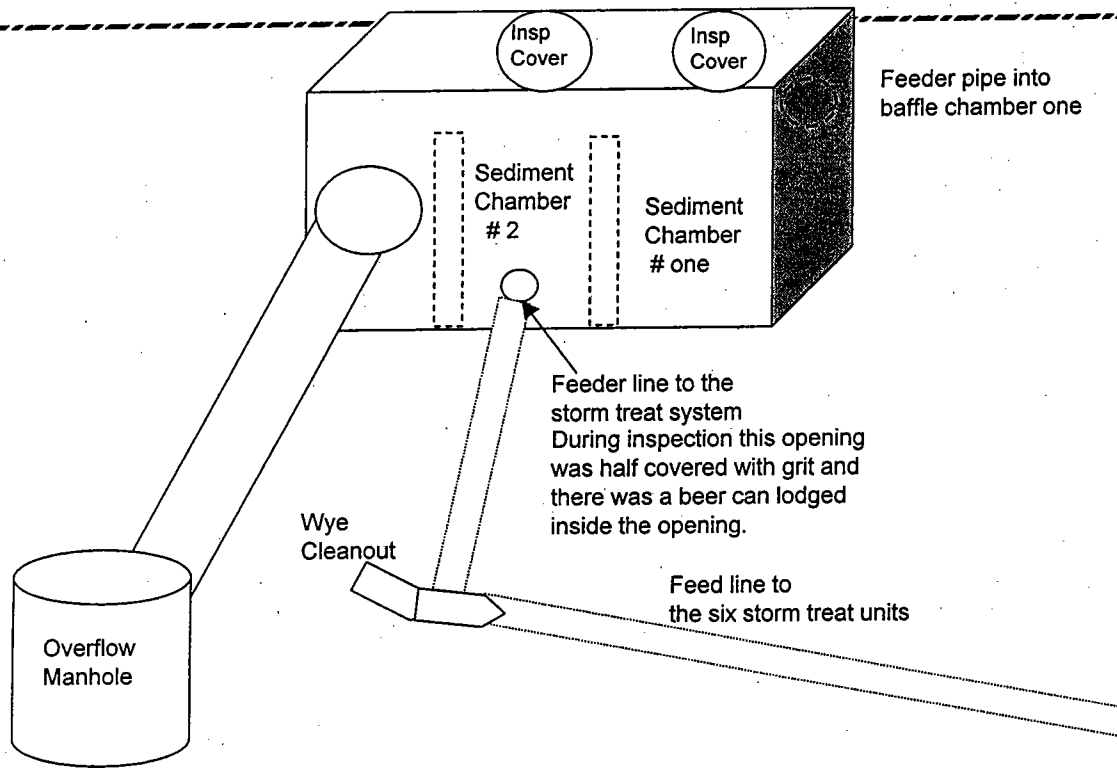
This redesign would assure the system would stay working during the six-month intervals between scheduled cleaning and inspections.

We will also have to plant six Day Lilly plants around each Stormtreat Unit to assure the removal of phosphorus and nitrogen is taking place as originally designed. I will work with the Parks and Rec department to see if we cannot get their landscape contractor to do this work for us.

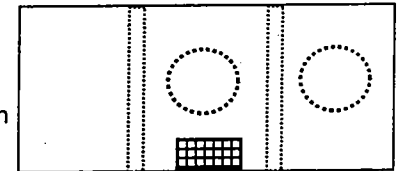
Storm Treat System

Crystal Lake

Maintenance Report



Top View of proposed design change



Proposal



4 Commercial Lane, Londonderry, NH 03053 • (603) 437-4HOG • www.4hog.com

PROPOSAL SUBMITTED TO <u>City of Manchester</u>		PHONE <u>Rick Cantu</u> <u>624-6513</u>	DATE <u>May 12, 2005</u>
STREET		JOB NAME <u>Storm Treatment System</u>	
CITY, STATE and ZIP CODE		JOB LOCATION <u>Crystal Lake Public Park</u>	
ARCHITECT	DATE OF PLANS	<u>Jan-628-6234</u>	JOB PHONE

We hereby submit specifications and estimates for:

Daily planting

72	Hemerocallis asst.	1 GAL	9.99	719.28
3	Yds Composted loam	PER yd.	26.00	78.00
2	Fertilizer EXPENSE(B1)	46 fl oz	8.99	17.98
1	Labor EXPENSE			409.00
				<u>\$ 1,224.26</u>

We Propose hereby to furnish material and labor - complete in accordance with above specifications, for the sum of:
(All materials property of Groundhog Landscaping until paid in full.)

Purchase Order -
Payment to be made as follows:

dollars (\$ _____).

All material is guaranteed to be as specified. All work is to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance.

Authorized
Signature: Deanne Baker

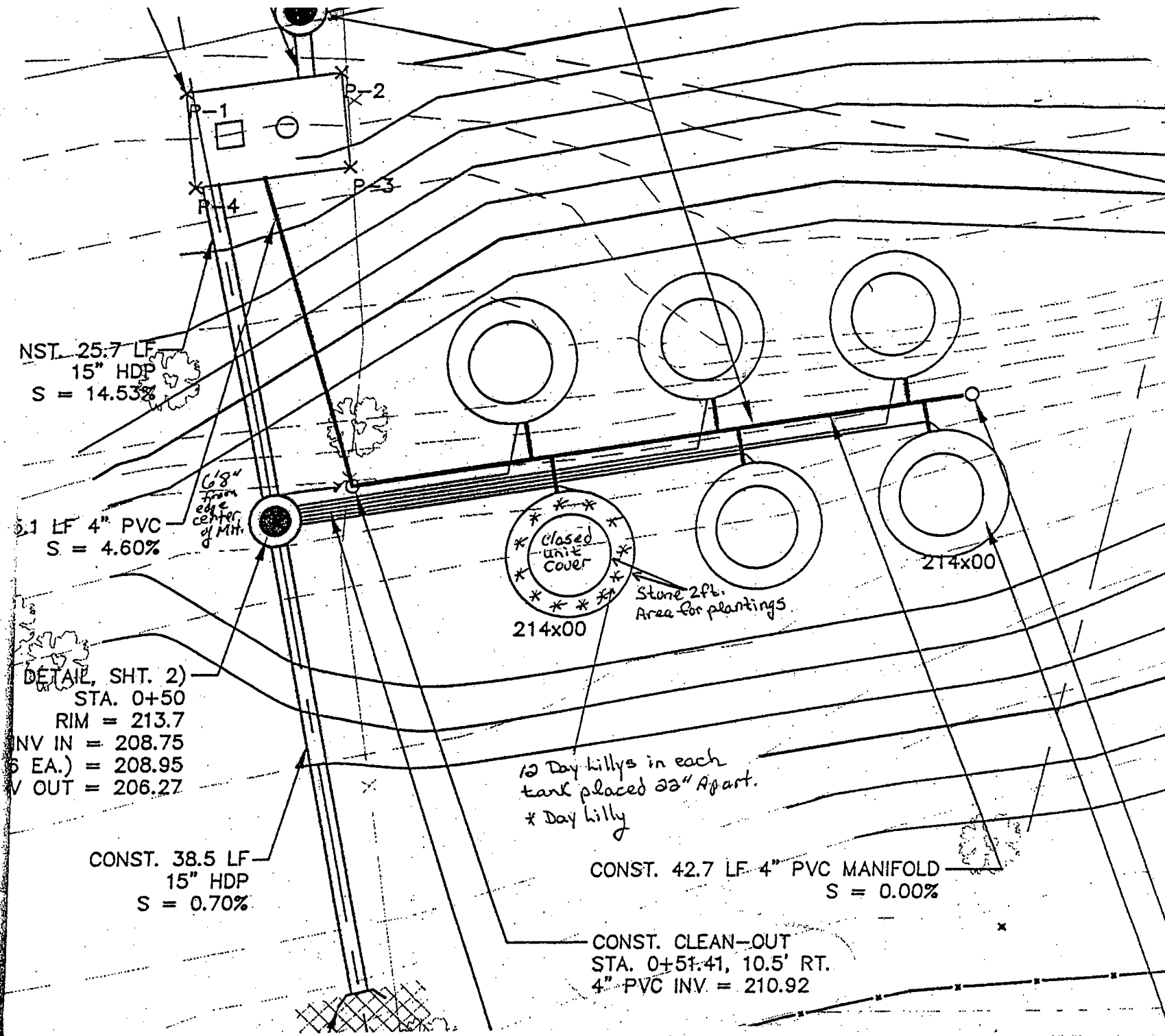
Note: This proposal may be withdrawn by us if not accepted within 14 days.

Acceptance of Proposal - The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance: 6/3/05

Signature: Ricardo Cantu - Env Permits Coordinator

Signature: _____





Storm Water Training Program Sewer Crew

1. Storm Treat System Over View – (StormTreatCD)
2. What is a Watershed and How Do We Protect It? – (WhyWatershedsCd)
3. Wastewater Treatment & Storm Water Impacts – (StudentOverviewRev)
4. After the Storm by EPA & The Weather Channel– (Video)
5. You can Help in the Battle of Non-point Source Pollution – (EarthDaySlideShowRev)
6. Manchester's Non-Point Source Issues – (NonPointRev)
7. Sources of Watershed Pollution in the Merrimack – (ManchesterNPSReduction)
8. Erosion Examples due to Lack of BMPs – (ErosionRev)
9. High Flows can Ruin Good BMP Measures – (BassIslandErosion)
10. It is the Small Issues that Create the Big Problems – (BeMyEyes)
11. Wrap Up

Date	Day	Time	Location
(1) 3/22/2005	Wednesday	7:30 AM	DPW Conference Rm
(2)			

Training Session # Year 3 - Refresher

Name of People Attending :

<u><i>Donna Mac</i></u>		
<u><i>Daniel Richards</i></u>	<u><i>Mike Dockx</i></u>	
<u><i>Edward Gabor</i></u>	<u><i>Shawn Maurice</i></u>	
<u><i>Beck LEBLANC</i></u>		
<u><i>Tom Cronin</i></u>		



Storm Water Training Program Sewer Crew

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10. It is the Small Issues that Create the Big Problems – (BeMyEyes)
11. Wrap Up

Date	Day	Time	Location
(1) 3/21/2005	Tuesday	7:30 AM	DPW Conference Rm
(2)			

Training Session # Year 3 - Refresher

Name of People Attending :

Tom Moran

Tim Perkins

Paul Moraway

Mar Muntz

Tom Petrowski

Jay Lorenz



Storm Water Training Program Engineering Staff

1. Manchester Non-Point Source Issues – (NonPointrev)
2. Sources of Watershed Pollution – (ManchesterNPSReduction)
3. EPA NOI Overview – (enoioverview[1])
4. Examples of Failed and Poor BMPs – (Engineering2006BadBMP)
5. Examples of Erosion due to Lack of BMPs – (ErosionRev)
6. Good BMPs are not Guaranteed – Bass Island Example – (BassIslandErosion)
7. Site Review Paints a Rosy Picture – (EPABMPPresentation)
8. It's the Small Issues that Compound the Problems – (BeMyEyes)
9. The Ideal World of BMPs – (BMPIdeals)
10. Storm Treatment System Overview – (StormTreatCD)
11. Wrap Up

Date	Day	Time	Location
(1) 3/20/2005	Monday	10:30 AM	DPW Conference Rm
(2)			

Training Session # Year 3 - Refresher

Name of People Attending :

Dennis Anctil Robert Polun Ruth Kueck
Paul Whelan James Cohen Bob Capone
John W. Smith James Zinn _____
David Glaser William C. Martin _____

June/July 2005

The CITY MATTERS

A NEWSLETTER FOR AND BY THE EMPLOYEES OF MANCHESTER NEW HAMPSHIRE

Events Committee Happenings

The Event's Committee is just bustling with activity. We have held several wonderful events and are planning many, many more.

Our Fratello's Post Holiday get together was a huge success. Everyone who went had a wonderful time and we hope to do this again next year. The Committee subsidized part of the employee's cost on this event through our calendar raffle to keep it affordable.



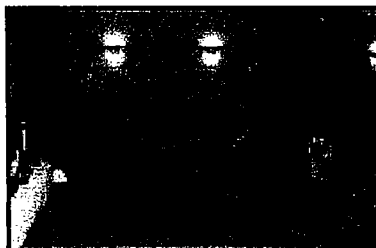
Another fun event was the tubing at McIntyre, which was completely free to employees and their families. This is the third time we have offered this event and it is such fun. Look for information on next years tubing event and sign up early. We also offer free skating at JFK Coliseum. There is no sign up for this event you just show up when you see the date announced. We would like to thank the Parks and Recreation Department for allowing us the use of these two facilities at no cost.



This is the third year we have had our Easter Bunny Breakfast. The children absolutely love this event and it is fun and inexpensive. The event was held shortly before Easter and besides the breakfast there were many prizes. Photos were offered of the children with the Easter Bunny at a small cost. The committee could not do this alone and would like to thank everyone who helped with this event. Paul

Koutroubas our EB, his wife and daughters, Gene and Barbara Mackie, Sandy Searles, Tom Boutilier, Alderman George Smith, Charlie Lavalley, and Billy Keith of the Sweeney Post, as well as our committee members. Thanks to Alderman Lopez for attending this event and all our events in support of our efforts. Our thanks to the Sweeney Post for donating this location so we can hold this event and keep the cost reasonable. This was another event that was subsidized by the events committee raffles and fundraisers.

Of course what would Manchester be without Baseball. Our committee arranged discount tickets at the very first Fisher Cat's game in their new stadium. The evening was a little brisk and it took awhile to get into the stadium but it was worth it. The evening was full of fun filled activities between innings and even though the Fisher Cats lost it was an enjoyable time for all. (cont. on page 2)



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Youth Services Helps Children Attend Ball Games

Good Question!!!

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4 Main Library Building Turns 90, Gets Cool Makeover

5 The City's Quality Council Is Looking For Potential New Members

Welcome the Newest Member of the MPD

6 Members First Credit Union

Special Programs from MFCU!

Health Insurance ID Cards

Arts in Manchester

Thanks Again to the Employee Events Committee

Mackie and Roy Said To Be Cooking Something Up!

Wellness Benefits for City Employees

7 EPD ups the Ante on Storm Water Treatment

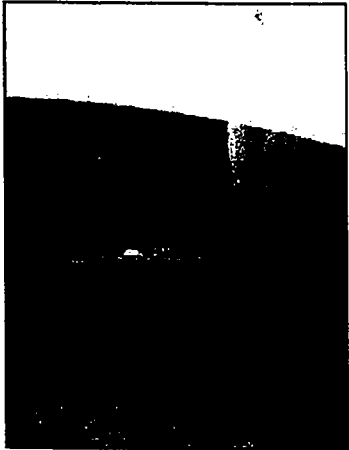
8 Peacetime Adjutant - Wartime Brigadier Joseph C. Abbott, Manchester, N.H.

EPD ups the Ante on Storm Water Treatment

By Rick Cantu

The Environmental Protection Division is continuing the storm drain / sewer line separation work on the West Side of the City. Last year extensive work was done in the neighborhoods

surrounding Parkside School. These projects are being done to eliminate the combined sewer overflows (CSOs) that discharge directly to the Piscataquog River during periods of heavy rain. The CSOs that have been eliminated to date due to these ongoing projects are at Electric Street, Varney Street, Theophile Street, Sullivan Street and South Main Street (South).



Last fall, a Vortech storm water treatment unit

was placed on Douglas Street. This unit is designed to treat 9.5 cubic feet per second (cfs) of water. You may wonder what this means in gallons. One cfs is equal to 1.55 million gallons of water over a 24-hour period. This would be equivalent to the treatment of over 14 million gallons of storm water over a 24-hour rain event.

The unit is designed with two objectives in mind. First it slows down the velocity of the incoming water and directs the energy to the bottom of the tank. This allows the sediment (sand, rocks, silt, glass, etc.) to settle to the bottom of the tank. This all happens within the first chamber or this baffle tank. The circular baffle (seen in the mid-section of the picture) directs the energy downward and also slows the flow. This is where the sediment collects. One can also see that there is some floating debris on the top of the water.

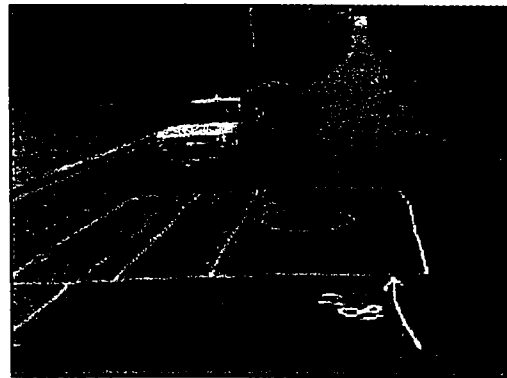
There are openings in the baffle structure that allows the flow to exit this energy dissipater



along with the collected floatables. This floatable debris is collected outside the circular baffle inside the first and part of

the second baffle chamber. Floatables consist of paper cups, plastic bottles, jars, Styrofoam, cigarette butts, sticks, and any debris that floats on the water surface. As you can see in the picture there is quite a collection of material. This unit was put in place in late September of 2004 and checked by staff in early April 2005. This was a period of a little over six months. There was over one, 55-gallon trash bag of floatable materials sitting on top on the water. There was also a depth of sediment of approximately 18 inches in the first chamber. This would be equal to approximately three or four cubic yards of sand.

This unit serves a small drainage area in comparison to all of the city drainage. A rough example would be 1/500th of the City's total drainage area. If this Vortech unit had not



been installed, all of this floatable garbage and sediment would have ended up in the Piscataquog River - and that was during a six-month

period! Now double that to get an idea of what a small area contributes over a year. Now multiply that by 500 to see what amounts of sediment and floatable debris is generated throughout the City.

The next time you think of throwing a cigarette but or plastic bottle out your car window, think of these numbers. Even small pieces of paper and plastic contribute to this waste going directly to the rivers.

The City has taken steps to collect this type of material in other areas of the City. There are three baffle tanks installed around Dorrs Pond and one at Crystal Lake. One or more these or similar units are in the planning stages for Nutts Pond.

You'll never see these units, but the outline on Douglas Street gives you an idea of what is happening under your feet in Manchester's storm drain system. Outta sight, outta mind no longer applies in a world where the environment can no longer taken for granted. Manchester is doing its part by installing these devices. Please contribute to this effort by thinking consciously before discarding any trash.

August/September 2005

The CITY MATTERS

A NEWSLETTER FOR AND BY THE EMPLOYEES OF MANCHESTER, NEW HAMPSHIRE

Don't Be Surprised if the Bottled Water You Drink Comes from Your Own Back Yard!

By Rick Cantu

"Do you know the source of the bottled water you're drinking?" Rick Cantu questioned the group of Parkside students along the Piscataquog River behind the Westside Arena. The students were participating in a four-station activity event planned for the day. This was the water analyzing station. Other stations included identifying invasive species at the Electric Street Dam, visiting a construction site in the Notre Dame Avenue area and collecting benthic organisms and macroinvertebrates at a site below the lab station.



Students participated in the analysis of the water for pH, temperature, chlorine, hardness and alkalinity. They were placed in groups of three and each individual was

given a task of getting the water sample, or asked to test the water with another asked to record the results of the testing.

The testing data was matched against a chart for healthy stream ecology. "Is the water capable of supporting trout and salmon?" Rick asked?" The students voiced a collective, "Yes." All parameters fell within the criteria for water capable of supporting the sensitive species of game fish.



The dissolved oxygen sampling was the highlight of the experience. Chemical reactions changed stream water from clear to cloudy a cloudy liquid and then formed a fuzzy looking floc that settled to the bottom of the test bottle. Another chemical was added that changed the floc to a yellow liquid. A third chemical was added to the yellow liquid, drop by drop, until the sample went clear. The number of drops was the amount of oxygen in the water. Student results fell between 8 and 10 mg/l of oxygen. The chart stated that oxygen levels above 6 mg/l was good for sensitive fish populations.

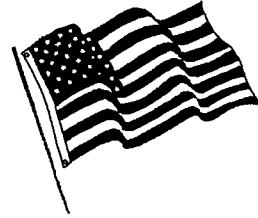


Hot water from a thermos was then analyzed. The students were surprised to see that clean hot water only held 3 mg/l of oxygen. "Oxygen saturation drops in water as it becomes warmer; the water holds less oxygen" Rick said. "That is why the summer time is most stressful on fish populations. Warm stagnant pools and low flows in

rivers make it difficult for fish to complete their life cycles."

Most students thought the answer to the question about the source of the bottled water was from deep underground springs. "What is better for you to drink, City water or bottled water?" Rick asked. "Bottled water," was the overwhelming student response. It was explained to the students that the bottle of Dasani® water was actually City of Manchester water from Lake Massabesic. The students were very surprised. Rick stated, "Look at the bottle cap. It says Coca-Cola Bottling Company of Northern New England, Londonderry, New Hampshire. This is 99.99% City of Manchester drinking water. Coca-Cola removes the chlorine through a purification process and then they add magnesium, potassium and phosphorous to give the water the mineral taste that is common with spring water. See the bottled water you drink can come from your own back yard!"

Reflecting back... September 11th



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5 Charles Haradon, Civil War Cavalryman, Prisoner of War Casualty

6 Protecting Your Identity

7 "Don't Let the Educational Bus Pass You By"

8 Mother Nature Tests City's Resolve at Earth Day Event

Mother Nature Tests City's Resolve at Earth Day Event

By: Rick Cantu - EPD

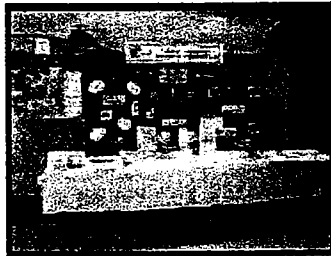
On Saturday, April 23rd, the City, working with the Student Conservation Association (SCA), planned an Earth Day Event at Veterans Park. The weather had not cooperated all week and the forecast for Saturday was heavy rain. Due to this the venue was changed to the Salvation Army building on Cedar Street.

SCA had spearheaded the coordination of the Day's events with a scheduled clearing of a portion of the Rails-to-Trails project from Nutt's Pond to the Fischer Cat Stadium.



With additional volunteers available, the Urban Pond clean up at Nutts Pond was scheduled to coincide with these events. There were approximately 50 individuals that participated in both assignments.

Several bags of garbage were picked up at the pond and hundreds of pounds of woody debris collected from the Rails-to-Trails project.



The gymnasium at the Salvation Army was lined with booths that displayed environmentally friendly themes. There was information in regards to solar power, rain barrels, environmental regulations, wetlands, gas hybrid

vehicles, recycling, pond protection, environmental art work and a host of other information.

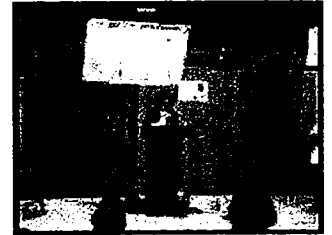
A live Owl demonstration given by the Audubon Society along with live music brightened up the dreary day.

The music ranged from soloists, to duos to the final act: a variety of high-energy music provided by Funk Foot.

The New Hampshire Department of Environmental Services (NHDES) brought along three of their gas hybrid vehicles. These cars sat in the rain all day, but were left open for individuals to get a flavor for how they work. Even in the pouring rain these vehicles drew quite a bit of attention. NHDES did start them to demonstrate the quiet efficient capability of these environmentally friendly vehicles.



Jane Beaulieu was a guest speaker during the morning session. She reinforced the need for everyone living in Manchester to do his or her part in the stewardship of the land and water we so dearly rely on.



She went on to talk about the projects "For Manchester" have completed and the vision for the future of Manchester in regards to environmental projects.

Hector Valez was the guest speaker during the afternoon session. Hector was director of the Salvation Army and the SCA has worked with this organization for several years. Hector spoke regarding the SCA's interaction with several Salvation Army activities over the years. Hector is a New Hampshire State Representative and a leader in the Manchester Latino Community.

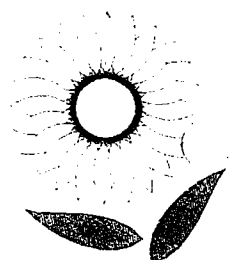
The featured speaker of the day was Liz Titus-Putnam. She attended Vassar College and wrote her thesis on the idea of forming a volunteer organization in the mold of the SCA. A few years later, in 1957, she organized the SCA. This all began in the State of Washington and initially was only open to young men. Today this organization is open to all genders and reaches across the country from coast-to-coast with thousands participating.

After the crews had returned from work on the trails and pond, they were all treated to lunch to refuel their wet tired bodies. There were plenty of Subway and Quiznos sandwiches to go around. Add to that Pappy's and Papa John's Pizza, pasta and potato salad, and several varieties of desserts and then we were talking a real celebration.

There were plenty of sombreros; chips and salsa donated by Margaritas for everyone and all volunteers received an SCA volunteer tee shirt. The children were treated to games, face painting, button making and were invited to design their own tee shirts and water bottles.

There was enough rain that day to even make the ducks miserable! However, with the enthusiasm of youth and the determination of the elder crowd, this Earth Day's events were an unqualified success.

Many thanks to the SCA staff, volunteers, vendors and folks who provided items to make this an eventful day and enjoyable for all.



October/November 2005

The CITY MATTERS

A NEWSLETTER FOR AND BY THE EMPLOYEES OF MANCHESTER, NEW HAMPSHIRE

Employee Appreciation BBQ September 28, 2005



(Left to right) Alderman-at-Large Lopez
Winner Health Department - Mary Rheault
QC Chaperone - Gene Mackie
Employee Events Committee Member - Anne Hatin



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|--|--|

CIPP The Solution For Derryfield Lane

By Robert Robinson, EPD

The Highway Department and the EPD were faced with a challenge on how to repair or replace a sewer line that was in poor condition. The site conditions posed the biggest challenge. Derryfield Lane is located downtown between Chestnut and Nutfield Lane. It is a narrow alleyway with utilities located in the roadbed above the sewer. Because of these conditions excavation to replace the sewer line was not an option. The other challenge involved scheduling the work. Because of businesses in the area the job had to be performed during the night over a weekend.



The solution for this sewer project was determined to be CIPP (Cured-in-Place-Pipe). The contractor that was selected to perform the work was Insituform Technologies®, Inc. Insituform® in England developed the CIPP

process in the early seventies. In this process a new pipe is placed in the old pipe. There is no excavation or disturbance of the roadbed and sewer downtime is hours, not days or even weeks as in conventional methods.

Insituform® manufactures the tube. The tube is made out of felt and is permanently bonded to a continuous layer of polyethylene. The tube is then filled with resin using a vacuum impregnation process. The tube is then delivered to the site in a refrigerated truck for installation.

The installation process involves the following steps:

1. The sewer line is cleaned and inspected using a sewer jetter truck and a camera truck using a closed circuit television / sewer camera setup. The location of service laterals is noted for opening when the line is cured.
2. The resin-filled tube is inverted (turned inside out) and feed through their Controlled Head Inversion Process unit into the manhole and into the sewer line.
3. Water pressure is used to propel the tube down to the other manhole. It is then secured in place.
4. After the tube is fully inverted, hot water is circulated through it. A boiler truck is onsite to provide the hot water. The pipe is held at 180 degrees Fahrenheit for one hour. This process cures the thermosetting resin and provides a new pipe inside the old sewer line.
5. The ends of the new pipe are cutoff next at the manholes. The robotic cutter is sent down the new pipe to cut open the service laterals to restore the service.
6. The line is cleaned again using the sewer jetter and inspected with the closed circuit television sewer camera setup.



The job took place in May and was a success. The new line is smooth and structurally sound. The sewer flows nicely. Please note the before and after photos located below.

City Retirement Now Accepts Certain Tax Sheltered Funds

Until now, if you were buying temporary service, buying back previously withdrawn service from an earlier period of employment, or contributing funds to obtain creditable service for time while you were out on worker's compensation, you had to use after tax dollars to complete your transaction. As of September 13, 2005 however, members with money in 401(k), 403 (b) or 457 plans can use those funds to purchase permissive service in the Manchester Employees' Contributory Retirement System, (MECRS) by executing a "trustee to trustee transfer" as long as the sending plan also permits such transactions. Since permissive service purchases are the only allowable transactions where tax sheltered funds can be accepted, other voluntary payments such as those made under the plan's "Additional Contribution Program" are not eligible and must continued to be made with after tax dollars.

Not all tax sheltered funds; (most notably IRAs) can be accepted under this new program. For employer sponsored plans including the City Deferred Compensation 457 Plan however, as long as that plan allows a member to transfer funds, the MECRS can now accept such funds as a result of its new rule which takes advantage of certain IRS regulations designed to allow for greater pension portability. For interested parties, City Retirement has a two page application form which needs to be completed by the member, the sending plan, and then approved by the retirement system which facilitates the process. The forms can be obtained by calling the retirement system at 624-6506 and can also be downloaded from their website at <http://www.manchesterretirement.org>, (click on "Forms" and then select "Application Accepting Tax Shelter Funds").

For more information about the use and limitations of trustee to trustee transfers, contact City Retirement at 624-6506 and ask to speak with Executive Director Gerry Fleury.

Dec. 2005 - Jan. 2006

The CITY MATTERS

A NEWSLETTER FOR AND BY THE EMPLOYEES OF MANCHESTER, NEW HAMPSHIRE



* to You,
* Your
* Families
* and
* Friends



Urban Ponds

By Art Grindle

The Manchester Urban Ponds Restoration Program would like to thank the dedicated team of volunteers that have pitched in and helped clean up Manchester's water bodies over the past six years. During that time, the Program has collected more than 7 and a half tons of trash at 40 volunteer clean up events at Manchester's urban ponds. In total, more than 170 volunteers have logged 662 hours on behalf of the Urban Ponds Restoration Program for a value of approximately \$12,534. Many thanks are owed to all those who have contributed over the years!

Congratulations to Gerry Coulter on his retirement. Gerry worked for the city for over 44 years. In this photo, Ron Ludwig gives Gerry a plaque.



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**City Of Manchester
Department of Highways
Environmental Protection Division**

300 Winston Street
Manchester, New Hampshire 03103-6826
(603) 624-6595 Fax (603) 628-6234

Frank C. Thomas, P.E.
Public Works Director

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

December 20, 2005

Mr. Tim Roberts
Road Agent
Town of Sandown
P.O. Box 1756
Sandown, NH 03873

#05-019-EPC

Re: Merrimack River Watershed – Storm Water Assessment Team (S.W.A.T)

Dear Tim:

Our storm water group was informed that the Atkinson group recently dissolved. Our group consists of the communities involving Auburn, Bedford, Goffstown, Hooksett, Londonderry and Manchester. We typically meet bi-monthly and interact on various issues. We have been meeting in Manchester, but we are considering moving the meetings to Londonderry in the future.

Each individual community participates by updating the group on how they are progressing on their minimum controls, offers guidance on issues they have dealt with, and ask questions in regards to issues or regulations of which that they are not familiar.

Our group is very supportive of each other and we provide assistance to one another when the need dictates. All the meetings have minutes (I have enclosed an example) and we do additional Q&A and contacts via email.

We would welcome your community into our group and I would be willing to meet with you to give an update on what our group has done over the past two years.

If you have any questions please give me a call at 624-6513 or email me direct at rcantu@manchesternh.gov

Sincerely,

Rick Cantu
Chair of S.W.A.T.

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ATTACHMENT AD

**City Of Manchester
Department of Highways
Environmental Protection Division**

300 Winston Street
Manchester, New Hampshire 03103-6826
(603) 624-6595 Fax (603) 628-6234

Frank C. Thomas, P.E.
Public Works Director

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

December 20, 2005

Mr. John Worten
Road Agent
Town of Hampstead
11 Main Street
Hampstead, NH 03841

#05-019-EPC

Re: Merrimack River Watershed – Storm Water Assessment Team (S.W.A.T)

Dear John:

Our storm water group was informed that the Atkinson group recently dissolved. Our group consists of the communities involving Auburn, Bedford, Goffstown, Hooksett, Londonderry and Manchester. We typically meet bi-monthly and interact on various issues. We have been meeting in Manchester, but we are considering moving the meetings to Londonderry in the future.

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If you have any questions please give me a call at 624-6513 or email me direct at rcantu@manchesternh.gov

Sincerely,

Rick Cantu
Chair of S.W.A.T.

H:\StormWater\Towns\Hampstead\Invite.doc



**City Of Manchester
Department of Highways
Environmental Protection Division**

300 Winston Street
Manchester, New Hampshire 03103-6826
(603) 624-6595 Fax (603) 628-6234

Frank C. Thomas, P.E.
Public Works Director

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

December 20, 2005

Mr. Bruce Caillouette
Road Agent
Town of Danville
12 Long Pond Road
Danville, NH 03813

#05-019-EPC

Re: Merrimack River Watershed – Storm Water Assessment Team (S.W.A.T)

Dear Bruce:

Our storm water group was informed that the Atkinson group recently dissolved. Our group consists of the communities involving Auburn, Bedford, Goffstown, Hooksett, Londonderry and Manchester. We typically meet bi-monthly and interact on various issues. We have been meeting in Manchester, but we are considering moving the meetings to Londonderry in the future.

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If you have any questions please give me a call at 624-6513 or email me direct at rcantu@manchesternh.gov

Sincerely,

Rick Cantu
Chair of S.W.A.T.

H:\StormWater\Towns\DanvilleInvite.doc

Phase II Storm Water Meeting

Minutes of the 5/17/05 Meeting held at EPD office in Manchester, NH at 1:30 PM

Present:

John R. Trottier	-	Londonderry, NH	JRTROTTIER@Londonderry.org
Tom Fatcheric	-	Goffstown, NH	tfatcheric@ci.goffstown.nh.us
Rick Cantu	-	Manchester, NH	rcantu@ci.manchester.nh.us
Janusz Czyzowski	-	Londonderry, NH	jczyzowski@londonderry.org
Jim Stanford	-	Bedford, NH	jsanford@ci.bedford.nh.us

Annual Report Updates

Each City/Town has sent in their annual report for 2004/2005 reporting year. There were discussions on how it is now not only the EPA that reviews the report, but also the Conservation Law Foundation and possibly other environmental groups. This group reviewed the annual report submissions from last and cited four of the EPA approved programs in NH with deficiencies. They are looking for gaps of what was initially promised and what is currently being delivered to build future cases for stronger enforcement of the storm water rule.

Asist Training Demonstration

The developer of the Asist Program (program to help groups manage their storm water program) will be holding a demonstration in Manchester on Monday, May 23rd. It will be a run through the program data that they have collected from some other storm water programs. There are systems for monitoring, construction and reporting. Everyone in the group is welcome to attend.

Status of State-wide Group Meeting

The original meeting was set for Fratello's on September 21st. As emails have not made it to the NHDOT staff, there is concern that this meeting has stalled. As individual groups we don't see our ability to schedule and pay for a venue at Fratello's when we are very vague as to how many people from the four groups would attend. It is believed that our group and the Nashua group will continue on with their meetings, but we're not so sure there is enough structure within the Atkinson and Seacoast groups to keep their interest up.

Discussed alternative annual meeting. Jim said that BCTV in Bedford could easily accommodate 20 to 25 storm water people for a meeting. Rick knows the Manchester Water Works can hold about 40 people. It was discussed that we consider holding a half-day session (8:00 to noon) to get to know everyone and get a few topics out for discussion. Also we'd get a feel if this were a good venue to continue and possibly expand to a full-day session. Rick will contact the Nashua group to get their ideas on this.

Dealing with Other Permit Conflicts

Manchester came upon a situation where there was another permit/easement that was provided to a local developer that was not disclosed to Manchester. The Storm Water Pollution Prevention Plan and site plan was clear on the limits for construction activity. The contractor had worked outside this area, along the shore of the Merrimack River and up to the river's edge (ignoring the 25-foot minimum required setback). When confronted with the issue the owner provided a letter from the National Fish and Wildlife Organization that was endorsed by the NH Fish and Game along with some NH delegate congressional backing that clearly was in opposition to the site plan limits.

Discuss centered around on issues like this, which permit takes precedence? Should the contractor have disclosed the permit/easement allowances (this easement was obtained six months after Manchester approvals had been granted)? Should there be language in Ordinances that state "If other obtained permits are not disclosed during the construction phases of any project to the City/Town, then the City/Town's conditions and requirements shall prevail."

Ordinance Update

Manchester's has completed all the internal reviews of the Ordinance and Rules & Regulations and it will go before the Highway Commission during the first meeting in June. From there it will go on to the City Council's Ordinance Committee for review and enrollment. Rick will send each member of the group the final approved Ordinance and Rules & Regulations once finalized.

Outreach Updates

Londonderry had a "Leadership Londonderry" presentation during the day of voting and at other Londonderry civic events. A slide show on erosion controls and storm water buttons were handed out to the residents.

Goffstown had a Public Works day for the students where construction equipment was taken to the elementary schools and demonstrated. The students were also informed on ways to control storm water and identify erosion.

Manchester participated with the Student Conservation Association (SCA) on Earth Day. Manchester provided some funding and also assisted with the coordination of events that was spearheaded by the SCA. All groups should take credit for any outreach that relates to storm water, construction or erosion within their communities, whether or not is was primarily developed by the City/Town.

Goffstown continues to post Town newsletters at the local businesses that have articles on storm water.

There is still an uncertainty among the group as to what is appropriate outreach to the schools, how much is expected and what is the EPA's view on what they would like to see.

Other Business

There was talk about what was seen at the UNH tour. Some of the group members who didn't make the first tour are scheduled for later tours. There was talk about how those structural units (that promise 80% removal of sediments) are actually achieving closer to 50%. The group is awaiting the final full report on the systems and gathered data.

Bedford talked about a project at the Stop & Shop that had a collapsed pipe that ran toward the Wayfarer Inn. There was much finger pointing as to who missed the errors during the inspection. The problem couldn't immediately be resolved at the contractor, town, developer's engineer and developer all pointed fingers as to who dropped the ball. Stop & Shop was forced to remedy the situation until the oversight issues could be sorted out. It was imperative this get resolved immediately as road work and new paving was happening over this drain within the week.

Next Meeting Date

The next meeting is scheduled for Tuesday, August 2, 2005 at **1:30 PM**. The agenda will be emailed a few weeks before the meeting. The meeting will be held at the EPD Administration Building in Manchester.

Phase II Storm Water Meeting

Minutes of the 8/2/05 Meeting held at EPD office in Manchester, NH at 1:30 PM

Present:

Tom Fatcheric	–	Goffstown, NH	tfatcheric@ci.goffstown.nh.us
Rick Cantu	–	Manchester, NH	rcantu@ci.manchester.nh.us
Jim Stanford	–	Bedford, NH	jsanford@ci.bedford.nh.us
Mark Hemmerlein	–	NHDOT	Mhemmerlein@dot.state.nh.us
Alan Cote	–	Derry, NH	Acote@ci.derry.nh.us

Annual Report Updates

All towns have sent in their annual reports. There have been no comments received by any of the communities and there have been no new audits that have transpired since the last meeting.

Some of the communities have dropped some of the items they originally submitted as part of the BMP task listing as they have not panned out (mainly the formation of committees). Other priorities have changed. Most of the communities have three tasks associated with each minimum control (Six-minimum controls – 18 tasks total).

The issue of CB maintenance under one of the task items came up. Derry, Bedford and Manchester contract work with Bellmore CB Cleaning service. The NHDOT uses their clamshell buckets and Goffstown does their own CB cleaning with a vactor.

Annual Meeting Update

Mark's division (NHDOT) is going to focus more on the field gathering and GIS mapping for the State. He will not have time to coordinate the annual meeting as Deb had been doing. He talked with Barbara Macmillan and Jeff Andrews of the river assessment section and they will be coordinating a meeting with the chairs to continue the process of the annual meeting. The September 23rd meeting set for Fratello's is cancelled. Mark said the NHDOT still has a pot of money earmarked for that kind of meeting. Mark thought a meeting sometime in January might be appropriate. The group voiced concerns about storms or icing and not being able to make the meeting due to that. It was believed a meeting sometime in mid to late October or in November before the week of Thanksgiving might be the best solution.

Rick will check with Barbara to see about holding a meeting with the chairs of the four regions and then setting an agenda and speakers for a meeting for the October/November time frame. He will keep the group posted on the progress.

Mark asked if anyone planed on attending the UNH T2 – Winter Operations Training seminar set for October. Attendees said they were not sure as they had been attending these sessions for the past few years and the information was now redundant.

Mark said the NHDOT has 55 stations that measure air temperature, wind speed, salinity in brooks and pavement temperature. These are around the I-93 corridor to measure for the expansion project due to the salt issues. There are stations on the tributaries that are adjacent to the highway. This information is available to the communities if it is needed.

Ordinance Updates

Rick said that Manchester has sent the Ordinance to the Board of Mayor and Alderman. The City Clerk's Office did not like the idea of the Ordinance being separate from the Rules and Regulations. The DPW Director and City Attorney insisted this was the way to go so it was presented at the meeting as two separate documents. The Ordinance and the Rules & Regulations was referred to the Committee for Bills on Second Reading and there will be a workshop on the items contained within the two documents.

There is no other activity associated with Ordinances in the other communities.

Storm Water Library

Rick passed out a listing of 150 Articles from the Center for Watershed Protection. Many of these articles have appeared in their featured publications and usually run between three and eight pages. They cover many topics that are important to the communities.

As the meetings are beginning to become redundant while covering the same issues, he thought it might be good to discuss one or two if the articles from the list at each meeting to have a training session associated with the meetings. All present were in favor of the concept.

Manchester came upon a situation where there was another permit/easement that was provided to a local developer that was not disclosed to Manchester. The Storm Water Pollution Prevention Plan and site plan was clear on the limits for construction activity. The contractor had worked outside this area, along the shore of the Merrimack River and up to the river's edge (ignoring the 25-foot minimum required setback). When confronted with the issue the owner provided a letter from the National Fish and Wildlife Organization that was endorsed by the NH Fish and Game along with some NH delegate congressional backing that clearly was in opposition to the site plan limits.

Discuss centered around on issues like this, which permit takes precedence? Should the contractor have disclosed the permit/easement allowances (this easement was obtained six months after Manchester approvals had been granted)? Should there be language in Ordinances that state "If other obtained permits are not disclosed during the construction phases of any project to the City/Town, then the City/Town's conditions and requirements shall prevail."

Tracking Required Inspections that need to be performed by Contractors

A sheet from weather.com was passed out to each participant. In this sheet the current month rainfall and the previous month rainfall could be viewed for any zip code. It is a good idea to print this sheet on a monthly basis and when an inspector checks a

construction site; they can tell which days were greater than 0.5 inches of rain. The site should have an inspection for each one of these events along with the usual weekly checklist. It is a good idea to take pictures of any inconsistencies in the BMPs and compare these on a weekly basis. Even though the site inspection checklist may all be checked good or no problems, you may see that the same issues exist week in and week out with no change. You can document these and bring them to the attention of the site inspector and ask why they check that all is in order with the BMPs when in fact they are not.

Other Business

Tom mentioned that the ASIST Software for tracking storm water data couldn't be interfaced with any GIS program. It is a stand-alone database and only categorizes and sorts that data that is input directly into the program. It would be of no use for a field GPS system to interface and track drain system maintenance activities.

The State of NH has a team who is going along the Merrimack River to track illicit discharges. They will be doing the portion of the Merrimack River from Bedford up through Goffstown and the tributary side rivers like the Piscataquog. Steve Landry of the NHDES is coordinating this.

Mark asked how does one control assuring that all the BMPs are completed before the contractor leaves the site. It is good to get all departments involved in the approval process on board with the storm water regulations. Let the planning department, building department and local engineering inspectors know that there is a final termination notice with many requirements before a site is fully released.

This can be accomplished through retainage, maintenance agreements and holding back at least the last remaining certificate of occupancy (CO). This could be done until the storm water inspector and site engineers have done a final inspection and have signed off that all the work has been completed in accordance with the Storm Water Pollution Prevention Plan and the local requirements. This would be the final step before the last CO is given to the developer/contractor.

Next Meeting Date

The next meeting is scheduled for Tuesday, October 4, 2005 at 1:30 PM. The agenda will be emailed a few weeks before the meeting. The meeting will be held at the EPD Administration Building in Manchester.

Phase II Storm Water Meeting

Minutes of the 12/7/05 Meeting held at EPD office in Manchester, NH at 1:30 PM

Present:

Tom Fatcheric	–	Goffstown, NH	tfatcheric@ci.goffstown.nh.us
Rick Cantu	-	Manchester, NH	rcantu@ci.manchester.nh.us
John Trottier	-	Londonderry, NH	jrtrottier@londonderrynh.org
Mark Hemmerlein	-	NHDOT	Mhemmerlein@dot.state.nh.us
Alan Cote	-	Derry, NH	Acote@ci.derry.nh.us
Liz Robidoux	-	Auburn, NH	erobidoux@comcast.net
Janusz Czychowski		Londonderry, NH	jczykowski@londonderrynh.org

Annual Report Updates

All towns have sent in their annual reports. There have been no comments received by any of the communities in response to the submissions. Londonderry did receive a phone call from Thelma and listed several dates that they would be available for an audit.

Annual Meeting Update

The chairs of the various regions will be meeting on December 13th to review the draft agenda for the first annual meeting. The meeting will be held in May of 2006 at Fratello's in Manchester. As new information comes forward, it will either be discussed at the next group meeting, or an email will be sent to members.

Mark stated that the Atkinson group has disbanded and he is trying to get the various communities into the other three groups. The former group will probably have three of the communities go to Nashua Coalition, three to the Seacoast and three to Manchester. The group unanimously approved having the members of the Atkinson group join our Manchester area group. We also discussed the possibility of having the meeting moved to Londonderry's new office locations as they have a larger conference area.

Ordinance Updates

Manchester's proposed ordinance has gone through the first reading. There were developer comments, comments from an engineering firm, and a few private citizen comments received. The Board of Mayor and Aldermen asked that these issues be addressed before the "Bills on Second Reading" was scheduled. There was also a question that a review be done by the City Solicitor and that the Solicitor's Department issued a letter stating that the Ordinance, as presented, would support the Rules & Regulations and vice-versa.

The meetings with concerned parties and their concerns were addressed. There are outstanding language issues with 40CFR and the ability to have Rules & Regulations. The Federal Code states "Communities shall develop an Ordinance, or other regulatory mechanisms...." The question raised is does this rule out two enforcement documents

and that there can only be one type of document or another? Thelma is looking into this issue. Rick will email the members copies of Manchester's latest draft ordinance and regulations.

Mark stated that towns may want to start thinking of their ordinances in regards to TMDLs, the implementation of reduced salt areas and the possibility of having language to allow for the implementation of a storm water utility. Salt issues have become an issue with the expansion of the I-93 turnpike between the State and EPA. The State is currently developing TMDLs for the rivers that abut the turnpike. That will affect the towns along this corridor. There are also issues with sand and sediment loading. Sand is not an effective deicer as it doesn't break the bond of ice build up on the highways and after a few vehicles pass over the application the sand is gone. Sanding also impairs air quality when it gets airborne due to fast moving vehicle traffic or windy conditions.

Rick stated that in the grant application for Nutts Pond water quality improvements, there was a requirement that the City go to the commercial establishments in that watershed and discuss their use of salt during the parking lot cleaning activities during the winter.

There were no other actions taken by the communities in regards to Ordinance development.

Illicit Discharge Manual

Rick passed around a copy of the EPA's Illicit Discharge Manual as developed by the Center for Watershed Protection. The manual is a good step-by-step guide on how to develop an illicit discharge program.

Some of the members have received the manual where some did not. A copy of the address and other contact information was made and distributed to the group so that everyone could obtain a copy.

Training – Strengthening Silt Fences (SFs)

A new aspect of the meetings will be a training portion. This meetings' training was on Strengthening Silt Fences. The training manual that is being used is called "The Practice of Watershed Protection" (Techniques for protection our nation's streams, lakes, rivers and estuaries). This manual has 150 articles that are typically four or five pages in length. The highlights of the Strengthening Silt Fences (Article #56) are listed below:

- SFs are the most widely uses and misused erosion and sediment control practices;
- SFs trap sediment in construction runoff before it washes into the street;
- The pores in geotextile fabric filter out sediment particles (settling is the most important sediment removal function of SFs);
- Removal efficiencies of SFs have ranged from 36% to as high as 86%;
- SFs are ineffective at removing turbidity and on steep slopes;
- SFs have replaced the use of hay bales that are completely ineffective in erosion control;

- SF visibility are a good public relations tool as they are an “advertisement” for erosion and sediment control;
- Studies have shown that only 58% of SFs are installed and that the maintenance aspect drops to 34% once installed;
- The best SF fabric is a strong fabric with a low flow-through rate as it offers the greatest settling time;
- SF installation can be improved by using thicker, longer posts that are placed closer together;
- A good practice is to include a 10-foot grass buffer between the construction activity and the SF;
- Super SFs are used on very steep slopes with long slope runs;
- Scoop traps can be used on the bottom of steep slopes to provide additional ponding volume;
- SF anchors are used to hold the fabric in place on steep slopes;
- SFs, once installed, tend to be forgotten and are perceived as a “no maintenance” practice. In reality, most silt fences will need extensive repair to function properly.

Issues With Local Complianace

There have been compliance issues in Manchester with tree cutting in an area where eagles perch and also at a site that is ½ acre where the erosion is extensive and going into one of the Urban Ponds.

The issue with enforcement in regards to cutting of the trees is very complicated. There are issues with enforcement authority, departmental jurisdictions (planning, building, highways, engineering, US Fish & Wildlife, and the NH Fish & Game). If the ordinance had been in place remedial actions could have been taken and fines issued very early on during the initial violation. As it stands now, there may never be any real enforcement on this gross act of negligence.

As the small project is under one acre only the building department has enforcement authority in Manchester. They are not aware of erosion control requirements and issues and it will be hard to get them to issue a cease and decist order where they have never done this in the past with similar single family home issues. A storm water ordinance would have addressed this problem.

Other Business

Mark stated that the State of NH is currently revamping the Site Specific Rules to bring them more in line with the Construction General Permit requirements.

There were some questions as to how many catch basins needed to be cleaned in a year to meet the minimum control of Good Housekeeping. Derry tries to get all basins done in a three-year cycle. Manchester does the CBs around the pond on a semi-annual basis, but the other areas of the City are broken down into eight sections. A private contractor is hired to work in one section annually. There is a chance that some CBs are not cleaned but once in an eight-year period. There were questions on how one can identify the worse areas in a town.

Some towns and the NHDOT are moving away from SFs and using bark mulch berms or mulch tubing. This is as effective as SFs and can be spread and left at the end of the project.

Mark had a request that all towns that have their storm water mapping and outfalls on GIS that the state would like a copy to incorporate into the overall State GIS system. Some of the towns sell their GIS information to developers, and if the information is made available on the state GIS site, these developers would get that information for free, never having contributed to the cost of obtaining the information. Mark will check into the GIS system to see if certain town layers can be only available to the state for reference work. He will get back to the group at a later meeting date.

Derry brought in a sheet of stickers they had developed for the grade schools. There were 16 stickers to the sheet all having to do with storm drains and storm water quality. These are passed out at the schools during presentations or other water quality events.

Next Meeting Date

Meeting adjourned at 3:40 PM. The next meeting is scheduled for Wednesday, February 15, 2006 at 1:30 PM. The agenda will be emailed a few weeks before the meeting. The meeting will be held at the EPD Administration Building in Manchester.

Phase II Storm Water Meeting

Minutes of the 2/15/06 Meeting held at the Town Office in Londonderry, NH at 1:30 PM

Present:

Tom Fatcheric	–	Goffstown, NH	tfatcheric@ci.goffstown.nh.us
Rick Cantu	–	Manchester, NH	rcantu@ci.manchester.nh.us
Jim Stanford	–	Bedford, NH	jsanford@ci.bedford.nh.us
Mark Hemmerlein	–	NHDOT	Mhemmerlein@dot.state.nh.us
Alan Cote	–	Derry, NH	Acote@ci.derry.nh.us
Liz Robidoux	–	Auburn, NH	erobidoux@comcast.net
Janusz Czychowski	–	Londonderry, NH	jczykowski@londonderrynh.org

Annual Meeting Update

The annual meeting is set for May 9, 2006 at the Center of New Hampshire. The Committee chairs are working at finalizing the agenda and topics for discussion. There will be a mailing for the meeting that will be sent out in a few weeks from Barbara McMillian of the NHDES. The reservations were set for 50 people. There will be a \$20 to \$25 charge for the meeting. This covers the cost of a continental breakfast, sit down lunch and afternoon drinks.

Ordinance Updates

The Town of Goffstown has a draft Ordinance that they sent around to the membership for review. The basis of the Ordinance comes from the EPA model used in Monterey, California; some of it is from Portsmouth, NH and other parts from the Manchester draft. The New Hampshire Municipal Association reviewed the Ordinance and said that there is not enabling legislation to enact this type of Ordinance. Rick stated that it is appropriate to have the Ordinance as part of the Public Works or Wastewater Ordinance, but that there was no legislation to form a Storm Water Utility.

Rick went over the discussions of the meeting he had with HTA and Bill Gabler of Governmental Consultants (a legislative lobbyist) on what was needed to get enabling legislation enacted to allow cities and towns to form storm water utilities. This will be discussed at the annual meeting in May.

The Manchester Ordinance is still waiting to be forwarded to the bills on second reading.

Mark stated that the Owner of the project and the Operator typically file the NOI. The owner being the person who owns the plans and the operator being the contractor on the site. The state does not file a separate NOI when their right-of-ways are being encroached by city/town or development projects. It is up to the Owner and Operator to file the NOIs. This would be a good question to forward to Thelma.

Merrimack River Study

Rick gave the group a copy of the draft report done by the Army Corps of Engineers and CDM in regards to the Merrimack River Water Quality Study. As the entire group has brooks, rivers or ponds that drain to the Merrimack it may potentially impact everyone's storm water programs.

The findings revealed that the only consistent water quality violation in dry weather and wet weather is bacteria. The Combined Sewer Overflow impact is quite small when compared to the non-point source impacts. If the communities along the Merrimack River watershed reduced the non-point bacterial impacts by 20% the river would come into compliance with water quality standards.

The study indicates that the phase I Combined Sewer Overflow program implementation coupled with the bacterial reductions from the non-point source contributions would be the most cost-effective method of achieving compliance in the Merrimack River watershed and the contributing tributaries.

The study indicates that the non-point issue (storm water) will become the focal point in the future in regards to the Merrimack River meeting water quality standards and that every community with a program will need to spend more time and resources if their tributaries are contributing to the water quality problems in the Merrimack.

Issues with Local Compliance

Tom said that he is getting plans for erosion and sediment controls that state these practices will be applied to the roads and right-of-ways, but not applied to the individual house lots. He believes this is because a developer gets the plans then sells the lots off to individual developers. Tom has pushed to have the entire area outlined in the plans covered under the E&S controls.

Yanusz had a question if the towns had to file an NOI when a development encroaches over an acre of land in town right-of-ways. Some discussion ensued, but it was thought that when towns have projects and they impact individual homeowner right-of-ways that we don't make each homeowner file a separate NOI.

Mark asked how people were dealing with post-construction minimum requirements after the home depots; food chains etc. put in their ponds or sediment structures. The response that currently none of the group is following up on these installations. Part of Thelma's afternoon session will be on post-construction controls and what the EPA hopes to see a follow up.

Rick updated the group on the enforcement activities at the Pointe. Due to the political pressures the issues at the point have been dropped.

Rick also stated that it is a good idea for the towns to keep a copy of all the SWPPPs that are developed for the corresponding NOIs. The EPA does not approve the SWPPPs no

does the EPA have any requirement of how each Storm Water Pollution Prevention Plan question needs to be answered. The only requirement for a Storm Water Pollution Prevention Plan is that it meets the minimum outline in the storm water federal regulations and that a copy be kept on site. Rick explained how material that is included in a Storm Water Pollution Prevention Plan is not always the same material that is presented later on down the road when enforcement activity is begun. It is easy for a site operator to change an onsite Storm Water Pollution Prevention Plan especially if no other copy exists.

Manchester has had some issues in regards to the coordination and enforcement between departments. Sometimes building approves lots with no knowledge forwarded to planning or highways. Planning will allow changes with no notification to building or Highways. There are times when zoning allows a variance to a building site and neither planning, building nor highways is notified. Rick gave an example where a variance was given to a site and there are issues with water coming out into the roadway and freezing. The highway has notified building with no response. Alan stated that under RSA 236:A a homeowner is not allowed to let water drain to the street and pose a safety hazard.

Bedford has an issue with minimum buildable lot size. It is 22,000 square feet requirement and the issue is to make sure that exists on the plans that are submitted. Jim gave an example of land that was underneath a power line was counted as buildable area. This is the major compliance issue in Bedford.

Training – Construction Practices: The Good, the Bad and the Ugly

This meeting's training was on specific BMP performances. The training manual that is being used is called "The Practice of Watershed Protection. The highlights of the Construction Practices article (Article #60) are listed below:

- North Carolina sent experts out to view over 1,000 sites for proper erosion and sediment controls (ESC) installation. The practices were rated on a scale from 1 through five;
- Eleven construction practices were consistently reviewed and only three were considered good to excellent (sediment basins, sediment traps and riprap stabilized channels);
- The worst performers were brush barriers and hay bales;
- A majority of the failures were due to poor installation with poor maintenance running a close second;
- An eye-opening finding was the number of construction practices that were never installed even though they were shown on the plan. More than a quarter of the two most commonly prescribed construction practices (storm drain inlet protection [SDIP] and silt fence) were never installed;
- Two most favored practices, SDIP and silt fences, were most frequently installed in a poor manner;
- 29% of the silt fences did not use the proper fabric material;
- 40% of the silt fences were not properly installed;

- 42% failed to use reinforcing wire;
- 33% did not anchor the silt fences properly;
- 22% did not properly space the silt fence stakes;
- Nearly half of the sediment traps and one fourth of the sediment basins failed due to poor maintenance during construction activities;
- Some installation problems are due to developers trying to save a buck, but most are due to lack of training of the people installing the BMPs;
- The best way to assure good implementation is to pay more attention on plan review and implementation;

Survey tables were included with the handouts.

Other Business

Mark stated that the Coastal Communities are developing an Illicit Discharges Manual vial a 319 Grant. They are using a Maine model program as a basis for the development. There will be a round-table meeting June 6th somewhere in the Seacoast region to go over the draft manual. The manual will include inspection protocol and laws.

Mark stated that Thelma had responded to the NHDOT annual report submitted in 2004. No other community received any formal response in regards to that report. NHDOT is going to shift from the training/outreach materials and do more on the baseline mapping. NHDOT wants to use their current asset management system to track what has been done.

Mark also stated that DES is working on TMDLs for chlorides. The Conservation Law Foundation has sued the State to stop the I-93 widening. The group still believes that chlorides are a big issue from water softeners. Liz stated that she used 2 to 3 fifty-pound bags monthly for water softening. The estimate is that about 1,000 pounds is used per household. Janusz uses that also in Bedford and stated that all his neighbors have water-softening units also. The reduction of road salt may not solve the chloride issue until the impact of the water softening discharge is known.

Rick passed out a copy of a brochure that will be included with the 22,500 bills sent to customers in Manchester. The city was looking to reissue the "Pet Waste" brochure, but the costs through the City Clerk's office was more expensive than the mailing with the bill. The company that sends the bills will do additional stuffing of the brochure as part of the initial mailing costs. The brochure covers steps the residents can take to reduce water use and pollutant runoff, pet waste information, statistics on how Americans pollute, information on the storm water hotline and information on the storm drain-stenciling program. Previous to this mailing these were all separate topics sent out in notifications.

Next Meeting Date

Meeting adjourned at 3:40 PM. The next meeting is scheduled for Wednesday, February 15, 2006 at 1:30 PM. The agenda will be emailed a few weeks before the meeting. The meeting will be held at the EPD Administration Building in Manchester.