NHR41027

Annual Storm Water Report 2004
For
Portsmouth, New Hampshire

May 1, 2004

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PART 1 GENERAL INFORMATION

Name of Permitee: City of Portsmouth, NH

Mailing Address: City of Portsmouth, DPW
680 Peverly Hill Rd
Portsmouth, NH 03801

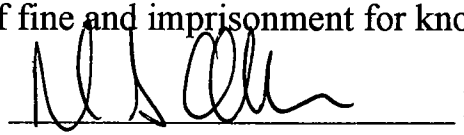
Contact Person: Silke Psula, Solid Waste Coordinator

Telephone #: 603 766-1454 Email: spsula@pw.cityofportsmouth.com

Reporting Period: May 1, 2003 – May 1, 2004

Certification

I certify under penalty of law that this document and all its 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, I certify that 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

Engineer: David S. Allen, P.E. Signature:  Date: 4/30/04

PART 1I ANNUAL REPORT

1. PUBLIC EDUCATION AND OUTREACH

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals for next reporting year
A. Conduct education activities Dept of Public Works .	Develop web-based annual newsletter and post on the City's Website by December, 2003	This report has been posted on the web: www.cityofportsmouth.com , click on Public Works, then click on Storm-water Protection	Annual reports thereafter will be posted during the 4th quarter calendar year.
B. Planning Dept	An annual report will be presented to the Planning Board, which is responsible for enforcement of site review regulations to include water quality protection measures, and the Conservation Commission, which deals with the wetlands and ties into water quality.	This report will be provided to the Planning Board and Conservation Commission and followed up with a presentation.	Report is not yet complete. However, anticipated completion and to review with the Board June 17, 2004 and the Commission June 9, 2004.
C. Dept of Public Works	Stencil storm-water basins	Currently 15 catch basins are stenciled. DPW will coordinate w/ Seagrant Extension of UNH and other organizations for scheduled stenciling activities in 2004.	

1. PUBLIC EDUCATION AND OUTREACH (CON'T)

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
D. Dept of Public Works	Develop informational video	A joint venture with the Seacoast Storm-water Coalition created the storm-water video "There is No Away". Beginning February 2004, the video is aired on the government channel every Saturday evening. Also, a link is provided on the web to view the video for those who have Quicktime, Windows Media Player or MEPG-1. Go to: www.cityofportsmouth.com click on Public Works then click on Storm-water Protection	Video will be aired and linked on an on-going basis through 2005.

2. PUBLIC INVOLVEMENT AND PARTICIPATION

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
E. Support current and future public input. Dept. of Public Works	Reduce litter and other solids and wastes from entering storm drains and water ways.	DPW coordinates efforts to clean up public lands of debris around sensitive watersheds. Provided assistance to Advocates of the North Mill Pond, Friends of the South end to clean up of 4 public areas, Blue Oceans Society clean-up of Peirce Island. Continued work with the Mayor's Blue Ribbon for dogs to manage waste at the dog park. The City also sponsors the "Adopt a Spot" program – volunteers to the City, who help clean up and beautify more than 100 different locations throughout the City.	Obtain approximate measurements, i.e. number of bags or volume/weight of litter collected from clean-up activites.

2. PUBLIC INVOLVEMENT AND PARTICIPATION (CON'T)

F. Planning Dept.	Continue Public Hearing Sessions at Land Use Boards	Currently the City is completing its Master Plan, which ties into the Storm-water Management Plan and site review regulations. A very broad base of the public is involved in the development of the Master Plan. Once the Master plan is complete the City will continue to solicit the public's input as it develops the Storm-water Management Plan and City ordinance for site review, via public readings, hearings and comment session.	
G. Dept of Public Works	Review existing committees to ensure storm-water pollution prevention issues are properly addressed and prevent duplication of efforts.	DPW has compiled a list of existing committees and boards.	DPW will catalogue the various committees and their missions and ensure they include where appropriate storm-water pollution issues.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
H. Map existing drainage systems and outfalls Dept of Public Works	Create "GIS" coverage and create storm-water maps	Storm-water map/model is completed December 2003. Model includes streams, 109 miles of drainage pipe, 105 outfalls, and 4,700 catch basins.	Majority of known system has been mapped. Mapping will continue as unknown pipes are uncovered.
I. Investigate non-storm-water discharges Dept of Public Works	Identify any illicit discharges and eliminate.	The City continues to work with DES on results of shoreline sensitivity survey. Dennett St illicit discharge elimination project has been completed Aug. '03. As a result of this project additional illicit discharges are suspected and being investigated. One illicit discharge has been identified and removed. Additional work is being coordinated with the DES to locate and eliminate any other illicit discharges.	

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION (CON'T)

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
J. Develop and implement plan to detect and address non-storm-water discharges Dept of Public Works	Create standard operating procedures for the detection of non-storm-water discharges	DPW crew have been trained and will receive refresher training to make continual observations for non-storm-water discharges while at their work sites and out in the field throughout Portsmouth.	DPW will further investigate existing regulatory mechanisms to devise a way to routinely observe outfalls during dry weather flows.
K. Dept of Public Works	Develop Mapping, Training and Reporting Protocols		This essentially is redundant of items "H" through "J" and therefore has been removed from the list of BMPs.

4. CONSTRUCTION SITE STORM-WATER RUNOFF CONTROL

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
L. Develop Ordinance for Erosion and Sediment Controls Planning Dept.	Creation of Storm-water ordinance	Currently the City is completing its Master Plan, which ties into the Storm-water Management Plan and site review regulations. Once the Master plan is complete the City will develop the Storm-water Management Plan and appropriate City Ordinances.	Master Plan anticipated to be complete September '04. Target date for ordinances 2005-2006.

4. CONSTRUCTION SITE STORM-WATER RUNOFF CONTROL (CON'T)

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
M. Creation of standard details for erosion controls Dept of Public Works	Create AutoCAD files, which will detail the standards for erosion control. Files will be used for in-house design and for dissemination to the public as requested.	DPW is in the process of creating these files.	Completion of AutoCAD files anticipated no later than September 2005.
N. Evaluate the current Site Plan Review procedures Planning Dept.	All procedures at the Planning dept which involve site review on any level reviewed and updated as necessary.	Currently the City is completing its Master Plan, which ties into the Storm-water Management Plan and site review regulations. Once the Master plan is complete in conjunction to reviewing and/or developing appropriate ordinances for site review, the Planning Dept will review its procedures for site review.	Target date for ordinances and procedures 2005-2006.

4. CONSTRUCTION SITE STORM-WATER RUNOFF CONTROL (CON'T)

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
O. Dept of Public Works Zoning Officer	Enforce new ordinance. Create educational pamphlet (or other appropriate mechanism) to be handed out during construction permitting or other like process to ensure contractors and the general public are aware of any new or modified rules. Ensure compliance via site inspections, permitting process, or other appropriate mechanisms as determined by the nature of the new or modified ordinance.		Target date: 2005-2006 (upon passing any new or amended ordinances)

5. POST-CONSTRUCTION RUNOFF CONTROL

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
P. Develop ordinance for Post-construction Runoff Planning Dept.	Creation of Storm-water ordinance for Post-construction Run-off.	Currently the City is completing its Master Plan, which ties into the Storm-water Management Plan and site review regulations. Once the Master plan is complete the City will develop the Storm-water Management Plan and appropriate City Ordinances.	Master Plan anticipated to be complete September '04. Target date for ordinances 2005-2006.

6. GOOD HOUSEKEEPING

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
Q. Employee training in Storm-water BMPs Dept of Public Works	Holding training for City employees who are effected or will effect the BMPs.	Highway personnel, Water & Sewer personnel required to attend in-house training (November '03). They were provided an introduction to the storm-water pollution issues at hand, an update of the regulations and viewed the video "There is No Away".	Yearly training will be required of all appropriate personnel to provide them updates of any BMPs and new requirements of them while performing their job.
R. Catch Basin Cleaning Dept of Public Works	Create a list of identified critical basins for regular cleaning and clean every basin within a 4 year cycle.	List to be compiled by December 2005	
S. Sweep Streets Dept of Public Works	All City streets swept at a minimum once per year. Daily street sweeping of areas identified as significant litter/pollution areas.	As of April 30, 2004, 85% of the 107 miles of city streets were swept in accord with the annual BMP standard. Estimated completion date May 15, 2004. 6 days /week street sweeping of the business/tourist district commencing in the Spring through the Fall.	

6. GOOD HOUSEKEEPING (CON'T)

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
T. Hold Household Hazardous Waste Collection events annually Dept of Public Works	Quantify diverted hazardous waste	DPW held events in May and October of 2003. The waste is measured by different methods, i.e. weight verses liquid volume. Therefore it is difficult to quantify the actual tonnage of hazardous waste collected and diverted from polluting bodies of waster. However a log of the diverted hazardous waste is compiled in Attachment I, which provides a form of quantifying.	
U. Calibrate Salt/Sand Spreaders Dept of Public Works	All salt/sand spreaders used during snowstorms are calibrated.	Equipment is calibrated mechanically. Logs to be completed by the truck drivers and information compiled.	Forms for Truck Drivers to log information to be created. A session on the use of forms and taking readings will be conducted. Responsible party to be identified to compile information. Target date: Fall 2005.

6. GOOD HOUSEKEEPING (CON'T)

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
V. Prepare Annual Storm-water Report Dept of Public Works			While this is a regulatory requirement, this is not a BMP with measurable goals. The report will still be prepared and submitted annually in May. However this BMP will not be listed.

7. BMPS FOR MEETING REQUIREMENTS OF PART 1.C AND PART 1.D

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
W. Storm/Sanitary Sewer Separation Dept of Public Works	Quantify separation of sewers.	2,400 ft of combined sewer has been separated in 2003. Additionally 3 storm water treatment systems (Downstream Defenders and Vortechnics) have been installed at the storm water outlets at the South Mill Pond. This work will be on going for many years as a part of our Long Term Pollution Control Plan.	

7. BMPs for Meeting Requirements of Part 1.C and Part 1.D

BMP/ID Responsible Party	Measurable Goal	Status	Changes/Goals
X. Upgrades to Sewage Pump Stations Dept of Public Works	Increased pumping and treatment of sewage	Improvements include: • replacement of the Mechanic Street Pumping Station radio telemetry system, • design for a new Deer Street Pumping Station, • Gosling Rd Pump Station, and • maximize the flow to the City's Peirce Island Wastewater Treatment Plant This work will be on going for many years as a part of our Long Term Pollution Control Plan.	

ATTACHMENT I
QUANTITIES OF HOUSEHOLD HAZARDOUS WASTE DIVERTED

May '03:

Type of Waste (Gallons or number of drums)	Quantity
Non-Processable Paints in can	5-FBIN
Aerosols	5-55DM
Asbestos	1-55DM
Lab Packs for Aqueous Treatment	1-55DM
Lab Packs for Incineration	5-55DM
Organic Material suitable for incineration	1-30DF
Mercury for Stabilization	1-5DF
Oil based paints in cans	10-FBIN
Solvents	10-FBIN
Lab Pack	1-30DM
PCB's for secure Chemical Landfill	1-5DF
Fluorescent light bulbs	6,058 feet

DM = Drum; FBIN = Flex Bin; DF = Drum Fiber

October '03:

Type of Waste (Gallons or number of drums)	Quantity
Non-Processable Paints in can	10-FBIN
Aerosols	5-55DM
Lab Packs for Aqueous Treatment	4-30DF
Lab Packs for Incineration	1-16DF
Organic Material suitable for incineration	1-30DF
Oil based paints in cans	8-FBIN
Solvents	7-55DM
Pesticide Liquid	3-55DF
Pesticide - Solid	2-55DF
Ethylene Glycol	5-55DM
Alkaline Batteries w/ Mercury	1-16DM
Fluorescent light bulbs	3,195 feet

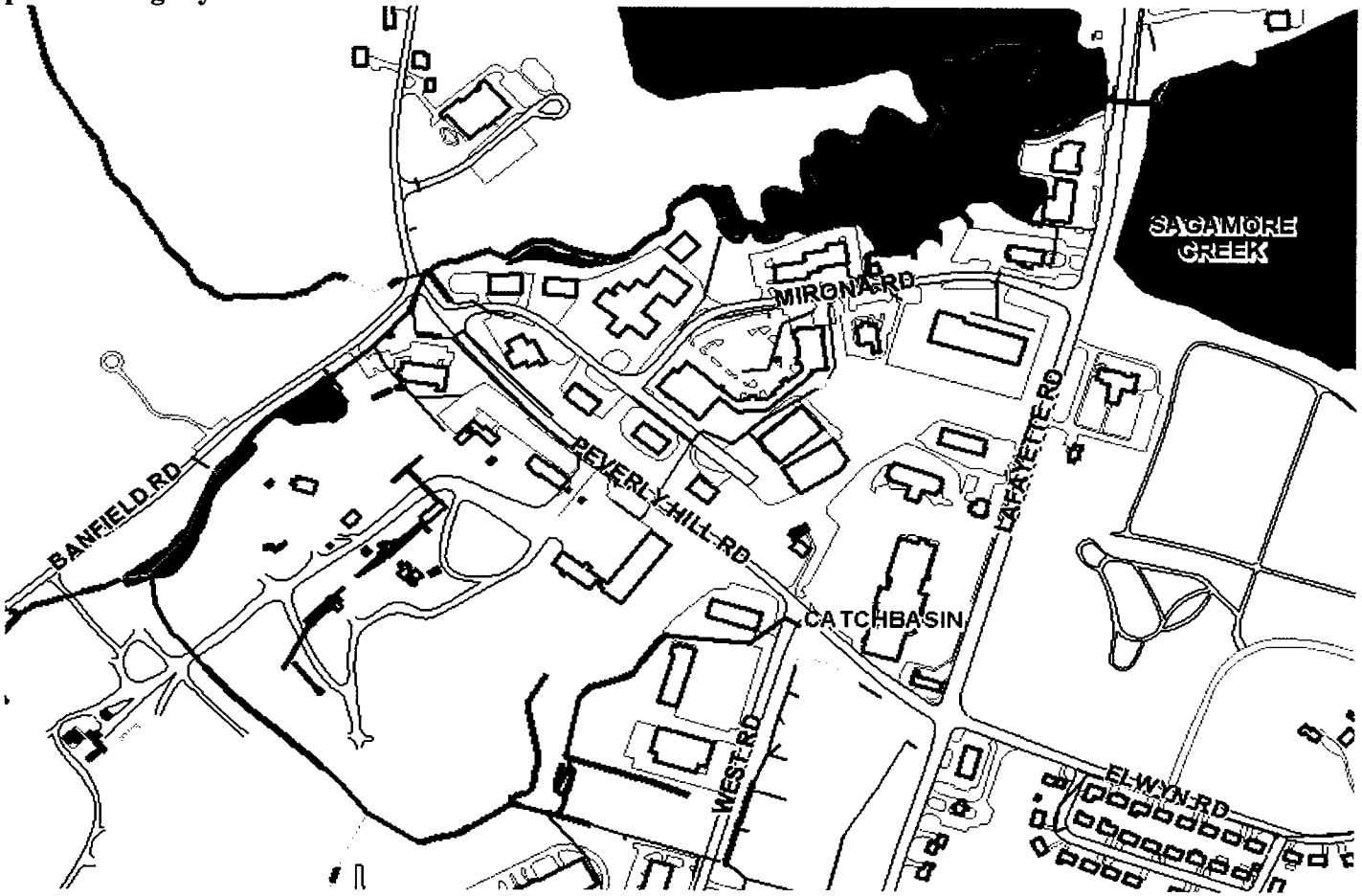
DM = Drum; FBIN = Flex Bin; DF = Drum Fiber

ATTACHMENT II
SUPPORTING NEIGHBORHOOD CLEAN-UPS

On April 17, 2004 the Blue Ocean Society collected 138 pounds of trash with 18 volunteers on Peirce Island

ATTACHMENT III
GEOGRAPHICAL INFORMATION SYSTEM

Example of map of drainage system and outfalls:



Part 1II Summary/Measure of Success

Since the advent of the City of Portsmouth's NPDES Phase II Storm-water Management Plan the employees of the City of Portsmouth have begun implementing a comprehensive plan that will essentially transform and enhance the way storm-water run-off is perceived and treated here in Portsmouth, New Hampshire. We have begun the task of building the structure that will allow residents as well as employees of the city to focus efforts that will increase the capabilities for utilizing best management practices in the treatment of storm-water run-off.

The identification of a Storm-water Coordinator at the Public Works Department has allowed for improved coordination between City departments and the general public. The Coordinator not only writes and maintains the permit, but also represents the community in regional storm-water organizations such as the Seacoast Storm-water Coalition. This coalition of seacoast cities and towns was formed principally for the creation of a storm-water public education video, but has decided to continue meeting to address current and future storm-water concerns. The Coordinator also acts a hot line for residents or city crews wishing to report dry weather drainage flows. The Coordinator also assists in establishing new priorities as storm-water treatment technologies come on line. Employee training is now mandatory each year for all Public Works employees. This training concerns not only systematic approaches to identified best management practices but also explains why these rules exist in practical terms. For example, employees now understand that washing vehicles inside the truck barn allows the wash water to enter an oil/water separator where it is conveyed to the sanitary sewer system for proper treatment.

Our mapping is essentially complete. With a grant from NHDES, we have used GPS and GIS technology to create a geographically-based network model of the storm drain system. The model allows us to quickly identify the relationships between catch basins and outfalls, which is helpful in identifying illicit discharges. The network model currently includes virtually all of the city's streams, pipes, catch basins, and outfalls. A few questions remain in an area where the drainage system has changed repeatedly due to extensive development, and we hope to map that area with help from NHDES this summer.

As part of the on-going efforts to comply with the BMPs to reduce pollutant loads to the Piscataqua River and to comply with the City's CSO Long Term Control Plan, the City of Portsmouth has performed sewer separation projects on Court Street, Dennett Street and Rogers Street. In addition the City is in construction to separate sewers on sections of Parrot Avenue, Rockland Avenue, Sherburne Avenue and Lincoln Avenue. In total the City has separated approximately 2,400 ft of combined sewer as part of this

reporting period. In conjunction with these separation projects new storm drains with storm water treatment systems have been installed at the storm water outlets at the South Mill Pond.

In addition to the sewer separations, the City has been pursuing improvements to their pumping stations to maximize the flow to the City's Peirce Island Wastewater Treatment Plant. These improvements include replacement of the Mechanic Street Pumping Station radio telemetry system. This telemetry system controls the pumping station and provides information to the treatment plant staff to better manage the pumping station's operation. The Mechanic Street Pumping Station's wet well was taken down and cleaned to improve pumping efficiency. The City is also in design at the Deer Street pumping Station to upgrade its capacity from 9.6 million gallons per day (mgd) to 12.5 mgd. Construction on this project should begin in the fall of 2004.