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Municipality/Organization: City of Portsmouth

EPA NPDES Permit Number: NHR041027

Annual Report Number
& Reporting Period: January 2005 – December 2005

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Silke Psula Title: Solid Waste Coordinator

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

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Printed Name: David Allen, P.E.

Title: Public Works Deputy Director

Date: 4/27/06

Part II. Self-Assessment

On July 28,2003, the City of Portsmouth, New Hampshire, submitted a Notice of Intent (NOI) to EPA as required by the NPDES Storm water General Permit issued for small MS4 municipalities by EPA Region. Portsmouth's NOI summarized the steps Portsmouth would take to meet the requirements of the general permit, including compliance with water quality standards. In 2004, the Conservation Law Foundation (CLF) commented on Portsmouth's NOI, identifying several areas in which it felt that requirements of the Clean Water Act were not met.

The City of Portsmouth took into account the issues raised by CLF as part of the required self-assessment, which it has completed. Further, the City resubmitted an updated September 14, 2005. The City has determined that the municipality is in compliance with all permit conditions, with the possible exception of the following provisions:

Part I. C.

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.

2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. This discussion must specifically identify control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.

Part I. D.

1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges form the MS4.

2. Determine whether the TMDL includes a pollutant waste load allocation (WLA), BMP recommendations or other performance requirements for storm water discharges. This storm water WLA may be expressed in the TMDL as a gross allotment for the impaired water body.

The City remains committed to resolving whether these conditions have been met and believes that critical data is needed which would, among other things, help establish whether certain water bodies are in fact impaired and if so for which pollutants.

Part III. Summary of Minimum Control Measures - See attached Annual Storm Water Report/Spreadsheet

Part IV. Summary of Information Collected and Analyzed
(Refer to Part II, above and BMP 3. B. (ii))

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Storm water management position created/staffed	~~Y~~/ N *	
Annual program budget/expenditures	Rough estimate $224,140.00	

** While a specific position was not created, the Solid Waste Coordinator was designated as the primary point of contact, facilitating the implementation of programs/BMPs with designated staff as part of a City wide implementation of storm water phase II compliance. Further, the SWPP identifies the Storm Water Management Team.*

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	Undetermined at this time	See BMP 1. A(iv)
Stormwater management committee established	~~Y~~/ N	See BMP 2.A. (ii)
Stream teams established or supported	~~(# or Y~~ N)	
Shoreline clean-up participation or quantity of shoreline miles cleaned	Y/ ~~N~~	See BMP 6.B.(vii)
Household Hazardous Waste Collection Days		
▪ days sponsored	2	May '05 & Sept '05
▪ community participation	2.3%	
▪ material collected	12,813 gals	
School curricula implemented	~~Y~~/ N	

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination		X		
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		

Mapping and Illicit Discharges

Outfall mapping complete	99%*	
Estimated or actual number of outfalls	+/- 213**	
System-Wide mapping complete	99%	
Mapping method(s)		
▪ Paper/Mylar	0 %	
▪ CADD	0 %	
▪ GIS	100 %	
Outfalls inspected/screened	184	
Illicit discharges identified	3	See BMP 3. B (i)
Illicit connections removed	3	
% of population on sewer	95%	
% of population on septic systems	5%	

** Locations are known; ongoing program of surveying invert elevations and determining pipe type and diameter.*

*** Directly discharging to waterbodies listed by DES as impaired waterbodies 303(d).*

Construction
Have not yet begun to track this information.

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	
Fines collected	(# and $)	
Complaints/concerns received from public	(#)	

Post-Development Storm Water Management
Have not yet begun to track this information.

Estimated percentage of development/redevelopment projects adequately regulated for post-construction storm water control	(%)	
Site inspections completed	(# or %)	
Estimated volume of storm water recharged	(gpy)	

Operations and Maintenance
Currently the City has a program in place to clean and maintain catch basins. However at this time we have not yet begun to track all of this information.

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	Urban annually and residential & commercial area as needed	See BMP 6.B (iii)
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)		
Total number of structures cleaned	46	
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. Or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	($)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	1time/yr	See BMP 6. B(iv) Total of 5,562 hours.
Average frequency of street sweeping (commercial/arterial or other critical streets)	6 days/week Spring through Fall	
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/~~leased~~	1	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	Y / ~~N~~	
Storage shed(s) in design or under construction	Y / ~~N~~	Constructed 2001

Annual Storm Water Report
For Calendar Year 2005
For
Portsmouth, New Hampshire

Submitted: May 1, 2005

2005 ANNUAL REPORT
BEST MANAGEMENT PRACTICES OBJECTIVES & STATUS REPORT

1. **PUBLIC EDUCATION AND OUTREACH**
   Public Education is an essential component to any effective storm water management program. To start, Portsmouth has decided to conduct a gen storm water, establishing for the general public a basic understanding of the issues and to target the appropriate citizens committees. Once a gener and more specific areas of concern are identified, education and out reach will be developed to address those needs with appropriate objectives, tar established.

BMP / ID **Responsible Party**	**Measurable Goal**	**Status**	**Changes / Goals fo**
1. A. Develop and distribute/post a minimum of 2,000 impressions via print, local TV, local radio or other appropriate media during the life of the permit. DPW	**i.** Storm Water report on web (X # hits)	Storm water report is on web – current technology does not allow us to track # of visits.	Update webpage to storm water and atte technology to track
	ii. Produce and post storm water pollution prevention construction BMPs poster. (# of posters)	15 posters produced by the EPA - 2 continue to be located at City Hall/Planning Dept., where residents and contractors apply for construction permits.	No change
	iii. Produce 1,020 pamphlets of EPA's, "The Solution to Storm water Pollution" pamphlet. (# of pamphlets)	These pamphlets are in the reception area of City Hall and DPW. Pamphlets aredistributed during HHW Collection events and other appropriate events. Events held May '05 & September '05 – 326 cars and 143 cars, respectively, attended event(s) and received a pamphlet.	No change

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- continued **1. A.** Develop and distribute/post a minimum of 2,000 impressions via print, local TV, local radio or other appropriate media during the life of the permit.	**iv.** Produce and air on local TV a public service announcement/video on storm water and what the public can do to prevent storm water impacts. (# of times video was aried)	A joint venture with the Seacoast Storm-water Coalition created the storm-water video "There is No Away". Beginning February 2004, and for the first 2 years of the permit, the video will be aired on the government channel every Saturday evening. The video was aired 92 times. In addition, a link is provided on the City web to view the video for those who have Quicktime, Windows Media Player or MEPG-1.	The City will develc survey within the la permit to ascertain b target audiences[s1].
	v. Produce and air on local TV a public service announcement on proper disposal of used (car) oil and provide means for disposal (recycling) at the City Recycling Center. (# of times PSA aired)	July 2004 through July 2005, the City is airing 1 minute "commercial" 5 times per day, 3 times a week advertising proper method of disposing used oil and the hours the Recycling Center accepts used oil. The video was aired 780 times.	Contract to use copy expired July 2005. objective.
	vi. Brochures about oil pollution prevention at key locations within City Hall	*Fast Facts About Oil & Fuel Pollution* and *Fast Facts About Vessel Maintenance Pollution*, produced by the Ocean Conservancy and addressing some storm water pollution prevention good house keeping initiatives and provided at City Hall reception area.	Fulfilled this objecti

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1.B. Educate local residents participating in local government; groups; organizations. DPW	**i.** Make presentations to appropriate local Committees. DPW hosted an all day workshop January 21, 2005, "How To" for Storm Water Phase II Communities that the Rockingham Planning Commission organized. 65 attendees representing 23 communities attended.	May 17, 2005, DPW presented to the Neighborhood Advisory Committee, Storm Water issues and the City's initiatives.	Objective targeted f permit. Objective n make presentations present, i.e. Citizens since they have rem public facilities proj playground improve neighborhoods.
	ii. # of public events storm water pollution issues presented at.	DPW set up a PR booth during Market Square Day, 6/11/05. Storm water / water quality issues and recycling were presented to event attendees.	No change.
1. C. Educate the general public and public school children about the storm water / sewer system, so that they understand the town water management systems and pollution issues. DPW	**i.** The City will coordinate with volunteer, local organizations and the public school system to educate about storm water	April 2005 - Coordinated w/ Girl Scout Troop leader, Sheila Kearsey, for the troop to earn their eco-badge. Arranged for tour of waste water treatment plant in Sept. In the interim provided Water Saver Kits, booklets on groundwater protection etc.	No change.
	ii. Develop a newsletter, for mass mailing throughout City residential addresses and posting on web. Articles will include Storm water pollution prevention; water quality; waste water info, treatment plant; buffer zones; etc.	Newsletter produced and distributed (mass mailing) in conjunction with Earth Day April 20, 2005 – mailed May 2005.	No change.
	iii. DPW coordinate with the Middle Public School children (grades 6 – 8) with material, including videos, live presentations, brochures and other media	Opportunities were not available in 2005. However, met this objective (1.C) through the other measurable goals cited. Will continue to look for opportunities.	No change.
	iv. New goal for 2006: include storm water info in City e-newsletter.	# of times storm water is included in the newsletter	Annual

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1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	**i.** City to support the Hodgson Brook Local Advisory Committee efforts to develop goals, objectives and actions to address the restoration of Hodgson Brook.	In 2005, the City contributed $7,000 through in-kind services to the Hodgson Brook project. June 2005, the City, in conjunction with NHDES and the Hodgson Brook Committee, began efforts to fix a break in the sewer line running under the Bartlett St. Bridge. Completed 1/17/06. Eliminated source of raw waste water discharging into the North Mill Pond.	City will continue tc Committee as City b Coordinated efforts contaminants on-goi efforts for a coordin scheduled for the Hc watershed.
	ii. Coordinate with the Blue Ocean Society to clean-up litter on Pierce Island. (# of events)	Two events held in 2005. 4/22/05 and 6/22/05 volunteers organized and took part in cleaning up over 965 pounds collectively of debris on Pierce Island.	No Change.
	iii. City coordinate initiatives with CSTEV	4/15/05 Four City reps attend CSTEV workshop. Deputy Dir invited to be a member of the Board as it looked at applications and results of the research project. Board met twice in '05.	No Change.

2. **PUBLIC INVOLVEMENT AND PARTICIPATION**
An involved public will be more likely to support a storm water program, in terms of both implementation and support for funding.

BMP / ID **Responsible Party**	**Measurable Goal**	**Status**	**Changes / Goals fo**
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about storm water management priorities and programs throughout the City. City Hall/DPW	**i.** Develop the storm-water pollution prevention programs and City ordinance	City completed its Master Plan in February 2005, which includes sustainable development concepts, in particular site review regulations, land use, natural resources and open space. Site reviews include public readings, hearings and comment session. Additionally a very broad base of the public was involved in the development of the Master Plan.	Objective met.
	ii. Review existing committees and ensure they include, where appropriate, storm-water pollution issues to ensure they are being addressed.	Review conducted in 2004. Identified Conservation Commission, Planning Board, TAC as appropriate committees to be informed of storm water issues. Determined at this time there is no practical reason to develop a storm water committee (no specific mission identified). But will present to the identified committees issues on storm water pollution prevention. Presentations given in 2004.	Objective met. No c
	iii. The Technical Advisory Committee (TAC) review and approval of NOIs from private contractors.	As part of updating site review regulations inspection and administration handling will be formalized.	Update GIS system t properties (and NOI:

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2.B. Maximize resources and effectiveness, and coordinate with neighboring communities occupying the same watershed for appropriate and feasible education and out reach. City Hall / DPW	**i.** # of meetings and/or coordinated efforts with the Storm Water Coalition.	The City has designated a representative. The Coalition meets quarterly throughout the year. Additionally, the City rep met with certain Coalition members and coordinated an application for grant money to develop SOP for IDDE and Good Housekeeping BMPs. The Coalition recently was awarded grant money. Approximately 5 additional meetings held in the last quarter – applying for grant and subsequent implementation of the project.	On-going meetings Manual to be compl

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

Illicit discharges are wastes and wastewaters that are not from storm water runoff and are not otherwise authorized by the City's NPDES permit. T system either through direct connections or through indirect connections.

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3. A. Develop a comprehensive map of the storm drain system. DPW	**i.** Percentage of Storm-water system mapped.	Storm-water map/model has been completed December 2003. Model includes streams, 109 miles of drainage pipe, 105 outfalls, and 4,700 catch basins.	Majority of known s mapped. Mapping v unknown pipes are u The City has hired a provide elevations, 1 size, material condit drainage as part of t Water Master Plan I

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3. B. Identify any illicit discharges and eliminate. DPW	**i.** Number of illicit discharges detected and/or eliminated.	**a.** 8/15/05 televised inspection of 2,900' of storm water infrastructure conducted at Rt 1 By-pass/Maplewood area. Appropriate corrective action implemented based on results of inspection.	On-going efforts. City coordinating ef Brook Local Adviso IDDE survey within Watershed. Spring
		b. Spring 2005 Cross connection removed at Buzzy's and installed a new 500 gal external grease trap.	
		c. 6/16/05 Dolphin Striker Restaurant enforcement action initiated for dumping mop water down storm drain.	
		d. 7 Central Ave – sewer lateral tied to storm drain. 8/2005, two City crew dug on sewer lateral and connected it to main sewer on Mechanic St.	
		e. 9/28.05 enforcement action taken against 1976 Woodbury Ave re: drains to be private opened and cleaned.	
		f. 10/11/05 enforcement action taken against Ricci on Deer St. – run-off from private construction project.	
		g. 10/18/2005 Enforcement action taken against King Real Estate re: Madison St. project.	
		h. sewer repair on Bartlett St., removing leaky sewer line into N. Mill pond.	

- continued **3. B.** Identify any illicit discharges and eliminate.	**ii.** Create standard operating procedures for the detection of non-storm-water discharges.	Previous year's initiative was to conduct a survey during dry weather of 20% of the storm drain system outfalls per year. Areas with suspicious discharges would be investigated.	Modified objective. better achieved by f for detection and eli subsequent training City obtained grant Seacoast Coalition t SOPs to be complet training conducted i
3.C. Establish legal authority for enforcement actions. City Hall	**i.** The City to adopt a storm water ordinance that provides enforcement mechanisms and penalties to halt illegal discharges.	Ordinance drafted. DPW and CH met Jan '06 - 4th review. Edits currently being made. Intend to present to Council no later than Fall '06 for approval.	As part of the Storm project, consultants provide feed-back. before City Council of passing.

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Construction sites can be a significant source of sediment – especially when installation and maintenance of erosion and sediment controls are not

BMP / ID **Responsible Party**	**Measurable Goal**	**Status**	**Changes / Goals fo**
4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites. City Hall / DPW	**i.** Require ESC plans for any land disturbance greater than 5,000 square feet.	Site review regs being updated and guidance being prepared.	As part of the Storm project, consultants and provide feedbac later than Fall '06.
	ii. 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.	Completion of Auto no later than Septem complete in 2005 – completed in 2006.
	iii. Site Plan Review procedures to include storm water pollution prevention activities. All procedures at the Planning dept to involve storm water activities site review on any level.	Evaluate the current Site Plan Review procedures. As part of the Storm Water Master Plan Project, consultants will review Site Plan Review procedures and provide feed back.	Target date for com

BMP / ID Responsible Party	Measurable Goal	Status	Changes / Goals fo
- continued			
4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites. City Hall / DPW	**iv.** 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. # of pamphlets created and distributed.	Ordinance under going 4th edit. To be presented to Council Fall '06, with intent to pass. Brochures will be created once ordinance is passed.	2007
	# of site inspections for compliance.	Sub-division and site monitoring is performed through contract with site consultant engineering firm, i.e. Unerwood monitored 2: Tuckers Cove and Madison St Condos.	City will develop a t

5. **POST-CONSTRUCTION RUNOFF CONTROL**
Once a construction project is complete, there still remains a need to address storm water runoff. Specifically those that disturbed greater than or e projects less than 1 acre that are part of a larger common plan of development, which discharge into the MS4.

BMP / ID Responsible Party	Measurable Goal	Status	Changes / Goals fo
5. A. Reduce the volume and improve the quality of storm water runoff by disconnecting impervious surfaces and installing and maintaining structural storm water controls. DPW	**i.** # of structural controls installed.	Four Vortectic units installed – two at DPW and two by the North Mill Pond.	Objective met. As part of the Storm consultants will draf maintenance schedu completion: by the e

6. GOOD HOUSEKEEPING

Effective storm water management programs start with good standard operating procedures and municipal employees. Standard operating procedu municipal crews need to be educated about the impacts of their work on storm water quality to prevent pollution from municipal operations. Also, good example for citizens.

BMP / ID **Responsible Party**	**Measurable Goal**	**Status**	**Changes / Goals fo**
6. A. Reduce the amount of nutrients and sediments entering receiving waters through education of municipal employees about spill prevention and control, vehicle washing, lawn activities, etc.	**i.** Number of in-house training sessions held and number of attendees.	10/13/2005 3 DPW employees attended training re: Wastewater Discharging Permitting in NH, agenda included storm water issues. 11/15/2005 – use and application of portable spill kits.	No change.
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	**i.** Storm/Sanitary Sewer Separation Quantify separation of sewers.	Began contract II of the sewer separation project – Bartlett St., intersection sewer separation designed.	This work will be or years as a part of the Pollution Control Pl
	ii. Upgrades to Sewage Pump Stations	Increased pumping and treatment of sewage Improvements include: • Deer St design completed • Project bid to be completed in '06 (contract is signed) • Rye line pump station in design.	This work will be or years as a part of ou Control Plan.
	iii. City to identify critical catch basins and frequency for cleaning.	The City will create a list of identified critical basins for regular cleaning and clean every basin within a 4-year cycle.	List to be compiled l Maintenance schedu based on # of critica areas, staff and equi

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- continued **6. B.** Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	**iv.** Miles of City streets swept.	Daily street sweeping of areas identified as significant litter/pollution areas. 6 days /week street sweeping of the business/tourist district commencing in the Spring through the Fall. Once a year, after Winter ops concluded, the following identified neighborhoods are swept: Maplehaven, South end, Jones Ave, Dennet St., Middle St., Borthwick Ave, Woodbury Ave, Panaway Area, the Heights, Essex Ave area, Elwyn Park. 10/17/05 swept downtown; Woodlands; Wright, Worth & Gas Lite lots. Four loads of street sweeping collected.	DPW developing si procedures to docun
	v. Reduce the amount of salt/sand being used in the winter to the minimum necessary amount.	The City eliminated the use of sand in 2005. The City will determine the amount of salt/sand being used to establish a base line understanding of operations and application. Calibrate Salters. Logs to be completed by the truck drivers.	Because seasons var compiled over the c seasons starting the Baseline not establis good representation. City will research o improve and optimi

BMP / ID Responsible Party	Measurable Goal	Status	Changes / Goals fo
- continued **6. B.** Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	**vi.** Develop spill prevention and control plans for Dept of Public Works.	DPW has SPCC written and signed by a certified Engineer. The plan describes spill prevention and control procedures.	Plan to be reviewed every three years an necessary.
	vii. Number of activities the DPW coordinates or conducts to clean up public lands of debris around sensitive watersheds.	Assisted 1) Blue Oceans Society clean-up of Peirce Island – Earth day 2005 and Sept '05; 2) The City sponsors the "Adopt a Spot" program – volunteers to the City, who help clean up and beautify more than 100 different locations throughout the City. 3) Storm drain stenciling project Sept '05.	No change – on-goi
6. C. Reduce the amount of hazardous waste being disposed of inappropriately through programs/services, education of municipal employees and local residents.	**i.** The number of household hazardous waste collection events and the volume (i.e gallons) of household hazadrous waste disposed (in accord with hazardous waste regs and diverted from the landfill).	Events held May and September 2005. 12,813 gals of waste collected.	No change – on-goi meeting this objecti State assistance. Lc make this project m effective.
	ii. The number of events/contacts with residents to educate about hazardous waste, proper disposal and the effects of hazardous waste on water quality, so that general awareness will increase.		No change[s6]