Municipality/Organization: **Rochester, New Hampshire**

EPA NPDES Permit Number: **NHR041028**

2004 MAY -7 A 9:41

MaDEP Transmittal Number: **W-**

Annual Report Number & Reporting Period: **No. 1: March 03-March 04**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Thomas H. Willis, Jr., PE Title: City Engineer

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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: Robert Steele

Title: City Manager

Date: May 3, 2004

Part II. Self-Assessment

While the City of Rochester fully supports the goals of stormwater II regulatory program, which is to reduce the quantity of pollutants that are carried to the city's surface water bodies by stormwater runoff conveyances. During the past year, the first year of the 5-year general permit period, the city has taken what can be characterized as "baby steps" in complying with the terms of the general permit. The first year has been devoted to learning what actually the city's requirements and obligations are under the terms of the general permit and devising a plan to meet them under current budgetary and personnel constraints. This program puts a significant stress on the city's already understaffed public works department, particularly the City Engineer.

During the past 18 months, the city has seen growth in residential development not seen in at least 17 years. In terms of the stormwater program this has been both a blessing and a curse. The blessing is that the City Engineer and the Planning Department are in a position to compel developers to adopt and adhere to best management practices (BMPs) to minimize the impact of erosion and sediment transport beyond the construction site. These BMPs are being emphasized during project planning and design review. Developers in Rochester are being informed of the Notice of Intent requirements and procedures are in place to build awareness through required preconstruction meetings and occasional site inspections.

Other requirements of this program such as illicit connection detection and stormwater mapping programs have been more difficult to complete this past year. Both of these projects are labor intensive and then, by definition, costly to complete. During the past two years, the city has spent close to $ 5 million per year on infrastructure improvement projects, with similar expenditures planned for the next two years. All of this has been managed by the City Engineer's office, which has a staff of two persons. Consequently, it is not whether the city desires to embrace the Stormwater II program, the challenge has been to properly allocate the existing staff to meet all of the requirements of the general permit, while meeting all of the city's other needs.

The City will need to use all five years of the permit period to achieve the goals of the stormwater management plan and intends to use them.

2004 MAY -7 A 9:41

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
01-01	Prepare Stormwater Video	Public Works /Commissioner	Cable Access, school and library showings	In CY 2003, City began operation of 24-hour local government channel. Video shown 12 times per week at various times; video distributed to library; and to high school earth science teacher. Video has received statewide acclaim	Continue promotion and showing of video to as wide an audience as possible. Referred to in stormwater brochures, which are distributed to key locations in city.
Revised					
01-02	Support Annual Hazardous Waste Day	Public Works/ Office Manager	Coordinate & fund w/ Strafford Planning Commission; publicity	Community held household hazardous waste collection in Rochester on Sept 27, 2003. Collected approximately 2000 gallons of hazardous waste from local residents. Expended $19K for effort.	Continue to support, publicize, and finance this regional effort annually.
Revised					
01-03	Produce a Stormwater Brochure	Public Works/ City Engineer	Have available for public access locations in city	Simple stormwater brochure was prepared and distributed to participants of annual earth day clean up on 4/24/04. Initial production run limited	Initial run was locally produced. Plan to solicit feedback on initial run and then have professional printing co. print large quantity for widespread distribution.
Revised					
	Localized Webside	Cocheco Water shed Coalition; Public Works	Tie in with City Webpage	Little progress was made on this BMP during reporting period.	Greater emphasis will be made to establish content and for city to develop greater working relationship w/ Cocheco River Coalition
Revised					

1a. Additions

01-05	School Involvement	Various Teachers/ Public Works	Promote Stormwater as a topic in the classroom	City Engineer prepared and presented lecture and showed locally produced video to 9th grade earth science students	Promote topic to School Districts curriculum director.

2005 MAY -7 A 9:41

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
02-01	Promote Riverbank Cleanups	Conservation Commission/ Cocheco River watershed coal.	Periodic Cleanup Days.	Watershed Coalition has scheduled and held canoe trips down Cocheco River to draw attention to the river quality. Earth Day city cleanup on 4/24/04. Groups went to clean up along riverbanks downtown and elsewhere. 8 tons of trash and debris was removed.	City needs promote greater awareness of the importance of stormwater runoff to this group, so membership can be savvier in noticing, identifying, and reporting problems. More of the same.
Revised		Dept of Recreation and Youth Services.			
02-02	Watershed Monitoring	Conservation Commission and Cocheco Watershed Coalition	Periodic Reviews of Watershed	Conservation Commission has been active in monitoring the explosion of construction activity in the city focusing on wetlands. Focus has been localized and less on watershed. Little coordination between Con Comm and Public Works on watershed emphasis this year to date. Program evolving	Public works will begin to bring focus to Conservation Commission After stormwater system mapping (BMP 03-01) and outfall locational work is complete (BMP 03-02). Need to develop data to find locations of emphasis for monitoring.
Revised					

2a. Additions

02-03	Greater Involvement of Dept of Recreation and Youth Services	DRYS Neighborhood Coordinator	Greater awareness and participation among city's neighborhood groups.	Public Works (agency responsible for stormwater program) reached out to DRYS to educate and inform coordinator of importance of stormwater management. Conduit for outreach to local neighborhoods.	Continue to foster and build on this relationship. Promote stormwater as a cause.

2004 MAY -7 A 9:41

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
03-01	Identify and map outfalls and receiving waters	Engineering Department	Map all outfalls in GIS by Spring 05.	Completed some minor stormwater mapping in Spring 2003. Pace of development has stretched engineering dept. (2 people) to point where no time to complete. City Engineer took course in GIS to sharpen these skills once data is collected.	Have solicitation on street to hire two college interns for Summer 2004 to collect outfall location data and begin stormwater mapping. Original solicitation done in early April 2004. Little response to date. Without add'l help, little prospect this will get done. Hiring consulting company would be costly and is not budgeted for.
Revised					
03-02	Screen outfalls for Illicit Connections	Public Works	Screen all outfalls by Spring '05.	No substantive work completed in the first year. Reviewed the capabilities of the city's wastewater treatment plan for sample testing for BOD, e-coli, and TOC, so that we can be ready once sampling activities occur, hopefully beginning in summer 2004.	Have solicitation on street to hire two college interns for Summer 2004 to collect outfall location data and begin collecting water samples from outfalls for in-house analysis. Original solicitation done in early April 2004. Little response to date. Without add'l help, little prospect this will get done.
Revised					
03-03	Review and Development Stormwater Ordinance	Public Works/City Council	Adoption of Ordinance by Fall of 2006	No work has been done, until public works receives a model ordinance developed by a regional entity. This has been discussed at several Seacoast Stormwater Coalition Committee Meetings	If a model ordinance is developed by a regional entity, the city will use this as model the then modify it to meet needs and city's situation. We will not reinvent the wheel, as this community does not have the staffing to "go it alone".
Revised					
03-04	Illicit Connection Elimination Plan	Public Works Documentation	Plan Development by Summer 2006, assuming meaningful data is obtained during 03-02 effort	Little work has been completed on this BMP to date. How we proceed will depend on the results of the effort described in BMP 03-02. Assuming we do find illicit connections, the city will likely seek funding through state sources and city CIP funds to eliminate illicit connections.	Complete 03-02 before we can develop illicit connection plans.
Revised					

3a. Additions

2004 MAY -7 A 9:41

	None				

2004 MAY -7 A 9:01

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
04-01	Review Stormwater Features during land development process	Planning/chief planner and public works/ city engineer	Development of Site Review Standards	Technical staff meets bi-weekly to review and discuss all new development proposals before going to planning board. Each proposal is scrutinized for stormwater impacts.	Continue emphasize state of the art stormwater management on new development projects where prudent in the context of current regulations until a planned revision of subdivision and site plan regulations begins (likely in late 2005). Development of plan review checklists to ensure review consistency
Revised					
04-02	Revise Subdivision and Site Plan Regulations	Planning/chief planner	Adoption of Site Plan Regulations	Little progress has been made thus far. Implementation schedule states this will begin in Winter 2004-2005	Planning dept. currently engaged in comprehensive rezoning program. Overhaul of stormwater and site plan regulations will begin after the zoning work has been completed. Planning dept. reports that would likely begin in late 2005.
Revised					
04-03	Construction Monitoring of Site Development	Public Works/ Inspection Engineer	Visit each site; engage in corrective action	Engineering personnel visit each site plan and subdivision at regular intervals. Stormwater management, erosion control, and adherence to construction plans and city standards are emphasized. In 2003 reporting year rapid pace of development and limited staffing has resulted in city not visiting projects as often as desired, however significant violation are enforced.	Continue with current practices as resources permit.
Revised					
04-04	Public Information / Pamphlet for Site Developers	Planning/ Conservation Commission	Pamphlet for site developers	This goal has not been met. Information to developers is transmitted during mandatory pre-construction meetings with city staff before the project start. Topics such as completion of NOI and other stormwater requirements are discussed.	Create pamphlet to hand out to developers and contractors during pre-construction meetings.

2004 MAY -7 A 9:

Revised			Significant projects are required to have a preconstruction meeting w/ city staff to outline requirements		

4a. Additions

	None				

2004 MAY -7 A 9:41

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
05-01	Establish Drainage Maintenance Agreement Program	Planning/Public Works	Adopt as part of planning process.	City has established a program as part of the planning process, which requires owners of site plans with stormwater conveyance and detention systems to maintain these systems so they work as designed. Failure to maintain gives city the right to access the property to maintain them and recover the costs from the owner.	Continue with the drainage maintenance agreement process.
Revised					
05-02	Revise Regulations for Stormwater Management	Planning/Public Works	Adoption of Regulations	No progress has been made on this BMP. Scheduled to begin during fall/winter of 2004-05. Desire to identify the extent of stormwater system by implementation of BMPs 03-01 and 03-02.	Depends on progress of BMPs 03-01 and 03-02. Collection of data will aid in how to proceed with development of regulations.
Revised					

5a. Additions

	None				

2004 MAY -7 A 9:41

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
06-01	Catch Basin Cleaning Program	Public Works/Highway Lead or Foreman	Establish Priorities	City uses VAC-Con truck to clean catch basins and manholes. Try to get to each of them every two years. Prioritized to the down town area where they are cleaned more frequently. Staffing levels do not allow a dedicated crew to do this everyday.	Continue as previously. They're two Vortechnics stormwater treatment systems installed (or planned) in city in 2004. A third may be installed in 2005. City will be maintaining these on a recurring schedule as well as upstream catch basins.
Revised					
06-02	Street Sweeping Year Road	Public Works/Highway Lead or Foreman	Install heating System in Garage for winter sweeper storage	City has two street sweepers. All winter sand is removed from the streets and sidewalks beginning in April and is an annual priority until complete. Throughout the spring, summer, and fall months both sweepers sweep and remove debris throughout the city. Downtown areas emphasized. Winter sand cannot be removed in winter because there is no heated place to store them, so they must be winterized to prevent freeze-ups.	Continue the same. In order to have street sweeping capabilities during the winter months, two garage bays will need to have heat installed or new heated garage bays installed. This may occur with the construction of salt/sand shed planned by 2006.
Revised					
06-03	Refine Vehicle Washing Program	Public Works/ Operations Manager	Implementation	Vehicles are currently washed sparingly either on an asphalt area that drains to a grassy area, where wash water evaporates or infiltrates into the sandy soil beneath the public works facility.	Plan to set up a vehicle washing area that captures all wash water and discharges it to the sewer system after passing through oil/water/grit separator. To be implemented by operations manager, however has been vacant for 16 months, current budget constraints preclude it being filled currently.
Revised					
06-04	Practice Environmentally Friendly Lawn Maintenance	Public Buildings/ Director	Grounds Maintenance Plan	Little progress has been made during this current year. Public Buildings Director position eliminated during year and merged w/ Public Works director. Still trying to assimilate two departments to conceive and implement new initiatives.	Once the reorganization has settled out, attention can be focused on developing a plan.
Revised					

06-05 Revised	Improve Salt/Sand Storage	Public Works/ Commissioner	Replace Salt Shed	$175K was budgeted for replacement of salt sand storage shed in current fiscal year. Inadequate to build a structure that is sufficient to meet the city's future needs. Applying for additional funding for FY-2005 budget in order to build and appropriately sized shed. Currently storing salt in a small shed, purchasing only small quantities. Cover salt/sand mixture with heavy-duty tarps	Will build salt-sand shed in FY 2005 – Start in spring / summer 2005, if city council appropriates enough funds to build the shed that the city needs.

6a. Additions

06-06	Street Sweeping Training Program	Public Works Dept. / Maintenance and Highway Leads	Conduct Annual Operations and Maintenance Refresher Training to Street Sweeper Drivers	In Spring 2004, Lead Maintenance Mechanic conducted training to all sweeper drivers on the proper operation and maintenance of both street sweepers to ensure that they operate effectively and efficiently and to out line where and when these scarce resources should be used to increase stormwater effectiveness. (e.g. removing winter sand, recurring cleanliness)	Will be conducted annually at the end of winter.

2004 MAY -7 A 9:41

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *<<if applicable>>*

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 1 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 2
07-01	Develop Stormwater Map	Public Works/ City Engineer	Prepare Fully-functional map that differentiates impaired waters	See 03-01	See 03-01 – impaired waters will be done first
Revised					
07-02	Locate and Map All Outfalls	Public Works/ City Engineer	Identify and Locate outfalls in Impaired waters; prioritized	See 03-02	See 03-02 – impaired waters will be done first
Revised					
07-03	Illicit Connection Plan	Public Works/ City Engineer	Planning Document Prep; Prioritize these waterways first	See 03-04	See 03-04
Revised					
07-04	Promote Riverbank Cleanup	Conservation Commission / Cocheco Watershed Coalition	Periodic Clean up days – prioritize these waters.		
Revised					
Revised					

7a. Additions

7b. WLA Assessment

2004 MAY -7 A 9:42

Part IV. Summary of Information Collected and Analyzed

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures	($)	~$20,000
		In connection w/ other expenditures

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	Undetermined, no way to measure how many have watched video on cable access
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	One
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y/approx 1 mile (downtown area of Cocheco River)
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	1
▪ community participation	(%)	< 5 percent
▪ material collected	(tons or gal)	> 2000 gallons
School curricula implemented	(y/n)	No

2004 MAY -7 A 9:42

Legal/Regulatory

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

Mapping and Illicit Discharges

Outfall mapping complete	(%)	~10 percent
Estimated or actual number of outfalls	(#)	More than 200
System-Wide mapping complete	(%)	~20 percent
Mapping method(s)		
▪ Paper/Mylar	(%)	~20 percent
▪ CADD	(%)	0
▪ GIS	(%)	0
Outfalls inspected/screened	(# or %)	5
Illicit discharges identified	(#)	Undetermined
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	Approx 40
% of population on septic systems	(%)	Approx 60

2006 MAY -7 AM 9:42

Construction

Number of construction starts (>1-acre)	(#)	19
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	75 percent
Site inspections completed	(# or %)	80 percent
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and $)	0
Complaints/concerns received from public	(#)	< 5

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	25%
Site inspections completed	(# or %)	100 % immediately following construction, ~10 % one year after construction
Estimated volume of stormwater recharged	(gpy)	undetermined

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1
Total number of structures cleaned	(#)	Not recorded
Storm drain cleaned	(LF or mi.)	Not recorded
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	Approx 100 tons
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Landfill
Cost of screenings disposal	($)	0 – landfill host community

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	10
Qty. of sand/debris collected by sweeping	(lbs. or tons)	~ 200 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Landfill
Cost of sweepings disposal	($)	0 – Landfill host community
Vacuum street sweepers purchased/leased	(#)	Own 2, 0 this year
Vacuum street sweepers specified in contracts	(y/n)	Sometimes on municipally managed projects in urban areas

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	No meaningful reduction
▪ Herbicides	(lbs. or %)	No meaningful reduction
▪ Pesticides	(lbs. or %)	No meaningful reduction

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	20 percent 80 percent – average proportion – varies according to storm
Pre-wetting techniques utilized	(y/n)	No
Manual control spreaders used	(y/n)	Yes
Automatic or Zero-velocity spreaders used	(y/n)	No
Estimated net reduction in typical year salt application	(lbs. or %)	Not meaningful

2004 MAY -7 A 9:02

Salt pile(s) covered in storage shed(s)	(y/n)	Yes – but not adequate
Storage shed(s) in design or under construction	(y/n)	Yes – add'l funding in proposed CIP Budget for upcoming year

2009 MAY -1 A 9:42