City of Rochester, New Hampshire

PUBLIC WORKS DEPARTMENT
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MAY - 3

May 1, 2006

U. S. Environmental Protection Agency
Water Technical Unit
PO Box 8127
Boston, MA 02114

RE: NPDES Stormwater Annual Report – Rochester, New Hampshire – EPA ID No. NHRO41028

Dear Ms. Murphy:

Enclosed, please find the annual stormwater report for the City of Rochester, New Hampshire. We trust that this information provided meets the reporting requirements of the general permit.

If you need additional information, please call me at (603) 332-4096 or via e-mail at tom.willis@rochesternh.net

Sincerely,
THE CITY OF ROCHESTER, NEW HAMPSHIRE

Thomas H. Willis, Jr., PE
City Engineer/Technical Services Manager

Encl: Stormwater Annual Report No. 3 – March 2005 to March 2006

CC: John Scruton, City Manager
Melodie Esterberg, PE, Commissioner of Public Works
File

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

EPA NPDES Permit Number:

NHDES Permit Number: NHR041028

Annual Report Number & Reporting Period: **No. 3: March 05-March 06**

MAY - 3 2006

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

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

Telephone #: (603) 332-4096 Email: tom.willis@rochesternh.net

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: John Scruton

Title: City Manager

Date: 5/1/06

Part II. Self-Assessment

The City of Rochester has been working to comply with the requirements of the Stormwater General Permit. All efforts have been performed using existing staff. There have been no permanent staff hired dedicated to stormwater management rather, existing staff have been continuing to train themselves on stormwater requirements and attempting to implement them in association with their normal duties. The City of Rochester's staffing was reduced from the previous year as the number of student intern hours was cut back significantly over the previous reporting year. The intern's period of employment ended in June 2005 and completed his work on locating and reporting the results of the outfall location and effluent sampling effort. This information is being used to continue the City's illicit connection and elimination program.

The City is continuing its efforts to promote the Cocheco River as an amenity to the City's vibrancy. The City's political leaders have created a committee to develop and ultimately construct a scenic river walk along the Cocheco River in the downtown area. The will provide an opportunity to promote the river's beauty and aesthetic qualities and create a platform for educating the public on the importance of maintaining a clean river watershed. This river walk committee is an outgrowth of the planning charette that was reported on in 2004. The Coalition for Rochester Enhancement (CORE) {www.core-nh.com} continues to be an active organization, however their focus in 2005 has shifted to promoting the efforts toward downtown revitalization and left the river promotion to the river walk committee.

The Public Works Department obtained a Wildlife Habitat Incentive Program (WHIP) grant from the Natural Resources Conservation Service to clean up an approximately one mile stretch of the Cocheco River. This included removing debris, invasive species, and other impedances to the natural flow of the river. The City worked closely with the Cocheco River Watershed Coalition to produce successful results. Because this grant is recurring similar issues will continue.

The City has been more proactive in monitoring stormwater management practices at construction sites. This year a formalized inspection form was created by the engineering division to ensure consistency in enforcement and contractor awareness. The owner/contractor being inspected is required to sign the form acknowledging receipt of compliance issues associated with the review. These inspection forms are then filed in the project planning file held at DPW.

The City's comprehensive rezoning committee completed its comprehensive rezoning process and reported to the City Council. The City Council has formed their own committee to review and amend the zoning committee's recommendations. Meanwhile the Planning Board has begun revising the subdivision regulations and completed a draft, which is currently under internal review. The Planning and Public Works Departments are working with these committees to ensure that stormwater management is an important component of all development projects. As these tools are updated we intend to include many of the latest best management practices for stormwater management as development requirements.

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
01-01	Prepare Stormwater Video	Public Works /Commissioner	Cable Access, school and library showings	The Stormwater video continues to be a valuable tool for informing the public on the importance of stormwater stewardship and management.	This program has matured. Will continue to use this as an educational resource
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 April 23, 2005. Managed and coordinated regional collection with 8 surrounding communities. Collected significant quantities of hazardous waste from 290 vehicles representing over 350 households.	City is continuing to manage, publicize, and finance this regional effort annually. Another Household Hazardous Waste Collection is scheduled for May 6, 2006, Depending on result of next two annual days, will evaluate whether to hold collection 2 times per year, though current city staffing levels make that unlikely
Revised					
01-03	Produce a Stormwater Brochure	Public Works/ City Engineer	Have available for public access locations in city	Continued local production. Handed out brochure to appropriate events – HHW day.	Have professional printing co. print large quantities for a more professional look and greater attention. If FY-2006 year-end funds permit, DPW will proceed with this effort in June 2006.
Revised					
	Localized Website	Cocheco Water-shed Coalition; Public Works	Tie in with City Webpage	Have created the framework for and have completed about 60 percent of the prototype site. It has yet to be uploaded to the City's website as it is still fragmented and disjointed.	Get the site completed and placed on the City's website.
Revised					

1a. Additions

01-05	School Involvement	Various Teachers/ Public Works	Promote Stormwater as a topic in the classroom	The City's chief water treatment plant operator has made several presentations to school children promoting water use and conservation in general. Stormwater management is included as a component.	Promote topic to School Districts curriculum director. Continue these presentations as opportunities arise.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any).	Planned Activities – Permit Year 4
02-01	Promote Riverbank Cleanups	Conservation Commission/ Cocheco River Watershed Coal.	Periodic Cleanup Days	Watershed Coalition continued with canoe trips down Cocheco River to draw attention to the river quality. RAYS conducted organized river bank clean-ups on 4/23/05. Groups went to clean up along riverbanks downtown and elsewhere.	City participated in promoting 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 Arena and Youth Services.			
02-02	Watershed Monitoring	Conservation Commission and Cocheco Watershed Coalition	Periodic Reviews of Watershed	Cocheco Watershed Coalition has been active in monitoring. These efforts continued during this reporting period. City of Rochester supported these efforts by conducting the laboratory analyses of the water samples collected from the Cocheco River by this organization. The City also participated in the Cocheco Watershed Restoration Plan directed by the Cocheco Watershed Coalition.	Current efforts will continue. Development of data to find locations of emphasis for monitoring underway. Much data collected and now under evaluation. The City will continue to work with the Coalition to identify and improve areas where the quality of the river is of concern.
Revised					
02-03	Greater Involvement of Dept of Recreation Arena and Youth Services (RAYS)	RAYS Neighborhood Coordinator	Greater awareness and participation among city's neighborhood groups.	RAYS has been spearheading neighborhood cleanup days in conjunction with Earth Day (April 23, 2005). Continued to be a conduit for outreach to local neighborhoods.	Incorporate stormwater as a cause at many of the other events that RAYS sponsors throughout the year including National Night Out, Halloween Event, and in the summer youth camps Continue to foster and build on this relationship. Continue to promote stormwater as a cause.
Revised					

2a. Additions

02-04	Downtown River Walk	Planning Dept – CORE-NH –	Focus attention on Cocheco River in Downtown area - Downtown Enhancement	Riverwalk Committee has evolved and continues to meet as a separate organization apart from CORE, though CORE members are involved. Establishing a direction for the group.	Downtown improvement and associated tie-in to nearby Cocheco River will continue to evolve with assistance and involvement by key city departments. Monitor private, re-development efforts currently being planned along riverfront, which will likely provide seed for first section of river walk.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
03-01	Identify and map outfalls and receiving waters	Engineering Division	Map all outfalls in GIS by Spring 05.	The City was not able to hire an intern in FY 2006. Therefore, the City made less progress than in the previous year.	Expand coverage and then identify more detailed data about each structure and catalog on GIS. Purchase GPS unit to assist. Existing intern due to graduate in May 2005, work conditional on hiring another intern for FY 2006. Resumes from interns are being evaluated. We hope to have one begin in May 2006.
Revised					
03-02	Screen outfalls for Illicit Connections	Public Works	Screen all outfalls by Spring '05.	Raw data from 2004 effort was processed and a report prepared to NHDES. Little progress was made on taking these results and investigating the contributing systems and identifying the sources of the illicit connections. This is because there was no intern hired in 2005 to support this effort.	Hire intern to build in work of 2004. Process raw data and collect confirmatory samples from positive outfalls. Begin investigating contributing system and identify sources of illicit connections. Work conditional on hiring another intern for FY 2007. Additionally, the City is purchasing a sewer television camera, which will aid greatly in identifying illicit connections.
Revised					
03-03	Review and Development Stormwater Ordinance	Public Works/City Council	Adoption of Ordinance by Fall of 2006	Identified and located several stormwater ordinances from other communities in the state as well as from other places in the country. Began reviewing to determine what would be right and politically palatable for this community. Still assimilating data.	Complete with the data review and prepare a draft ordinance for review by the Planning Board and City Council and begin the political process in getting an ordinance adopted.
Revised					
03-04	Illicit Connection Elimination Plan	Public Works Documentation	Plan Development by Summer 2006, assuming meaningful data is obtained during 03-02 effort	Mapping efforts conducted in 2004 have identified nine outfalls that need additional investigation. Will continue with identification and eradication efforts.	Plan to focus efforts on tracing the path of these outfalls and locating possible illicit connections, first by sampling outfalls of interest for e. coli bacteria. Work conditional on hiring another intern for FY 2007. City is currently reviewing resumes for an intern. Hope to have one available by end of May 2006.
Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
04-01	Review Stormwater features during land development process	Planning/chief planner and Public Works/ city engineer	Development of Site Review Standards	Technical staff continues to meet bi-weekly to review and discuss all new development proposals before going to planning board. Each proposal is scrutinized for stormwater impacts. City now mandates a 3rd party engineer; reporting to City Engineer, review all larger development projects. This ensures that time is available and devoted to a comprehensive design review including stormwater impacts.	In connection with planning and the City's design review consultant, continue emphasize state of the art stormwater management on new development projects where prudent in the context of current regulations and best management practices.
Revised					
04-02	Revise Subdivision and Site Plan Regulations	Planning/chief planner	Adoption of Site Plan Regulations	Comprehensive rezoning draft completed in March 2005. Offered to City Council for review. Council formed their own committee to review and amend the rezoning group's draft. Draft of revised subdivision regulations reviewed by various staff members and returned to planning department for further development	Subdivision regulations get presented to full planning board and then to the full city council for review and possible adoption.
Revised					
04-03	Construction Monitoring of Site Development	Public Works/ Inspection Engineer	Visit each site; engage in corrective action	Engineering personnel continue to visit each site plan and subdivision at regular intervals. Stormwater management, erosion control, and adherence to construction plans and city standards are emphasized. Developed an inspection procedure with form to document inspections and report results to property owners and others. 2005 reporting year continued rapid pace of development and limited staffing has resulted in city not visiting projects as often as desired. Conservation Commission taking more active role at reviewing developments.	Continue with current practices as resources permit. Continue to work with planning department and conservation commission to ensure development projects get scrutiny. Planning and Public Works Department has requested an additional staff person, whose task it will be to monitor all private development.
Revised					

04-04	Public Information / Pamphlet for Site Developers	Planning/ Conservation Commission	Pamphlet for site developers	Developed an informal information sheet that details the City's inspection requirements during the course of construction of infrastructure that will be eventually taken over by the City. This is handed out to developers and contractors during mandatory pre-construction meetings with city staff before the project start. Topics such as completion of NOI and other stormwater requirements are discussed.	Continue this practice. Create a more formal pamphlet to hand out to developers and contractors during pre-construction meetings.
Revised			Significant projects are required to have a preconstruction meeting w/ city staff to outline requirements		
Revised					
Revised					

4a. Additions

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
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	Began identifying and reviewing regulations from other municipalities both inside and outside the state. Began reviewing to determine what would be right and politically palatable for this community. Still assimilating data. (See BMP 3-3)	Begin to tailor a program that will work in Rochester, as the extent of the stormwater system becomes known. Collection of data will aid in how to proceed with development of regulations.
Revised					
Revised					
Revised					

5a. Additions

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 downtown area where they are cleaned more frequently. Staffing levels do not allow a dedicated crew to do this everyday.	Continue as previously. City is maintaining Vortechnics units on a recurring schedule as well as upstream catch basins. Focus on routine maintenance of Vortechnic units (May and November).
Revised		Public Works/ Highway/Fleet Supervisor			
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 it, so it must be winterized to prevent freeze-ups. Light winter of 2005-06 reduced the need to place down significant quantities of sand.	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. Will continue to use less sand to treat roads during winter snow removal. Results in less debris getting into catch basins and drainage courses.
Revised		Public Works/ Highway/Fleet Supervisor			
Revised					

6a. Additions

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

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	($)	~$10,000
		For HHW

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	Unk
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	Yes – Cocheco
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Yes - ~5 mi
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	1
▪ community participation	(%)	~1 percent
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	No

Legal/Regulatory

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

Mapping and Illicit Discharges

Outfall mapping complete	(%)	70
Estimated or actual number of outfalls	(#)	138
System-Wide mapping complete	(%)	50
Mapping method(s)		
▪ Paper/Mylar	(%)	50
▪ CADD	(%)	
▪ GIS	(%)	50
Outfalls inspected/screened	(# or %)	30
Illicit discharges identified	(#)	9
Illicit connections removed	(#) (est. gpd)	1
% of population on sewer	(%)	Approx 40
% of population on septic systems	(%)	Approx 60

Construction

Number of construction starts (>1-acre)	(#)	19
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	75
Site inspections completed	(# or %)	100 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	(%)	
Site inspections completed	(# or %)	100 percent immediately following 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 80 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)	6
Qty. of sand/debris collected by sweeping	(lbs. or tons)	~150 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	←Varies according to storm 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
Salt pile(s) covered in storage shed(s)	(y/n)	Yes
Storage shed(s) in design or under construction	(y/n)	Deferred by city council
