

MAY 11 2009

Municipality/Organization: City of Dover

EPA NPDES Permit Number: NHR041037

MaDEP Transmittal Number:

**Annual Report Number
& Reporting Period:**

No. 6 March 08 – March 09

MAY - 5 2009

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Dean Peschel

Title: Environmental Project Manager

Telephone #: (603) 516-6094

Email: dean.peschel@ci.dover.nh.us

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: J. Michael Joyal

Title: City Manager

Date: April 30, 2009

Part II. Self-Assessment

The City of Dover continues to implement the identified tasks in its Stormwater Phase II NPDES minimum control Best Management Practices that Dover has continued to implement include:

- Dover has completed mapping the stormwater system which was initiated prior to the NPDES permit. The City updates the mapping as the system grows.
- The City held one Household Hazardous Waste Collection Day for Dover residents in September 2008. The event included the Towns of Rollinsford, Madbury, and Lee.
- Dover's recycling program includes weekly curbside pick up of recyclables as well the operation of a recycling center. The recycling center accepts many items including waste oil, white goods, tires, metal, C & D material, yard waste, monitors and other electronics, Freon containing appliances, used antifreeze and mercury containing items. The program aims to reduce waste to landfill and prevent the release of contaminants into the environment. Dover's recycling rate is 52% of the national average and is nationally recognized as a leader.
- The City Engineers review all subdivision and site plan applications before the Planning Board. Their review includes water plans to insure the site meets all standards during construction and upon completion of the project. The City is required to submit storm water O&M plans to insure long-term performance of storm water infrastructure. The Engineering inspection team continued its inspection of construction sites for temporary erosion control measures and the implementation of permanent stabilization and run off control measures.
- The City continued to promote and implement its pet-waste program. Pet waste stations were added at two locations in City parks where residents bring their dogs for exercise. The Dover Planning Department received grant funding for a dog park at Long Hill Park. The neighborhood has a high proportion of dog owners and the lack of sidewalks and roads will provide a safe place for pets and owners to exercise. The dog park will employ the bring a bag policy, similar to the carry in carry out concept for hikers.
- Funding for the catch basin cleaning program continued in the 2009 budget. The catch basin cleaning contract was renewed for 2008 and the City staff cleaned another 42 as the need presented itself. The FY 2010 budget includes consideration by the Dover City Council and includes funding triple the amount of previous years. The 2010 budget is enough to meet the proposed EPA General Permit requirement that every catch basin is cleaned at least once per period.

- The City of Dover hosts and is an active participant in the N.H. Seacoast Storm Water Coalition. The N.H. Seacoast Storm Water Coalition has accomplished much in the five years to further the goal of improved stormwater quality. Public awareness and training of staff common needs for all members has been very successful. The Coalition also provides a forum in which to share our individual program experiences both good and bad. The coalition is now considering using its numbers as an incentive to get better pricing on purchased goods and services that we all utilize.
- Two new direct illicit connections were discovered and removed during 2008. One was on Elm street and the other was on Maple Street. A third indirect connection was discovered on Grove Street where a leaking sewer service was finding its way into the storm drainage system. That sewer service was replaced. A fourth illicit connection as discovered on Washington Street at the Robbins auto property. This illicit connection is scheduled to be removed in the Spring of 2009.

New activities aimed to achieve improved stormwater program performance and water quality improvement include:

- The Planning Department and Engineering Division proposed amendments to Dover's Subdivision and Site Review regulations that strengthen stormwater requirements as required by the MS4 General Permit. The Planning Board following review and lengthy debate approved the amendments in June 2008. The new regulations strongly encourage the use of Low Impact Development techniques to address stormwater runoff. The amendments require all projects that propose to disturb an acre or more to submit plans to the Planning Board for review and approval. The amendments also give the City the authority to regulate projects that have less than an acre impact that are in close proximity of sensitive ecologic areas which could be potentially impacted.
- The City invited the NROC (Natural Resource Outreach Coalition) program to help Dover review its stormwater program and identify ways it could be improved. Two key areas were targeted for action through a series of meetings facilitated by the NROC team with numerous stakeholders. The stakeholders included a mix of Dover residents, City staff, Dover Board and Commission members, the Strafford County Regional Planning Commission, the NHDES and the Cocheco River Watershed Association members are participating in the project which is being facilitated by the NROC team. The two areas selected were encouraging the use of Low Impact Development techniques in development and redevelopment projects, and exploration in the establishment of a stormwater utility to provide a consistent adequate funding source to implement the City's stormwater program. Two presentations were prepared for targeted audiences. The first was geared to City staff to educate them on the two issues. The second presentation was aimed at the volunteer City Boards and Commissions and interested residents. This meeting was held in the evening and featured a pizza dinner. Both meetings were well attended and well received. They laid a firm foundation to move both issue forward.

- The City of Dover completed a DIMS (Does It Make Sense) analysis with NHDES to determine the threshold issues relating to the establishment of a stormwater utility. The City subsequently has applied to NHDES for grant funds to conduct a Feasibility Study to determine if establishment of a stormwater utility is a feasible alternative for the City of Dover to pursue. NHDES and the City are negotiating a contract for the project. In 2008 the NH Legislature passed important legislation which enables any NH community the option of creating a storm water utility to fund, operate and maintain its storm water system should the community's governing body vote to do so. The Bill was written and sponsored by Dover's Conservation Commission Chair and State Representative.
- The Berry Brook Watershed Assessment and Management Plan was finalized in 2008. To begin the implementation of the plan the city has applied for two implementation grants. The first is with NHDES for funds to encourage the adoption of LID techniques into the watershed. We hope to get residents to purchase and use at reduced cost rain barrels or rain gardens on their properties to collect and infiltrate stormwater which currently runs off. Berry Brook watershed is highly developed primarily with medium density residential properties. A second grant has been prepared to NOAA for a stream restoration grant. The City has partnered with the University of New Hampshire Stormwater Center on the grant. The UNH Stormwater Center team has extensive expertise and experience in designing and constructing stream restoration projects. The grant proposal is for more than a million dollars in funding which will go a long way to restore Berry Brook.
- An algae bloom of cyanobacteria at Willand Pond, which is located in Dover and Somersworth, has spurred much attention to water quality issues in both communities. Willand Pond, a kettle hole pond which was previously issued by the City of Dover for drinking water prior to 1950, has been a favorite recreation area for fishermen, picnickers, hikers and swimmers. The NHDES's limnologist attributes the rise in phosphorus levels primarily to the flooded condition of the pond and adjacent forest floor for the last two years as a result of excess precipitation and obstructions placed in wetlands that now blocks the pond's natural outlet. Other contributions of phosphorus include storm water runoff from recently constructed commercial parking lots in the watershed within the last few years. The cities of Dover and Somersworth, and NHDES together hired a consultant to study the problem and propose alternatives to correct the problems causing the algae blooms. The study is completed and a draft report issued. A preferred alternative to address the water level issue was identified as well as suggested stormwater treatment improvements for existing and future development sites. It is hoped that after review and finalization of the draft report funds can be secured to implement the water level control solution which is a main contributing factor to the phosphorus entering the pond

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
A1 Revised	Establish Pollution Hotline	Dean Peschel Community Services	Trained secretaries who receive calls	Received 1 phone complaints	Continue to advertise existence of hotline in Community Notes and on City webpage
A2 Revised	Community Cleanup	Doug Steele Community Services	Hold 7 th & 8 th annual clean-up	Dover Main Street clean up, Kiwanis May 5, 2008	Hold 8 th Dover Pride clean-up day, April 25, 2009
A3 Revised	Educational Video	Seacoast NH Stormwater Coalition	Show on local access Converted to DVD	Video shown on numerous occasions during May 2008	Show video on local access TV.
A4 Revised	Publish Stormwater information	Community Services	Published articles	Published several items relating to the program in Community Notes Fall 07 Made several public presentations regarding stormwater, and subsequent press coverage.	Continue to place items in Community Notes and local newspapers. Hold meetings to educate public on stormwater utility issue
A5 Revised	Pet Waste and Storm Water	Dean Peschel NHDES	Lower bacteria levels in unnamed brook	Added new pet waste stations and planning a dog park	Continue to educate the public about pet waste storm water impacts and proper behavior
A6 Revised	Assist School in SW education	Community Services and volunteers	Make presentations in classroom	No school presentations in 2008	Make additional presentations to Dover Schools

1a. Additions

A7	Berry Brook Watershed Plan	Community Services	Improve water quality in Berry Brook	Finalized Berry Brook Watershed Plan and applied for two grants to implement plan recommendations	Accept grant awards and begin implementing the plan
----	----------------------------	--------------------	--------------------------------------	---	---

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
B1 Revised	Storm Stencil	Community Services	Number completed 3 events	No stenciling in 2008	
B2 Revised	Sample outfall and other structures	Community Services	Sampled Great Bay Watch sampled and analyzed storm water outfalls and structures with DPW assistance	Approached Great Bay Watch Stewards re sampling. Awaiting invitation to the strategic plan meeting	
B3 Revised	Update Ordinances	Planning Steve Bird	Ordinance facilitate compliance of NPDES regulations	Planning Board adopted proposed stormwater amendments to the subdivision and site review regulations in June 2008	
B4 Revised	Establish Citizen Hotline	Community Services	Number of calls 2	Same as A1	Continue to promote existence of hotline on website and in Community Notes
B5 Revised	Pet Waste Pilot Project	Dean Peschel NHDES	Lower bacteria in surface water	Same as A5	Continue to implement City wide pet waste program. Install new pet waste stations at parks with high dog activity
B6 Revised	Berry Brook Watershed Assessment and Management Plan	City of Dover UNH NHDES	Improved habitat and water quality	Finalized plan incorporating public comments. Applied for implementation funds.	Implement a LID program for the neighborhood using rain barrels, rain gardens and dry wells

2a. Additions

B7	Willand Pond	Planning	Water quality improvement	Draft Management Plan completed	Finalize plan, design and permit solutions, find funds to implement recommendations
B8	Add LID to zoning regulations	Planning	Better storm water management at development sites	Adopted LID language in ordinances and standards	Begin implementing

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
C1 Revised	Storm water System Mapping	Community Services	Have completed map of system and keep maintained	Continue collection of infrastructure condition for storm drain system. Update system map as system grows and is repaired.	Continue collection of infrastructure condition for storm drain system. Update system map as system grows and is repaired.
C2 Revised	Establish Illicit Discharge Program	Community Services	Establish Program and Implement	Removed 3 illicit sewer connections and tied to sanitary sewer Performed detection work in Berry Brook watershed and Washington St area. Identified 1 illicit connection	Continue to look for illicit connections and remediate. Remediate the discovered illicit connection on Washington St
C3 Revised	Catch Basin Stenciling	Community Services	Same as B1	Same as B1	Same as B1
C4 Revised	Update City Ordinance	Community Services and Planning	Same as B3	Same as B3	Same as B3
C5 Revised	Secure Funding	Community Services	Find funding for programs	Finalized Watershed plan for Berry Brook. Applied for implementation funding of plan. Applied for grant funds to implement plan	Begin implementing of Berry Brook Watershed Plan.
Revised					

3a. Additions

C6	Participation in Seacoast Storm Water Coalition – development of NH IDDE Manual	Community Services	Distribution of published manual	Continued participation in Seacoast Stormwater Coalition	Continue participation in Seacoast Stormwater Coalition
C7	Include Berry Brook watershed as priority area in IDDE plan	Community Services	Remove bacterial sources	Discovered and removed two illicit discharges	Continue to identify sources and remove Target pet owners in watershed

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
D1 Revised	Review and Update Ordinances	Community Services and Planning	Have legal authority to enforce Phase II	Same as B3	Same as B3
D2 Revised	Develop Inspection Program	Community Services and Planning	Site inspections to ensure compliance of Phase II	Engineering inspector inspects all sites for erosion control daily, weekly	Continue inspection program.
D3 Revised	Direct Contractors to Educations Materials	Community Services	Better compliance of BMP's	Engineering provides to developers and site contractors at pre-construction conference.	Continue to educate community.
D4 Revised	Provide City Staff Training	Community Services Seacoast Coalition	Have educated workforce	Held training on Good Housekeeping at Dover DPW utilizing new manual	Continue sending staff to educational opportunities regarding storm water.
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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
E1 Revised	Review and Update Ordinances	Community Services and Planning	Have City Ordinances that comply with Phase II requirements	Adopted proposed ordinance revisions in June 2008	
E2 Revised	Develop and Implement O & M Plans for Private Sites	Community Services and Planning	Design and implement program which tracks maintenance	All approved site plans required to submit O & M plans to City and report annually to the City. Incorporate tracking system.	Continue to require O & M plans at new sites and track compliance.
E3 Revised	Implement Inspection Program	Community Services	Insure BMP are constructed to plan	The Engineering Technician inspects all sites for proper installation of BMP prior to issuance of Certificate of Occupancy	Continue to inspect sites.
E4 Revised	Review and Update BMP List	Community Services	Maintain BMP list	Challenge design engineers to prepare effective stormwater system designs using appropriate BMP's	Continue.
Revised					
Revised					

5a. Additions

E5	Encourage LID	Planning	Improve site development	Made 2 presentations which highlighted LID as a desired outcome in future development projects	Educate and develop LID ordinances for adoption

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
F1 Revised	Create Storm Drain Inspection	Community Services	Have a record of system conditions	Continue to develop system and begin field data collection and input to software	
F2 Revised	Implement Inspection Program	Community Services	Collect data useful for prioritization of maintenance	Continued inspections while cleaning catch basins 497 basins cleaned and inspected in 2008	Continue inspections while cleaning catch basins 1450 basins
F3 Revised	Create Street Sweeping Plan	Community Services	Cleaner storm system	Continued street sweeping program.	Continue street sweeping program.
F4 Revised	Implement Catch Basin Cleaning Program	Community Services	Clean every catch basin once every 4 years	Contracted catch basin cleaning. Completed cleaning of 497 basins.	Will contract out catch basin cleaning if successful in receiving funds in FY 2010 budget. 1450 basins projected for cleaning
F5 Revised	Establishment of Stormwater Utility	Community Services Seacoast storm water Coalition	Reliable funding source for stormwater system	Bill in NH Legislature to enable communities in NH to establish storm water utilities passed. City completed DMS study and applied and was awarded grant to conduct a stormwater utility feasibility study.	Conduct feasibility study to consider possible development of a Storm Water Utility.

6a. Additions

F6	Explore use of salt brine	Community Services	Reduce amount of salt and sand used	Have established conditions in which salt brine is effective	Continue use of salt brine
F7	Provide DPW staff training for Pollution Prevention/good house keeping	Seacoast Storm Water Coalition	Improve staff understanding and performance of pollution prevention	Provided DPW staff training using NH manual developed by Seacoast Storm Water Coalition	

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	Used paid college intern	(y/n)	No
Annual program budget/expenditures		(\$)	\$250,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)		(# or %)	100%
Stormwater management committee established		(y/n)	No
Stream teams established or supported		(# or y/n)	2
Shoreline clean-up participation or quantity of shoreline miles cleaned		(y/n or mi.)	Yes
Household Hazardous Waste Collection Days			
▪ days sponsored		(#)	1
▪ community participation	Dover, Madbury, Lee	(%)	161
▪ material collected		(tons or gal)	1440 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	X			
▪ Erosion & Sediment Control	X			
▪ Post-Development Stormwater Management	X			
Accompanying Regulation 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	(%)	100
Estimated or actual number of outfalls	(#)	210
System-Wide mapping complete	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	4
Illicit connections removed	(#)	3
	(est. gpd)	
% of population on sewer	(%)	75
% of population on septic systems	(%)	25

Construction

Number of construction starts (>1-acre)	(#)	6
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100
Site inspections completed	(# or %)	100 %
Tickets/Stop work orders issued/Building Permits Withheld/Occupancy Permits Held	(# or %)	2
Fines collected	(# and \$)	N/A
Complaints/concerns received from public	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections completed	(# or %)	100
Estimated volume of stormwater recharged	(gpy)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	.25
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	.25
Total number of structures cleaned	(#)	497
Storm drain cleaned	(LF or mi.)	0
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	750 tons
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Landfill
Cost of screenings disposal	(\$)	\$4,000

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	Once/Spring
--	------------	-------------

Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	Weekly
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Reuse
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased	(#)	0
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)	Yes
Manual control spreaders used	(y/n)	No
Automatic or Zero-velocity spreaders used	(y/n)	Yes
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	Yes
Storage shed(s) in design or under construction	(y/n)	