TOWN OF NORTH ANDOVER
DIVISION OF PUBLIC WORKS
384 OSGOOD STREET
NORTH ANDOVER, MASSACHUSETTS 01845-2909

BRUCE D. THIBODEAU, P.E.
DIRECTOR

Eugene P. Willis, M.S. PE
Director of Engineering

Telephone (978) 685-0950
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May 1, 2008

Ann Herrick, CIP
United States Environmental Protection Agency – Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)
Annual Report for Town of North Andover (Permit Year 5)
Permit Number: MAR041214/MA DEP Transmittal Number: W034970

Ms. Herrick:

Pursuant to the requirements of EPA's "National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems" issued May 1, 2003; the Town of North Andover is pleased to submit the enclosed Annual Report for Permit Year 5. If you have any questions regarding this report, please feel free to contact me.

Very truly yours,

DEPARTMENT OF PUBLIC WORKS

Eugene P. Willis, P.E.
Director of Engineering

Enclosures

cc: Mr. James F. Finegan, P.E. - Project Manager, Weston & Sampson

Municipality/Organization: **North Andover, MA**

EPA NPDES Permit Number: **MAR041214**

MassDEP Transmittal Number: **W-034970**

Annual Report Number & Reporting Period: **April 1, 2007 – March 31, 2008**

8
05/01/08

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2008)

Part I. General Information

Contact Person: **Eugene P. Willis, P.E.** Title: **DPW Director of Engineering**

Telephone #: **(978) 685-0950** Email: **Gwillis@townofnorthandover.com**

Mailing Address: **384 Osgood Street, North Andover, MA 01845**

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: Mark H. Rees

Printed Name: **Mark H. Rees**

Title: **Town Manager**

Date: 5-1-08

Part II. Self-Assessment

The town of North Andover has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

- **BMP ID 3a: Outfall mapping in urbanized areas is still in the process of being completed. Outfall mapping will be completed in June of 2008.**

- **BMP ID 3e: The town has not yet adopted the General Illicit Discharge Bylaw. The first time that it was presented for Town Meeting Action, it did not pass. This bylaw has since been revised with input from various town departments. This revised bylaw will be presented for Town Meeting action in the near future, and is expected to be adopted.**

- **BMP ID 4c: The town has not yet adopted the Construction Site Runoff Control Bylaw. The first time that it was presented for Town Meeting Action, it did not pass. This bylaw has since been revised with input from various town departments. This revised bylaw will be presented for Town Meeting action in the near future, and is expected to be adopted.**

- **BMP ID 5c: The town has not yet adopted the Post-Construction Site Runoff Control Bylaw. The first time that it was presented for Town Meeting Action, it did not pass. This bylaw has since been revised with input from various town departments. This revised bylaw will be presented for Town Meeting action in the near future, and is expected to be adopted.**

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 5 (Reliance on non-municipal partners indicated, if any)	
1a	Air stormwater messages on local cable channel	Division of Public Works	Air one new message for two weeks quarterly	The town previously set up a list of stormwater messages that they put together to air on the local cable access channel. These messages are targeted at homeowners and what they can do to prevent nonpoint source pollution. A new message aired each month throughout the fifth permit year.	
Revised					
1b	Add stormwater information to Town's website	Division of Public Works	Complete update by end of the second permit year	Links to information about stormwater included on the town website during Permit Year 1 were maintained throughout Permit Year 5. This information is directed at adults, educators, and kids, and also includes links to local watershed websites. Information about protecting lakes from nonpoint source pollution included during Permit Year 1 also remains on the town website. The stormwater messages that were prepared for the local cable access channel and were added to the to the town website in Year 3 were maintained throughout Year 5.	
Revised					
1c	Distribute/post non-point source pollution posters	Division of Public Works	Post in all schools and town-owned buildings	Posters were distributed to and posted in the Town Library, Office of Community Development, Town Hall, and the Water Treatment Plant during Permit Year 1. No goals related to this item were planned for Permit Year 5.	
Revised					
1d	Inform residents of Town's recycling programs/schedules	Division of Public Works	Distribute info. to all residents by website, mailings, etc.	On the town's website, information remains available on the following: items that can be recycled, the recycling calendar, the recycling bylaw, the Neighborhood Recycling Incentive Program, reuse, and yard waste recycling.	
Revised					

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (Reliance on non-municipal partners indicated, if any)	
2a	Collect household hazardous waste from residents	Division of Public Works	Hold household haz. waste collection day twice per year	North Andover held Household Hazardous Waste Collection Days twice this year on October 20th, 2007 and April 19th, 2008 from 9am to 1pm at the DPW garage. The town holds a general household hazardous waste collection day the third Saturday of every month from 9 am to noon.	
Revised					
2b	Collect & recycle waste oil	Division of Public Works	Collect waste oil from residents twice per month	The DPW collected waste oil for recycling the first and third Saturdays of every month from 9 am to noon.	
Revised					
2c	Develop stormwater hotline	Division of Public Works	Create phone number(s) & inform residents of hotline	The town continued to have in place a stormwater hotline to track illegal dumping, with information included on the town website. The town wants residents to be able to call the hotline and obtain information, ask questions, provide feedback, and report illegal dumping.	
Revised					
2d	Coordinate an annual, volun. waterways clean-up day	Division of Public Works/ ConCom	Hold waterways clean-up day once per year beginning in the Spring of 2005 (Permit Year 3)	North Andover held their 5th annual town-wide Earth Day Clean-up on April 28, 2007 from 8:30am to 3:30pm. Residents volunteered to pick up litter and were allowed to focus their efforts in a part of town of their choosing. In past events, over 700 volunteers have picked up 120 cubic yards of trash and litter. The 6th annual town-wide Earth Day Clean-up will be held on May 3, 2008 from 8:30 am to 3:30 pm.	
Revised					
2e	Make SWMP available for public review/comment	Division of Public Works	Post SWMP on Town website, in library, in DPW office	Copies of the SWMP created for the town were placed in the Town Library, at the DPW office, and the SWMP was posted on the town website during Permit Year 1. The SWMP remained available at these locations during Permit Year 5.	
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (Reliance on non-municipal partners indicated, if any)	
3a	Map outfalls, receiving waters, and storm drain system	Division of Public Works	Complete mapping by end of fourth permit year	During Permit Year 5, drainage structures (outfalls, manholes, and catch basins) located in an additional subdrainage basin were collected using GPS. This information was added to the GIS drainage mapping being created for the town. Mapping work is ongoing. Outfall mapping in urbanized areas will be complete by June 2008.	
Revised					
3b	Develop illicit discharge detection & elimination plan	Division of Public Works	Make recommendations for proposed plan	During Permit Year 4, the town completed the development of an illicit discharge detection and elimination plan. No goals related to this item were planned for Permit Year 5.	
Revised					
3c	Review existing bylaws and regulations	Division of Public Works	Determine whether existing bylaws/regs are adequate	The town finished reviewing their existing regulations with regard to illicit discharge detection and elimination in the third permit year. No goals related to this item were planned for Permit Year 5.	
Revised					
3d	Develop/modify general illicit discharge bylaw	Division of Public Works	If necessary, propose recommen. for bylaw updates	The town developed a general illicit discharge bylaw that meets USEPA requirements during the fourth permit year.	
Revised					
3e	Present bylaw for Town meeting action	Division of Public Works	Make presentations for Town meeting action, if necessary	During the fourth permit year, the general illicit discharge bylaw was presented for Town Meeting action. However, the bylaw did not pass. During the fifth permit year, the bylaw was revised and selected information was pulled out to include in a separate regulation. The bylaw was revised with input provided from the Planning Department and Conservation Commission. This revised bylaw will be presented for Town Meeting action in the near future, and is expected to be adopted.	
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 5 (Reliance on non-municipal partners indicated, if any)	
4a Revised	Review existing bylaws and regulations	DPW/Planning/ConCom	Determine whether existing bylaws/regs are adequate	The town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws and is in the process of incorporating relevant information into a new bylaw governing the control of construction site stormwater runoff. No goals related to this item were planned for Permit Year 5.	
4b Revised	Develop/modify bylaws for construction site runoff	DPW/Planning/ConCom	If necessary, propose recommen. for bylaw updates	In the fourth year of the permit, the town completed the development of a bylaw for the control of construction site runoff.	
4c Revised	Present bylaw for Town meeting action	DPW/Planning/ConCom	Make presentations for Town meeting action, if necessary	During the fourth permit year, the bylaw governing construction site runoff was presented for Town Meeting action. However, the bylaw did not pass. During the fifth permit year, the bylaw was revised and selected information was pulled out to include in a separate regulation. The bylaw was revised with input provided from the Planning Department and Conservation Commission. This revised bylaw will be presented for Town Meeting action in the near future, and is expected to be adopted.	
4d Revised	Review existing site inspection practices	DPW/Planning/ConCom	Determine whether existing practices are adequate	During the fourth permit year, the town completed review of their erosion/sedimentation control and drainage submittal requirements, as well as their site inspection practices.	
4e Revised	Develop/modify site inspection practices	DPW/Planning/ConCom	If necessary, make recommen. for updating existing practices	During the fifth permit year, the town made any necessary changes to their erosion/sedimentation control and drainage submittal requirements, as well as their site inspection practices.	

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 5 (Reliance on non-municipal partners indicated, if any)	
5a Revised	Review existing bylaws and regulations	DPW/Planning/ConCom	Determine whether existing bylaws/regs are adequate	The town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws during the third permit year. No goals related to this item were planned for Permit Year 5.	
5b Revised	Develop/modify bylaws for post-construction runoff	DPW/Planning/ConCom	If necessary, propose recommen. for bylaw updates	During the fourth permit year, the town developed a post-construction site runoff control bylaw that meets USEPA requirements and considers MA DEP Stormwater Management Policy Standard 3 (Recharge to Groundwater).	
5c Revised	Present bylaw for Town meeting action	DPW/Planning/ConCom	Make presentations for Town meeting action, if necessary	During the fourth permit year, the post-construction site runoff control bylaw was presented for Town Meeting action. However, the bylaw did not pass. During the fifth permit year, the bylaw was revised and selected information was pulled out to include in a separate regulation. The bylaw was revised with input provided from the Planning Department and Conservation Commission. This revised bylaw will be presented for Town Meeting action in the near future, and is expected to be adopted.	
5d Revised	Review existing site inspection practices	DPW/Planning/ConCom	Determine whether existing practices are adequate	During the fourth permit year, the town completed review of their existing site inspection and maintenance practices to determine whether they comply with USEPA's stormwater management plan requirements.	
5e Revised	Develop/modify site inspection practices	DPW/Planning/ConCom	If necessary, make recommen. for updating existing practices	During the fifth permit year, the town made any necessary changes to their existing site inspection and maintenance practices to bring them into compliance with the USEPA's stormwater management plan requirements.	

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 5 (Reliance on non-municipal partners indicated, if any)	
6a	Sweep streets	Division of Public Works	Sweep all Town streets once per year; Stevens Pond 2/yr.	During Permit Year 5, 290 lane miles of roadway were swept of winter sand.	
Revised					
6b	Clean catch basins	Division of Public Works	Develop & implement cleaning schedule; Stevens Pond 1/yr.	During Permit Year 5, a total of 310 catch basins were cleaned by machine or by hand.	
Revised					
6c	Train municipal employees at each facility	Division of Public Works	Target all applicable municipal facilities	During the fourth permit year, the town used information obtained from questionnaires sent to municipal facilities to gather information regarding their existing stormwater practices to develop a municipal employee-training program. The town started to train employees at all applicable municipal facilities during the fourth permit year. During the fifth permit year, the town completed the required training, which included holding a training session with municipal employees from the Fire Department, School Department, Department of Public Works, and Youth Services.	
Revised					
6d	Perform follow-ups to ensure required practices are met	Division of Public Works	Target all applicable municipal facilities	The Town is currently in the process of performing follow-ups with the Fire Department, School Department, Department of Public Works, and Youth Services to ensure that those items covered in the municipal employee training program are being adhered to.	
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 5 (Reliance on non-municipal partners indicated, if any)	
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)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2007 through March 31, 2008)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	No (Director of Engineering oversees Stormwater Management)
Annual program budget/expenditures **	($)	
Total program expenditures since beginning of permit coverage	($)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	Earth Day is held annually
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	2 (annually)
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	

School curricula implemented	(y/n)	

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination				Revised During Permit Year 5	To be Adopted May 2008
▪ Erosion & Sediment Control				Revised During Permit Year 5	To be Adopted May 2008
▪ Post-Development Stormwater Management				Revised During Permit Year 5	To be Adopted May 2008
Accompanying Regulation Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination				Revised During Permit Year 5	To be Adopted May 2008
▪ Erosion & Sediment Control				Revised During Permit Year 5	To be Adopted May 2008
▪ Post-Development Stormwater Management				Revised During Permit Year 5	To be Adopted May 2008

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	85%
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	75%
Mapping method(s)		
▪ Paper/Mylar	(%)	50%
▪ CADD	(%)	
▪ GIS	(%)	75%
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

	(Preferred Units)	Response
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 Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	<1/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1/yr
Qty of structures cleaned **	(#)	310
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	recycle

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	
• Hourly or per basin contract rate **	($/hr or $ per basin)	
• Disposal cost**	($)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1/yr
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1/yr
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Sharpeners Pond Road
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	
• Disposal cost**	($)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	N/A 100%
▪ Herbicides	(lbs. or %)	N/A 100%
▪ Pesticides	(lbs. or %)	N/A 100%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	33% 2%
Pre-wetting techniques utilized **	(y/n or %)	Y
Manual control spreaders used **	(y/n or %)	Y
Zero-velocity spreaders used **	(y/n or %)	Y
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	