Municipality/Organization: **Town of Townsend**

EPA NPDES Permit Number: **MAR041228**

MassDEP Transmittal Number: **W-036204**

Annual Report Number & Reporting Period: **April 1, 2006 – March 31, 2007**

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2007)

Part I. General Information

Contact Person: Karen Chapman Title: Acting Land Use Coordinator

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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: Karen Chapman

Printed Name: Karen Chapman

Title: Acting Land Use Coordinator

Date: April 30, 2007

Part II. Self-Assessment

During year four of our permit, the Town suffered the loss of its Conservation Agent, Land Use Coordinator, and Highway Department Administrative Assistant. These losses put a severe strain on the existing personnel to accomplish the goals of the NPDES Permit. The Highway Assistant has not been replaced; the Conservation Agent position was empty for 4 months; and the Land Use Coordinator position is being temporarily filled with the possibility of the position being cut from the budget. Despite these losses, the Town was able to continue some important events such as Household Hazardous Waste Days, monthly waste oil collection, street sweeping, catch basin cleaning, mandatory recycling, and Earth Day celebrations. As part of the revitalized Earth Day celebration, the Recycling Committee has initiated an "Adopt-a-Street Clean-Up" program whereby each year a different street is cleaned up of trash by volunteers. This began in 2006 and continues in 2007.

The Stormwater Adhoc Committee is still meeting, but with the loss of personnel, the timeline for presenting the Stormwater Bylaw and Illicit Discharge and Detection Bylaw has been postponed until the Special Town Meeting in the Fall of 2007. Mark Archambault of the Nashua River Watershed Association has continued to work with the committee and this has been a tremendous help. The Conservation Commission, along with this committee, held a Stormwater training session with the assistance of the DEP's Central Region Circuit Rider. This session was taped and is continually showing on the public access cable channel. A brochure explaining NPDES and the requirements of the permit will be sent to residents in the property tax bill at the end of June. There will be 2-3 public information nights for the proposed bylaws before the town meeting in the fall.

A member of the Conservation Commission and the Housing Authority has attended training sessions on Low Impact Development and Smart Growth. The Conservation Commission continues to recommend low impact development techniques as well as varying stormwater filtration systems. There is one 40B development in town that has been very successful using filtration systems such as rain gardens, vegetated filter strips and grass swales. The Planning Board continues to encourage Open Space Preservation and Open Space Multifamily Developments, which are allowed by the Town's Bylaws.

The Conservation Commission sponsored an Organic Lawn Care Seminar in the spring of 2006. Several organizations and individuals volunteered their time to give a presentation, including Yard Spice, an organic lawn care company, and our own Commissioner Jennifer Pettit, member of the Ecological Landscaping Association. The Green Guy, Inc., NOFA (Northeast Organic Farming Association) and Bradford Organics were also represented. The seminar increased awareness of the long term and cumulative impact of using chemical lawn fertilizers, herbicides and pesticides on groundwater, which is ultimately our drinking water.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1a	Distribute/post nonpoint Source Pollution posters	Land Use Coordinator	Completed year 1		
1b	Stormwater message on Local cable access channel	Land Use Coordinator	Completed. Need to add periodically	Stormwater Management training done at Town Hall with DEP Circuit Rider and NRWA representative. Training session shown on Public Access Cable channel on regular basis.	Investigate other videos available for viewing on cable access channel
Revised					
1c	Obtain/Distribute Auto Shop brochures	Land Use Coordinator	Distribute brochures in tax bill annually	Not completed – understaffed	Use Senior work off program volunteer to copy flyer and add to appropriate tax bill mailing for FY08
Revised					
1d	Add Stormwater information to Town's Website	Land Use Coordinator	Update Stormwater info on website to ensure it is current	Website in process of being updated. Loss of personnel an issue	Complete website redesign with links to particular informational sites..
Revised					

1a. Additions

1e	Distribute brochures in water bills	Land Use/Water Department	Insert in biannual water bill	New BMP	Develop and insert brochure on lawn watering and water conservation after permission from Board of Water Commissioners.
1f	Host Lawn Care Seminar	Conservation Commission	Hold Seminar	Completed. Conservation Commission sponsored seminar open to the public on organic lawn care with organic fertilizer manufacturer, member of NOFA and member of Ecological Landscapers Association.	Consider annual seminar

1g	Develop dog waste bylaw	Land Use	Have bylaw passed at Town Meeting	Completed. Disposal of Dog Waste Bylaw passed at May, 2006 Annual Town meeting. Calls for enforcement by Animal Officer or Police Dept.	None
1h	Distribute Stormwater Pollution Prevention brochure to residents	Conservation Commission	Distribute brochure in property tax bills	New BMP	Develop and distribute Stormwater pollution prevention brochure in quarterly tax bill in FY08.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
2a	Advisory Committee	Land Use Coordinator	Formed year one.	Loss of personnel hampering effort. Meetings held monthly. Using the resources of NRWA employee funded through EPA grant.	Continue meeting monthly.
Revised					
2b	Adopt-a-Highway Program	Land Use Coordinator		Recycling Committee initiated "Adopt-a-Street Clean-Up" as part of the Earth Day Celebration on 4/29/2006. One street completely cleaned up of trash on that day.	Continue on an annual basis. Recycling Committee has scheduled a new clean-up on 4/28/2007.
Revised		Recycling Committee	Target at least one street per year		
2c	Hazardous Waste Day Collection	Fire Department	Hold waste collection annually	Completed on 9/30/2006 as part of the North Central Regional Solid Waste Cooperative. Published on Website and local bulletin boards	Continue with twice per year collections. New collection day scheduled for 5/5/2007. .
Revised			Hold twice per year		
2d	Continue Waste Oil Collection & Recycling	Highway Department	Hold first Saturday Monthly	Held monthly. Highly successful. Town-wide participation	Continue. Monthly participation continued.
Revised					
2e	Volunteer annual stream clean-up day	Land Use Coordinator	One clean-up day every spring	No progress.	No progress to date due to issues of liability. Continue effort to establish.
Revised		Conservation Commission			

2a. Additions

2f	Hold Earth Day Celebration	Recycling Committee, Recreation Commission	Hold Earth Day Celebration	Completed. Earth Day Celebration held on April 29, 2006. Activities included Recyclable Arts & Crafts, Demonstration of trash removal & recycling by Allied Waste, Organic Lawn Care presentation, Composting instructions, booths representing Nashua River Watershed Association, Townsend Recycling Committee, Friends of Willard Brook, Townsend Conservation Land Trust, North Central Regional Solid Waste Cooperative and many others	Continue annual celebration. 2007 celebration scheduled for April 28, 2007.

3. Illicit Discharge Detection and Elimination

BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 4** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 5**
3a	Map Outfalls and Receiving	Land Use Coordinator	Map 25% of outfalls that drain urbanized areas each year	25% complete. No more progress due to losses in personnel.	Continue project. Contact State to obtain mapping for State road Route 119 which runs through the length of the town.
Revised	Map Outfalls and Receiving Waters				
3b	Review existing bylaws and regulations	Land Use Coordinator	Determine if existing bylaws & regs fulfill EPA requirements	Bylaw Review Committee completed preliminary review. Disposal of Dog Waste Bylaw passed at May, 2006 Annual Town meeting. Calls for enforcement by Animal Officer or Police Department.	Continue review of bylaws; amend as needed at Town Meeting or within Town Board's Rules and Regulations.
Revised		Bylaw Review Committee			
3c	Develop Illicit Discharge Detection & elimination plan	Land use Coordinator	Make recommendations for inclusion into proposed plan	No progress	Will be addressed following bylaw presentation in fall as a committee effort.
Revised		Highway Department			

3d	Develop/Modify General illicit Discharge bylaw	Land Use Coordinator	Propose recommendation for modifying/developing bylaw	Bylaw is in draft form. Loss of personnel hampering progress.	Continue meeting with highway department and NRWA representative.
Revised		Highway Department			
3e	Present Bylaw for Town Meeting Action	Land Use Coordinator	Make Presentation for Town Meeting Action	No progress due to loss of personnel.	Continue to work towards inclusion as article on Fall 2007 Special Town Meeting warrant.
Revised		Highway Department			

3a. Additions

	See BMP 2b, 2c, and 2d above				

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
4a	Review Existing Site Inspection Practices	Land Use Coordinator	Review current practices and change if inadequate or include in new bylaw	Conservation Commission bylaw and rules & regulations require applicants to comply with State Stormwater Policy for work within 100' of a wetland or 200' of a river or stream.	Revise Conservation Commission bylaw and Rules & Regs to include more specific Stormwater requirements related to NPDES, not just State Policy
Revised		Conservation Commission, Building Dept.			
4b	Develop/Modify Site Inspection Program	Land Use Coordinator	Make recommendations for modifying existing program	Part of Stormwater Bylaw development	Continue work with committee on developing bylaw
Revised		Conservation Commission, Building Dept			
4c	Review Existing Bylaws and regulations	Land Use Coordinator	Determine if existing bylaws and regs fulfill EPA requirements	Completed in 2005. Recommended to develop bylaw and regulations	.
Revised					

4d	Develop/Modify Bylaw for Construction Site Runoff	Land Use Coordinator	Propose recommendations for modifying/developing bylaw	Is part of Stormwater Bylaw being developed	Continue development of Bylaw and present to Town Meeting Fall '07
Revised		Stormwater Bylaw Committee			
4e	Present Bylaw for Town Meeting Action	Land Use Coordinator	Make Presentation for Town Meeting Action	Due to loss of personnel, we are behind schedule on passing bylaw	Scheduled for presentation at Fall '07 Town Meeting. Informational brochure on why the Town needs a bylaw will go out in property tax bills at the end of June, 2007.
Revised		Stormwater Bylaw Committee			

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
5a	Review Existing Site Inspection Practices	Highway Department	Determine if existing practices fulfill EPA requirements	complete	
Revised					
5b	Develop/modify inspection & Maintentance Practices	Highway Department	Make recommendations for modifying existing practices	none	Fall stormwater agenda item
Revised					
5c	Review Existing Bylaws and Regulations	Land Use Coordinator	Determine if existing bylaws and regs fulfill EPA requirements	Part of bylaw review	
Revised					
5d	Develop/modify Bylaws for Post Construction Site Runnoff	Land Use Coordinator	Propose recommendations for modifying/developing bylaw		Complete analysis.
Revised					
5e	Present Bylaw for Town Meeting Action	Land Use Coordinator	Make presentations for Town Meeting Action	Developing Bylaw and Rules & Regulations simultaneously.	Will present at Fall '07 Town Meeting.
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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
6a	Street Sweeping Program	Highway Department	Sweep all streets once per year	Completed	Continue. Completed Annually
Revised					
6b	Catch Basin Cleaning Program	Highway Department	Clean catch basins once very two years	Cleaned annually. 381 basins cleaned for this reporting period.	Continue annually as budget allows.
Revised					
6c	Perform site visits to examine existing practices	Land Use Coordinator	Target all applicable municipal facilities	Complete.	Monitor for any changes
Revised					
6d	Train municipal employees at each town facility	Land Use Coordinator	Target all applicable municipal facilities	Complete	
Revised					
6e	Perform follow-ups to ensure required practices are met	Land Use Coordinator	Target all municipal facilities	Ongoing	
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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

As of this writing our weakest area appears to be in defining if our regulations for construction sites meet EPA requirements. We have developed the draft bylaw amendments and regulation drafts are in the works to be completed over the summer into the fall. Development of the bylaw amendments are major milestones for our permit and will allow us to move further on other items needing attention within the permit.

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, 2006 through March 31, 2007)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	($)	0
Total program expenditures since beginning of permit coverage	($)	0
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		none

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	80-100%
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	N
Shoreline cleaned since beginning of permit coverage	(mi.)	0
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1 HHW 12 Waste Oil
▪ community participation **	(# or %)	HHW = 75 residents.

▪ material collected **	(tons or gal)	HHW=720 gallons. Waste Oil=1455 gal.
School curricula implemented	(y/n)	Y

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		X			
▪ Erosion & Sediment Control		X	X		
▪ Post-Development Stormwater Management		X			
Accompanying Regulation Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination		X	X		
▪ Erosion & Sediment Control		X			
▪ Post-Development Stormwater Management		X			

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	25%
Estimated or actual number of outfalls	(#)	20
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	25%
Mapping method(s)		
▪ Paper/Mylar	(%)	5
▪ CADD	(%)	0
▪ GIS	(%)	0
Outfalls inspected/screened **	(# or %)	8
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	18
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	(%)	0
% of population on septic systems	(%)	100%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	8
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	8
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and $)	0
Complaints/concerns received from public **	(#)	0

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)	y

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)	
Qty of structures cleaned **	(#)	381

Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	250cubic yds
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	compost

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	
• Hourly or per basin contract rate **	($/hr or $ per basin)	
• Disposal cost**	($)	0
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
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	compost
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	(#)	1 owned
• 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 %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
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	50 50
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
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)	y

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	