

Municipality/Organization: Town of Merrimack, NH

EPA NPDES Permit Number: NHR041018

MassDEP Transmittal Number: W-

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: David C. Lent

Title: Deputy Director of Public Works

Telephone #: (603) 424-5137

Email: dlent@ci.merrimack.nh.us

Mailing Address: P.O. Box 940 12 Bishop Street Merrimack, NH 03054-0940

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: David C. Lent

Title: Deputy Director of Public Works

Date: April 2007

Part II. Self-Assessment

A self assessment of the progress made by the Town of Merrimack during Year 4 finds that focus was placed on procuring a consultant to assist in the Town meeting overall program goals by the end of the permit term. Specific tasks to be undertaken by the consultant are the development of a stormwater GIS map, field assessment of existing outfalls, review of existing and development of new ordinances for illicit discharges elimination, construction site and post construction BMPs. The Town continued with existing maintenance programs and provided support to local watershed groups.

Additionally, the Town's consultant spoke with the EPA on April 16th, 2007 regarding the BMPs previously listed in Section 7 "BMPs for Meeting TMDL Waste Load Allocations". Due to the fact that none of the 303(d) listed waters in Merrimack have TMDLs established to date, and are not scheduled to be established until 2016, the status of Section 7 is to be changed to "Not Applicable". Further, the activities that were previously listed under this section overlapped with activities that the Town is currently performing to comply with Control Measure 3 "Illicit Discharge Detection and Elimination". Therefore, effectively these BMPs have not been removed from the program and progress made will be recorded under Control Measure 3.

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
1.1	Informational brochures for trash management and disposal of hazardous waste	DPW	Develop brochure by Spring of 2004, distribute to all residents by fall of 2004	The Town continues to produce and distribute informational brochures for proper household hazardous waste disposal and solid waste management specific to Merrimack. Approximately 500 brochures were distributed in Year 4. Brochures are currently available at the Town's transfer station and were also distributed to new residents. Approximately 40 new residents received brochures in 2006.	In addition to the current brochures, the Town has adopted the EPA brochure titled "After the Storm" for stormwater education in the Town. The brochure was ordered from the EPA and the Town plans on reproducing 1,500 copies for distribution during 2007. The brochure discusses various watershed activities that can influence stormwater runoff volume and quantity. Copies of the EPA stormwater brochure and Merrimack's household hazardous waste disposal and solid waste management brochures will be made available to the public starting in May 2007. Copies will be available at Town Hall, DPW, Transfer station, Town Library and other Town facilities.

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
1.2	Classroom education	DPW	Have guided tour program of WWTF & Highway Garage available to students by end of year 1.	No tours were conducted this year due to scheduling conflicts. However, the program is still available for the local schools and participation is expected to continue.	The DPW will send a letter to the school department as a reminder that the WWTF is available for tours by school children. Additionally, the Town is currently coordinating with the Nashua Regional Planning Commission (NRPC) to develop a curriculum for storm water education. The goal is to integrate the program into the Town's 8th grade curriculum. It is expected the program will be modeled after preexisting educational water programs such as "Project Wet" and "Project Learning Tree" and will be tailored to focus on the Town's waterways. The NRPC plans to distribute the cost of the program across the 12 municipalities that are represented by the commission and will require support from other communities before it becomes an established program in Merrimack. The Town will continue coordinate with and provide support for the NRPC throughout the development of this program.

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
1.3	Advertisements promoting BMPs to air on local cable station	DPW	Create sleds and secure airtime by fall of 2004. Advertisements to run monthly at a minimum.	Information on household hazardous waste disposal airs regularly on the Town's public access station. Additionally, the Town ordered the EPA video "After the Storm" to be played on local cable stations. This 30 minute video produced by the EPA and The Weather Channel discusses watersheds and water pollution protection measures.	The Town will continue to air information on household hazardous waste disposal. Additionally, the "After the Storm" video will be shown on the local cable station 12 times during 2007.
1.4	Educational pamphlets provided to new residents.	DPW	Distribution of educational materials to begin by end of year 1 and be continuous	See BMP 1.1	See BMP 1.1

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
1.5	Stormwater information provided on website	DPW	Develop website information, implement fall 2004.	Household hazardous waste information is currently posted on the DPW website. Additionally, a stormwater link section has been added to the DPW site. Links currently include: • A link to the Merrimack Village District (the Town's water supplier), which includes information on drinking water protection and landscaping BMPs. • A link to the main EPA and NHDES stormwater pages. • A link to the EPA "Stormwater Frequently Asked Questions" page. • A link to the EPA "After the Storm" page. • A link to the EPA "Adopt Your Watershed" page, which includes a self-test to determine if Town residents are minimizing their impact on the watershed. • A link to the Souhegan Watershed Community page, which includes data on water quality for local waterways.	The Town is currently in the planning stage of a major website overhaul. The Town will continue add additional stormwater information to the DPW page as it becomes available. Also, once the Town's stormwater phone line is established it will be posted on the website. It is anticipated that the website will be overhauled and operational by Fall 2007.

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
2.1	Storm Drain Stenciling	DPW	Stencil designed by Year 1, 80% catch basins stenciled by end of Year 2, stencil program to run annually	Stenciling and repainting of stencils that have faded continues. The Town has determined that there are more catch basins than originally anticipated at the beginning of the program, which has made measurement of progress difficult. However, the location of additional catch basins should be viewed as a positive for the Town and its stormwater program. These additional structures will be included in the Town's stormwater inventory and mapping being developed under BMP 3.1. The Town currently coordinates the catch basin cleaning program with the catch basin stenciling program. Approximately 916 catch basins were cleaned during 2006. It is estimated that approximately 1800 of the Town's catch basins have been stenciled to-date.	Continue coordination of catch basin cleaning and stenciling. Catch basins stencils that have faded will be repainted as necessary.
2.2	Volunteer program for stream cleanup and water quality monitoring	Community Development	Work of Souhegan and Lower Merrimack local advisory committees to be monitored by the Town. Monitoring Data to be included in annual report to EPA.	Merrimack's continued support enabled water quality monitoring along the Souhegan and Merrimack Rivers for the tenth straight year. Data can be found at the following website: http://www.souhegan.org/results.html#Current The data is also included in The Merrimack Journal, a publication that is distributed weekly to every household. Additionally, the Town's Conservation Commission sponsors a water quality testing program (water clarity, chlorophyll and phosphorus) for the Naticook and Baboosic Lakes. Copies of the test results are available upon request at the Town Hall.	Continue association and support of watershed groups and the sampling program.

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
2.3	Greenbelt Program	Community Development	Greenbelt program is included in master plan, the Town is actively encouraging private participation	The Town continued to purchase properties in sensitive areas of Town through the Greenbelt Program for conservation purposes. Land purchased in 2006 included a 78.8 acre parcel that is adjacent to a tributary stream that drains to Baboosic Brook. Additionally, the Town inventoried and created GIS mapping of all open space and conservation lands in the Town.	The Town boards will continue to work to acquire parcels to protect the watershed.
2.4	Support watershed organization	Community Development	Town will continue to solicit applicants for appointment with the local watershed organizations	The Town continues to support local watershed organizations such as the Souhegan Watershed Association, Lower Merrimack River Local Advisory Committee and the Nashua Regional Planning Commission. Currently the Town provides funding to support the organizations and donates staff time to attend meetings and support the various programs sponsored.	The Town will continue to provide funding and staff time to support the local watershed associations.
2.5	Develop system for public communication	DPW	Appoint Contact person and establish communication methods by fall 2004	The Town's Stormwater Committee has established a contact person and a plan for the implementation of a stormwater phone line and a procedure for receiving complaints or notices relative to stormwater violations.	The Town will establish a new phone line before the end of 2007 and post the number on the Town's website as discussed in BMP 1.5.

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
3.1	Preparation of Master Drainage Map (delineation of municipal storm sewer system, drainage basins, outfalls & receiving waters)	DPW	Master Drainage Map is prepared by end of Year 4. Map is modified as needed annually.	The Town procured a consultant in April 2007 to complete the drainage system GIS and a Master Drainage Map. The contract includes integration of the outfalls that were previously located with GPS by the NHDES.	The Master Drainage Map will be developed in Year 5. A field program will also be conducted to locate outfalls along waterways within Merrimack that have yet to be mapped.
3.2	Storm sewer bylaw	DPW	Storm sewer bylaw in place by Year 3.	The Town procured a consultant in April 2007 to review existing ordinances and bylaws and prepare a formal storm sewer bylaw if necessary.	The Town's consultant will review existing ordinances and bylaws and develop necessary additions to the Town legislature. Proposed changes will be presented to the Town Council by the end of Year 5. Approval of the proposed regulations by the appropriate board will be required.
3.3	Qualitative observation of discharge at outfalls	DPW	100% major outfalls from developed areas are screened for pollutants by end of Year 2.	The Town procured a consultant in April 2007 to develop and conduct an outfall screening and sampling program.	The Town's consultant is under contract to locate, develop mapping and screen all outfalls in Merrimack. This will be completed by the end of 2007.
3.4	Dry Weather screening of outfalls	DPW	100% major outfalls from developed areas are screened for dry weather flows pollutants by end of Year 1.	See BMP 3.3	See BMP 3.3
3.5	Develop program for the elimination of illicit discharges, if applicable	DPW	Eliminate all known illicit discharges by end of Year 5, first permit period.	A potential illicit connection was flagged by the NHDES during their sampling program. Investigations into the origin of the contamination were conducted but have yet to locate the source.	The Town's consultant will further investigate this potential illicit connection as part of their comprehensive field program to be conducted in the Summer of 2007.

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
4.1	Preparation of Town Ordinance to address: BMP erosion and sediment controls for all new construction, preparation of SWPPPs for land disturbances greater than 1 acre, building setbacks from waters of the state and disposal of discarded materials	Community Development	Complete ordinance and implement as allowable under State law	The Town procured a consultant in April 2007 to review existing planning and development regulations and to prepare an ordinance to address BMP erosion and sediment controls for all new construction, preparation of SWPPPs for land disturbances greater than 1 acre, building setbacks from waters of the state and disposal of discarded materials.	The Town's consultant will review existing ordinances and draft proposed new language to be presented to the Town Council by the end of Year 5. Approval of the proposed regulations by the appropriate board will be required..
4.2	Develop procedures for Site Inspection, enforcement and penalties for non-compliance	Community Development	Summarize inspections and violations	The Town's inspection staff continued regular site inspection on new construction. The Town's Erosion Inspector monitored 35 sites in 2006/2007 making approximately 97 inspection and maintenance visits. 7 violations were pursued with NHDES.	Continue to enforce the current procedures for site inspection and enforcement. The Town's consultant will develop an official procedure by the end of the Year 5.
4.3	Appoint a contact person and establish communication methods by fall of 2005	Community Development	Develop system for public communication (for reporting violations) and track reports	A contact person has been established and a phone line is to be dedicated to stormwater issues as discussed in BMP 2.5.	As part of BMP 4.2 the Town's consultant will develop a procedure for tracking reports of inspections and violations of erosion control BMPs.

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
5.1	Revision to Town Site Plan and Subdivision review regulations to address: Structural BMPs for land disturbances for greater than 1 acre, and perpetual maintenance BMPs	Community Development	Regulations to be revised and adopted by fall of 2004.	The Town procured a consultant in April 2007 to review existing site plan and subdivision regulations, develop procedures for review of structural BMPs, incorporate ideas to promote open drainage systems and groundwater recharge and develop procedures for site inspection and enforcement.	The Town's consultant will develop a list of BMPs that the Town can incorporate to minimize maintenance costs, develop procedures for review of structural BMPs, incorporate ideas to promote open drainage systems and groundwater recharge and develop procedures for site inspection and enforcement.
5.2	Develop procedures for review of structural BMPs	Community Development	To be part of revised regulations by fall 2004.	See BMP 5.1	See BMP 5.1
5.3	Promote open drainage systems and groundwater recharge through infiltration systems	Community Development	To be part of revised regulations by fall 2004.	See BMP 5.1	See BMP 5.1
5.4	Develop procedures for site inspection and enforcement	Community Development	Internal inspection procedures in place by fall of 2004.	See BMP 5.1	See BMP 5.1

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
6.1	Prepare Operations and Maintenance program for storm sewer system	DPW	33% of structures are cleaned and inspected each year. O&M plan developed by end of Year 3. Plan to be revised as necessary.	The Town continued its current operations and maintenance program and good housekeeping measures. The following bullets detail specifics of the program from 2006. • Street sweeping – 100% of streets were swept. • Catch Basin Cleaning – 916 cleaned • Salt continues to be stored in a new covered shed and salt use is limited in sensitive areas of Town. • Vehicles are washed inside the DPW garage and rinse water drains to the Town sewer system. • Vehicle maintenance is performed inside the DPW garage. Employees are trained on spill procedures and spill kits are readily available. • Park maintenance continues with minimized use of herbicides, pesticides, fertilizers.	Continue existing program.

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
6.2	Implement employee Training Program to include: vehicle maintenance, building maintenance, oil recycling policy, calibration of salt spreaders, hazardous waste material storage, spill response and prevention and erosion control for new construction	DPW	Employee Training program to be developed by end of Year 1, and conducted annually for all DPW employees.	The employee training program that has been contracted by the DPW in the past was not conducted this year. However, staff members received training in the following courses from the UNH Technology Transfer Center: • Anti-Icing Applications (2 attendees) • Construction Inspection (8 attendees) • Erosion Control (4 attendees) • Erosion Control BMPs - Level 2 (6 attendees) • Erosion Prevention and Sediment Control (2 attendees) • Winter Operations (2 attendees)	It is anticipated that the contracted employee training program that the Town has used in the past will be conducted again in Year 5. The program deals with material storage and spill controls. Additionally, individual training through seminars will continue as opportunities to attend appropriate courses become available.

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
Not Applicable					
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, 2006 through March 31, 2007)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	(\$)	\$70,000
Total program expenditures since beginning of permit coverage	(\$)	\$170,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		Gen. Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	Unk.
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	N
Shoreline cleaned since beginning of permit coverage	(mi.)	N
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	5/yr.
▪ community participation **	(# or %)	186
▪ material collected **	(tons or gal)	8800 #
School curricula implemented	(y/n)	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		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

	(Preferred Units)	Response
Outfall mapping complete	(%)	25%
Estimated or actual number of outfalls	(#)	UNK
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	25%
Mapping method(s)		
▪ Paper/Mylar	(%)	75
▪ CADD	(%)	
▪ GIS	(%)	25
Outfalls inspected/screened **	(# or %)	none
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	34
Illicit discharges identified **	(#)	none
Illicit discharges identified (Since beginning of permit coverage)	(#)	none
Illicit connections removed **	(#); and (est. gpd)	none
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	none
% of population* on sewer	* (% of housing units) (%)	50 +/-
% of population* on septic systems	* (% of housing units) (%)	50 +/-

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) ** Active sites – not necessarily new starts	(#)	35
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	97
Tickets/Stop work orders issued ** Notice of Violation	(# or %)	7
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 %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	N
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y-permitted

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	Once/3yr.
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	Once/3yr
Qty of structures cleaned **	(#)	916
Qty. of storm drain cleaned **	(%, LF or mi.)	< 10%
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	Unk.
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$150000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	N/A
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1 (own)
• Vacuum truck(s) owned/leased	(#)	1 (own)
• Vacuum trucks specified in contracts	(y/n)	n
• % Structures cleaned with clam shells **	(%)	70%
• % Structures cleaned with vector **	(%)	30%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	Once/yr.
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	Once/yr.
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	500 T.
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	fill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$40,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	\$80/hr.
• Disposal cost**	(\$)	none
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	none
• Vacuum street sweepers owned/leased	(#)	none
• Vacuum street sweepers specified in contracts	(y/n)	N
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	0

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)	Y

	(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	
Pre-wetting techniques utilized **	(y/n or %)	40%
Manual control spreaders used **	(y/n or %)	60%
Zero-velocity spreaders used **	(y/n or %)	40%
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l _n mi. or %)	10% (red)
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l _n mi. or %)	25% (red)
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	none
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	100%

Water Supply Protection

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