Municipality/Organization:	City of Haverhill
EPA NPDES Permit Number:	MAR 041197
MassDEP Transmittal Number:	W-040847
Annual Report Number & Reporting Period:	Year 12 April 1, 2014 – March 31, 2015

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2015)

Part I. General Information

Contact Person: Paul Jessel Title: Collection System Supervisor

Telephone #: (978) 374-2382 Email: pjessel@haverhillwater.com

Mailing Address: 40 South Porter Street, Haverhill, MA 01835

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: Robert E. Ward

Printed Name: Robert E. Ward

Title: Deputy DPW Director

Date: 4/29/15

Part II. Self-Assessment

The City of Haverhill has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following items:

- PART II B 3 – The City has not fully implemented and enforced its illicit discharge detection and elimination (IDDE) program. A consultant is currently under agreement to assist the City with implementation and enforcement of its IDDE program (IDDE). Implementation and enforcement is expected to begin within the next permit period.

- PART II B 3 – All dry weather outfalls inspections are not complete. To date 42 percent (337 outfalls) have been completed. We expect to complete these inspections during the next permit period.

- PART II B 3(b) – Submitted a proposed ordinance to prohibit non-stormwater discharges into the stormwater system to City Council on March 23, 2010, which was not approved. The City is revising the ordinance and expects to submit it to City Council for approval within the next permit period.

- PART II B 4 – The city has a program to reduce pollutants from stormwater runoff from construction sites that disturb greater than or equal to one acre that is enforced for projects that fall under the Conservation Commission's jurisdiction. During the next permit period the City will revise the program to include all projects that disturb greater than or equal to one acre.

- PART II B 4(a) – During the next permit period the City plans on reviewing and updating its ordinances to comply with this requirement.

- PART II B 5 –. The City has a program to address stormwater runoff from new and redevelopment project that are enforced for projects that fall under the Conservation Commission's jurisdiction. During the next permit period the City will revise the program to include all projects that disturb greater than or equal to one acre.

- PART II B 5(a) – During the next permit period, the City plans on reviewing and updating its ordinances to comply with this requirement.

- PART II B 6(a) - The City did not conduct training this reporting period.

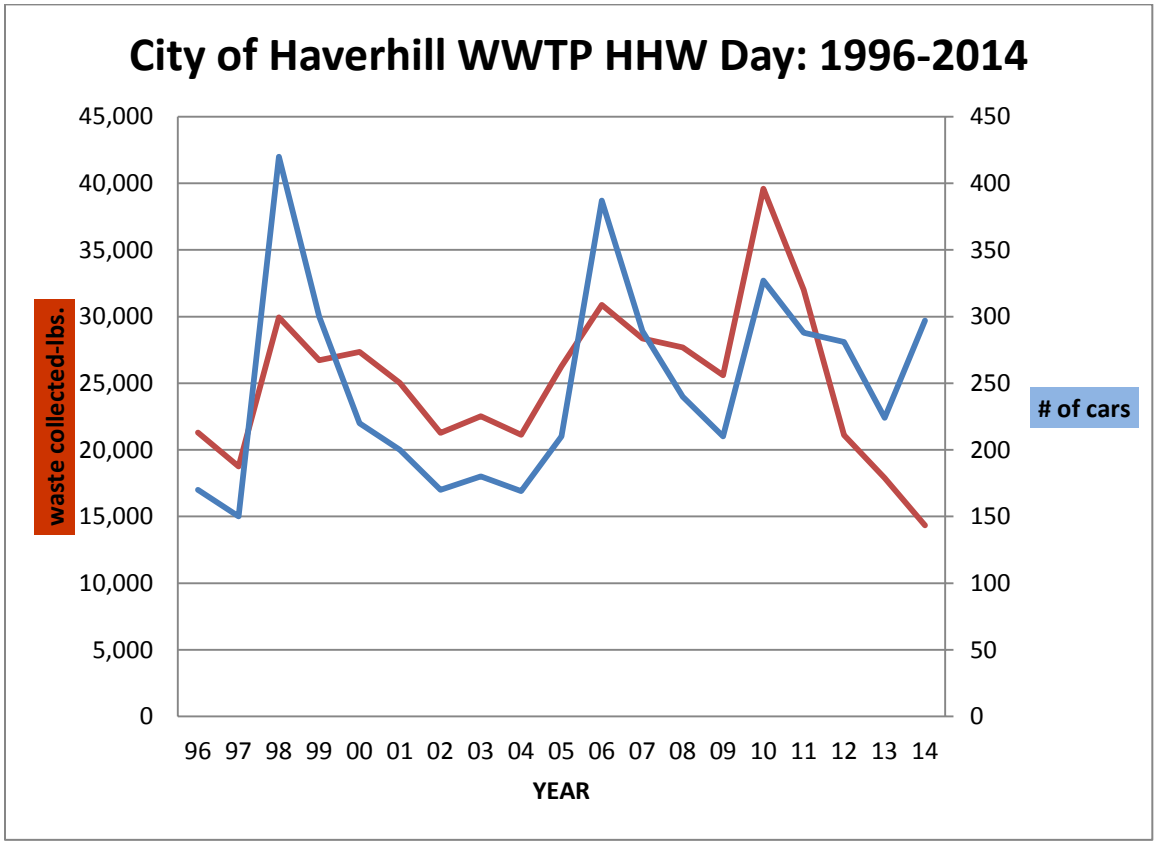
Part II. Self-Assessment, continued

Haverhill Highway Department continued the street sweeping program. The City currently has over 1,400 streets, with 266 centerline miles of streets or 532 lane miles. The City began using the street sweeping odometer to track the sweeping activity, which includes travel mile to and from the work site. The City currently has a database that has the Right of Way (ROW) length. The street sweeping list was cross reference to the City's ROW database and determines that the City cleaned 1,053 miles of streets. The odometer-reading total was 1,291 miles, a difference of 238 miles (18%) attributed to travel to and from the work site. Not all streets were swept; the City concentrated the street sweeping activity within the downtown section.

The City through the City Engineering Department has inputted all new subdivisions into GIS, which includes Stormwater features. In addition, other Stormwater features that were identified as missing are being inputted into GIS as time allows. The attached tables are the Best Management Practices (BMP's) listed in City of Haverhill's Notice of Intent, (NOI) and the City's progress in the twelfth permit year.

We continue to have a residential Household Hazardous Waste collection day twice per year Spring and Fall. In calendar year 2014, we collected 14,331 pounds of hazardous waste. Below is a graph detailing the collections activities from 1996 to 2014.

Part II. Self-Assessment - continued



Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP	Responsible Department/ Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12	Planned Activities - Permit Year 12
1-1	Designate Stormwater Coordinator	Mayor	Officially designate and support Stormwater Coordinator		Official designation of a Stormwater Coordinator
1-2	Add Stormwater Information to City's Website	Stormwater Coordinator	Incorporate a stormwater page onto the City's website	Completed Stormwater web page	Place Stormwater information onto the City's web page. The City's Stormwater Web page is http://www.ci.haverhill.ma.us/departments/storm_water_program/index.php Added request for catch basin cleaning and street sweeping onto the City's Web Site. http://www.ci.haverhill.ma.us/online_services/index.php
1-3	Conduct Outreach/ Coordinate City Program with Initiatives of Local Watershed Organizations	Stormwater Coordinator	Identification of groups interested in City programs. Annual contact with interested groups. Sharing information.	Completed	Initiate discussions with Haverhill's Lake Alliance, Merrimack Valley Planning Commission
1-4	Develop Brochures and Distribute to the Public	Stormwater Coordinator	Development of 2 separate brochures will be completed and disseminated.	Completed	Completed brochures.
1-5	Install and Maintain Signs at Key Stormwater Outfalls	Stormwater Coordinator	New outfall signs installed at 5 locations. Develop a list of parks, streams, ponds, etc. suitable for future signage.	Completed	City decided only CSO signs are required.
1-6	Distribute Pet Waste Fact Sheet with Dog Licenses.	Stormwater Coordinator and/or City Clerk	Pet waste fact sheet to all licensed dog owners	In Process	The City Clerk has pet waste brochure on the counter and on City's website.

2. Public Involvement and Participation

BMP ID #	BMP	Responsible Department/ Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12	Planned Activities - Permit Year 12
2-1	Comply with State Public Notification Guidelines	City Clerk and other Department Heads	Comply with state guidelines	Completed	Continue Compliance
2-2	Hold Annual Household Hazardous Waste Day	Industrial Pretreatment Coordinator	An annual hazardous waste collection day	Held two (2) household hazardous waste collection days, collected 14,331 pounds of hazardous waste	Continue bi-annual household hazardous waste collection days in Spring and Fall
2-3	Motor Oil Collection Days	Highway Department	Monthly oil collection day to be held first Saturday of the month.	Held monthly collection days from September to June	Last Saturday of the month 9:00 AM to 1:00 PM September to June
2-4	Establish a Stormwater Hotline	Stormwater Coordinator	Establishment of hotline.	Completed	Establish email for public, which is stormwater@cityofhaverhill.com. Established and maintain hotline (978) 374-2334
2-5	Establish a Stormwater Committee	Mayor and Stormwater Coordinator	Establishment of Committee. Meeting attendance.	Completed	Designate and formally establish Stormwater Committee. Committee has not met this reporting period.
2-6	Youth Group to Stencil Catch basins	Stormwater Coordinator	Contact Groups to stencil 50 CBs per year	In Progress	No CBs stenciled during this report period

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP	Responsible Department/ Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12	Planned Activities - Permit Year 12
3-1	Map Outfalls and Receiving Waters	City Engineer & Stormwater Coordinator	Map completed	Completed June 2007	Through outfall inspections added outfalls as appropriate; updating GIS as time allows
3-2	Review Existing and Develop, If Necessary, Stormwater Bylaw	Stormwater Coordinator	Review of existing bylaws and regulations. If necessary, prepare storm sewer bylaw and present to City Council	Submitted Ordinance to City Council on March 23, 2010	Submit revised ordinance to City Council for adoption on May 23, 2010. Not approved
3-3	Continue Dry Weather Screening of Outfalls	Stormwater Coordinator	Complete first round of dry weather field screening of as many outfalls as possible in the 5 years of the first permit term.	Developed a dry weather outfall inspection program. Inspected 337 outfalls	Continue dry weather inspections of the remainder of the City's stormwater outfalls (see Appendix A and Appendix B)
3-4	Develop System for Detection and Elimination of Illicit Connections	Stormwater Coordinator, Board of Health, Wastewater	Develop procedures for elimination of illicit connections	Completed IDDE manual in 2008, available on the City's website at http://www.ci.haverhill.ma.us/haverhill/departments/storm_water_program/uploads/Haverhill_s_IDDE_Manual.pdf	Review IDDE Manual and update as needed, implement program

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP	Responsible Department/ Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12	Planned Activities - Permit Year 12
4-1	Review Existing Ordinance Requiring Stormwater Control Plan for Sites Distributing more than 1-acre. Make Changes as Necessary.	Conservation Commission, Engineering Department, Water & Wastewater Department, Stormwater Coordinator	Review existing ordinances and draft changes as necessary.	In Progress. Conservation Commission enforces the 2008 Massachusetts Stormwater Management Regulations for projects that are within its jurisdiction. For projects that will disturb an acre or more, the Commission requires proof of EPA authorization under NPDES and copies of the Stormwater Construction General Permit Notice of Intent. The Commission also requires a copy of the related NPDES Stormwater Pollution Prevention Plan to be submitted before commencement of work.	(See BMP ID#3-2)
4-2	Develop Procedure for Receipt and Consideration of Public Comment	Conservation Commission, Engineering Dept., Water & Wastewater Dept., Stormwater Coordinator	Review existing ordinances and draft changes as necessary to ensure public comment.	Completed	Established email hotline, which is stormwater@cityofhaverhill.com phone hotline 978-374-2334
4-3	Site Inspections of Stormwater Control and Construction Material Management	Conservation Commission, Engineering Dept., Water & Wastewater Dept., Stormwater Coordinator	Site inspectors regularly check erosion control measures.	Site Inspections are currently being conducted	Continue ongoing inspections of subdivisions. (see BMP ID#3-2)

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP	Responsible Department/ Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12	Planned Activities - Permit Year 12
5-1	Develop Ordinance to Require Runoff Controls for New and Re-Development	Conservation Commission, Engineering Department, Water & Wastewater Department, Stormwater Coordinator	Review of existing ordinances.	Submitted Ordinance to City Council on March 23, 2010. Not approved.	(see BMP ID#3-2)
5-2	Recommend a BMP Manual for Use by Planners and Developers	Conservation Commission, Engineering Department, Water & Wastewater Department, Stormwater Coordinator	BMP Manual selected	Currently researching appropriate manuals to comply with the new permit schedule to be issue soon	Finalize ordinance references (e.g. Massachusetts *Stormwater Management Handbooks (including Volume 2, Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Handbook), Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas – A Guide for Planners, Designers, and Municipal Officials,* and *Massachusetts Nonpoint Source Pollution Management Manual*

6. Pollution Prevention/ Good Housekeeping in Municipal Operations

BMP ID #	BMP	Responsible Department/ Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12	Planned Activities - Permit Year 12
6-1	Continue Catch Basin Cleaning Program, Including Priority Catch Basins (i.e. near Ponds) Annually	Wastewater, Stormwater Coordinator, Planning?	Continue current program	In Progress, cleaned 65 catch basins, disposed of 225 tons of catch basin cleanings	Continue with current program
6-2	Street Sweeping	Highway Department, Stormwater Coordinator	Continue with current program	In Progress	Continue with Current Program
6-3	Adopt Appropriate Operating Procedures for Disposal of Catch Basin and Street Sweeping Residuals.	Highway Department, Stormwater Coordinator	Review current disposal procedures and modify as appropriate. Properly dispose of residuals	In Progress	Researching DEP standards
6-4	Minimize Salt Usage and Maintain Cover over Salt Storage Area	Highway Department, Stormwater Coordinator	Continue program	Completed	Salt storage is covered and maintained at the Highway Department, 500 Primrose Street, Haverhill
6-5	Develop/ Implement Program for Cleaning Pond Inlets and Trash Racks	Stormwater Coordinator and Highway Department	Develop a program to clean pond inlets and trash racks, including schedule	Began inventorying pond inlets where cleaning is likely needed	Developing and Identify what needs to be cleaned and where
6-6	Develop/Implement Employee Education Program	Stormwater Coordinator and Highway Department	Two hours of training during the permit period to all relevant employees on stormwater related topics	Completed	No training this report period

Part IV. Summary of Information Collected and Analyzed

Not applicable

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, 2014 through March 31, 2015)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n) (no)	no
Annual program budget/expenditures **	($)	$224,300*
Total program expenditures since beginning of permit coverage	($)	
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)	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.)	n
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	2 days
▪ community participation **	(# or %)	297 cars
▪ material collected **	(tons or gal)	71 tons
School curricula implemented	(y/n)	y

*Annual budget does not include city staff time.

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	(%)	90
Estimated or actual number of outfalls	(#)	916
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	90
Mapping method(s)		
▪ Paper/Mylar	(%)	90
▪ CADD	(%)	
▪ GIS	(%)	90
Outfalls inspected/screened **	(# or %)	337
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	337
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	13
Illicit connections removed **	(#); and (est. gpd)	13
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	13 removed 17,1368
% of population on sewer (based upon billable records)	(%)	90
% of population on septic systems	(%)	10

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)	y
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)	0
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	0
Qty. of structures cleaned **	(#)	53
Qty. of storm drain cleaned **	(%, LF or mi.)	0
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	225 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$62,500*
• Hourly or per basin contract rate ** (I don't have)	($/hr or $ per basin)	
• Disposal cost**	($)	$68.7/tons

*Does not include labor and in-house catch basin cleaning

Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	n
• % Structures cleaned with clam shells **	(%)	8.6%
• % Structures cleaned with vactor **	(%)	0

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	7
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)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$65,834*
• Hourly or lane mile contract rate **	($/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 %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

*Does not include city staff time

	(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 %)	
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)	(%)	
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	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