

Municipality/Organization: City of Northampton, MA

EPA NPDES Permit Number: MA041016

Mayor's Office

MassDEP Transmittal Number: W-035904

APR 29 2014

Northampton MA

**Annual Report Number
& Reporting Period:**

**Year 11
April 1, 2013 – March 31, 2014**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2014)

Part I. General Information

Contact Person: Edward S. Huntley

Title: Director of Public Works

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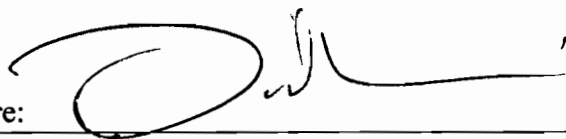
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Certification:

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:



Printed Name: David J. Narkewicz

Title: Mayor

Date:

4-30-14

Part II. Self-Assessment

The City of Northampton has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
1.1 Revised	Stormwater Educational Brochure	DPW	General educational brochure developed and distributed by Fall 2004. General educational brochure developed by Spring 2004 and distributed by Fall 2007.	General educational brochure distributed to 15,090 households, businesses and other mail recipients in Northampton in 2007, 2008, 2009, 2010, 2011, 2012 and 2013. Stormwater information also distributed at Rain Barrel events and other public events.	The educational material will be printed and distributed again in the Spring of 2014 as part of the City's Water Quality Report.
1.2 Revised	Stormwater Educational Information on DPW Website	DPW	Information on the Stormwater Management Program and other public educational material on DPW website.	New information and links continually put on the DPW web site.	New information will continue to be put on the DPW web site.
1.3 Revised	Stormwater Educational Outreach to Community School Groups	DPW	Educational Materials Available for use in schools and community groups by Fall 2004 Stormwater information used in classrooms as determined by interest.	Ongoing curriculum at the Northampton High School on water and watersheds that includes stormwater. Students have conducted limited sampling in past years.	Continue to work stormwater information into curriculums of schools.
1.4 Revised	Tributary Signage	DPW	Tributary signage on five bridges in 2005 and 2007 Eliminated tributary signage in favor an expanded catch basin labeling program due to cost constraints and greater effectiveness of the catch basin labels for public education (see 2.3 below)		

1.5	Targeted Educational Material	DPW	Additional Educational Outreach as necessary.	Continued program to sell rain barrels to residents. 63 rain barrels were sold in 2013. Continued individual outreach to property owners, engineers, and developers on green infrastructure and Low Impact Development (LID) techniques. Soak up the Rain workshop in Northampton for homeowners and business in October 2013 to learn about rain gardens, rain barrels, cisterns, porous pavers, green roofs and other systems.	Continue to increase awareness and use of LID and Green Infrastructure practices for new developments and small scale improvements on residential properties (i.e. rain gardens and rain barrels)
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
2.1 Revised	Public Advisory Committee	DPW	Regular Advisory Committee meetings	The Board of Public Works (BPW) has served as the public advisory committee for the Stormwater Management Program. Numerous public meetings have been held to discuss stormwater management and flood control system planning and funding. Northampton City Council approved an ordinance in March to create a Stormwater and Flood Control Utility.	Continue to utilize the Board of Public Works as a means for public participation.
2.2 Revised	Volunteer Water Quality Monitoring	DPW	Water quality monitoring and inspections throughout the City by volunteers. Water quality visual inspections by DPW employees and volunteers.	Visual inspections of priority outfalls completed by DPW staff. Volunteers and staff with the Connecticut River Watershed Council conducted Connecticut and Mill River water quality monitoring.	Continue water quality visual assessments at priority outfalls throughout the City working with volunteers as possible. (see also 3.3 below)
2.3 Revised	Storm Drain Labels	DPW	Storm Drain labels on 20% of Catch Basins by Spring 2008	Volunteers labeled 150 (5%) catch basins throughout the City in 2004. 500 additional labels (15%) were installed by the Fall of 2009.	Install 1,200 additional storm drain labels working with volunteers as possible.
2.4 Revised	Community Clean-Ups	DPW	Community Clean-Ups publicized and completed by Spring 2009.	Multiple clean-ups completed in the downtown area, specific city neighborhoods, rail trails, Mill River, and the “Meadows” section of the City near the Connecticut River.	Continue to expand the number of neighborhood cleanups.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
3.1	Storm Sewer System Map	DPW	Complete storm sewer map and field verify by Spring 2005.	Storm sewer map completed on GIS. Updates to the storm sewer map added as necessary.	Continue to make updates to storm sewer map.
Revised					
3.2	Legal Prohibition and Enforcement	DPW	Illicit Connections and Discharges to the Municipal Storm Drain System Ordinance adopted by City Council.	Previously completed. (Illicit Connections and Discharge to the Municipal Storm Drain System Ordinance adopted by the City Council and signed by the Mayor June 17, 2004.)	Continue to enforce the Illicit Connections and Discharge to the Municipal Storm Drain System Ordinance.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
3.3	Illicit Discharge Detection and Elimination	DPW	Priority screening areas identified and targeted for inspections. Investigation and enforcement of illicit discharges and connections.	Continued visual inspections of priority outfalls. Investigated various public complaints. Located one illegal connection to the drain system and issued violation notice. Illegal connection to be corrected in Spring 2014. Following up on wet and dry weather outfall monitoring conducted in 2011, a field investigation was conducted in 5 high priority drain catchment areas. Dry weather sampling and inspection was conducted in 35 manholes and 5 outfalls in September 2013. A Technical Memorandum dated 3/11/2014 by Kleinfelder detailing this investigation has been submitted with this report.	The City will continue IDDE investigation in all drainage areas where previous investigations have shown positive indicators of contamination. Additional manhole sampling, dye tests, and smoke tests will be used to locate the sources of contamination and work to correct the problems. Continue to conduct visual inspections at priority outfalls including limited bacteria sampling. Investigation and enforcement of illicit discharges and connections as they are discovered.
3.4	Targeted Educational Outreach	DPW	Conduct annual household hazardous waste collection. Conduct outreach to the public to encourage reporting of illicit discharges.	Household Hazardous Waste Collection publicized and completed in May 2013. 155 Northampton residents or businesses participated and a total of 1,440 gallons of hazardous waste was collected. Information about reporting illicit discharges discussed in Stormwater Brochure distributed to residents of the City.	Continue Household Hazardous Waste Collection. Continue educational outreach to the public for reporting illicit discharge to the storm drain system to the DPW.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
4.1 Revised	Erosion and Sediment Control Ordinance	DPW	Erosion & Sediment Control and Post Construction Stormwater Management Ordinance adopted by City Council.	Completed. (Erosion & Sediment Control and Post-Construction Stormwater Management Ordinance adopted by the City Council and signed by the Mayor June 17, 2004.)	Implement the Erosion & Sediment Control and Post-Construction Stormwater Management Ordinance as necessary.
4.2 Revised	Stormwater Site Plan Reviews	DPW	Procedures for site plan review implemented following adoption of Ordinance.	Reviewed all proposed development projects disturbing over 1 acre for compliance with the Erosion & Sediment Control and Post Construction Stormwater Management Ordinance. Issued stormwater management permits for 5 construction projects and reviewed all smaller projects applying for planning board permits.	Continue to review all development projects for compliance with the Erosion & Sediment Control and Post Construction Stormwater Management Ordinance.
4.3 Revised	Stormwater Site Inspections	DPW	Procedures for site inspections implemented following adoption of Ordinance.	Conducted site inspections and responded to public complaints regarding construction sites.	Continue inspections as required for compliance with the Erosion & Sediment Control and Post Construction Stormwater Management Ordinance.
4.4 Revised	Construction Site Public Participation	DPW	Procedures for receiving information submitted by the public in place following adoption of Ordinance.	Stormwater Management Permit application process coincides with Planning Board or Conservation Commission review so the public hearings during review by these entities serve as the public hearing for each project.	Conduct further outreach to the public on how to identify and report stormwater runoff problems at construction sites.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
5.1	BMP Strategies	DPW	Adopt or change City regulations to create a consistent post-construction runoff control strategy.	Completed. Post-construction runoff control strategy defined and adopted as part of Erosion and Sediment Control and Post-Construction Stormwater Management Ordinance adopted June 2004. The DPW continued to work with the Office of Planning and Sustainability and the Pioneer Valley Planning Commission to consistently revise all relevant municipal ordinances to add specific LID and green infrastructure guidance and requirements. Reviewed draft revised subdivision regulations to eliminate barriers to Low Impact Development (LID).	The DPW will continue working with the Northampton Office of Planning and Sustainability and the Pioneer Valley Planning Commission to consistently revise all relevant municipal ordinances to add specific LID and green infrastructure guidance and requirements. Work on revisions to the Stormwater Ordinance to encourage Low Impact Development (LID) consistent with changes to other City regulations and ordinances. Continue to maintain a consistent post-construction runoff control strategy. Conduct outreach to developers to educate about LID and preferred runoff control BMPs.
5.2	Runoff Control Performance Standards	DPW	Post-Construction runoff control performance standards incorporated into an Ordinance.	Completed. Performance standards developed and incorporated into the Erosion and Sediment Control and Post-Construction Stormwater Management Ordinance, which was adopted in June 2004.	Enforce compliance with post-construction runoff control performance standards through site plan review and site inspections. Continue to define the preferred structural and non-structural BMPs.

5.3	Structural BMP Inspection and Maintenance	DPW	Develop inspection schedules and a maintenance enforcement mechanism for structural stormwater controls throughout the city.	All development projects over 1 acre since 2004 with approved Stormwater Management Permits have been required to complete a legally binding Stormwater Operation, Maintenance, and Inspection Agreement as a condition of the permit. Inspections of the condition and maintenance status of BMPs are conducted on an on-going basis.	As part of the new Stormwater and Flood Control Utility, a Credit and Incentive Policy will be implemented starting July 1, 2014 to provide credits for stormwater BMPs that have been operated and maintained in good working condition. Property owners will be required to provide documentation of the condition and maintenance status of BMPs for the proposed credits.
Revised					

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
6.1 Revised	Drainage System Operation & Maintenance Program	DPW	Operation and maintenance (O&M) program implemented.	Implemented stormwater O&M activities including street sweeping, catch basin cleaning, limited drain line cleaning, and drain system repairs. In March 2014, the City Council approved the establishment of a Stormwater and Flood Control Utility to provide a consistent method to finance stormwater system operation, maintenance, and compliance with EPA regulations.	Continue to implement O&M activities and identify ways to further reduce the discharge of pollutants through the storm drain system. The Stormwater and Flood Control Utility will provide the revenue for on-going operation, maintenance, and upgrades to the City's drainage system as necessary to meet the needs of the City and the requirements of regulatory agencies.
6.2 Revised	Employee Training	DPW	Employee training completed.	Completed in 2004 and ongoing.	
6.3 Revised	Pollution Prevention BMPs	DPW	Pollution prevention BMPs identified and prioritized.	Completed construction of a water quality swale as part of the North Street reconstruction project. Applied for grant funding for the construction of multiple green infrastructure retrofits on City properties.	Identify additional pollution prevention BMPs for DPW properties, road projects, and activities as well as other Municipal properties and parking lots. Design of improvements to the Hinckley Street drainage system and outfall. Design of stormwater green infrastructure improvements as part of the renovation of Pulaski Park in downtown Northampton.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *Not Applicable*

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Dry weather sampling was conducted for 5 priority drainage areas: 5 outfalls and 35 drain manholes sampled in Northampton. See attached Technical Memorandum, Northampton Stormwater System Sampling, March 11, 2014, Kleinfelder

Part V. Program Outputs & Accomplishments

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2013 through March 31, 2014)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y
Annual program budget/expenditures **	(\$)	\$164,000
Total program expenditures since beginning of permit coverage	(\$)	\$1,174,000+
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	85%
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.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	-
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	155
▪ material collected **	(tons or gal)	1,440 gal
School curricula implemented	(y/n)	Y

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
▪ 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	(%)		100%
Estimated or actual number of outfalls	(#)		326
System-Wide mapping complete (complete storm sewer infrastructure)	(%)		95%
Mapping method(s)			
▪ Paper/Mylar	(%)		-
▪ CADD	(%)		-
▪ GIS	(%)		100%
Outfalls inspected/screened **	(# or %)		10%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)		85%
Illicit discharges identified **	(#)		1
Illicit discharges identified (Since beginning of permit coverage)	(#)		9
Illicit connections removed **	(#); and (est. gpd)		1 (pending)
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)		6
% of population on sewer	(%)		80%
% of population on septic systems	(%)		20%

Construction

	(Preferred Units) Response	
Number of construction starts (>1-acre) **	(#)	5
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	12
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	\$0
Complaints/concerns received from public **	(#)	4

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	60%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	70%
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)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	4835
Qty. of storm drain cleaned **	(%, LF or mi.)	0%
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	20 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs			
• Annual budget/expenditure (labor & equipment)**	(\$)		\$25,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)		-
• Disposal cost**	(\$)		0
Cleaning Equipment			
• Clam shell truck(s) owned/leased	(#)		1
• Vacuum truck(s) owned/leased	(#)		1
• Vacuum trucks specified in contracts	(y/n)		N
• % Structures cleaned with clam shells **	(%)		100%
• % Structures cleaned with vacor **	(%)		0%

	(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)	2
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	400 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost & Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$35,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	-
• Disposal cost**	(\$)	0
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % 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 **	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	Y-(% not known) Y-(% not known)
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
--Granular Sodium Chloride (NaCl) treated with liquid magnesium chloride/organic based performance enhancer (Caliber-M2000—24% MgCl ₂ , 12% proprietary ingredients, 0.5% IMP-AP)		
Pre-wetting techniques utilized **	(y/n or %)	Y
Manual control spreaders used **	(y/n or %)	Y
Zero-velocity spreaders used **	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	0
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	-100% (reduction)
% 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	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	0