

**Municipality/Organization:** City of Northampton, MA  
**EPA NPDES Permit Number:** MA041016  
**MassDEP Transmittal Number:** W-035904  
**Annual Report Number & Reporting Period:** Year 14  
April 1, 2016 – March 31, 2017

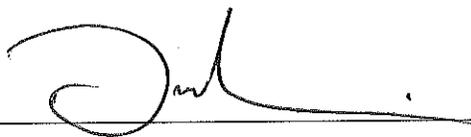
## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2017)

### Part I. General Information

Contact Person: Donna LaScaleia Title: Director of Public Works  
Telephone #: 413-587-1570 Email: dlascaleia@northamptonma.gov  
Mailing Address: 125 Locust Street, Northampton, MA 01060

#### 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:

APRIL 27, 2017

## **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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
1.1	Stormwater Educational Brochure	DPW	General educational brochure developed and distributed by Fall 2004.	General educational brochure distributed to approximately 15,000 households, businesses and other mail recipients in Northampton in 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016 Stormwater information also distributed at the DPW office and other public events.	Implement public education activities through the Soak Up the Rain and Pioneer Valley Soak Up the Rain initiatives as a member community in the Connecticut River Stormwater Committee. Distribute educational door hangers when DPW is working on the stormwater system in a neighborhood.
Revised			General educational brochure developed by Spring 2004 and distributed by Fall 2007.		
1.2	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 to resources continually put on the City's web site.	New information will continue to be put on the City's web site.
Revised					
1.3	Stormwater Educational Outreach to Community School Groups	DPW	Educational Materials Available for use in schools and community groups by Fall 2004	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.
Revised			Stormwater information used in classrooms as determined by interest.		

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1.4	Tributary Signage	DPW	Tributary signage on five bridges in 2005 and 2007		
Revised			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. 48 rain barrels were sold in 2016-2017.  Continued individual outreach to property owners, engineers, and developers on green infrastructure and Low Impact Development (LID) techniques.	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, rain barrels, porous pavement/pavers, and drywell systems)
Revised				Worked with the Connecticut River Stormwater Committee on various public education initiatives including Pioneer Valley Soak Up the Rain, informational signs for rain gardens and porous paving projects, and outreach to dog owners on pet waste disposal practices.  Implemented a credit program for rain gardens, porous pavement/pavers and dry wells for residential properties as part of the Northampton Stormwater and Flood Control Utility.	

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
2.1	Public Advisory Committee	DPW	Regular Advisory Committee meetings.	The Board of Public Works and the Public Works Commission served as the public advisory committee for the Stormwater Management Program until 2015. Currently, the City Council Committee on Public Works and Utilities provides the advisory role as necessary for the Stormwater Management Program.	Continue to work with the Committee on Public Works and Utilities.
Revised					
2.2	Volunteer Water Quality Monitoring	DPW	Water quality monitoring and inspections throughout the City by volunteers.	Visual inspections of priority outfalls completed by DPW staff. Volunteers and staff with the Connecticut River Watershed Council also conducted limited 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)
Revised			Water quality visual inspections by DPW employees and volunteers.		
2.3	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. Purchased 1,700 metal catch basin labels in February 2014. Installed approximately 200 catch basin labels in 2016 throughout the City.	Continue to install new metal catch basin labels throughout Northampton.
Revised					
2.4	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 river and neighborhood cleanups throughout the City.
Revised					

### 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 14</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities –</b>
3.1	Storm Sewer System Map	DPW	Complete storm sewer map and field verify by Spring 2005.	GIS storm sewer map completed. Updates and revisions to the storm sewer map added as necessary.	Continue to make updates and revisions to the 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.	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					

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3.3	Illicit Discharge Detection and Elimination	DPW	Priority screening areas identified and targeted for inspections. Investigation and enforcement of illicit discharges and connections.	<p>Continued visual inspections of priority outfalls. Investigated various public complaints.</p> <p>Follow up investigations to dry weather sampling results and recommendations conducted in 2011 and 2013. Outfall, manhole and CCTV inspections located 2 previously undocumented sanitary sewer connections and piped overflows to the stormwater system. Permanently plugged one piped sanitary sewer overflow and issued notice for one property owner to correct an illicit connection.</p>	<p>Continue to implement IDDE investigation in all drainage areas where previous investigations have shown positive indicators of contamination and where further action and IDDE investigation was recommended. Additional outfall and manhole inspections and sampling, CCTV inspections, dye tests, and smoke tests will be used as necessary to locate the sources of contamination and work to correct the problems.</p> <p>Continue to conduct visual inspections at priority outfalls including limited bacteria sampling. Investigation and enforcement of illicit discharges and connections as they are discovered.</p>
3.4	Targeted Educational Outreach	DPW	Conduct annual household hazardous waste collection. Conduct outreach to the public to encourage reporting of illicit discharges.	The annual household hazardous waste collection was publicized and completed in May 21, 2016. 168 Northampton residents or businesses participated and a total of 2,137 gallons of hazardous waste was collected. Information about reporting illicit discharges was in the Stormwater Brochure distributed to residents of the City.	Continue annual 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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
4.1	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.
Revised					
4.2	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 7 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.
Revised					
4.3	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.
Revised					
4.4	Construction Site Public Participation	DPW	Procedures for receiving information submitted by the public in place following adoption of Ordinance.	Stormwater Management Permit application process is concurrent with Planning Board and/or Conservation Commission review and the public hearings 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.
Revised					

## 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 14 (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 will continue working with the Northampton Office of Planning and Sustainability, the Northampton Planning Board and the Pioneer Valley Planning Commission to consistently revise requirements for stormwater management in all relevant municipal ordinances.
Revised				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. A Complete Streets Policy was adopted by Northampton that includes promotion of green infrastructure practices. Also worked with the Northampton Planning Board to consistently apply stormwater management standards and respond to public concern regarding stormwater impacts from smaller, infill development projects.	Continue to maintain a consistent post-construction runoff control strategy. Conduct outreach to developers to educate about preferred LID BMPs.

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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.
Revised					
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 BMPs are conducted on an on-going basis. As part of the new Stormwater and Flood Control Utility, a Credit and Incentive Policy has been 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.	Continue inspections of the stormwater BMPs throughout the City.
Revised					

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 14</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities –</b>
6.1	Drainage System Operation & Maintenance Program	DPW	Operation and maintenance (O&M) program implemented.	Implemented stormwater O&M activities including street sweeping, catch basin cleaning, water quality unit cleaning, limited drain line cleaning, and drain system repairs.	Continue to implement O&M activities and identify ways to further reduce the discharge of pollutants through the storm drain system.
Revised					
6.2	Employee Training	DPW	Employee training completed	Ongoing training.	
Revised					
6.3	Pollution Prevention BMPs	DPW	Pollution prevention BMPs identified and prioritized.	Design of improvements to the Hinckley Street drainage system and outfall. Construction of stormwater green infrastructure improvements as part of the renovation of Pulaski Park in downtown Northampton.	Identify and implement additional pollution prevention BMPs for DPW properties, road projects, and activities as well as other Municipal properties and parking lots.
Revised					

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

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 14</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities –</b>
Revised					

**7a. Additions**


**7b. WLA Assessment**

**Part IV. Summary of Information Collected and Analyzed**

n/a

**Part V. Program Outputs & Accomplishments**

(Since beginning of permit coverage unless specified otherwise by a \*\*, which indicates response is for period covering April 1, 2016 through March 31, 2017)

**Programmatic**

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y
Annual program budget/expenditures **	(\$)	\$200,000+
Total program expenditures since beginning of permit coverage	(\$)	\$1,500,000+
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		Utility

**Education, Involvement, and Training**

Estimated number of property owners reached by education program(s)	(# or %)	85%
Stormwater management committee established	(y/n)	N
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 %)	168
▪ material collected **	(tons or gal)	2,137 gallons
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	(%)	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 %)	5%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	85%
Illicit discharges identified **	(#)	2
Illicit discharges identified (Since beginning of permit coverage)	(#)	18
Illicit connections removed **	(# ); and (est. gpd)	1
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	8
% of population on sewer	(%)	80%
% of population on septic systems	(%)	20%

## Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	7
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	10
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	(%)	70%
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 **	(#)	1,050
Qty. of storm drain cleaned **	(%, LF or mi.)	0%
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	n/a
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	n/a
• 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 vactor **	(%)	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)	123 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**	(\$)	\$3,817
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 **  (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	Y-(% not known)  Y-(% not known)
--Granular Sodium Chloride (NaCl) treated with liquid magnesium chloride/organic based performance enhancer (Caliber-M2000—24% MgCl <sub>2</sub> , 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 %)	0%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	N
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
<ul style="list-style-type: none"><li>• Treatment units induce infiltration within 500-feet of a wellhead protection area</li></ul>	# or y/n	0