4/27/17

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Municipality/Organization:	**City of Beverly**
EPA NPDES Permit Number:	MAR041181
MassDEP Transmittal Number:	**W-040371**
Annual Report Number & Reporting Period:	**Year 14** **April 1, 2016 – March 31, 2017**

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

Part I. General Information

Contact Person: Roland Adams Title: GIS Coordinator

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Mailing Address: 191 Cabot Street Beverly, MA 01915

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: Michael P. Cahill

Title: Mayor

Date: 4/25/17

Part II. Self-Assessment

The Stormwater Committee has completed a self-assessment at the March 23, 2017 committee meeting. Details of the annual report were reviewed and we believe the City is in compliance with the 2003 Permit.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-1	Article/brochure about stormwater in the Annual Consumer Confidence Report	Engineering Dept.	Article published in the Water Quality Report annually distributed to all residents	Article in the 2015 Water Quality Report distributed summer 2016	Continue
Revised					
1-2	Stormwater education program for school children	Engineering Dept.	Greenscapes stormwater program in school curriculum	Four Elementary school programs	Continue
Revised					
1-3	Public Education and protection	Health Dept.	Beach Sampling report to public	Beach sampling posted on Mass. Dept. of Health City Health Dept. and City web sites	Continue
Revised					
1-4	Educate dog owners about picking up dog waste	Recreation Dept.		Recreation Department Brochure article published 3 times per year	Continue
Revised					
1-5	Install and maintain pet waste clean-up signs at parks	Recreation Dept.	Park Signs	Continue to review and update dog waste signage with dog officer.	Continue
Revised					
1-6	Annual update of SWMP at televised City Council Meeting	Engineering Dept.	Annual update	Not completed-pending new draft permit	Introduce City Council to new permit.
Revised					

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2-1	Form Stormwater Advisory Committee	Engineering Dept.	Form Committee	Committee formed by City Ordinance	Continue
Revised					
2-2	Comply with State public notification guidelines at MGL.Ch 39C23B	Planning Dept.	Public Notice	Public notice-Committee Meetings	Continue
Revised					
2-3	Stencil up to 25 catch basins with do not dump message	Public Services	Stencil catch basins	Neighborhood group in the Beverly Cove/Burton Ave area stenciled catch basins	New MS4 Permit
Revised					
Revised					
Revised					
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-1	Map Stormwater Outfalls	Engineering Dept.	Map Outfalls	Completed-GIS database updated as needed	Continue
Revised					
3-2	Review and amend City Ordinance to prohibit illicit discharges and connections and to require inspection of new construction for correction connection	Planning & Engineering Depts.		Component in the Ordinance- "Stormwater Management and Construction Site Ordinance"	Continue
Revised					
3-3	Conduct dry weather outfall screening	Public Services	Sample Outfalls	Salem Sound sampled 3 outfalls during summer 2016 near beaches	New MS4 Plan
Revised					
3-4	Develop and implement plan to identify and remove non-stormwater discharges	Public Services	Illicit Connection	Remove as found	New MS4 Plan
Revised					
3-5	Create a GIS stormwater collection system	Engineering Dept.	GIS Stormwater System	Completed and updated as required	Continue
Revised					
Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-1	Erosion Sediment Control (ESC) Ordinance for construction sites greater than 1 acre in area	Planning Dept.	Create and adopt an ordinance	Component in the Ordinance—"Stormwater Management and Construction Site Ordinance"	Continue
Revised					
4-2	Require a waste management plan at construction sites greater than 1 acre	Planning & Engineering Depts.	Create and adopt an ordinance	Component in the Ordinance—"Stormwater Management and Construction Site Ordinance"	Continue
Revised					
4-3	Consider public input on project greater than 1 acre	Planning Dept.		Site plans reviewed	Continue
Revised					
4-4	Inspect erosion and sediment controls on projects greater than 1 acre	Planning & Engineering Depts.	Inspection of construction sites	Inspections at milestones—continuing on "as need" basis	Continue
Revised					
Revised					
Revised					

4a. Additions

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-1	Develop an ordinance to apply standards 2,3,4,7 and 9 of the Mass. Stormwater Policy to the entire City	Planning Dept.	Develop and adopt an ordinance	Component in the Ordinance—"Stormwater Management and Construction Site Ordinance"	Completed
Revised					
5-2	Specify a stormwater BMP manual to be used for consistent design and performance standards	Planning & Engineering Depts.	Specify a manual	Completed—Stormwater Management, Stormwater Policy Handbook, Volumes 1&2	Completed
Revised					
5-3	Develop an Ordinance that ensures long term maintenance of structural BMP's	Planning, Health & Public Services	Develop and adopt an Ordinance	Component in the Ordinance—"Stormwater Management and Construction Site Ordinance	Completed
Revised					
Revised					
Revised					
Revised					

5a. Additions

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-1	Identify sensitive receptors within the City	Engineering & Public Services		Completed	New MS4 Permit
Revised					
6-2	In house employee training program	Public Services		Continue to train pesticide licensed employees	New MS4 Permit
Revised					
6-3	Hazardous Material Inventory & Training	Public Services		Motor pool employees trained for housekeeping measures relative to waste oils etc. and operation of fueling depot	New MS4 Permit
Revised					
6-4	Street Sweeping	Public Services		All streets swept 3 times per year with commercial/critical areas swept more frequently	New MS4 Permit
Revised					
6-5	Storm Drain Maintenance	Public Services		Catch basins city wide cleaned once per year	New MS4 Permit
Revised					
6-6	Roadway Deicing	Public Services		Trucks purchased after 2008 with computerized ground speed controlled sander. All trucks as replaced to be fitted with similar units.	New MS4 Permit
Revised					
6-7	Minimize impacts from vehicle washing	Public Services		Facility under consideration-dependent on funding	Continue
Revised					

6a. Additions

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *<<if applicable>>*

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised					
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, 2010 through March 31, 2011)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y Part Time
Annual program budget/expenditures **	($)	In Dept. Budgets
Total program expenditures since beginning of permit coverage	($)	In Dept. Budgets
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		Enterprise

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	100%
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Y-2 Mile
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	2 with Salem
▪ community participation **	(# or %)	242 vehicles-Beverly day
▪ material collected **	(tons or gal)	3745 Gallon
School curricula implemented	(y/n)	Y

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control					X
▪ 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—Discharge Points	(#)	583
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	3
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	37%
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	2
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	2
% of population on sewer	(%)	96% (Parcel)
% of population on septic systems	(%)	4% (Parcel)

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	4
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	100%
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	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
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 **	(#)	4450
Qty. of storm drain cleaned **	(%, LF or mi.)	Minor amount
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	350 Ton
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)	$14/basin
• Disposal cost**	($)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	N
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	2-3
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	App. 60
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	704 Ton
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	
• Disposal cost**	($)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % Roads swept with rotary brush sweepers **	%	100%
• % 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 %)	

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 %)	Y
Manual control spreaders used **	(y/n or %)	60%
Zero-velocity spreaders used **	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	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	

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