

Municipality/Organization: Town of Canton
EPA NPDES Permit Number: MA 0410311
MassDEP Transmittal Number: X274764
Annual Report Number & Reporting Period: Year 14
April 1, 2016 – March 31, 2017

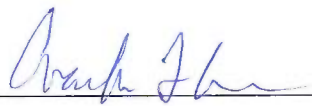
**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2017)**

Part I. General Information

Contact Person: Michael Trotta **Title:** Superintendent of Public Works
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Mailing Address: 801 Washington St Canton MA 02021

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: Charles Aspinwall

Title: Town Administrator

Date: 5/2/17

Part II. Self-Assessment

The Town of Canton has completed its annual report and has determined that our municipality is in compliance with all permit conditions.

The Town of Canton prepared for the renewal of the MS4 General Permit on the basis of requirements detailed in the 2014 Draft permit. The Town has reviewed the Final Permit, effective July 1, 2017, and has taken steps to prepare for changes to the regulations. In anticipation for the effective date of the Final Permit, the Town of Canton has taken a proactive approach to collecting required quantifiable information related to Stormwater Management through a centralized online platform, VUEWorks. The Town has begun collecting information related to stormwater management using VUEWorks and work is underway to setup system mapping and field data collection to facilitate regulatory reporting needs.

The Town of Canton achieved significant progress in program development including completing Phase II of an Integrated Water Resource Management / Capital Improvements Plan which has been heavily focused on stormwater and in the implementation of an asset management-based approach. This reporting year's activities included:

- Organizing an intradepartmental Task Force on Stormwater Management to facilitate the development of an updated Stormwater Management Plan
- Continuing to make progress on Stormwater System mapping requirements in GIS and making revisions to the GIS schema to address regulatory changes.
 - The system includes 100% of outfalls; each with photographs and inspection reports attached to the features. New features were added using ArcGIS Collector app. Historic sampling data from
 - Updates to catch basin attribute data from field data collected on work order forms.
- Implementation of updated Town Facility Best Management Practices and Drainage Operation & Maintenance (O&M) manual for preventing stormwater pollution from municipal operations.
- Participation in various stormwater program related trainings throughout the year including: IDDE Training, Infrastructure O&M Training, Annual NPDES MS4 Compliance & Planning Training, and VUEWorks Trainings.
- Implementing a computerized maintenance management system including the use of tablets for creating maintenance work orders, collecting data in the field, and reporting for stormwater management. Specifically the system now includes catch basin inspection and outfall inspection work order forms. Additional forms have been developed for street sweeping, outfall repairs, and catch basin repairs for use in the next permit year.
- Continuation of Construction Site Storm Water Runoff Control plan review, permitting, and site inspection.
- Continuation of catch basin cleaning and street sweeping programs.
- Held a Household Hazardous Waste Day on May 14, 2016.
- Reviewed and revised by-laws including General By-law Article XXI, Stormwater Management Rules and Regulations, which was approved on April 13, 2016.

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 Revised	Design Distribute Brochures <i>Neponset Storm Water Partnership Materials</i>	DPW	Spring	Outside watering tips mailed in spring water bills. Storm water brochure distributed at DPW Office and Con Comm. meetings	Reassess activity under new MS4 permit through Stormwater Task Force Meetings and NOI Development process. Use Neponset Storm Water Partnership materials and website to for education and outreach.
1-2 Revised	CATV	DPW	On going	Town Engineer discussed storm water with Con Comm.	Reassess activity under new MS4 permit through Stormwater Task Force Meetings and NOI Development process
1-3 Revised	Storm Water Comm. <i>Stormwater Task Force</i>	Con Comm. DPW	On going	Worked with Kleinfelder on IWRMP Phase 2. Developed a Stormwater Management Task Force. Meeting series scheduled through 2017 for development of NOI.	Continue holding Stormwater Management Task Force Meetings to develop NOI.
1-4 Revised	Label Catch Basins <i>Not required under Final MS4 Permit</i>	DPW	On going	<i>Not required under Final MS4 Permit</i>	
1-5 Revised	High School Educ.	Con Comm.		No action	No action

1a. Additions

1-6	Evaluate Stormwater Utility Feasibility	DPW	Fall/Winter	In Summer 2014, presented a Utility Feasibility Study Report to the Board of Selectmen through funding from a MassDEP SWMI grant.	Pursue stormwater utility as a possible funding mechanism, if deemed best option for the stormwater program and Town.
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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 Revised	Storm Water Comm.	SWC	On going	See BMP 1-3	See BMP 1-3
2-2 Revised	Label Catch Basins <i>See BMP 1-4</i>	DPW	On going	See BMP 1-4	See BMP 1-4
2-3 Revised	Technical Comm.		On going	The IWRMP, Stormwater Master Plan, stormwater bylaws, and other technical documents related to Stormwater Management continue to be made available on the Town of Canton Website. A link to stormwater references is included below: http://www.town.canton.ma.us/494/Stormwater-References	Continue work on IWRMP
2-4 Revised	Review General Permit	DPW	On going	Prepared annual report. Participated in Stormwater Management Task force meetings and trainings.	Prepare for new MS4 General Permit

2a. Additions

None					
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3. Illicit Discharge Detection and Elimination

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
3-1 Revised	Drainage System Map	DPW	On Going	Updated system map with data collected in the field and available record drawings	Continue to collect field data using mobile devices.
3-2 Revised	Article XVI By-Law		Completed	Completed	Completed
3-3 Revised	Enforce By-Law	Con Comm. DPW	On going	Reviewed site and subdivision storm water and grading plans.	Continue activity
3-4 Revised	Train Staff	DPW	On going	IDDE Training occurred in March 2017 and was attended by Town Engineers and staff from DPW	Continue activity
3-5 Revised	Dry Weather Outfall Inspection	DPW	Complete Annual Round Inspections	Located 9 additional outfalls in Permit Year 14. Re-inspected and sampled according to procedures outlined in the IDDE plan. No new IDs identified. Followed-up in August 2016 with property owner of known illicit discharge to inspect property and the progress of implementing a structural control which will remove the source of the illicit discharge.	Continue activity and prepare for new MS4 General Permit requirements.

3a. Additions

3-6	IDDE Plan Update			Completed gap analysis for O&M Manual.	Revise IDDE Plan for new requirements.
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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	Draft Erosion / Sediment By-Law	Con Comm.	Completed	This by-law was completed in 2008 and amended in 2009.	Completed
Revised					
4-2	Erosion / Sediment By-Law	Con Comm.	Article XX TOC By-Law	This by-law was completed in 2008 and amended in 2009. Rules and regulations are were revised in April 2016.	Review new Permit requirements and revise as appropriate.
Revised					
4-3	Procedures for Site Waste	Con Comm.	Article XX TOC By-Law	Rules and regulations are under review and revision	Review new Permit requirements and revise as appropriate.
Revised					
4-4	Procedure for Site Plan Review	Con Comm.	Article XX TOC By-Law	Rules and were incorporated into Stormwater Management Rules and Regulations, which was approved on April 13, 2016	Continue Activity
Revised					
4-5	By-Law Enforcement	Con Comm.	Article XX TOC By-Law	On-going enforcement.	Review new Permit requirements and revise as appropriate. On-going enforcement.
Revised					

4a. Additions

None					
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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	Storm Water Management Policy	Building DPW Con Comm.	On going	Reviewed Drain Connection Permits. Site plan reviews and follow up inspections.	Continue activity
Revised					
5-2	Review Storm Water BMPs	DPW SWC	Ongoing	Evaluated implications of 2014 Draft General Permit on proposed and existing BMPs at Stormwater Management Task Force Meeting in March 2017.	Revise O&M Plan
Revised					
5-3	Review Long Term O&M	DPW SWC	On going	Implemented O&M Plan.	Revise O&M Plan
Revised					
Revised					
Revised					
Revised					

5a. Additions

None					
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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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-1 Revised	Catch Basin Cleaning	DPW	Clean 1100 / Year	Recorded work order data for 1625 completed catch basins cleanouts in 2016. Between January and March 2017, 306 catch basins were cleaned. The total catch basins cleaned in Permit Year 14 was 1931.	Continue activity and collecting field data using tablets to streamline regulatory reporting
6-2 Revised	Street Sweeping	DPW	Complete Spring and Fall Sweeps	Completed 3 full sweeps of all streets. Swept CBD twice monthly. Swept low areas after .5" rain.	Continue activity and begin collecting field data using tablets to streamline regulatory reporting
6-3 Revised	Hazard Waste Materials	DPW	Yearly Collection	Held HHW Day on May 14, 2016.	Hold HHW Day on May 20, 2017 from 9:00 am to 1:00 pm at the DPW Garage located at 150 Bolivar Street
6-4 Revised	Procedure for Catch Basin Cleanings	DPW	Yearly	Recycle sweepings and catch basins with compost or gravel fill.	Continue activity.
6-5 Revised	Revise and update O&M Ops Manual	DPW	Year 13	Implemented revised O&M manual. Training was provided by the Town's Consultant, Kleinfelder, in March 2017. Completed gap analysis for O&M Manual.	Continue activity. Revise O&M Plan based on recommendations in Gap Analysis.
Revised					

6a. Additions

None					
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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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
7-1 Revised	Identify and Categorize Outfalls	DPW	Spring and Fall	Updated Storm Water map and developed a tracking/sampling program through VUEWorks. Integrated historic sampling data into VUEWorks using a data link. Revised GIS Schema to incorporate outfall inspection prioritization.	Continue implementing tracking/sampling program and investigate outfalls according to IDDE plan.
7-2 Revised	Test Outfalls	DPW	Test 50% of Outfalls	Completed Outfall Sampling requirements in current Permit Term.	Continue activity according to IDDE Plan.
7-3 Revised	Identify Illicit Drainage Source	DPW Con Comm.	Sample as needed	None identified	Continue activity
7-4 Revised	Eliminate Illicit Drainage Source	DPW Con Comm.	Sample as needed	See BMP 3-5	Continue activity
Revised					

7a. Additions

None					
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7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

- Number of Outfalls Inspected for Illicit Discharges: 9
- Number of Outfalls Re-sampled: 0
- No new illicit discharge was identified during this permit year.
- 1931 catch basins were cleaned
- All streets in town were swept 3 times

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, 2016 through March 31, 2017)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	(\$)	\$352,000
Total program expenditures since beginning of permit coverage	(\$)	
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 %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	

Legal/Regulatory

In Place

Reviewing

Draft

	Prior to Phase II	Existing Authorities	Drafted	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	(#)	339
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100
Outfalls inspected/screened **	(# or %)	9
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
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)	1
% of population on sewer	(%)	75
% of population on septic systems	(%)	25

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(# or %)	0
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
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)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Beneficial
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	

• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vector **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	3
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	14
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Beneficial Use
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	120,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1 Owned
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/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 %)	
▪ 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	80 20
Pre-wetting techniques utilized **	(y/n or %)	N
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/lb mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/lb 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	