

Municipality/Organization: Wayland, Massachusetts
EPA NPDES Permit Number: MAR041169
MassDEP Transmittal Number: W-
Annual Report Number & Reporting Period: Year 18
April 1, 2017 – March 31, 2018

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2018)

Part I. General Information

Contact Person: Paul Brinkman **Title:** Town Engineer
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Mailing Address: Department of Public Works, 66 River Road, Wayland, MA 01778

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: Tom Holder

Title: Director of Public Works

Date: April 27, 2018

Part II. Self-Assessment:

Over the last year the Department of Public Works has added staff that will now allow for a singular point of coordination in the management of the Town's MS4 system. The Town Engineer is currently charged with implementation of the NPDES Phase II MS4 permit. The Town Engineer is coordinating with other Town Departments including the Department of Public Works, Conservation Commission, Board of Health, Building Department and Town Administrator to comply with the requirements of the NPDES Phase II permit. The Department of Public Works has primary authority over the Town's municipal separate storm sewer system (MS4) and is currently tasked with all operation, maintenance, replacement and capital upgrade of the drainage system. The responsibility for reporting requirements of the MS4 was transferred to the DPW as part of the creation of the Town Engineer role. In the first year, the Town Engineer has worked to review ongoing programs and make improvements to allow the Town to smoothly transition into the new permit proposed to become effective in Fiscal Year 2019.

A number of priorities have been identified to allow the Town to be better positioned to comply with the new permit including:

- Implementation of a more comprehensive mapping and asset management program.
- Improvements to maintenance protocols and practices.
- Development of new ordinances and regulations to allow for better management of the existing systems.
- Revisions to existing ordinances to increase the Town's ability to implement effective and long-term measures for stormwater control.
- Identification of resource, staff and equipment, needs to meet the existing and forthcoming regulatory requirements.

The Town Engineer is currently working in a number of areas of the MS4 system to ensure that existing requirements are being met. They include:

- Review of proposed developments and redevelopments to ensure that proposed systems comply with existing requirements as well as proposed systems are optimized to provide the maximum benefit to the environment. Additionally, new facilities are reviewed to ensure that owners can be best able to operate and maintain them over the long term.
- Assistance with the collection of data for reporting efforts.
- Development of educational programs for the local school system to ensure that water quality ideas are reinforced in the newest generation.
- Implementation of Low Impact Development and Green Infrastructure in new Town projects.

The Town continues its commitment to reduce the use of phosphates on town land along the Sudbury River, other tributaries, and in the Charles River watershed. The Department of Public Works now oversees the maintenance of recreational facilities and documents the use of phosphates on town lands. No fertilizers are used on town land managed by the conservation department. In addition, pretreatment to reduce phosphate in stormwater runoff is required for all new development located near perennial or intermittent streams, including the Sudbury River.

The Town has permanently protected an agricultural property from future development by purchasing a conservation restriction on 218 acres from the property owner and continues to rigorously enforce regulations to ensure that resources areas are not impacted from development.

The Town continues to fund MS4 improvements including:

- Pinebrook Culver Rehabilitation project.
- Concord Road Culvert Rehabilitation project.
- Conservation Improvements and Transfer Station Access Road reconstruction project. This project will create several thousand square feet of wetland as well as provide for crossing for smaller wetland animals under the access road.

Annual Transfer Station and Annual Post-Closure Landfill Inspections are conducted by a contractor. The inspections are typically conducted in the spring. Written reports are prepared and submitted to the MassDEP and the Town. The landfill storm water management system consisting of water bars, drainage swales, culverts and detention areas is checked and any needed corrective actions are listed in the inspection report, and discussed with DPW staff. Storm water drainage at the Transfer Station is also checked. Inactive, closed, or capped landfills are no longer subject to storm water permitting requirements and are also not regulated under EPA's Phase II Small MS4 program and therefore this BMP is not a required to be completed under the Town's MS4 program.

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 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 19
PEO-3	SuAsCo			Status of continued participation is presumed to have ended.	Communicating with public will be done by town staff and provided on the town website. New MS4 permit requirements as needed.
Revised					
Revised	<i>No longer participating in SuAsCo</i>				
PEO-2	Stormwater Flyer	SuAsCo	Flyer, poster, and postcards	Displayed poster at DPW	Distribute postcards at DPW open house
Revised					Continued use of web page and tax bill inserts as well as participation in community events.

1a. Additions

PEO 3	Introduction to possible changes to MS4 Permit	DPW and ConCom	Fact sheet on proposed changes	The new MS4 Permit will be prepared by town's contractor or the newly hired town engineer	New MS4 permit requirements as needed.
PEO	Increase public education regarding local Bylaw	DPW and ConCom	Hearing on the stormwater regulations, update web page, notice to other departments	Research conducted on the revisions to MS4 regulations as well as the development of new utility specific regulations. Identification and publication of MS4 requirements and resource gap analysis.	Development and implementation of revisions and new regulations through a the public process.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 19
PP-2 Revised	Storm water web page	All	Link or links on Town of Wayland Web page	Check links, add additional material	Continue same. Update for new permit requirements.

2a. Additions

PP-3	Interdepartmental Coordination	Land Use Depts.	Compatible standards and implementation	Participated in monthly Land Use meeting. Contact other permitting departments about existing Stormwater and Land Disturbance Bylaw.	Continued participation in Land Use meetings. Evaluate on-line permitting options to include SW requirements.
PP-4	Coordination of regulatory boards	BOPW, BOH, CONCOM, et al	Meeting attendance by representative - minutes	Developed new Building permit application with department sign-offs	Continued work with other permitting or review Boards and/or Commissions.
	Litter clean-up	Volunteers	Annual clean up of roadsides and town owned land	Collected 25 bags of rubbish	Done annually by a group of volunteers
	Rain barrel installation	DPW	Providing Rain barrels to residents	Coordinated a sale of rain barrels to residences.	Continue rain barrel program
	Composters	DPW	Provide Composters to residents	Coordinated a sale of composter to residences.	Continue composter program.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 19
IDE-1 Revised	Storm water Mapping	DPW/Engineering Dept.	Prepare map	Preliminary review of infrastructure. Improved existing information and data.	Conduct a physical review of the MS4 and increase data on existing system. Asset Management implementation. Update for new permit.
IDE-3	Illicit Discharge Detection	DPW	Identification of illicit discharges	Conducted inspections of 50% of existing outfalls.	Continue outfall and open conveyance inspections.
Revised	Develop enforcement procedures	Cons Com	Draft enforcement procedures	Review of existing regulations and systems.	Development and implement MS4 specific regulations
IDE-3	Illicit Discharge Detection	All Town Depts.	Coordinate efforts to identify illicit discharges	DPW regularly inspected drainage system for illicit discharge to town system	No further action
Revised	Removal of Illicit Discharges	DPW	Adopt procedures	Illicit discharges will be handled on a case by case basis	No further action

3a. Additions

IDE-4	Amend or Adopt Bylaw	ConCom/Town Meeting	Create report with outline of changes to improve addressing illicit discharges	Bylaw was amended. Explored a separate IDDE Bylaw, however, could not define an oversight agency.	Continue to monitor effectiveness of the amended Bylaw. Finalize SW regulations. Update for new permit.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 19
Revised					
BMP CSW-3	Dept. site inspections	Planning Bd, Con. Comm.	Site inspections	Evaluate and report on other means of inter-departmental cooperation and communication and report on same.	Continue to expand upon present year efforts. Update for new permit.
Revised		Add BOH and Building			
	Erosion and sediment control for construction sites	Con. Com	Implement bylaw	Permit requires pre-construction site visit and erosion control inspection	Continue to implement bylaw requirements.
Revised					

4a. Additions

BMP-1A	Implementation of Stormwater Bylaw	Conservation and others	Draft regulations and general permit	Drafted regulations – prepared a submittal requirement checklist for SW applications	Finalized and approve SW regulations through a public process.

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 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities -- Permit Year 19
GH-1 Revised	Develop controls for reducing discharge	Various Depts.	On-site implementation	Depts. are generally aware of requirements and using BMPs	Seek continued compliance
GH-2 Revised	Landfill SWPP	Public Works	By others	Ongoing. Continue to maintain BMPs at site.	Update as required for new MS4 permit.
GH-4 Revised	Record depository	Undefined	Annual Reports	Collected existing MS4 information into a single location as electronic files.	Enhance/improve records and record-keeping. Update for new permit.
Revised					
Revised					

5a. Additions

GH-7	Coordinated O&M efforts for BMPs	Land Use Dept and DPW	Undefined -- Land Use minutes, anecdotal	Reviewed new developments for stormwater systems.	Expand existing GIS and data to include previous developments. Develop outreach to homeowners on the O&M of these systems.
GH-8		DPW	Use of vactor for bmp maintenance.	Implemented improved tracking of materials.	Improve as required by new permit.

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 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 19
GH-2 Revised	Interdepartmental Efforts	B.O.H./Conservation/Public Works/Building Department		Capping of landfill complete. Facility being operated as transfer station. Will assess any further needs or requirements	Reporting done by Town contractors when applicable. Update for new permit.
GH-3 Revised	Cleaning and maintenance	DPW	Regular housekeeping operations	Yearly cleaning of over 2,500 catch basins, cleared 6 clogged outfalls, cleared beaver dams from 6 culverts, road sweeping of 96 miles of road.	Update for new permit.
GH3 Revised	Development of Stormwater Regulations	ConCom	Draft regulations	Prepared draft regulations	Finalize regulations

6a. Additions

GH#	Pollution prevention	Con.Com	Manage pet waste	Three pet stations maintained. Weekly disposal of the pet waste container.	Continue maintaining pet waste stations. Seek outside funding to pay for weekly disposal.
	Decrease use of road sand	DPW	Use less sand during winter operations	Use of sand was down 628 tons from previous year	Continue to decrease use of sand.
	Direct road runoff	DPW	Install or repair road berms or curbing		Identify other areas of roadway for installation or repair of berms and curbing.

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 18 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 19
Revised	Address Sudbury River TMDL report	Wastewater	Review TMDL report		New permit likely to be in effect. Will be looking at impacts/needs to Charles River Phosphorus TMDL

7a. Additions

	none				

7b. WLA Assessment: Currently no TMDL applicable however, with new permit Charles River Basin may have TMDL. Conservation Commission, through assessment of drainage, considers water quality and attempts to ascertain if WLA are applicable. Aware of no change in status of TMDL. Consideration of phosphorous removal by ConCom, Surface Water and others continues to be applicable. NO CHANGE IN THIS AT THE PRESENT TIME.

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, 2017 through March 31, 2018)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y 0.25 FTE
Annual program budget/expenditures **	(\$)	\$100,000
Total program expenditures since beginning of permit coverage	(\$)	\$2,000,000
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 %)	5%
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.)	90 miles
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	2
▪ community participation **	(# or %)	5%
▪ material collected **	(tons or gal)	3.5 tons
School curricula implemented	(y/n)	n

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	300
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	70%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	50%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	3%
% of population on septic systems	(%)	97%

Construction

	(Preferred Units)	Response
Number of construction starts (> 1-acre) **	(#)	3
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	9
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 %)	1%
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 **	(#)	2563
Qty. of storm drain cleaned **	(%, LF or mi.)	500 lf
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	50 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	landfill
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$40,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$22.47 (includes disposal)
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	0
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vacator **	(%)	<1%

(Preferred Units)		Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1 / yr
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	2 / yr
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	100 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	compost
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$60,000
• Hourly or lane mile contract rate **	(\$/hr. or in mi.)	
• Disposal cost**	(\$)	
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 %)	100% of phosphorus
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented		

(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	80%
	% CaCl ₂	
	% MgCl ₂	10%
	% CMA	
	% Kac	

	% KCl	10%
	% Sand	
Pre-wetting techniques utilized **	(y/n or %)	y
Manual control spreaders used **	(y/n or %)	n
Zero-velocity spreaders used **	(y/n or %)	y
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 %)	50%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	0
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	0
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	0
Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	0