

Municipality/Organization: Town of Mashpee

EPA NPDES Permit Number: MAR041129

MassDEP Transmittal Number: W-035197

Annual Report Number Year 10
& Reporting Period: April 1, 2012 – March 31, 2013

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2013)

Part I. General Information


Contact Person: Catherine Laurent Title: DPW Director

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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: Joyce M. Mason

Title: Town Manager

Date: April 23, 2013

Part II. Self-Assessment

The Town of Mashpee has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

Part 1.B.2.(k)

The Town is working with the Mashpee Wampanoag Tribe on a water quality monitoring program for Santuit Pond. Santuit Pond is listed as an impaired water under Section 303(d) of the Clean Water Act. The Town hired AECOM in 2009 to complete a study on the causes of the deteriorated water quality in Santuit Pond. A final report was issued in July 2010. In March 2012, 6 solar-powered artificial water circulators were installed in the pond to decrease the anaerobic conditions that contributes to the release of phosphorus and the formation of algal blooms. Improvements in water quality have been monitored over the year. Since their installation, water clarity in the pond, measured by Secchi Disk, has improved by over 50%.

Through the Town's Shellfish Department, limited water quality monitoring is being completed. The monitoring is relative to shellfish beds and fish spawning areas, and therefore does not specifically identify any discharges that may contribute to not meeting water quality standards. Until a monitoring program is developed and implemented that can identify these discharges, the Town will continue to eliminate direct discharge from roadways, with those roadways targeted where discharge is to a surface water. In October 2012, the Town voted to accept as public ways several neighborhood roads adjacent to Santuit Pond and John's Pond. As part of this process, new drainage is being installed to capture and treat storm water runoff, preventing it from entering the ponds. The Town is also completing a road project on Great Neck Road North, again capturing and treating runoff that previously may have been discharged to the Mashpee River.

Part 1.B.2.(l)

See above.

Part 1.C.

See above.

Part 1.D.

See above.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
PE1 Revised	Zone II Information	Public Works; EOC; Water District	Distribute information annually on protection of drinking water	Environmental Oversight Committee developed “Mashpee Blue Book”, a guide for home owners on drinking water protection, low impact storm water practices, etc. The book was mailed to all Mashpee property owners in 2011. The book is still available at the Town’s library.	
PE2 Revised	Storm Water Information	Public Works; County; EOC	Develop and distribute information annually on impacts of storm water on water bodies and groundwater	See “Mashpee Blue Book” above. Mashpee Environmental Coalition (MEC) distributed storm water information through their quarterly newsletter.	Continue to work with MEC.
PE3	Storm Drain Stenciling	Public Works	Stencil drains in target areas	None to date. No longer offered through County.	No action proposed.
PP4	Storm Water School Program	Public Works; School Dept; County	Develop program for presentation to Grades 3-5	Cape Cod Groundwater Guardian Team held water festival for Grade 5 students.	Work with School Department to schedule program for school-wide assembly.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) -- Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities -- Permit Year 11
PP1 Revised	Community Cleanups	Public Works, Conservation	Continue to organize annual cleanups of Town properties	Conducted clean ups of several Town properties (Noisy Hole Road, Mashpee Wildlife Refuge) Conservation Department to continue Land Steward Program	Continue conducting and working with others on clean ups. Continue Land Steward program.
PP2 Revised	Reciprocal HHP Collections	Public Works	Continue to provide HHP collections	Held and funded with towns of Sandwich, Falmouth, and Bourne four collections of HHP from residents. Residents able to participate at no direct cost.	Continue collections. Work to increase participation through increased publicity.
PP3 Revised	Permanent HHP Collections	Public Works	Continue to provide permanent collection of certain products at Transfer Station	Collected used oil (2,295 gallons), spent antifreeze (110 gallons), CRTs (47 tons), car batteries (98 total), rechargeable batteries (14 boxes), and mercury products (including over 19,000 LF of bulbs) from residents.	Continue collection.
PP4	Pooper Scoopers	Animal Control	Expand provision of "pooper scoopers" on Town properties beginning in '03	Maintained existing pooper scoopers.	Identify other areas for provision of pooper scoopers and install.
PP5 Revised	Fertilizer/Pesticide Use	Public Works; EOC	Develop and distribute information on effects of fertilizer and pesticides use on water	Use of slow release nitrogen, zero phosphorus fertilizers on Town properties. Environmental Oversight Committee reviewing recommendations for use of low phosphorus fertilizers. No action.	Develop Integrated Pest Management program for Town properties. Work with EOC on recommendations.
PP6	Regulatory Board Education	Public Works; County	Develop educational program for regulatory boards/commissions		Schedule training with DEP Circuit Rider program.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
IDD1 Revised	Outfall Identification	Public Works; GIS	Map drainage and outfall locations	Updated GIS layer as necessary NOTE: Town of Mashpee does not have a piped storm water system. None to date.	Update data layer as necessary.
IDD2 Revised	Prohibition of Illicit Discharge	Public Works	Amend General Bylaw to explicitly prohibit illicit discharge		Develop amendment for Town Meeting to prohibit discharge of other substances as well as prohibition against dumping into road drainage systems. Continue to install drainage during planned road construction projects.
IDD3 Revised	Reduction of Direct Discharge	Public Works	Install drainage system to eliminate direct discharge	Completed Mashpee Neck Road and Great Neck Road North storm water improvements. Storm water improvements in Timberland Shores, Santuit Woods, and John's Pond neighborhoods underway.	
IDD4	Water Monitoring Program	Public Works; Shellfish	Develop volunteer monitoring program to test and identify pollutants and determine potential sources in '06 and '07	Town and Mashpee Wampanoag Tribe monitoring Santuit Pond. The Shellfish Department continued limited testing of shellfish areas. NOTE: The Town does not have a laboratory facility.	Collect information on similar programs in other towns. Work with Mashpee Environmental Coalition and the Mashpee High School on developing a pilot program.
IDD5	Identification of Illicit Discharge	Public Works; Conservation	Identify illicit discharges, contact responsible party, and work to eliminate	Outfalls mapped (IDD1)	Monitor outfalls for illicit discharge.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
CSR1 Revised	Review and Amendment of Existing Regulations	Public Works; Planning; Conservation	Review regulations for existing controls and amend as necessary	Erosion and Sedimentation Control Bylaw in effect (approved at Fall 2005 STM).	Work with Conservation Agent to review and amend Wetlands regulations if necessary.
CSR2 Revised	Inspection Program	Public Works; Planning; Conservation; Building	Develop inspection program to ensure compliance with required controls	None to date.	Begin drafting inspection program for inclusion in applicable regulations as developed by CSR1.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
PCR1 Revised	Review of Existing Regulations	Public Works; Planning; Conservation	Review regulations for existing controls and amend as necessary	See CSR1 above.	See CSR1 above.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
MGH1 Revised	Street Sweeping	Public Works	Continue to sweep Town roads annually	Sweeping of 76± miles of road (all Town roads) scheduled in May 2013 after winter sanding.	Continue sweeping program.
MGH2 Revised	Catch Basin Cleaning	Public Works	Continue to clean catch basins annually	Cleaning of approximately 2,000 catch basins in Fall 2012 and Spring 2013 (some catch basins cleaned each time).	Continue semi-annual catch basin cleaning program.
MGH3 Revised	Spill Training	Public Works	Provide annual training to employees	Provided annual training to DPW employees on spill prevention and spill clean up	Continue training.
MGH4 Revised	Minimization of Road Salt Use	Public Works	Continue to minimize application of salt on roads and parking lots	Used 2:1 ratio of sand to salt during winter ice and snow operations.	Continue with low salt use.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
IDD3 Revised	Water Monitoring Program	Public Works; Shellfish		See #3 above	
IDD2 Revised	Reduction of Direct Discharge	Public Works		See #3 above	

TMDL1	Development and Implementation of BMPs	Public Works; Shellfish	Develop BMPs to address the other sources of pollutants exceeding the TMDLs for a water body in '07	None to date.	None directly proposed. Activities for IDD4 and IDD5 will provide base of information for this BMP in future years.
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7b. WLA Assessment

A WLA has not yet been conducted.

Part IV. Summary of Information Collected and Analyzed

No information collected.

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, 2012 through March 31, 2013)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	nn
Annual program budget/expenditures **	(\$)	\$50,000
Total program expenditures since beginning of permit coverage	(\$)	\$350,000
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 %)	100%
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.)	unknown
Household Hazardous Waste Collection Days		

▪ days sponsored **	(#)	4
▪ community participation **	(# or %)	192 households
▪ material collected **	(tons or gal)	Unknown
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	(%)	90
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	90
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	90
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	0

Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	1
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(# or %)	4
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	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

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)	2
Qty of structures cleaned **	(#)	2,000

Qty. of storm drain cleaned **	(%, LF or mi.)	na
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or 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)	\$12.50/basin
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	3 (contracted)
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	N
• % Structures cleaned with clam shells **	(%)	100
• % Structures cleaned with vector **	(%)	

	(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)	1
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	BUD
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$15,000
• Hourly or lane mile contract rate **	(\$/hr. or in mi.)	\$89/hr
• Disposal cost**	(\$)	Na
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1 (owned) 2 (contracted)
• 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 **	%	0
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Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	50
▪ Herbicides	(lbs. or %)	50
▪ Pesticides	(lbs. or %)	Na
Integrated Pest Management (IPM) Practices Implemented		
	(y/n)	

	(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	33 67
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	No change
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	No change
% 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)	100

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
<ul style="list-style-type: none"> • Treatment units induce infiltration within 500-feet of a wellhead protection area 	# or y/n