Municipality/Organization:Town of Harwich

EPA NPDES Permit Number: MAR041120

MassDEP Transmittal Number: W-062631

Annual Report Number & Reporting Period: Year 13 April 1, 2015 – March 31, 2016

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2016)

Part I. General Information

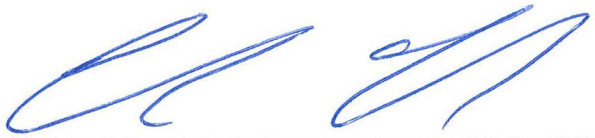
Contact Person: Robert Cafarelli, PE Title: Town Engineer

Telephone #: 508-430-7508
Email:rcafarelli@town.harwich.ma.us

Mailing Address: 732 Main Street, Harwich, Ma 02645

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: Christopher Clark

Title: Town Administrator

Date: 5/20/16

Part II. Self-Assessment

The Town of Harwich has completed the required self-assessment and has determined that our municipality is in substantial compliance with all permit conditions.

The Town is completing the Muddy Creek Bridge project which replaces small culverts with a bridge at Route 28 to better flush the Muddy Creek channel at pleasant Bay.

Construction is nearly complete to upgrade Allen Harbor parking lot drains to comply with MS4 requirements.

The Town has re-constructing the Wychmere Pier which directing all run off into an oil/solids separator before discharge into Wychmere Harbor.

The new Monomoy High School complies with MS4 requirements.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
E1	Channel 18	Assist. Admin	Video Production	Information gathering ongoing interdepartment	Production and display of video
Revised					
E2	Hand outs and flyers	Various Departments	Provided at Public Facilities	Handouts available at various facilities	Continued and additional handouts available at various public facilities
Revised					
E3	Posters	Various Departments	Posters displayed at all public facilities	Posters displayed at all municipal facilities	Continue to display and update posters at Municipal Facilities
Revised					
E4	Town Web Site	Town Planner	Post Homeowners Guide	Guide Posted on Website	Review and update guide as needed
Revised					
Revised					
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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
P1	Town Web site	Assist. Admin	Provide Response	Plan posted and explained on web site	Posting on web site with response area
Revised					
P2	Public hearings	Rules and Regulations various Departments	Enact Rules and Regulations	Rules and Regulations for Subdivision Control and Site Plan review continually reviewed to ensure compliance with Stormwater Regulations	Enforce Rules and Regulations for compliance by applicants
Revised					
P3	Hazardous Waste Collection	DPW Director	Reduce Hazardous waste	Six hazardous waste days per year . 3,300 gallons of hazardous waste collected and disposed of.	Flyers and mailers sent for hazardous waste days
Revised					
P4	Oil, Antifreeze, etc.	DPW Dirctor	Increase amount collected	Increase ease and availability of recycling facility oil – 4800 gallons of oil and antifreeze collected	Facility open daily and antifreeze and oil filter recycling facility available.
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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
D1	Locate discharge to water	Harbormaster	Reduce number of discharges	Mapping of existing drainage system completed	Mapping of system completed and field verification ongoing.
Revised					
D2	Locate discharge areas	Coastal Engineering, consultant	Fly over	Drainage information purchased from consultant in prior years.	Field verification and location of storm water structures and outfalls plotted on base plans with information available on each location
Revised					
D3	Review of existing data and compliance with MS4 requirements	Coastal Engineering Consultants	Update data	Have asked Coastal Engineering for recommendations on further compliance with MS4 requirements.	Enact recommended changes
Revised					
Revised					
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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
S1	Subdivision Control Rules and Regulations Amended	Planning Department	Adopted by Planning Board	Rules and Regulations continually reviewed for compliance with storm water control regulations.	Enforce Rules and Regulations for commercial and industrial construction sites.
Revised					
Revised					
Revised					
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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
C1	Subdivision Control Rules and Regulations Amended	Planning Department	Adopted by Planning Board	Rules and Regulations Amended	New Rules and Regulations implemented and continue to be enforced on all new work
Revised					
C2	Site Plan Regulations amended	Planning Department	Adopted by Planning Board	Regulations amended	New Rules and Regulations implemented and continue to be enforced on all new work
Revised					
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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
G1	Street Sweeping	DPW Director	All Roads Swept Annually	Street Sweeping program reviewed and all roads included for sweeping. Two sweepers in use	All roads to be swept for 2016
Revised					
G2	Review Town Property for Drainage	DPW Director	Locate problems and repair	Continual inspection of drainage structures	Inspections ongoing
Revised					
Revised					
Revised					
Revised					
Revised					
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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
M1	Continue Drainage installation and update	DPW Director	Improve Drainage system	53 drainage systems installed or upgraded	Continuation of Town Installation of drainage systems throughout the Town
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

Part IV. Summary of Information Collected and Analyzed

Harwich is also a member of the Pleasant Bay Resource management Alliance with Chatham, Brewster and Orleans. The Alliance has over 100 volunteers who collect water samples throughout the Bay from June through September.
The samples are analyzed for Nitrates and Phosphates as well as color and turbidity in order to establish a baseline for future testing.

In September 2015, Harwich Natural Resources worked in conjunction with Harwich Conservation Trust to host COASTSWEEP 2015. Volunteers spent the day cleaning debris from beaches. All debris/trash was taken to the Harwich Transfer station in the back of a dump truck.

In March 2016 (several days) - Natural Resources Dept., with the help of Americorps of Cape Cod, cleaned streams related to our herring runs. Connections between Seymour Pond, Long Pond & Hinckleys pond as well as Herring River were cleaned. Debris and fallen trees/limbs were removed in order to assist migrating Herring up the run. Red River connecting to Skinequit Pond was also cleaned.

Waste oil from boats is collected at Saquatucket Harbor. In the past year the oil holding tank was emptied 4 times,
(250 gal, 275 gal, 250 gal, 250 gal). A total of Approx 1,000 gallons of waste oil was collected and hauled away to an approved disposal site.

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, 2014)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	no
Annual program budget/expenditures **	($)	
Total program expenditures since beginning of permit coverage	($)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc) Local & Federal funds		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	90%
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	yes
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	2 mi per year
Shoreline cleaned since beginning of permit coverage	(mi.)	2 mi per year
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	6
▪ community participation **	(# or %)	100%
▪ material collected **	(tons or gal)	4,496 gal
School curricula implemented	(y/n)	yes

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	X	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	(#)	6
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	100
▪ CADD	(%)	0
▪ GIS	(%)	100
Outfalls inspected/screened **	(# or %)	0
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	6
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)	0
% of population on sewer	(%)	0
% of population on septic systems	(%)	100

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)	N
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 **	(#)	375
Qty. of storm drain cleaned **	(%, LF or mi.)	200
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	200+TONS
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Recycle for sand and closed landfill berm

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	
• Hourly or per basin contract rate **	($/hr or $ per basin)	
• Disposal cost**	($)	3000

Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	0
• % 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)	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)	200 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Closed landfill cover berm
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	
• Disposal cost**	($)	3000
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	1
• Vacuum street sweepers specified in contracts	(y/n)	n
• % Roads swept with rotary brush sweepers **	%	90%
• % Roads swept with vacuum sweepers **	%	10%

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	0
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	N/A

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	50salt 50sand
Pre-wetting techniques utilized **	(y/n or %)	no
Manual control spreaders used **	(y/n or %)	yes
Zero-velocity spreaders used **	(y/n or %)	yes
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	15%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	10%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	no
100% of salt/chemical pile(s) covered in storage shed(s)	(y/n)	yes

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	N/A
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	N/A
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	N/A