

Municipality/Organization: Town of Harwich

EPA NPDES Permit Number: MAR041120

MassDEP Transmittal Number: W-062631

Annual Report Number Year 9

& Reporting Period: April 1, 2011 – March 31, 2012

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

Contact Person: Robert Cafarelli, PE

Title: Town Engineer

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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: James R. Merriam

Title: Town Administrator

Date: April 27, 2012

Part II. Self-Assessment

The Town of Harwich 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 II.F Failed to submit annual report on or before May 1. Submitted on September 16

The Town continues to struggle with fiscal restraints due to the economy. The Town took advantage of ARRA funding to improve the drainage at Wychmere Harbor. All storm water will be treated before entering the Harbor. Construction for this project was completed in November, 2011. Another ARRA project to replace two small culverts to box culverts will be complete in May 2012. This project is for salt marsh restoration by better flushing two salt marshes adjacent to the Sound.

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
E1 Revised	Channel 18	Assist. Admin	Video Production	Information gathering ongoing interdepartment	Production and display of video
E2 Revised	Hand outs and flyers	Various Departments	Provided at Public Facilities	Handouts available at various facilities	Continued and additional handouts available at various public facilities
E3 Revised	Posters	Various Departments	Posters displayed at all public facilities	Posters displayed at all municipal facilities	Continue to display and update posters at Municipal Facilities
E4 Revised	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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
P1 Revised	Town Web site	Assist. Admin	Provide Response	Plan posted and explained on web site	Posting on web site with response area
P2 Revised	Public hearings	Rules and Regulations various Departments	Enact Rules and Regulations	Rules and Regulations for Subdivision Control and Site Plan revised earlier to include Stormwater Regulations	Enforce Rules and Regulations for compliance by applicants
P3 Revised	Hazardous Waste Collection	DPW Director	Reduce Hazardous waste	Six hazardous waste days per year appears sufficient.	Flyers and mailers sent for hazardous waste days
P4 Revised	Oil, Antifreeze, etc.	DPW Director	Increase amount collected	Increase ease and availability of recycling facility	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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
D1 Revised	Locate discharge to water	Harbormaster	Reduce number of discharges	Mapping of existing drainage system completed	Mapping of system completed and field verification ongoing.
D2 Revised	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
D3 Revised	Review of existing data and compliance with MS4 requirements	Coastal Engineering Consultants	Update data	MS4 Compliance Report completed and submitted on January 26, 2011.	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 9 (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 currently only apply to new subdivisions and not individual sites. Effort will be made this year to correct this.	New Rules and Regulations to cover 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 9 (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					
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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
G1 Revised	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 2012
G2 Revised	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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
M1 Revised	Continue Drainage installation and update	DPW Director	Improve Drainage system	20 existing systems were updated to Phase II standards. Construction for Wychmere Harbor drainage improvements completed in November, 2011.	Continuation of Town Installation of drainage systems throughout the Town
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

Harwich is also a member of the Pleasant Bay Resource management Alliance with Chatham and Orleans. The Alliance has over 100 volunteers who collect

water samples throughout the Bay from June through September.

Part IV. Summary of Information Collected and Analyzed

The samples are analyzed for Nitrates and Phosphates as well as color and turbidity in order to establish a baseline for future testing.

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)	no
Annual program budget/expenditures ** (Two Projects funded by ARRA, Local & Federal funds)	(\$)	342,279
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)	In process
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)	5,000 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
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	X			X
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				

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	(%)	0
▪ CADD	(%)	100
▪ GIS	(# or %)	6
Outfalls inspected/screened **	(# or %)	6
Outfalls inspected/screened (Since beginning of permit coverage)	(#)	0
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#); and (est. gpd)	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) **	(#)	3
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 vacuor **	(%)	

	(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 In 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

■ Herbicides

■ Pesticides

Integrated Pest Management (IPM) Practices Implemented

(lbs. or %)
(lbs. or %)
(lbs. or %)
(y/n)

0
N/A
N/A
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
% CaCl₂
% MgCl₂
% CMA
% Kac
% KCl
% Sand

50salt
50sand

Pre-wetting techniques utilized **

Manual control spreaders used **

Zero-velocity spreaders used **

Estimated net reduction or increase in typical year salt/chemical application rate

Estimated net reduction or increase in typical year sand application rate **

% of salt/chemical pile(s) covered in storage shed(s)

Storage shed(s) in design or under construction

100% of salt/chemical pile(s) covered in storage shed(s) by May 2008

(y/n or %)
(y/n or %)
(y/n or %)
(±lbs/ln mi.
or %)
(±lbs/ln mi.
or %)
(%)
(y/n or #)
(y/n)

no
yes
yes
15%
10%
100%
no
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