

Municipality/Organization: Town of Plymouth

EPA NPDES Permit Number: MAR 041150

MaDEP Transmittal Number: W-40949

**Annual Report Number
& Reporting Period:** No. 9: March11 – March12

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: David Gould **Title:** Environmental Manager

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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: David Gould

Title: Environmental Manager

Date: 4/25/12

Part II. Self-Assessment

The Town of Plymouth 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 (e) (Vi)** **The Town of Plymouth’s permit eligibility with regard to the Endangered Species Act is still pending at the time of our NOI submission. Our MS4 discharges will have the potential to impact the existence of specific species protected under the Endangered Species Act. We will investigate more on this issue of concern.**
- Part 1.B.2 (k)** **Some discharges have been determined (through DMF Sanitary Survey) to be contributing to exceedance of water quality standards in Plymouth Harbor. These discharges have been made priorities in our NPS Pollution Grant Program.**
- Part 11.B.8** **The DPW Engineering and Planning Departments worked in cooperation to complete the “Guide for the Design of Storm Drainage Facilities in the Town of Plymouth, Massachusetts” (attached). The guide is now part of the Planning Subdivision Regulations as well as DPW policy. The guidelines include, but are not limited to, the following items:**
- **Acceptable Best management Practices with specific reference to State of Massachusetts BMP standards including Low Impact Standards and Conventional Standards for various structures and functions including nutrient removal in harbors and ponds, total suspended solids(TSS) removal in streams, resource crossing regulations and standards including fish passage and openness ratios, and removal rates;**
 - **Plant selection guidelines for vegetated BMPs;**
 - **Water quality and water quantity management guidelines;**
 - **Design guidelines for BMPs Low Impact Design (LID) standards and Conventional Standard Design standards for various structures including those functions listed above;**
 - **Selection criteria for BMPs;**
 - **Incentives for implementing LID practices.**

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
1-1	Educational Flyer	Town Engineer/ Town Manager	Post in all schools & Town buildings	The Town’s Environmental Management Division created an educational watershed management brochure containing tips on reducing pollutants in stormwater runoff. This brochure is made available at Town Hall. The Town’s Environmental Management Division is active in updating the stormwater management webpage which includes interactive computer games for children, educational information on stormwater and background of stormwater permit with reports available for download. The SuAsCo stormwater display have been rotated in various locations through Town Hall and also displayed at DPW Day.
Revised				
1-2	Form Public Education Task Force	Town Engineer/ Environmental Manager	Participation in town wide events & schools	The Town’s Environmental Management Division actively participates in educational opportunities with local watershed groups and citizens concerning stormwater issues. The Town worked with the Herring Ponds Association in distributing over 1,500 watershed management postcards for the Herring Pond Watershed.
Revised	Educational Workshops	Town Engineer/ Environmental Manager	Schedule Workshops	The Town’s Environmental Management Division held a public meeting to discuss stormwater issues and resolution options for an area near Great Herring Pond. The Herring Ponds Watershed Association has held Association meetings to discuss and review stormwater issues in their watershed.
1-3	Air stormwater message on local cable access channel	Town Engineer	Post one message every month	Service announcements for the Town’s Household Hazardous Waste Days are broadcasted spring and fall.
Revised				
1-4	Storm Drain Stenciling	Town Engineer/Conse rvation Comm./Environ mental Manager	Stencil Storm Drains with Messages (25% each year)	The Town continues to utilize volunteers as well as staff to continue the ongoing storm drain marker program.
Revised	Storm drain Markers	Environmental Manager	50 per year	

1-5	Map outfalls and receiving waters	Town Engineer	Map of discharge pipes to waters & wetland (20%/yr.)	Completed
Revised				
Revised				

1a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 9
1a.	Media coverage	Town Engineer	Story coverage on NPS Pollution Projects.	A newspaper article on the upcoming implementation of the Pond Rd stormwater project was printed in the local newspaper. The bioretention and rain garden projects the Town DPW has completed have become an educational piece for various workshops held in the area. These bioretention areas, which are in or close to downtown Plymouth, have become destinations for educational workshops.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goals – Permit Year 9
2-1	Hazardous waste collection	DPW Recycling Coordinator	Twice/yr. (min.)	Two events were held in this permit period.
Revised		DPW		
2-2	Volunteer Water Quality Monitoring	Environmental Management	Level of participation	The Town continues to work with four Pond Associations as well as other interested volunteers for water quality monitoring. The Town funds a portion of the sampling while the remainder is part of the MET grant.
Revised	Rain Barrel Program			The Town coordinated with NSRWA to post on our website the availability of rain barrels.
2-3	Citizen Stormwater Committee/Lake Associations	Town Engineer/Natural Resources Officer	Hold meeting to plan for stormwater issues/mgmt.	The Town continues to work closely with the Herring Ponds Association whom hold numerous meetings regarding water quality and stormwater management issues in the watershed. The Town also works closely with 3 other Watershed Associations and assists on remediating stormwater issues to the best ability.

Revised		Town Engineer/Environmental Manager		
2-4	“Adopt a Storm Drain Program”	Town Engineer/Natural Resources Officer	Participation in Community Cleanups	Several community based cleanups were held during this permit year.
Revised				
2-5	Citizen watch Groups	Town Engineer/Natural Resource Officer	Aid Local Enforcement author. In the identification of polluters	The Town Conservation and Environmental Management Departments continue to work closely with the Network of Open Space Friends in coordinating cleanups, stewardship as well as many other activities.
Revised				
Revised				

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9
3-1	Develop illicit dischg. id. & elim. plan	Town Engineer/BOH/Environmental Manager/Planning Bd.	Make recommendations for the plan	The Town DPW Sewer Division utilizes the Illicit Discharge and Elimination Plan under the Sewer Division Rules & Regulations.
Revised	Screen outfalls for Illicit connections	Public Works	Screen outfalls by Winter 07-08	
3-2	Drainage Network Mapping	Town Engineer	Drainage of urbanized areas	Mapping of outfalls and catch basins were completed in previous years.
Revised				

3-3	Public Info. on illicit connections/illegal discharges	Town Engineer/Board of Health	Educating the public-hazards associated with these activities	Section twelve of the Sewer Division Rules & Regulations has been approved and states that surface runoff is prohibited.
Revised				
3-4	Develop/Modify general illicit discharge bylaw	BOH/Planning Board	Developing/modifying the plan	The guide for Storm Drainage Facilities that address illicit discharges is now being utilized.
Revised				
3-5	Present Bylaw for town meeting action	BOH/Planning Board	Make presentations for town Meeting action	Section twelve of the Sewer Division Rules & Regulations has been approved in previous years and states that surface runoff is prohibited. The Guide for Storm Drainage Facilities was adopted in 2008 by Planning Board, DPW & Inspectional Services and is being utilized.
Revised				

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9
4-1	Wetlands by-law for stormwater management	Conservation Commission	Town Meeting Action	This by-law is now being enforced by the Conservation Commission.
Revised				
4-2	Subdivision regulations for stormwater management	Planning Board	Change subdivision Rules and Regulations	The Guide for Storm Drainage Facilities was adopted in 2008 by Planning Board, DPW & Inspectional Services and are now being utilized.
Revised				

4-3	Erosion control by-law	Planning/Zoning Board of Appeals	Town Meeting Action	The Guide for Storm Drainage Facilities was adopted in 2008 by Planning Board, DPW & Inspectional Services and are now being utilized.
Revised				
4-4	Reporting hotline	Town Engineer/Planning Board	Set up procedures in response to info submitted by public	Residents contact DPW Highway Administration. The information is submitted to the Highway Superintendent for remediation.
Revised				
4-5	Site plan review/constr. Site inspection program	Town Engineer, Planner/Building Inspector	Review all plans, inspect, & visit construction site	These regulations are now being utilized.
Revised				

4a. Additions - Projects

4a-1	Drainage Project – Nickerson Street	DPW	Drainage Project at 18 Nickerson Street was constructed by Town forces installing two precast catch basins with a four foot sump and eliminator HDPE pipe, manhole, and leaching structures.
4a-2	Drainage Project – Carver Road	DPW	Drainage Project at 230-253 Carver Road was constructed by Town forces installing two precast catch basins with four foot sump and eliminator connecting to a manhole with HDPE pipe.
4a-3	Drainage Project – Plymouth Street	DPW	Drainage Project was constructed by Town forces installing three double grates precast catch basins with four foot sump and eliminator connecting to a manhole with HDPE pipe.
4a-4	Drainage Project – John Alden Road	DPW	Drainage design beginning at Charlemont Road and running to Priscilla Beach Road to eliminate an existing outfall without benefit of a drainage easement. This work is constructed by Town forces and includes the installation of a series of precast catch basins with four foot sumps and eliminators, gutter inlets connected to manholes with four foot sumps and eliminators connected to eighteen inch HDPE pipe tying to an existing outfall opposite Cochituate Road.
4a-5	Drainage Project – Water Street	DPW/Environmental Management	Design for the Water Street bridge is nearing completion and includes stormwater improvements to Town Brook and Plymouth Harbor.
4a-6	Drainage Project – Pond Road	DPW/ Environmental Management	Design for the Pond Road Stormwater Drainage Implementation Project is complete and targets a suite of best management practices to manage roadway and residential runoff. The BMP's include construction of a bioretention treatment area, installation of multiple oil-water separators, catch basins and recharge chambers.

4a-7	UST Removal – Town Wharf / Plymouth Harbor	Environmental Management	Received funding at Fall Town Meeting to remove 5 UST's at Town Wharf / Plymouth Harbor.
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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 9
5-1	Stormwater Mange. By-law- Development Construction Site Runoff Control and Pretreatment	Planning/Zoning Bd. & Conservation Commission	Strategies to be developed	The Guide for Storm Drainage Facilities is now being utilized by Planning Board, DPW & Inspectional Services.
Revised				
5-2	Stormwater Mange. By-law Development Post Construction Stormwater Management	Planning/Zoning Bd. & Conservation Commission	Formulation of the By-law	The Guide for Storm Drainage Facilities is now being utilized by Planning Board, DPW & Inspectional Services.
Revised				
5-3	Conservation Comm. Wetlands By-law	Planning/Zoning Bd. & Conservation Commission	Presentation for Town Meeting Action	These regulations are now being utilized.
Revised				
Revised				
Revised				

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
6-1	Street sweeping program	Highway	Spring annual sweeping record sweeping as needed	Completed annual sweeping program. Sweeping program is now in place.
Revised				
6-2	Catch basin/drain cleaning	Highway	500 per year (record)	1500 catch basins were cleaned during the permit period.
Revised			Clean all catch basins once every 3 years.	
6-3	Annual training at town facilities	Town Engineer	Conduct training, prepare literature, record attendance	
Revised				
6-4	Policy Guide	Town Engineer	Developing the Policy Guide	The Guide for Storm Drainage Facilities was adopted in 2008 by Planning Board, DPW & Inspectional Services and is being utilized.
Revised	O & M program for town-owned structural BMP's		Implement O & M program by Spring 06	The Town rehabilitated an existing jet rod truck for use in O &M of stormwater structures. This allows the Town to have two such pieces of equipment.
6-5	Permit filing for the town's activities related to Phase II	Town Engineer	Permits Filed as needed	The Town has developed a general stormwater operation and maintenance permit in coordination with Engineering and the Conservation Commission.

6a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 9
6.6	Vehicle washing	Public Works	Implemented washing policy and constructed washing facility.	Continuing program.

6.7	Implement Integrated Pest Management (IPM) at Town Facilities	Parks & Recreation	Train facility employees and practice IPM town-wide by Summer 2008.	Inventory current chemicals, quantities, and practices used on town parcels. Training has not been completed.
6.8	Development of Spill Prevention, Control and Countermeasure Plan (SPCC)	DPW	Complete a SPCC plan.	The SPCC for the DPW facility has been completed.
6.9	Environmental Audit at DPW Facility	DPW/Environmental Management	Complete the Environmental Audit of the DPW Facility.	The Environmental Audit of the DPW Facility at Camelot Park has been completed.
6.10	UST for oil and waste at DPW Facility	DPW	Installation of UST	Installation of UST's for oil and waste oil at DPW Facility.

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)	Planned Activities – Permit Year 9
	Development of the Nitrogen Management Analysis for Plymouth-Duxbury Harbor-Kingston Bay Embayment System is underway.	DPW – Environmental Management		The Town completed the Land Use Data Collection and Watershed Delineation for the MEP Harbor Analysis and is under contract for the Cumulative Nitrogen Loading Determination. The Town has completed 4 years of monitoring for the program as well as completed 3 of the 8 Tasks analysis and funded another Task in 2009-2010.
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7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

As noted in the Mapping Section below and in the attached map the town has completed the outfall mapping and is 100% complete with the catch basin mapping.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures	(\$)	

Education, Involvement, and Training

Estimated number of residents 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	(7 mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(2 days)	
▪ community participation	420 vehicles	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	
Electronic Waste Day sponsored by Samsung		
○ days sponsored	(1 day)	
○ material collected	(40.44 tons)	

Legal/Regulatory

	In Place Phase II	Prior to Review	Prior to Drafted	Under Adopted
Regulatory Mechanism Status (indicate with “X”)				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				
Accompanying Regulation Status (indicate with “X”)				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				

Mapping and Illicit Discharges

Outfall mapping complete	(100%)	
Estimated or actual number of outfalls	(#350)	
System-Wide mapping complete	(100%)	
Mapping method(s)		
▪ Paper/Mylar	X	(NA)
▪ CADD	X	(NA)
▪ GIS		(100%)
Outfalls inspected/screened		(100%) mapped and conditions noted
Illicit discharges identified		(#0)
Illicit connections removed		(#0) (est. gpd)
% of population on sewer		(5%)
% of population on septic systems		(95%)

Construction

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	
Fines collected	(# and \$)	
Complaints/concerns received from public	(#)	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections completed	(# or %)	
Estimated volume of stormwater recharged	(gpy)	

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)	
Total number of structures cleaned	(#1500)	
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	(\$)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	

Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

Anti-/De-Icing products and ratios	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	
Storage shed(s) in design or under construction	(y/n)	