

**Municipality/Organization:** Town of Dennis

**EPA NPDES Permit Number:** MAR041103

**MADEP Transmittal Number:** W-041145

**Annual Report Number  
& Reporting Period:** No. 10: April 2013-March 2014

## NPDES PII Small MS4 General Permit\ Annual Report

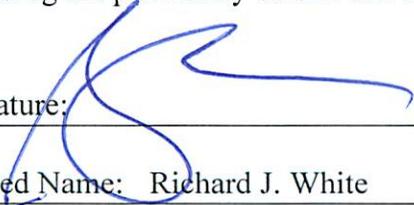
### Part I. General Information

**Contact Person:** Joseph A. Rodricks **Title:** Town Engineer

**Telephone #:** 508-760-6145 **Email:** jrodricks@town.dennis.ma.us

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:** Richard J. White

**Title:** Town Administrator

**Date:** 4/30/14

## Part II. Self-Assessment

The Town of Dennis has completed the required self-assessment and has determined that our municipality is currently in compliance with all permit conditions. During the past year various responsible Town Departments have continued to educate the public on protecting our waterways, monitored and enforced protection standards. Updates to the stormwater infrastructure database were also made. A program of installing BMPs and other pollution mitigation measures on town roads and paved parking lots was continued this past year with the goal of pollution reduction and improved water quality.

## 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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
1.1	Provide literature & pamphlets	Director of Natural Resource, Karen Johnson,	Provide literature w/ off-road & shellfish permits	Maintained brochures in information tree in office with the theme “Think Globally-Act Locally” and educational kiosks at Crowes Pasture and Chapin Beach..	Continue to expand and update brochure selection. Maintain educational material in the kiosks at Crowe’s Pasture Conservation Area and Chapin Beach ORV area regarding public and conservation management. Maintain educational information provided on the Town of Dennis Natural Resources Department web page.
Revised					
1.2	Provide Public awareness classes	Shellfish Officer Chris Southwood	Provide Information to school children	CRABS. (Commercial Recreational Association for Better Shellfish), a local volunteer group, held educational events to promote shellfish, clean herring runs, quahog seeding, oyster farming, and other educational instruction with a web site <a href="http://www.denniscrabs.com">www.denniscrabs.com</a> Provided educational program at the Dennis Public Library.	Continue to expand CRAB volunteer programs and activities aimed at educating public on aqua culture and pollution of estuaries.
Revised					
1.3	Provide Literature & Information	Town Engineer J. Rodricks	Provide literature & Information to public	Posters distributed by Cape Co Groundwater Guardian Project displayed at Dennis DPW building. Maintained webpage with link to NPDES website..	Continue to improve website to include information and project related information. Continue to work with other Cape communities in public outreach under the Barnstable County Public Works Association.
Revised					

## 1a. Additions

1.4	Provide Literature and Information	Town Planner, Daniel Fortier	Provide information to the public through the Town of Dennis Planning Department Weblog	The Planning Department has made use of the Weblog to reach out to residents, property owners and builders to keep them aware of local issues. Stormwater Management and other site design issues are addressed regularly on the Weblog	Continue to provide information on site design and stormwater issues through the Weblog.
1.5	Provide literature and information	DPW Supt. D. Johansen	Provide "Project Storm" bookmarks and workbooks to children as well as pamphlets for adults.	DPW sponsored a booth at 2013 National Night Out.	Continue to have educational booth at National Night Out and other community education events.
1.6	On-going educational programs on land stewardship, water quality & shellfishing.	Natural Resource Dept. Karen Johnson Director,	Participate in local fairs and educational events to provide information.	"Learn to Shellfish Day"; snow fencing installed on beach and conservation areas. Cleanup of beach and conservation areas.	Continue to hold and expand curriculum and work with AmeriCorp.

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
2.1	Sponsor & Advertise Household Hazardous Waste Collection Days	Board of Health, Dennis Water District, DPW	Encourage proper disposal of hazardous materials	Two (2) Household Hazardous Waste Collection Days held: June 1, 2013 with 3900 gallons and 18,860 pounds collected; and Sept. 14, 2013 with 3265 gallons and 13,210 pounds collected.	Conduct Three (3) Household Hazardous Waste Collection Days Continue to do advertisements & mailings to residents and businesses that are small quantity generators
Revised		Terry Hayes, Health Director			
2.2	Volunteer Coast Sweep		Annual Beach Cleaning	Spring and fall cleanup of all town beaches by volunteers.	Expand volunteer network to monitor and expand sweep to include coastal conservation areas.
Revised		Dustin Pineau, Director of Recreation	Bi-annual Town beach cleaning		Develop an “Adopt a Beach” program.
Pet waste management	Lori Miranda, Animal Control Officer Dennis Police Dept.	Provided disposal mitts and waste receptacles at Town Beaches	Dog Waste Mitt dispensers installed on public parks, beaches and conservation areas.	Increased fines for Dog Waste By-law and added more stringent rules that require anyone with an animal have dog mitts or bags on their possession. Mitt dispensers maintained at 17 locations. Completed Fresh Pond Dog Park work, Mayflower Beach and West Dennis Beach Resident Parking area.	Continue to maintain dog waste dispensers. Add dispensers to Bayview Beach & Flax Pond,
Revised			Create “Waste Disposal” By-law		
2.4	Proper Disposal of Boat Septic Storage Tanks	Harbor Master-	Notify Boat Owners annually	Posted notices and flyers sent promoting pump-out facility installed at Sesuit Harbor.	Continue to promote use of Sesuit Harbor pump-out in several local magazines and direct notifications to boaters. Continue permitting process town wide dredging projects to increase tidal flushing.
Revised	<i>Develop dredge program for Swan Pond River and Bass River to increase flushing</i>	Terrence Clen		Louis Berger Inc. Consulting Engineer, continued application for a 10 year comprehensive dredging permit for Bass River, Swan Pond River & Chase Garden Creek.	Finalize and seek approval for 10 year dredge permit.

### 2a. Additions

2.5	Enforcement Agency	Police Chief Michael. Whalen	Enforcement of Sate Illegal Disposal Law	Enforcement of illegal dumping laws.	Add literature and information on illegal activities to Department web site.
2.6	Volunteer Land Steward Program	Natural Resources - Karen Johnson	Quarterly land inspections	Inspections and clean up of conservation lands quarterly.	Expand volunteer network to monitor and clean conservation areas periodically.

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
3.1	Identify Discharge and Map Discharges	Town Engineer- Joseph Rodricks	Identify & prioritize	Continued to update Outfall map to include spillways and outfalls into non-Federal waters.	Continue GPS all outfalls and spillways and add to database.
Revised				Stormwater Mitigation Plan for Dennis Port Center/Division St outfall pipe in progress.	Seek funding for stormwater mitigation of Dennis Port Center/Division St outfall system at Pound Pond.
3.2	Notify Owners of Violation eliminate using BMP	Town Engineer Joseph Rodricks	Identify & eliminate all known discharges.	Monitored for illicit discharges.	Continue to monitor and investigate any reported or uncovered illicit stormwater discharges.
Revised					
3.3	Enforcement Agency	Police Chief Michael Whalen	Enforcement of Sate Illegal Disposal Law	Continued to enforce illegal dumping laws	Add literature and information on illegal activities to Department web site.
Revised					
3.4	Illicit Discharge/hazardous Spill investigation	Terry Hayes, Health Director	Identify and investigate	Identified and investigated four (4) illicit discharge complaints. One complaint represented a commercial dishwasher discharging into Weir Creek, while the other complaints represented the is discharge of residential sump pumps into town storm drains. All complaints have been resolved.	Continue to monitor for illicit discharge/hazardous spills.
Revised					
Revised					
Revised					

#### 3a. Additions

3.5	Identify and GIS Map Stormwater discharges	Alicia Messier GIS	Identify & prioritize	Continued to update mapping and database.	Continue to update mapping and database.

#### 4. Construction Site Storm Water Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
4.1	Propose By-law	Dennis Board of Selectmen-	Storm water & erosion control Standards & Enforcement	Stormwater Management Rules and Regulations in effect. Stormwater Permit required for two site developments.	Review policy and update as needed.
Revised	<i>Storm water Management By-Law</i>	Chair Paul McCormick			
4.2	Order of Conditions	Conservation Commission- George Macdonald, Chairman	Eliminate Runoff & erosion during construction.	Fresh and Cedar Pond Reports completed.	Continue sampling and water quality investigations of Dennis ponds.
Revised					
4.3	Subdivision Rules & Regulations	Planning Board Robert Mezzadri, Chair	Eliminate runoff & erosion during construction.	Monitored all subdivision plans for possible storm water runoff.	Continue to monitor projects for and the elimination of storm water runoff
Revised					

#### 4a. Additions

4.3	Estuary study	Dennis Comprehensive Wastewater Management Task Force.  Natural Resource Dept.	Evaluate Swan River, Swan Pond, Sesuit Creek and Chase Garden Creek and establish Total Maximum Daily Limit for nitrogen loading	Conducted water sampling using DNR staff and volunteers under the direction of the Department of Natural Resources as part of the DEP/SMAST study to establish the Total Maximum Daily Limit for Nitrogen Loading for estuaries.	Conducting water sampling using Department of Natural Resources staff and Water Quality Committee volunteers under the direction of the Department of Natural Resources until DEP/SMAST study complete.
4.4	Zoning	Zoning Board of Appeals Ernie Oliveira, Chair & Planning Board, R. Mezzadri, Chair	Eliminate runoff and erosion during construction	Monitored all commercial development for possible storm water run-off. Makes recommendations on storm water design and construction.	Continue to monitor projects for and the elimination of storm water runoff.
4.5	Pond and Lake Stewards (PALS) Study	Water Quality Advisory Committee, Suzanne Brock, Chair.	Evaluate water quality in Dennis ponds.	Scargo Lake Water Quality Management Report completed.	Continue sampling and water quality investigations of Dennis ponds including Cedar Pond.

### 5. Post-Construction Storm Water Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
5.1	Proposed By-Law	Board of Selectmen	Storm water & Erosion Control Standards & enforcement	Continued oversight of the Stormwater By-law	Monitor Stormwater Management By-law and amend Rules and Regulations as necessary.
Revised	<i>Stormwater By Law and Regulation</i>	Joseph Rodricks Town Engineer			
Revised					
Revised					

Revised					
Revised					
Revised					

**5a. Additions**

5.2	Subdivision Rules & Regulations	Planning Board Rob. Mezzadri, Chair	Require conformity in all subdivisions with the Storm Water and Erosion Control Standards	Require all subdivisions to meet Town of Dennis Storm Water requirements.	Continue to require all subdivisions to meet Town of Dennis Storm Water requirements
5.3	Zoning	Zoning Board of Appeals Ernie Oliveira, Chair & Planning Board, R. Mezzadri, Chair	Require conformity in all commercial developments with the Storm Water and Erosion Control Standards	Require applicable commercial projects to meet Town of Dennis Storm Water requirements.	Continue to require all applicable commercial projects to meet Town of Dennis Storm Water requirements.

## 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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
6.1	Street sweeping/ basin cleaning/ roadside mowing	DDPW Superintendent- D. Johansen	Maintenance of Drainage	Maintain Stormwater BMP for the Bass River/Kelly’s Bay/Follin’s Pond area. Received \$8,000 additional funding for catch basin cleaning and increased cleaning accordingly.	Continue to request additional funding to increase number of basins cleaned. Beneficial Use Determination from MASSDEP (to dispose of catch basin cleanings on municipal property which would reduce per basin cost and increase number of basins cleaned) under review. Continue to maintain all Stormwater BMPs for the Bass River/Kelly’s Bay/Follins Pond area
Revised					
6.2	Existing enclosed salt storage.	DPW Superintendent D. Johansen	Exposure reduction	Continued to maintain existing enclosed operations.	Maintain existing enclosed operations.
Revised					
6.3	Regular vehicle maintenance	DPW Superintendent- D. Johansen	Exposure reduction	Regular vehicle maintenance instituted.	Continue to refine and update maintenance programs. Implement “Equipment Tracker” operations program.
Revised					
6.4	Existing enclosed vehicle storage & wash bay.	DPW Superintendent- D. Johansen	Exposure reduction	Maintained existing enclosed vehicle and wash bay.	Maintain existing enclosed operations.
Revised	<i>Schedule weekly vehicle cleaning &amp; assessment.</i>				
6.5	Invite NEIWPC to speak	DPW Superintendent- D. Johansen	Provide information to employees	Enroll employees into seminars and demonstrations promoted by Bay State Roads and other organizations as they are scheduled.	Continue to enroll employees into seminars and demonstrations promoted by Bay State Roads and other organizations as they are scheduled.
Revised	<i>Employees education</i>		Exposure reduction.		
6.6	Tidal stream cleanup.	Brian Everett, Land Manager, DNR	Pollutant removal	Instituted Bound Brook and Scargo Lake volunteer steward program to monitor herring run. Worked with	Repeat and expand cleanup and monitoring program at Bound Brook and other locations including Scargo

Revised		Karen Johnson Director DNR		CRABS program to clean up Sesuit Creek herring run.	Lake.
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**6a. Additions**

6.7	Control boat waste discharge	Terrence Clen Dennis Harbormaster	Exposure Reduction		Continue to seek funds for purchase a solar operated pump out barge, provided through grant program under the Clean Waters Act. This pump out barge if approved will provide better pump out access for boats using Bass River and Nantucket Sound which will improve water quality.
6.8	Upgrade all beach bathhouse septic systems.	Dustin Pineau, Director of Recreation.	Exposure Reduction	Upgraded septic system for Corporation Beach Bathhouse. Also relocated it further from beach to provide additional separation.	Upgrade West Dennis Comfort Station #1 septic system.
6.9	Erosion Control	David Johansen, DPW Supt.	Prevent soil erosion from coastal and inland banks	Installed retaining wall, Rosa Regosa and beach grass along Bayview Beach parking area.	Install porous pavement at along West Dennis Beach parking to prevent erosion due to runoff.

**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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – next Permit Year
7.1 Revised	Installation of leaching drainage systems	Town Engineer J. Rodricks	Exposure reduction	No new BMP's installed. One repair on Airline Road at Cedar Pond.	Install remediation measures on New Boston Rd ( Chase Garden Creek), Rte 134 (unnamed wetland), Chase Avenue( Nantucket Sound), West Dennis Beach and Airline Rd at Baker's Pond.
7.2 Revised	Water quality sampling	Natural Resources Dept. Karen Johnson, Director	Ensure water quality	SMAST completed water quality data reports for Fresh and Cedar Ponds.	Continue and refine sampling program. Conduct monitoring in 2014.
7.3 Revised	Use compost material to stabilize shoulders	DPW Superintendent- D. Johansen	Erosion control	Improved slope stabilization where necessary.	Continue and improve slope stabilization where necessary
7.4 Revised	Coastal Pollutant Remediation Program	Town Engineer J. Rodricks	Exposure Reduction and/or elimination	Dennis Port Center/Division St outfall pipe to Pound Pond and Nantucket Sound design and permitting continued.	Continue to seek MassDOT assistance for Rte 28 at Bass River design and mitigation measures .
7.5 Revised	Weekly Water Sampling of Beaches <i>Water sampling o beaches during summer weeks.</i>	Town Health Director Terry Hayes	Ensure water quality	Weekly sampling of 22 beaches June thru August. Additional tests taken on days of 1" or greater rainfall. During summer of 2013 there were thirty-three (33) beach closures resulting in thirty-three (33) days closed	Repeat testing program.
7.6 Revised	Salt Marsh Restoration program	Director of Natural Resource K. Johnson	Increase tidal flushing and improve fish and wildlife habitat.	Monitored and maintained herring runs. Conducted vegetation removal with volunteers.	Continue to coordinate with state agencies, COE and Town of Yarmouth for Bass River Railroad Bridge re-design. Pursue funding for post construction evaluation of Sesuit Creek/Bridge St Restoration project.

**7a. Additions**

7.7	Installation of Porous Pavement	Town Engineer J. Rodricks	Exposure Reduction	No action taken.	Propose installation of porous pavement as needed. West Dennis Beach main parking lot off Weir Creek. Lighthouse Road at Weir Creek.

### 7b. WLA Assessment

In 2002 the Town identified the Bass River and Kelley's Bay area as the highest priority for immediate implementation of BMP solutions. Working with the Town of Yarmouth, most outfall locations along this water body have been identified and BMP solutions installed. The Town continues to seek funds to address mitigation measures for the MassDOT Route 28 outfall which flows into Bass River and the reconstruction of the Railroad bridge over Bass River to improve flushing. The Town has also identified Swan Pond and Swan Pond River as a high priority for an area of concern and is continues to institute mitigation measures and fund the dredging of the river mouth to increase flushing.

Based on the evaluation of the Division Street drainage system that drains a significant portion of Dennis Port Center into Pound Pond and a tidal creek outlets into Nantucket Sound, the town continues to pursue and fund mitigation measures to eliminate pollutant sources prior to their entering the system. Current plans for 2014 included additional subsurface leaching systems along a portion of Upper County Road and Telegraph Road to eliminate first flush pollutants prior to them entering the system.

#### Part IV. Summary of Information Collected and Analyzed

A total of 22 Town beaches were tested on a weekly basis during the months of June, July and August 2013 and resulted in thirty-three (33) days of beach closures

#### Part V. Program Outputs & Accomplishments (OPTIONAL)

##### Programmatic

Storm water management position created/staffed	(y/n)	yes
Annual program budget/expenditures	(\$)	<\$10,000

##### Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	5 %
Storm water management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	No
Shoreline clean-up participation or quantity of shoreline miles cleaned	( yes)	3.2 mi
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	2
▪ community participation	(%)	617 households
▪ material collected	(tons or gal)	7165 gal
School curricula implemented	(y/n)	No


**Legal/Regulatory**

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

**Mapping and Illicit Discharges**

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	90
System-Wide mapping complete	(%)	80%
<b>Mapping method(s)</b>		
▪ Paper/Mylar	(%)	100 %
▪ CADD	(%)	90 %
▪ GIS	(%)	70 %
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	0 %
% of population on septic systems	(%)	100 %

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### Construction

Number of construction starts (>1-acre)		8
Estimated percentage of construction starts adequately regulated for erosion and sediment control		100
Site inspections completed		32
Tickets/Stop work orders issued		0
Fines collected		0
Complaints/concerns received from public		0

### Post-Development Storm Water Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction storm water control	(%)	100
Site inspections completed	(# or %)	0
Estimated volume of storm water recharged	(gpy)	0

### Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1 every 3 yrs
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1 every yr
Total number of structures cleaned	(#)	1242
Storm drain cleaned	(LF or mi.)	20 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(tons)	4,968
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Landfill
Cost of screenings disposal	(\$)	0

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)	3 x /yr
Qty. of sand/debris collected by sweeping	(lbs. or tons)	1372 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Landfill
Cost of sweepings disposal	(\$)	0
Vacuum street sweepers purchased/leased	(#)	1
Vacuum street sweepers specified in contracts	(y/n)	0

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	5%
▪ Herbicides	(lbs. or %)	5%
▪ Pesticides	(lbs. or %)	5%

Anti-/De-Icing products and ratios	% NaCl	50%
	% CaCl <sub>2</sub>	32%
	% MgCl <sub>2</sub>	0%
	% CMA	0%
	% Kac	0%
	% KCl	0%
	% Sand	50%
Pre-wetting techniques utilized	(y/n)	y
Manual control spreaders used	(y/n)	y
Automatic or Zero-velocity spreaders used	(y/n)	y
Estimated net reduction in typical year salt application	(lbs. or %)	0%
Salt pile(s) covered in storage shed(s)	(y/n)	y
Storage shed(s) in design or under construction	(y/n)	n