

Municipality/Organization: Town of Dennis

EPA NPDES Permit Number: MAR041103

MADEP Transmittal Number: W-041145

**Annual Report Number
& Reporting Period:** No. 9: March 2011-March
2012

NPDES PII Small MS4 General Permit\ Annual Report

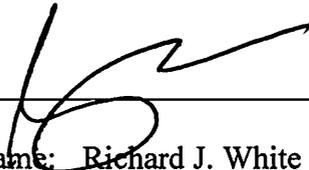
Part I. General Information

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:  4-30-2012

Printed Name: Richard J. White

Title: Town Administrator

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 and installed various BMPs to improve water quality standards.

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 Alan. Marcy	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 www.denniscrabs.com 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. Participated as active member in Barnstable County “PROJECT STORM” 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 “Project Storm” initiative
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 2011 National Night Out event and April 2011 Community Fair.	Continue to have educational booth at Community Fair and National Night Out.
1.6	Week long educational program called "From Shoop to Shore"	Natural Resource Dept. Karen Johnson Director,	Hold inaugural meeting on various shore related topics.		Continue to hold and expand curriculum.

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	Encourage proper disposal of hazardous materials	Two (2) Household Hazardous Waste Collection Days held: June 4, 2011 with 2256 gallons and 10,475 pounds collected; and Sept. 10, 2011 with 1570 gallons and 8685 pounds collected.	Two (2) Household Hazardous Waste Collection Days to be held June and September 2012. 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		
Pet waste management	Animal Control Officer-	Provided disposal mitts and waste receptacles at Town Beaches	12 Additional Dog Waste Mitt dispensers installed. Additional cases of mitts purchased.	Improvements made to prevent including stormwater runoff BMPs for Fresh Pond Dog Park and increased enforcement hours for enforcement of ordinances prohibiting animals on the beaches.	Pet waste management Proposed higher fines for dog waste violations and restrictions in public places. This will be discussed at ATM in May 2012 Complete Fresh Pond Dog Park work
Revised			Improvements to Dog Park and increased enforcement hours for enforcement of ordinances prohibiting animals on the beaches. 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			

2a. Additions

2.5	Enforcement Agency	Police Chief Michael Whalen	Enforcement of State Illegal Disposal Law	Enforcement of illegal dumping laws – 45 call in CY 2009 and 35 calls in CY 2010. 11 calls to date in 2011.	Add literature and information on illegal activities to Department web site.
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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.
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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. .
Revised				Stormwater Mitigation Plan prepared for Dennisport Center/Division St outfall pipe.	Seek funding for stormwater mitigation of Dennisport Center/Division St outfall system.
3.2	Notify Owners of Violation eliminate using BMP	Town Engineer Joseph Rodricks	Identify & eliminate all known discharges.	There was one illicit discharge pipe found during period on New Boston Road. Notified Health Dept for corrective measures.	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 one (1) illicit discharge. Discharge pipe has been capped and/or removed.	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 updating GIS mapping.	Conduct aerial photography and map all drainage components on GIS mapping system Continue to update mapping with new discharge points.

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 one site development.	Seek approval at town meeting for penalties on violations.
Revised	<i>Storm water Management By-Law</i>	Chair Paul McCormick			
4.2	Order of Conditions	Conservation Commission-Donald Waldo Chairman	Eliminate Runoff & erosion during construction.	Issued Orders of Conditions for construction projects with no discharge allowed.	Continue to monitor projects for and the elimination of storm water runoff.
Revised					
4.3	Subdivision Rules & Regulations	Planning Board Rob. 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/SMASST 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/SMASST 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	Evaluate water quality in Dennis ponds.	Conducted water sampling using WQAC volunteers as part of monitoring water quality in Dennis ponds.	Continue SMASST contract for sample testing and development of a lake management plan for Scargo Lake.

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. Seek enforcement penalties.
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	Continued to evaluate and prioritize basins to be cleaned targeting areas of greatest potential impact of estuaries.	Update catch basin and street sweeping program prioritizing basins in areas of greatest potential impact on water bodies and estuaries. Seek funding to increase number of basins cleaned.
Revised				Maintain Stormwater BMP for the Bass River/Kelly's Bay/Follin's Pond area	Continue to maintain all Stormwater BMPs for the Bass River/Kelly's Bay/Follins Pond area
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 & 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.	Shellfish Officer A. Marcy	Pollutant removal	Instituted Bound Brook volunteer steward program to monitor herring run. Worked with CRABS program to	Repeat and expand cleanup and monitoring program at Bound Brook and other locations including Scargo

Revised		Karen Johnson Director DNR		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		Design and purchase a solar operated pump out barge, provided through the 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.
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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	Completed installation of several BMPs on Lower County Rd ((Weir Creek estuary); Greenland Circle(Cedar Pand); Aunt Julia Ann’s Rd and Landing (Bass River) and West Dennis Beach rotary(Weir Creek)	Install remediation measures on New Boston Rd (Chase Garden Creek)
7.2 Revised	Water quality sampling	Natural Resources Dept. Karen Johnson, Director	Ensure water quality	SMAST contracted to develop lake management plan for Scargo Lake on-going.	Continue and refine sampling program. Conduct monitoring in 2012.
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	Worked with consultant to pursue potential grant money for mitigation at Dennisport Center/Division St outfall pipe.	Seek funding for Rte 28 at Bass River design and mitigation measures on Division St outfall pipe into Pound Pond (tidal, Nantucket Sound).
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 2011 there were eleven (11) beach closures resulting in sixteen (16) 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. Coordinated with state agencies, COE and Town of Yarmouth for Bass River Railroad Bridge re-design	Continue to ordinate with state agencies, COE and Town of Yarmouth for Bass River Railroad Bridge re-design.

7a. Additions

7.7	Installation of Porous Pavement	Town Engineer J. Rodricks	Exposure Reduction	Porous pavement installed as part of the West Dennis Beach Rotary improvement (Weir Creek).	Propose installation of porous pavement as needed.

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. The Town has also identified the MassDOT Route 28 outfall into Swan Pond River as a stormwater pollutant source.

The evaluation of the Division Street drainage system that drains a significant portion of Dennisport Center into Pound Pond, a tidal creek continued during the last year. All connections to the system have been identified, screened and mapped. No illicit connections into the system were found. A final report with recommended BMPs for stormwater management is due in September 2011.

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 2011 and resulted in three (3) days of beach closures.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Storm water management position created/staffed	(y/n)	yes
Annual program budget/expenditures	(\$)	\$100,000

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	(%)	613 households
▪ material collected	(tons or gal)	4826 gal

School curricula implemented	(y/n)	No

Legal/Regulatory

In Place
Prior to
Phase II Under
Review Drafted 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

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	90
System-Wide mapping complete	(%)	80%
Mapping method(s)		
▪ Paper/Mylar	(%)	100 %
▪ CADD	(%)	70 %
▪ GIS	(%)	70 %
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified	(#)	1
Illicit connections removed	(#) (est. gpd)	1
% of population on sewer	(%)	0 %
% of population on septic systems	(%)	100 %

Construction

Number of construction starts (>1-acre)		7
Estimated percentage of construction starts adequately regulated for erosion and sediment control		100
Site inspections completed		35
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)	0K

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	(#)	1507
Storm drain cleaned	(LF or mi.)	50 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(tons)	6,376
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)	1300 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 ₂	32%
	% MgCl ₂	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