Municipality/Organization: **Town of Dennis**

EPA NPDES Permit Number: **MAR041103**

MaDEP Transmittal Number: **W- 041145**

Annual Report Number & Reporting Period: **No. 1: March 04-March 05**

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: Robert F. Canevazzi

Title: Town Administrator

Date: April 29, 2005

Part II. Self-Assessment

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

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year
1.1	Provide literature & pamphlets	Natural Resource Officer- George MacDonald	Provide literature w/ off-road & shellfish permits	Brochures in information tree in office and applicants directed to same.	Continue to expand and update brochure selection.
Revised					
1.2	Provide Public awareness classes	Shellfish Officer A. Marcy	Provide Information to school children	Constructed model of a estuary cross-section starting from a salt marsh and ending at the sub tidal zone exhibited at local fairs by Barnstable County Cooperative Extension..	Continue to educate general public on importance of keeping estuaries clean.
Revised					
1.3	Provide Literature & Information	Town Engineer J. Rodricks	Provide Information booth at Chamber of Commerce Fair	Posters distributed by Cape Co Groundwater Guardian Project maintained at 4 public buildings. Participated as active member in "PROJECT STORM" (see attachment "A"	New Department of Public Works web page still being worked on that will include stormwater information. Continue to work with other Cape communities in public outreach under the "Project Storm" initiative.
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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2.1	Sponsor & Advertise Household Hazardous. Waste Collection Days	Board of Health	Encourage proper disposal of hazardous materials	Two (2) Household Hazardous. Waste Collection Days held: June 4, 2005 with 2585 Gallons collected; Sept. 10, 2005 with 1950 gallons collected.	Two (2) Household Hazardous. Waste Collection Days to be held June 3, 2006 and September 9, 2006. Continue to do advertisements & mailings to residents and businesses that are small quantity generators.
Revised		Terry Hayes, Health Director			
2.2	Volunteer Coast Sweep	CZM/Natural Resource Officer- Brian Malone	Annual Beach Cleaning	Coastal Sweep program was canceled due to inclement weather.	Repeat & expand Coastal Sweep in September 2005
Revised					
2.3	Pet waste management	Animal Control Officer- Cheryl Malone	Provide disposal mitts and waste receptacles at Town Beaches	Researched most effective disposal mitts and waste receptacles products and obtained prices.	Place disposal mitt receptacles at Fresh Pond Dog Park and Chapin Beach as trial run and to monitor effectiveness. Install additional signs on Town Beaches relative to Dog Waste Disposal Bylaw and fine.
Revised			Create "Waste Disposal" By-law		
2.4	Proper Disposal of Boat Septic Storage Tanks	Harbor Master-	Notify Boat Owners annually	Flyer listing pump out facilities mailed to slip and mooring owners with applications.	List of pump out facilities and their environmental benefit in the Dennis Harbor "Scuttlebutt" newsletter published in December.
Revised		Ed Tierney			
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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
3.1	Identify Discharge and Map Discharges	Town Engineer-Joseph Rodricks	Identify & prioritize	Applied for and successfully obtained a CPR Pollution Grant to fund the elimination of flows from three outfall pipes into Bass River from Leif Erickson Drive, Old Fishhouse Road and Hawthorn Road.	Design, bid and oversee construction of stormwater mitigation measures for outfall pipes into Bass River from Leif Erickson Drive, Old Fishhouse Road and Hawthorn Road. Construct stormwater retention pond and drainage system to eliminate outfall pipe into Swan River Road from Upper County Road. Pursue additional funding for drainage remediation of the Rte 28 outfall pipe into Bass River.
Revised					
3.2	Notify Owners of Violation eliminate using BMP	Town Engineer Joseph Rodricks	Identify & eliminate all known discharges.	Worked with the Comprehensive Wastewater Task Force Subcommittee on Stormwater Mitigation to develop by-law to control runoff.	Continue monitoring and data accrual and issue advisories as needed. Continue to work with the Comprehensive Wastewater Task Force Subcommittee on Stormwater Mitigation to develop by-law to control runoff.
Revised					
3.3	Enforcement Agency	Police Chief M. Whalen	Enforcement of Sate Illegal Disposal Law	Assisted DPW with the investigation and mitigation of possible illegal discharge locations.	Add literature and information on illegal activities to Department web site.
Revised		Acting Chief W. Monahan			
Revised					
Revised					

Revised					

3a. Additions

4. Construction Site Storm Water Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
4.1	Propose By-law	Dennis Selectmen-Donald Trepte, Chairman	Storm water & erosion control Standards & Enforcement	Dennis Comprehensive Wastewater Management Task Force Subcommittee continued work on the development of a proposed by-law for stormwater runoff control..	Develop draft of by-law for presentation to general public for comment.
Revised	*Storm water management By-Law*				
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 require the elimination of any storm water runoff.
Revised					
4.3	Subdivision Rules & Regulations	Planning Board W. Murray, Chairman	Eliminate runoff & erosion during construction.	Monitored subdivision plans for possible storm water runoff. No action required.	Continue monitor and prevention. Consider revisions to Rules and Regulations to reduce soil erosion and sediment transportation into road drainage systems and waterways.
Revised					
Revised					
Revised					
Revised					

4a. Additions

4.3	Estuary study	Dennis Comprehensive Wastewater Management Task Force.	Evaluate Swan River, Swan Pond, Sesuit Creek and Chase Garden Creek and establish Total Maximum Daily Limit for nitrogen loading	Conducted water sampling using Water Quality Committee volunteers under the direction of the Board of Health Agent as part of the DEP/SMAST study to establish the Total Maximum Daily Limit for Nitrogen Loading for estuaries. Completed Plan of Study and Needs Assessment for Wastewater and nitrogen	Continue sampling of estuaries and development of a TMDL for Nitrogen to be used to for implementing mitigation measures.

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
5.1	Propose By-Law	Board of Selectmen- Donald Trepte, Chairman	Storm water & Erosion Control Standards & enforcement	CWMTF subcommittee established to draft stormwater runoff by-law collect data and information by reviewing by-laws developed by other communities and met with local regulatory officials to draft by-law for stormwater runoff control.	Finalize draft of by-law for presentation to general public for comment.
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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6.1	Street sweeping/ basin cleaning/ roadside mowing	DDPW Superintendent- D. Johansen	Maintenance of Drainage	Increased budget for catchbasin cleaning.	Continue to evaluate and prioritize basins to be cleaned targeting areas of greatest potential impact of estuaries. Increase number of basins cleaned. Develop and adopt a Storwater BMP for the Bass Rover/Kelly's Bay/Follins Pond area
Revised					
6.2	Existing enclosed salt storage.	DPW Superintendent D. Johansen	Exposure reduction	No action taken.	Continue to acquire pertinent facts and information to develop sand & salt spreading policy.
Revised					
6.3	Regular vehicle maintenance	DPW Superintendent- D. Johansen	Exposure reduction	No action taken.	Continue to refine a computerized maintenance program and develop maintenance policy.
Revised					
6.4	Existing enclosed vehicle storage & wash bay.	DPW Superintendent- D. Johansen	Exposure reduction	No action taken.	Develop policy for weekly vehicular cleaning and maintenance.
Revised	*Schedule weekly vehicle cleaning & assessment.*				
6.5	Invite NEIWPCC to speak	DPW Superintendent- D. Johansen	Provide information to employees	No action taken	Continue to enroll employees into seminars and demonstrations promoted by Bay State Roads and other organizations as they are scheduled.
Revised	*Employees education*		Exposure reduction.		
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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
7.1	Installation of leaching drainage systems	DDPW Superintendent D. Johansen	Exposure reduction	Obtained Wetland permit for replacement drainage system on Upper County Road at Swan River Road that will remove outfall pipe. Coordinated with MassHighway on the installation of BMPs on section of Rte 6A adjacent to Sesuit Creek.	Complete installation of new retention pond to replace outfall pipe on Upper County Road at Swan River Road Design and construct stormwater drainage systems on Mayfair Road to intercept runoff prior to it reaching unnamed creek entering Bass River. Installed subsurface leaching system to reduce direct outfall into Quivet Creek from Sea Street, East Dennis.
Revised					
7.2	Water quality sampling	DMF/Natural Resources-Alan Marcy	Ensure water quality	Samples taken in Swan Pond, Swan Pond River, Sesuit Creek and Chase Garden Creek as part of estuaries study.	Continue and refine sampling program.
Revised					
7.3	Use compost material to stabilize shoulders	DPW Superintendent-D. Johansen	Erosion control	No action taken in pertinent areas.	Continue and improve slope stabilization where necessary.
Revised					
7.4	Coastal Pollutant Remediation Program	Town Engineer J. Rodricks	Exposure Reduction and/or elimination	Town applied for and was awarded a Non Point Source Pollution mitigation grant for the remediation of three outfall drainage systems into Bass River.	Design, bid and construct three stormwater mitigation systems along Bass River.
Revised					
7.5	Weekly Water Sampling of Beaches	Town Health Director	Ensure water quality	Samples taken and tested weekly, first week of June through the Labor Day Weekend. Additional tests taken on days of 1" or greater rainfall. During summer of 2005 four beaches were closed a total of 5 days.	Repeat testing program.
Revised	*Water sampling o beaches during summer weeks.*	Terry Hayes			

Revised					

7a. Additions

7.6	Salt Marsh Restoration program	Natural Resource Dept. George Macdonald, Dept. Head.	Increased tidal flushing.	Quivet Creek under Sea Street, East Dennis: Design, permitting and installation of an 8'x 8' box culvert to replace two 30" failed pipes.	Sesuit Creek under Bridge Street. Design, permitting & construction of twin 12' x 10' box culverts to replace a failing 24" pipe.

7b. WLA Assessment

For several years the Town has identified the Bass River and Kelley's Bay area as the highest priority for immediate implementation of BMPs. In conjunction with the Town of Yarmouth the Town of Dennis was granted funding for construction of several remediatory drainage systems that are the highest prioritized locations. Additionally, the Department of Public Works has continued its program of identifying and mitigating potential upgradient pollution sources. Furthermore the Town is also in the process of applying of additional CPR funding to design and construct mitigation measures for the existing Route 29 (State Highway) outfall pipe into Bass River. The Town recently purchased a parcel of land adjacent to the river and Route 28 for the sum of $3.1 million dollars. This property will provide sufficient area to allow for the construction of mitigating measures.

Part IV. Summary of Information Collected and Analyzed

Water quality testing of Town beaches during the months of June, July and August 2005, resulted in 5 days of beach closures.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Storm water management position created/staffed	(y/n)	No
Annual program budget/expenditures	($)	$110,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	10 %
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	(y/n or mi.)	no
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	2
▪ community participation	(%)	444 persons
▪ material collected	(tons or gal)	4535 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	(%)	95 %
Estimated or actual number of outfalls	(#)	56
System-Wide mapping complete	(%)	20 %
Mapping method(s)		
▪ Paper/Mylar	(%)	80 %
▪ CADD	(%)	15 %
▪ GIS	(%)	50 %
Outfalls inspected/screened	(# or %)	5
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	0 %
% of population on septic systems	(%)	100 %

Construction

Number of construction starts (>1-acre)		5
Estimated percentage of construction starts adequately regulated for erosion and sediment control		100
Site inspections completed		4
Tickets/Stop work orders issued		1
Fines collected		0
Complaints/concerns received from public		1

Post-Development Storm Water Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction storm water control	(%)	0 %
Site inspections completed	(# or %)	10
Estimated volume of storm water recharged	(gpy)	100

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	(#)	890
Storm drain cleaned	(LF or mi.)	0 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	4450 tons
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)	650 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 % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	50% 32% 0% 0% 0% 0% 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

Town of Dennis

Department of Public Works
Engineering Division

120 Theophilus F. Smith Rd. • South Dennis, MA 02660-3413
508-760-6166 • Fax 508-760-6233

May 4, 2006

U.S. Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, MA 02114

MAY - 9 2006

Massachusetts Dept of Environmental Protection
Division of Watershed management
627 Main Street
Worcester, MA 01608

To Whom It May Concern:

Enclosed please find a copy of the Town of Dennis Annual Report for the NPDES Phase II Small MS4 General Permit for the period of March 2005 to March 2006 signed by the appropriate signatory. Should you have any question please call me at 508-760-6166.

Sincerely,

Joseph A. Rodricks, P.E.
Dennis Town Engineer