

Municipality/Organization: Pembroke, MA

EPA NPDES Permit Number: MAR041054

MaDEP Transmittal Number: W035403

**Annual Report Number
& Reporting Period:** No. 4: May 1, 2006 - April 30, 2007

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Michael F. Valenti **Title:** DPW Director

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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: Edwin J. Thorne

Title: Town Administrator

Date: _____

Part II. Self-Assessment

The town of Pembroke has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

- **BMP ID 1a: Stormwater messages were not aired on the local cable access channel during the fourth permit year. However, the town plans to resume airing these messages for two weeks every quarter during the fifth permit year.**
- **BMP ID 3b: The town has not yet completed the development of the illicit discharge detection and elimination plan, although they have spent time reviewing procedures already in place. The town plans to complete development of the illicit discharge detection and elimination plan during the fifth permit year.**

Although the town was not able to complete all of the Best Management Practices outlined in the original Notice of Intent for Permit Year Four, they plan to complete all required conditions outlined in the permit by the end of Permit Year Five. However, the town has exceeded schedule requirements for other permit conditions, including the mapping of their outfalls. In Permit Year Four, the town completed mapping of all remaining outfalls in urbanized areas.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1a	Air stormwater messages on local cable channel	Department of Public Works	Air a message every two weeks	Stormwater messages were developed and have been aired on the local cable access channel in previous years along with the town’s quarterly SWAC (Drainage Commission) meetings. However, no goals related to this item were completed during Permit Year 4.	The town plans to resume airing of stormwater messages on the local cable access channel during the fifth permit year. One stormwater message will be aired for two weeks every quarter.
Revised					
1b	Distribute/post non-point source pollution posters	Department of Public Works	Post in all schools and town-owned buildings	The town checked and confirmed that posters were still displayed in town buildings.	During the fifth permit year, the town will again verify that the posters are still displayed. Replacements will be provided if the posters are missing or in disrepair.
Revised					
1c	Include stormwater info in Consumer Confidence Report	Department of Public Works	Distribute Consumer Confidence Report yearly to all residents	In the fourth permit year, the town included information on stormwater pollution prevention in its annual Consumer Confidence Report. Several of the water bodies in town are drinking water sources for surrounding towns, and preventing pollution discharges from stormwater outfalls is necessary to keep these sources clean.	During the fifth permit year, the town will continue to include information on stormwater pollution prevention in its annual Consumer Confidence Report.
Revised					
1d	Develop children’s coloring book on Pembroke recycling	Board of Health	Distribute coloring books outside of Board of Health office	The town has developed an informative coloring book to educate children on the importance of recycling, which was made available outside the Board of Health office during the fourth permit year.	The town will continue to make this coloring book available outside the Board of Health Office in permit year five.
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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
2a Revised	Form Storm Water Advisory Committee	Department of Public Works	Hold quarterly meetings	The SWAC (Drainage Commission), which includes both town officials and local residents, continued to meet quarterly throughout the fourth permit year.	During the fifth permit year, the Drainage Commission will continue to meet quarterly to review the town's progress and to ensure that the town's Storm Water Management goals are being implemented.
2b Revised	Collect household hazardous waste from residents	Board of Health	Hold household hazardous waste collection day once per year The town is holding their Household Hazardous Waste Collection Day in August as opposed to the spring as previously indicated.	During the fourth permit year, in August of 2007, the town held their annual household hazardous waste collection day. It was announced in the local press, on cable and at BOH and Selectmen meetings. The town also continued its involvement in the South Shore Recycling Cooperative, which allows Pembroke residents to participate in the Hazardous Waste Days of surrounding towns.	Pembroke will continue to hold household hazardous waste collection days once per year in permit year five.
2c Revised	Implement annual, volunteer waterways clean-up day	Department of Public Works	Hold waterways clean-up day once per year beginning in the Spring of 2005 (Permit Year 3)	During the fourth permit year, the town held its annual, volunteer waterways clean-up day on May 21, 2006.	During the fifth permit year, another waterways clean-up day will be held on June 2, 2007.
2d Revised	Make SWMP available for public comment/review	Department of Public Works	Post SWMP in DPW office and Town library	Throughout the fourth permit year, copies of the town's Stormwater Management Plan were made available for public review and comment at the town library, at the DPW office, and on the town website.	Throughout the fifth permit year, the town will continue to make the SWMP available at the town library, at the DPW office, and on the town website.

2a. Additions

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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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
3a	Map outfalls and receiving waters	Department of Public Works	Complete mapping by end of fifth permit year	The town mapped all remaining outfalls this year that are in urbanized areas.	The town completed all outfall mapping this year ahead of schedule, therefore no goals related to this item are planned for Permit Year 5.
Revised					
3b	Develop illicit discharge detection & elimination plan	Department of Public Works	Make recommendations for proposed plan	During the fourth permit year, the town started to review the procedures, which they already have in place, for illicit discharge detection and removal.	During the fifth permit year, the town will complete the development of their illicit discharge detection and elimination plan, which will include methods for identifying priority areas and locating illicit discharges and their sources. It will also include a procedure for removal of illicit discharges. All actions will be documented.
Revised					
3c	Review existing bylaws and regulations	Department of Public Works/Stormwater Advisory Committee	Determine whether existing bylaws/regs are adequate	The town reviewed the existing bylaws and regulations for requirements relating to illicit discharge detection and elimination during the third permit year. No goals related to this item were planned for Permit Year 4.	No goals related to this item are planned for Permit Year 5.
Revised					
3d	Develop/modify general illicit discharge bylaw	Department of Public Works/Stormwater Advisory Committee	If necessary, propose recommendations for bylaw updates	A general illicit discharge bylaw that meets USEPA requirements was developed during the third permit year. No goals related to this item were planned for Permit Year 4.	No goals related to this item are planned for Permit Year 5.
Revised					
3e	Present bylaw for Town meeting action	Department of Public Works/Stormwater Advisory Committee	Make presentations for Town meeting action, if necessary	The town is in the process of having their attorneys review the bylaw that was developed. The town distributed the bylaw to local town boards and commissions, and is in the process of scheduling meetings with these departments to review the bylaw prior to the Town Meeting.	During the fifth permit year, the bylaw will be revised as needed to address comments from the town's attorneys and various town departments. The illicit discharge bylaw will be presented for Town Meeting action during the Fall of 2007 during the fifth year of the permit.
Revised					

3a. Additions

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4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
4a	Review existing bylaws and regulations	DPW/Planning/Zoning	Determine whether existing bylaws/regs are adequate	The town reviewed the relevant sections of the Rules and Regulations Governing the Subdivision of Land, the Zoning Bylaws, and the Water Resource Protection Bylaw during the third permit year. No goals related to this item were planned for Permit Year 4.	No goals related to this item are planned for Permit Year 5.
Revised					
4b	Develop/modify bylaws for construction site runoff	DPW/Planning/Zoning	If necessary, propose recommendations for bylaw updates	In the fourth year of the permit, the town completed the development of a bylaw for the control of construction site runoff.	No goals related to this item are planned for Permit Year 5.
Revised					
4c	Present bylaw for Town meeting action	DPW/Planning/Zoning	Make presentations for Town meeting action, if necessary	The town is in the process of having their attorneys review the bylaw that was developed. The town distributed the bylaw to local town boards and commissions, and is in the process of scheduling meetings with these departments to review the bylaw prior to the Town Meeting.	During the fifth permit year, the bylaw will be revised as needed to address comments from the town's attorneys and various town departments. The construction site runoff control bylaw will be presented for Town Meeting action during the Fall of 2007 during the fifth year of the permit.
Revised					
4d	Review existing site inspection practices	DPW/Planning/Zoning	Determine whether existing practices are adequate	The town reviewed their erosion/sedimentation control and drainage submittal requirements, as well as their site inspection practices, during the fourth permit year.	No goals related to this item are planned for Permit Year 5.
Revised					
4e	Develop/modify site inspection practices	DPW/Planning/Zoning	If necessary, make recommendations for updating existing practices	No goals related to this item were planned for Permit Year 4.	During the fifth permit year, the town will make recommendations for improving site inspection practices.
Revised					

4a. Additions

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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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
5a Revised	Review existing bylaws and regulations	DPW/Planning/Zoning	Determine whether existing bylaws/regs are adequate	The town evaluated regulations regarding the control of post-construction stormwater runoff, including the Rules and Regulations Governing the Subdivision of Land and the Zoning Bylaws during the third permit year. No goals related to this item were planned for Permit Year 4.	No goals related to this item are planned for Permit Year 5.
5b Revised	Develop/modify bylaws for post-construction runoff	DPW/Planning/Zoning	If necessary, propose recommendations for bylaw updates	During the fourth permit year, the town developed a post-construction site runoff control bylaw that meets USEPA requirements and considers MA DEP Stormwater Management Policy Standard 3 (Recharge to Groundwater).	No goals related to this item are planned for Permit Year 5.
5c Revised	Present bylaw for Town meeting action	DPW/Planning/Zoning	Make presentations for Town meeting action, if necessary	The town is in the process of having their attorneys review the bylaw that was developed. The town distributed the bylaw to local town boards and commissions, and is in the process of scheduling meetings with these departments to review the bylaw prior to the Town Meeting.	During the fifth permit year, the bylaw will be revised as needed to address comments from the town's attorneys and various town departments. The post-construction site runoff control bylaw will be presented for Town Meeting action during the Fall of 2007 during the fifth year of the permit.
5d Revised	Review existing site inspection practices	DPW/Planning/Zoning	Determine whether existing practices are adequate	During the fourth permit year, the town completed review of their existing site inspection and maintenance practices.	No goals related to this item are planned for Permit Year 5.
5e Revised	Develop/modify site inspection practices	DPW/Planning/Zoning	If necessary, make recommendations for updating existing practices	No goals related to this item were planned for Permit Year 4.	In the fifth permit year, the town's existing site inspection and maintenance practices will be modified accordingly to ensure compliance with USEPA requirements.

5a. Additions

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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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
6a	Sweep streets & clean catch basins	Department of Public Works	Sweep all town-owned streets and clean all catch basins once per year	During the fourth permit year, the Pembroke Highway Department swept all streets in town, at least once. Some streets adjacent to water resources were swept more than once. The town shares an additional sweeper with neighboring communities. The town has between 1,100 and 1,200 catch basins, all of which were cleaned during the fourth permit year.	In permit year five, the town intends to continue sweeping all streets and cleaning all catch basins at least once per year, tracking the amount of debris removed from streets and catch basins.
Revised					
6b	Maintain filtration system at North & Indian Head Rivers	Department of Public Works	Inspect baffle tank and leaching basin, and remove sediment	During the fourth permit year, the town inspected the filtration system installed at the confluence of the North and Indian Head Rivers and is making arrangements to remove sediment when 1/3 full.	The town will continue to regularly maintain this filtration system during permit year five.
Revised					
6c	Train municipal employees at each facility	Department of Public Works	Target all applicable municipal facilities	During the third permit year, the town examined existing practices at municipal facilities, and trained employees at these facilities in construction methods to prevent soil erosion. In the fourth year of the permit, annual follow-ups were performed to ensure that employees working at these facilities are following the required stormwater management practices.	In the fifth year of the permit, the town will continue to conduct annual follow-ups to ensure that employees working at municipal facilities are following the required stormwater management practices.
Revised					
6d	Implement items in EPA env. audit report for DPW facility	Department of Public Works	Ensure action items completed and BMPs followed	The town made changes during the first permit year to comply with this program that included prohibiting municipal vehicles from being washed outside and developing a SPCC plan. The town continued to comply with this program throughout the fourth permit year.	The town will continue to comply with the items included in the EPA Environmental Audit report for the DPW Facility during the fifth permit year.
Revised					
6e	Retrofit catch basins around Furnace and Oldham Ponds	Department of Public Works	Install vortex separators and new piping	Those catch basins around Furnace Pond and Oldham Pond, which were retrofitted with vortex oil/water separators during the third permit year, were maintained and cleaned regularly throughout the fourth permit year.	Catch basins and vortex units will be maintained and cleaned regularly throughout permit year five and beyond.
Revised					

6a. Additions

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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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

No water quality sampling has been conducted for this permit.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

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

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	6,000
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	1
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

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	(#)	150 < # < 200
System-Wide mapping complete	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	0
% of population on septic systems	(%)	100

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)	1/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1/yr
Total number of structures cleaned	(#)	1100-1200
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	CY	
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)	1/yr
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1/yr
Qty. of sand/debris collected by sweeping	CY	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	recycle
Cost of sweepings disposal	(\$)	\$0
Vacuum street sweepers purchased/leased	(#)	1.3
Vacuum street sweepers specified in contracts	(y/n)	

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

▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

Anti-/De-Icing products and ratios	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	38% 70%
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	(%)	35
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	