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Municipality/Organization: Town of Brewster
EPA NPDES Permit Number: MAR 041096
MassDEP Transmittal Number: W- 040679
Annual Report Number Year 8
& Reporting Period: April 1, 2010 – March 31, 2011

**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2011)**

Part I. General Information

Contact Person: Robert L. Bersin, PE **Title:** DPW Supt
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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: R. L. Bersin

Printed Name: Robert L. Bersin, PE

Title: DPW Supt

Date: August 22, 2011

Part II. Self-Assessment

Brewster is a coastal community with an interest in protecting its surrounding fresh and salt water resources. Catch basin cleaning and street sweeping programs are completed annually and small stormwater projects are designed and installed either through contract services or using DPW personnel. As local financing of DPW activities is generally lower than required, we continue to be proactive in our search for outside funding opportunities related to stormwater projects. This is evidenced by approval of a Coastal Zone Management – Non-Point Source Pollution (CZM - NPS) grant for the Stony Brook Water Shed in 2007. Water quality projects that are a direct result of this grant are as follows:

- ◆ The CZM-NPS assessment lead to the submittal and approval of a Coastal Zone Management – Coastal Pollution Remediation (CZM - CPR) Grant for the design of stormwater remediation plans at the Town's alewife fish run. This project relied on the NPS assessment and stormwater remediation facilities were designed to prevent untreated stormwater from entering Stony Brook. The final piece of this project was the approval of a Section 319 grant for the installation of remediation facilities at the aforementioned fish run. Remaining construction issues were completed in the 2010.
- ◆ The CZM-NPS assessment also identified several other areas in need of stormwater remediation. With the assistance of the Town's Department of Natural Resources, the town was able to secure funding for the design two stormwater remediation projects and a small culvert replacement project at one of the town's more popular beaches. Natural Resource Conservation Service (NRCS) funding sources were used for the design of an undersized culvert at Paines Creek Beach near the parking area. This culvert is currently under permit review and is scheduled for installation in the fall of 2010.
- ◆ NRCS funds were also used in the design and construction of stormwater remediation projects along Paines Creek Road and at Saints Landing. These projects are at two popular beach resource areas and direct discharges to surrounding coastal resources were eliminated through the installation of catch basins and leaching areas designed to eliminate pollutants associated with first flush stormwater runoff. In order to complete these projects, the NRCS funds were complemented with Town funds as well as MassDOT State Aid Chapter 90 funds.
- ◆ The final project for the reporting period was also completed along Paines Creek Road, but further away from the beach resource area. This project, Paines Creek South, included the design permitting and installation of drainage facilities near the intersection of Paines Creel Road and Stony Brook Road. Again, direct discharges to wetland resources were eliminated through the use of catchbasins and leaching areas sized to remediate first flush runoff.

In all of the above projects, town funds and the town's MassDOT State Aid Chapter 90 funds were used to augment these other outside funding sources for these projects. Also, the town was able to provide in kind matching services through the use of town material, equipment, labor, and professional services to meet certain funding requirements of these grants.

As described in previous Stormwater II assessments, the town also received a grant from the Gulf of Maine Council to address an undersized culvert under Route 6A. The assessment was completed and a replacement culvert was sized. In kind services through the DPW were used in sizing the culvert and installation of the replacement culvert was completed in the spring of 2010.

In other areas related to the Stormwater II program, financial constraints and workload issues have limited our response for the past year. Education and outreach has been limited to use of the Town's website and this office has placed various informational posters in strategic locations in Town. An informational sheet was prepared to outline the various projects, their locations, costs, and funding sources, and is included for your review in Appendix A. Also completed this year was a presentation to the Board of Selectmen, by the DPW depicting changes to Paines Creek Beach as a result of winter storm damage and the need to revise the Town's parking strategy. The presentation was well accepted and the drainage at this beach, mentioned above, required significant revisions prior to permitting. A second document was designed and prepared under the requirements of the 319 Non-Point Source project on Stony Brook Road. The document entitled "Paines Creek and Stony Brook Watershed: Stormwater Mitigation Summary" was inserted in all Brewster copies of the Cape Codder, a local newspaper serving our community. A copy of the insert is included for your review in Appendix B.

Each of these items reflects the Town's effort to educate the public of the natural resources in our area and describes our efforts in protecting them. Also included in the latter document are steps individuals can take to reduce their impact on the environment.

Outfall mapping was improved in this reporting year as our Comprehensive Water Planning Committee (CWPC) had similar mapping needs and the town was able to expand this mapping effort. Financial resources have been combined and we have recently embarked on a formal GIS mapping program. We are generally aware of outfalls on public properties, but mapping of outfalls on private properties is limited. Private property rights, including access, are problematic and our ability to require improvements is limited. The federal program may provide more latitude for compliance, but at this time, our access is limited. Brewster has a large number of private roads and does not have jurisdiction on them. I believe this is an issue quite unique to Massachusetts. If our effort is to address water quality issues, the private road issue will need to be addressed at some point in the future.

From the above information, it is clear the Town has an interest in maintaining and improving our coastal environment. The Town is certainly aware of the plan requirements and we plan to continue our efforts in this area. As DPW Superintendent with Professional Licensure and experience in public works and stormwater related issues, it is my responsibility to oversee the program and propose improvement projects for funding. We have identified several areas where remediation is required and we plan to follow through with funding requests and we continually research outside funding opportunities. Unfortunately, other town projects generally take precedence over DPW type projects and our internal funding opportunities are limited.

Please review the above information and related material in the attached report and contact me directly with any questions or comments.

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 5 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 6
Revised	Develop and distribute educational materials	BoH – Nancy Ice	Biannual Mailings	Due to the increased costs associated with individual mailings, reproduction costs, and workload in the Health Department this measurement was not as effective as anticipated.	Increase the use of the Town's website with links to flyers, documents, and other stormwater related websites (EPA, DEP, etc).
Revised	Additional Educational Materials	DPW – Bob Bersin	Information Documents	The DPW has placed links on the Town's web site to various web related stormwater sites, but not to the extent that was planned. In addition to the above effort, DPW was able to develop a GIS based plan depicting our stormwater efforts in the Stony Brook Watershed. Besides providing a broad overview to the public, the document was also used to describe our efforts to the funding authorities in town and is shown in Appendix A. Although a second reference document was delivered to Brewster residents via an insert in a local newspaper in late June, the information was gathered and the document designed during the current reporting year. Additional copies of the flyer were also placed at several locations in town. The flyer outlined our efforts in the Paines Creek/Stony Brook area and explained the benefits of and the need for stormwater remediation projects. A copy has been included for your review in Appendix B.	The DPW also intends on preparing flyers etc for handout at the Transfer Station, during Beach/Transfer Station sticker sales, and for display/pick up at the Town Hall. Some of the material will be include solid waste based information, as proper management of solid waste is a related component to our overall pollution/natural resource problems.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 6
Revised	Establish Stormwater Web Site with pollution reporting capability	IT – Kathleen Lambert	Town Web Site is operational with Stormwater links under DPW section	The Town's website is a viable alternative for conveying town related information. Again, the IT department consists of one person and other duties and projects have taken precedence over our Stormwater II efforts.	The Department of Public Works will continue to add/update Stormwater issues on the site.
Revised					
Revised					
Revised					
Revised					
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 5 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 6
Revised	Map Stormwater facilities	Robert L. Bersin, PE DPW Supt	Update Stormwater data on Town GIS system.	The Town of Brewster has a GIS system but with limited use. Training and upkeep of the system has been limited due to funding shortfalls. The DPW has attempted to update the GIS system for its own purposes but other work related activities have affected this effort.	Continue the implementation of the GIS System at the DPW. Staffing issues will have an effect on this program. Training and/or additional personnel to implement the program are limited
Revised	By-Law prohibiting illicit discharge	Sue Leven Town Planner Robert L. Bersin, PE DPW Supt	Pursue passage of Illicit Discharge By-Law	Ongoing discussions of By-Law language. This document has been finalized and will be presented top Town Meeting in the fall of 2010.	The Comprehensive Water Planning Committee has identified similar mapping needs to that required by this program. In the spring of 2011, we were able to secure funding to pursue our GIS mapping program using and engineering consultant.
Revised	Illicit discharge detection	Chris Miller Natural Resources Coordinator	Sampling and Analysis of water bodies	Mr. Miller continued his departments sampling and analysis program and was instrumental in obtaining the Natural Resources Conservation Service funding for the aforementioned stormwater related grants..	Continue the program
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 6
Revised	Revise Development Plan Review By-Law	Planning Board Elizabeth Taylor	By-Law update	The Town recently approved a Water Quality Protection By Law and a Mining and Excavation By Law. These documents were developed using volunteers, Town Department Heads, and a Professional Legal Advisor. These documents address stormwater issues for construction activities and include sedimentation and erosion control as well as long term stormwater issues associated with development.	Continue with the development of these documents. It should be noted that the several volunteers involved in this endeavor are another example of Outreach and Public Education.
Revised	Establish public input mechanism	Planning Board Elizabeth Taylor	In progress	Working on program language	We plan to move the project forward
Revised					
Revised					
Revised					
Revised					
Revised					

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 5 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 6
Revised	Revise Development Plan Review By-Law	Planning Board Elizabeth Taylor	By-Law update	See Section 4 above. A comprehensive group of By Laws and regulations was developed and approved, as described above. In addition, the Town in the preliminary stages of developing a Comprehensive Water Management Plan in conjunction with activities related to work on Pleasant Bay and Clean Water Act recommendations.	We plan to move the project forward.
Revised	Construction Inspection	Construction by proponent engineer and DPW	Continued project construction inspection.	The Town does not have a formal Engineering Department and uses contract services as well as trained staff in the DPW. Also, development in the area is of a residential nature, and projects disturbing more than an acre are rare. The enforcement of this issue is more effective with appropriate regulations and approval conditions.	Continue our inspection program and continue to improve our regulations..
Revised					
Revised					
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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
	Employee Education	Robert L. Bersin, PE DPW Supt	Training programs	Continue with employee training. Mr. Day is continuing the staff training required. We employed the services of the Barnstable County Health Department for an informal assessment of our procedures. Some of the recommended improvements have been completed and additional staff training is currently being scheduled.	Continue program
Revised		Jeff Day DPW Foreman			
	Operation & Maintenance Schedule	Robert L. Bersin, PE DPW Supt	Annual catch basin cleaning and annual winter sand cleanup	These two programs are completed annually. The sweeping is completed with Town personnel and equipment while the catchbasin cleaning is completed using contracted services.	Continue program
Revised		Jeff Day DPW Foreman			
Revised					
Revised					
Revised					
Revised					
Revised					

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
	N/A				
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

N/A

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures – A separate funding source for these activities has not been approved. Funding is generally through the DPW annual budget.	(\$)	\$50,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	4,000
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	No
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y – 9 miles
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	6
▪ community participation	(%)	33.5%
▪ material collected	(tons or gal)	6.1 T
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	(%)	75% (Est)
Estimated or actual number of outfalls	(#)	75 (Est)
System-Wide mapping complete	(%)	75% (Est)
Mapping method(s)		
▪ Paper/Mylar	(%)	75% (hand Sketches)
▪ CADD	(%)	0%
▪ GIS	(%)	15% (Est)
Outfalls inspected/screened	(# or %)	10% (Est)
Illicit discharges identified	(#)	0
Illicit connections removed	(#)	0
% of population on sewer	(est. gpd)	
% of population on septic systems	(%)	0%
	(%)	100%

Construction

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

Post-Development Stormwater Management

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

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	(#)	750 Est
Storm drain cleaned	(LF or mi.)	250 ft
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	250 T
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		This year we received a Beneficial Use Determination for the management of Street Sweepings and Catch Basin Cleanings. Our efforts will be to amend soils throughout town as described in our permit.
Cost of screenings disposal	(\$)	\$40,000

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	(lbs. or tons)	150 T (Est)