

**Municipality/Organization:** Town of Brewster, MA

**EPA NPDES Permit Number:** MAR 041096

**MADEP Transmittal Number:** W-221540

**Annual Report Number  
& Reporting Period:** No. 4: March 2006-March 2007

## NPDES PII Small MS4 General Permit Annual Report

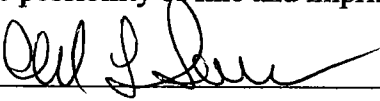
### Part I. General Information

**Contact Person:** Charles L. Sumner **Title:** Town Administrator

**Telephone #:** 508 896 3701 – X130 **Email:** csumner@town.brewster.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:** Charles L. Sumner

**Title:** Town Administrator -0 Town of Brewster

**Date:** April 16, 2008

2008-4-16 2007 Annual Report

## **Part II. Self-Assessment**

Brewster is a coastal community and has a keen interest in protecting our surrounding resources. Annual catch basin cleaning and street sweeping programs were completed and several smaller stormwater projects were addressed. The Town also received a Coastal Zone Management – Non-Point Source Pollution (CZM - NPS) grant for the Stony Brook Water Shed. This assessment project mapped the water shed, identified sub-watersheds, completed 25 year stormwater runoff calculations, and identified several areas where Best Management Practices (BMP's) should be employed. This project will allow us to prioritize stormwater activities in the area. The Town received a second grant from the Gulf of Maine Council to address a limiting state highway culvert along Route 6A in west Brewster. The project called for the completion of a hydraulic and hydrological study and modeling restoration options to restore tidal flow to Stony Brook. The complex grant was developed with assistance from the Association for the Preservation of Cape Cod (APCC) and professional services are being provided jointly by the Town, the APCC and the Massachusetts Bays Program, Cape Cod Region, as well as contractual services of a Professional Coastal Engineering entity.

From the above information, it is clear the Town has a keen interest in maintaining and improving the coastal environment. The Town is certainly aware of the plan requirements and we plan to continue our efforts in this area. Our DPW Superintendent is a licensed Professional Engineer with experience in Public Works and Stormwater related issues. This experience will be an asset in future projects and other compliance issues. We have identified several areas where remediation is required and we plan to follow through on the various By-Law requirements.

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

**Part III. Summary of Minimum Control Measures**

**1. Public Education and Outreach**

| <b>BMP ID #</b> | <b>BMP Description</b>                       | <b>Responsible Dept./Person Name</b> | <b>Measurable Goal(s)</b> | <b>Progress on Goal(s) – Permit Year 4</b><br>(Reliance on non-municipal partners indicated, if any)   | <b>Planned Activities – Permit Year 5</b>  |
|-----------------|--|--------------------------------------|---------------------------|--|--|
| Revised         | Develop and distribute educational materials | BoH – Nancy Ice                      | Biannual Mailings         | Due to the increased costs associated with individual mailings and the rapid increase in the use and availability of the internet, the town was able to target this BMP through the use of the internet. Flyers and links relative to stormwater activities were used as well as handouts at the Transfer Station. | Increase the use of the Town’s website with links to flyers, documents, and other stormwater related websites (EPA, DEP, etc). 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 |
| Revised         |  |                                      |                           |  |  |
| Revised         |  |                                      |                           |  |  |
| Revised         |  |                                      |                           |  |  |
| Revised         |  |                                      |                           |  |  |
| Revised         |  |                                      |                           |  |  |

**Additions**

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

**2. Public Involvement and Participation**

| BMP ID # | BMP Description   | Responsible Dept./Person Name | Measurable Goal(s)   | Progress on Goal(s) – Permit Year 4<br>(Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5  |
|----------|---|-------------------------------|--|---|---|
| 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..           | The Department of Public Works will continue to add/update Stormwater issues on the site. |
| 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 4<br>(Reliance on non-municipal partners indicated, if any)  | Planned Activities – Permit Year 5   |
|----------|--------------------------------------|--|--|--|--|
| Revised  | Map Stormwater facilities            | Robert L. Bersin, PE<br>DPW Superintendent   | Update Stormwater data on Town GIS system, | The Town of Brewster does not have a Planner. As maintenance of a GIS database generally resides with this position, addressing this issue was slower than anticipated. The DPW has attempted to update the GIS system for its own purposes and this project is ongoing. Using resources obtained under a CZM-NPS Grant, groundwork GIS Database structure is being developed. The system should be operational by the Fall of 2007. | 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 have been limited |
| Revised  | By-Law prohibiting illicit discharge | BoH – Nancy Ice                              | Pursue passage of Stormwater By-Law        | Ongoing discussions of By-Law language   | Continue with By-Law development   |
| Revised  | Illicit discharge detection          | Robert Mant<br>Natural Resources Coordinator | Sampling and Analysis of water bodies      | Mr. Mant, the Town's Natural Resources Director was ill for most of the year and our efforts in this area were limited. However, stormwater sampling in several areas of Town were conducted by the DPW during the completion of the CZM-NPS Grant mentioned above.  | Continue the program   |
| Revised  |                                      |  |  |  |  |
| Revised  |                                      |  |  |  |  |
|          |                                      |  |  |  |  |

#### 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description                       | Responsible Dept./Person Name      | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3<br>(Reliance on non-municipal partners indicated, if any)   | Planned Activities – Permit Year 4   |
|----------|---------------------------------------|------------------------------------|--------------------|---|--|
| Revised  | Revise Development Plan Review By-Law | Planning Board<br>Elizabeth Taylor | By-Law update      | The Town is in the process of developing a Water Quality Protection By Law, a Land Clearing and Grading Regulation, and an Excavation, Earth Removal and Excavation By Law. These documents are being developed using volunteers, several 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 storm water issues associated with development. We have targeted the Spring of 2010 for presentation to the Town Meeting. | 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<br>Elizabeth Taylor | In progress        | Working on program language   | We plan to move the project forward  |
| 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 4<br>(Reliance on non-municipal partners indicated, if any)  | Planned Activities – Permit Year 5  |
|----------|---------------------------------------|---|--|--|---|
| Revised  | Revise Development Plan Review By-Law | Planning Board<br>Elizabeth Taylor                    | By-Law update                              | See Section 4 above. A comprehensive group of By Laws and regulations is being developed concurrently 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 inspection 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  |                                       |   |  |  |   |

**6. Pollution Prevention and Good Housekeeping in Municipal Operations**

| <b>BMP ID #</b> | <b>BMP Description</b>           | <b>Responsible Dept./Person Name</b> | <b>Measurable Goal(s)</b>                                  | <b>Progress on Goal(s) – Permit Year 3</b><br>(Reliance on non-municipal partners indicated, if any)   | <b>Planned Activities – Permit Year 4</b> |
|-----------------|----------------------------------|--------------------------------------|--|--|---|
| Revised         | Employee Education               | James Bearse<br>DPW Foreman          | Training programs  | Continue with employee training. It should be noted that Mr. Bearse was out of work for an extended period this year. Traing activities were continued by the DPW Superintendent and the Master Maechanic. | Continue program                          |
| Revised         | Operation & Maintenance Schedule | James Bearse<br>DPW Foreman          | Annual catch basin cleaning and annual winter sand cleanup | Ongoing with continued refinement  | Continue program                          |
| Revised         |                                  |                                      |  |  |   |
| Revised         |                                  |                                      |  |  |   |
| Revised         |                                  |                                      |  |  |   |
| 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<br>(Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|----------|-----------------|-------------------------------|--------------------|---|------------------------------------|
| Revised  | N/A             |                               |                    |   |                                    |
| Revised  |                 |                               |                    |   |                                    |
| 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             | (\$)  | \$50,000 |
|  |       |          |
|  |       |          |

**Education, Involvement, and Training**

|   |               |       |
|---|---------------|-------|
| Estimated number of residents reached by education program(s)           | (# or %)      | 5,000 |
| Stormwater management committee established                             | (y/n)         | N     |
| Stream teams established or supported                                   | (# or y/n)    | N     |
| Shoreline clean-up participation or quantity of shoreline miles cleaned | (y/n or mi.)  | Y     |
| 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)         | N     |
|   |               |       |
|   |               |       |

**Legal/Regulatory**

|  | In Place<br>Prior to<br>Phase II | Under<br>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               | (%)                | 25% (Est)           |
| Estimated or actual number of outfalls | (#)                | 100 (Est)           |
| System-Wide mapping complete           | (%)                | 25% (Est)           |
| Mapping method(s)                      |                    |                     |
| ▪ Paper/Mylar                          | (%)                | 75% (hand Sketches) |
| ▪ CADD                                 | (%)                | 0%                  |
| ▪ GIS                                  | (%)                | 25% (Est)           |
| Outfalls inspected/screened            | (# or %)           | 10% (Est)           |
| Illicit discharges identified          | (#)                | 0                   |
| Illicit connections removed            | (# )<br>(est. gpd) | 0                   |
| % of population on sewer               | (%)                | 0%                  |
| % of population on septic systems      | (%)                | 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  | (#)            | 900 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.) |      | Stored at Transfer Station – waiting for BMP development and approval |
| Cost of screenings disposal  | (\$) | \$10,000  |
|  |      |   |
|  |      |   |

|  |                |   |
|--|----------------|---|
| 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)   |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)                | (location)     | Stored at Transfer Station – waiting for BMP development and approval |
| Cost of sweepings disposal   | (\$)           | 0   |
| Vacuum street sweepers purchased/leased  | (#)            | 0   |
| 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 %) | unknown |
| ▪ Herbicides   | (lbs. or %) | unknown |
| ▪ Pesticides   | (lbs. or %) | unknown |
|  |             |         |
|  |             |         |

|  |                     |               |
|--|---------------------|---------------|
| Anti-/De-Icing products and ratios                       | % NaCl              | 2:1 Sand/NaCl |
|  | % CaCl <sub>2</sub> | 200 gal       |
|  | % MgCl <sub>2</sub> | 0             |
|  | % CMA               | 0             |
|  | % Kac               | 0             |
|  | % KCl               | 0             |
|  | % Sand              | 2:1 Sand/NaCl |
| 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 %)         | 5% (Est)      |
| Salt pile(s) covered in storage shed(s)                  | (y/n)               | Y             |
| Storage shed(s) in design or under construction          | (y/n)               | N             |
|  |                     |               |
|  |                     |               |