TOWN OF SANDWICH
THE OLDEST TOWN ON CAPE COD
DEPARTMENT OF PUBLIC WORKS

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April 27, 2007

MAY 1 2007

United States Environmental Protection Agency
Water Technical Unit
PO Box 8127
Boston, Massachusetts 02114

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street
Worcester, Massachusetts 01608

**Subject: Annual Update - NPDES Phase II General Permit**
**Town of Sandwich Stormwater Management Plan: Year 4 Update**

Dear U.S. EPA and MaDEP:

As required under the NPDES Stormwater General Permit, the Town of Sandwich hereby submits this annual update of the Town's the Stormwater Management Plan.

**Year 4 Update**
The Town of Sandwich continues to be very proactive in the field of stormwater management and has successfully fulfilled many of its goals established in its Stormwater Management Plan.

This Annual Update provides a look at major accomplishments, new programs and goals and the status of goals that have not been met as scheduled. Below is a summary of Year 4 implementation.

**Major Fourth Year Accomplishments (Spring 2006 - Winter 2007)**
Below is a list of some of the significant goals accomplished over the past year:

Drainage System Identification & Mapping
GIS Drainage maps were completed this past year. These maps provide details such as location and type of drainage facilities (including outfalls), pipe connections, and drainage easements. This information is being used by the DPW to respond to resident requests, record drainage maintenance and upgrades and as a planning tool for future drainage projects. GIS Drainage maps are shown in the Appendix.

One valuable feature of the drainage mapping system is the service request function. This function allows residents to identify drainage problems on a GIS map using the

Town web site. The information is then e-mailed to the DPW, which promptly inspects the problem and makes necessary repairs. This function is shown in the Appendix.

Stormwater Inspections and Monitoring

The Town has continued to develop a program to effectively inspect and enforce stormwater issues. Some of the highlights of this program are listed below and shown in the Appendix:

• Developed reporting and inspection procedures for illicit detection. For example, when possible illegal discharges (e.g., sump pumps) are identified, the Health Agent is notified, who promptly inspects the source of the problem and enforces mitigation if necessary. The DPW maintains a record of all identified sites reported to the Health Inspector.

• Developed reporting and inspection procedures for erosion control problems. For example, when erosion control issues are identified (e.g., new home construction without hay bales), the Building Inspector is notified and a visit and letter promptly follow warning the owner of the violation and consequences. Due to the Building Departments heavy workload, the Town's enforcement policy is being revised to allow the DPW to assist in the inspection and enforcement of such violations. The DPW maintains a record of all identified sites with erosion control problems.

• Reporting of all stormwater and drainage problems. As discussed earlier, the public is able to send drainage service requests to the DPW via the GIS web site. The DPW also records all drainage issues, whether identified by the public or town officials. This is particularly helpful during severe rain events due to the backlog of calls. Records of drainage issues are shown in the Appendix. Future drainage requests will be recorded on the GIS drainage database.

Stormwater Seminars

Town staff continues to attend stormwater seminars to obtain knowledge of new Best Management Practices (BMP's) technologies and to learn of successes achieved by other municipalities related to stormwater management. Staff attended a seminar at the UNH Stormwater Center, which has a unique field facility to evaluate and verify the performance of stormwater management devices and technologies. Staff has also participated in the EPA's Stormwater Progam Webcast Series. The Town will continue to send staff to these seminars and others related to stormwater impacts and management. Information obtained from these seminars and research facilities will be implemented into the Town's Stormwater Management Plan.

**New Programs/Goals**

Below is a list of new accomplishments/goals that have been added to the Town's SMP (i.e., goals not on the original General Permit NOI):

• The Town of Sandwich's Stormwater Management Plan and Best Management Practices were featured in an article in the nationally published "Municipal Sewer &

Water" February 2007 edition. The article highlighted the efforts taken by the Town to minimize impacts from stormwater runoff. (See attached article).

• The Town of Sandwich participates in a Household Hazardous Product Collection Day four times per year. As part of this effort, the Town educated the public and encouraged the public to recycle more. This effort, called the "Use Less, Recycle More" campaign, included education about rain barrels and also gave away a free barrel to coincide with the Earth Day celebration. The Town will continue to educate the public about stormwater impacts and will encourage residents to use rain barrels to recycle their stormwater. (See attached information).

• The Project Storm Team, a Cape-wide stormwater management focus group, and the Cape Cod Commission teamed up to apply for a grant to develop BMP's for Cape Cod. The proposal, titled "Developing an Alternative Stormwater Management Design Manual for Cape Cod, Massachusetts" will allow towns to implement stormwater BMP's appropriate for the Cape's environment.

**Status of Goals for Year 4**

Similar to the original table submitted for the NPDES General Permit, the attached table shows goals proposed for all Six Control Measures. This updated table reflects new goals and the status of Year 1, 2, 3 and 4 goals. The yellow highlighted blocks represent goals scheduled in each season of respective years. Words highlighted in red represent goals that have not yet been reached. New goals mentioned earlier have also been included in the table.

The attached appendices show several of the actions performed by the Town to meet the Year 4 goals listed in the table.

**Conclusion**

The Town of Sandwich's accomplishments over the past four years meet or exceed most of the scheduled goals. Also, new goals have been created to further enhance the Towns Stormwater Management Plan. We trust that these accomplishments will satisfy the Massachusetts Department of Environmental Protection and the United States Environmental Protection Agency requirements. Please contact Paul S. Tilton of the Department of Public Works if you have any questions or require further information regarding the Year 4 Annual Update.

Sincerely,

Paul S. Tilton, P.E.
DPW Director/Town Engineer

Attachments: Year 4 Update Materials

**Massachusetts Department of Environmental Protection**
Bureau of Resource Protection - Watershed Management
**BRP WM 08A NPDES Stormwater General Permit Notice of Intent**
**for Discharges from Small Municipal Separate Stormwater Sewer Systems (MS4's)**
**F. Storm Water Management Program TIME FRAMES**

Transmittal Number: W035665

Facility ID (if known): _____

Page: 3 of 3

| BMP ID # | PERMIT YEAR ONE Spring 03 | Summer 03 | Fall 03 | Winter 03-04 | PERMIT YEAR TWO Spring 04 | Summer 04 | Fall 04 | Winter 04-05 | PERMIT YEAR THREE Spring 05 | Summer 05 | Fall 05 | Winter 05-06 | PERMIT YEAR FOUR Spring 05 | Summer 05 | Fall 05 | Winter 05-06 | STATUS: Goals | STATUS: Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***5.7: BMP's for Meeting TMDL*** | | | | | | | | | | | | | | | | | | |
| 7a | | | | | | | | | | | | | | | | | Identification & Mapping of Outfalls & CB's | W/ AmeriCorps, identified over 2,500 CB's and outfalls w/ GPS. Report is available. GIS complete. |
| 7b | | | | | | | | | | | | | | | | | Water Sampling | Town and County continue sampling efforts. DPW will use for grants & BMP projects. |
| 7c | | | | | | | | | | | | | | | | | BMP Mitigation | The Town continues to apply for grants for Stormwater Mitigation projects using BMP's. |
| 7d | | | | | | | | | | | | | | | | | Public Education & Participation | Distributed & displayed educational information. Rain Barrel Raffle. Water & Sewer article. |
| 7e | | | | | | | | | | | | | | | | | DPW Maintenance, Cleanup & | DPW inspects, maintains and records any information related to stormwater impacts. |
| | | | | | | | | | | | | | | | | | Identification of Illegal Disposals | |

Note: Many of the BMP's above will continue beyond the 5-year permit period.
[ ] = Goals anticipated to be completed in the season & year shown above. Words in Red = goals not yet accomplished under this year.

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| BMP ID # | PERMIT YEAR ONE | | | | PERMIT YEAR TWO | | | | PERMIT YEAR THREE | | | | PERMIT YEAR FOUR | | | | STATUS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Spring 03 | Summer 03 | Fall 03 | Winter 03-04 | Spring 04 | Summer 04 | Fall 04 | Winter 04-05 | Spring 05 | Summer 05 | Fall 05 | Winter 05-06 | Spring 05 | Summer 05 | Fall 05 | Winter 05-06 | Goals | Comments |
| ***5.4: Const. Stormwater Runoff Control*** | | | | | | | | | | | | | | | | | | |
| 4a | | | | | | | | | | | | | | | | | Town Bylaw - Driveway Regulation | Continue to enforce driveway regulations to minimize stormwater impacts. |
| 4b | | | | | | | | | | | | | | | | | Existing Laws & Regulations | Continue to enforce stormwater and erosion regulations and will evaluate need for updates. |
| 4c | | | | | | | | | | | | | | | | | Educational Info & Public Participation | Distributed & displayed educational information. Rain Barrel Raffle. Water & Sewer article. |
| 4d | | | | | | | | | | | | | | | | | Development Review | Continue to enforce stormwater and erosion regulations during development review. |
| 4e | | | | | | | | | | | | | | | | | Consideration of Public Information | Public notifies DPW of drainage issues via GIS. Town will solicit input on SMP and from web site. |
| 4f | | | | | | | | | | | | | | | | | Site Inspections | Town officials continue to inspect & enforce regulations related to stormwater & erosion control. |
| 4g | | | | | | | | | | | | | | | | | Recommended BMP's | Required use of BMP's thru development review. Applied for grant to develop Cape Cod BMP's. |
| 4h | | | | | | | | | | | | | | | | | Zoning Bylaw - Erosion Control | Erosion control law in place and being enforced by site visits. Update as necessary. |
| 4i | | | | | | | | | | | | | | | | | Erosion Control Guidelines | Will include with recommended BMP List for distribution. Old version is being updated. |
| 4j | | | | | | | | | | | | | | | | | Subdivision Rules & Regulations | Made changes to stormwater regs in the Subdivision Rules & Regulations. Update as necess. |
| 4k | | | | | | | | | | | | | | | | | Water Sampling | Health Department and County continue to sample water quality and report to DPW. |
| 4l | | | | | | | | | | | | | | | | | Stormwater Posters | Displayed 4 Stormwater posters in Town buildings. |
| | | | | | | | | | | | | | | | | | | |
| ***5.5: Post-Construction Stormwater Management*** | | | | | | | | | | | | | | | | | | |
| 5a | | | | | | | | | | | | | | | | | Growth Incentive Zones - Stormwater Plans | Working with CCC on Growth Centers and Local Comprehensive Plan to address these issues. |
| 5b | | | | | | | | | | | | | | | | | Existing Laws and Regulations | Continue to enforce stormwater and erosion regulations and will evaluate need for updates. |
| 5c | | | | | | | | | | | | | | | | | Educational Info & Public Participation | Distributed & displayed educational information. Rain Barrel Raffle. Water & Sewer article. |
| 5d | | | | | | | | | | | | | | | | | Development Review | Continue to enforce stormwater and erosion regulations during development review. |
| 5e | | | | | | | | | | | | | | | | | Catch Basin Cleaning | Continue to clean & monitor CB conditions. Will include Maintenance Plan on GIS. |
| 5f | | | | | | | | | | | | | | | | | Recommended BMP's | Required use of BMP's thru development review. Applied for grant to develop Cape Cod BMP's. |
| 5g | | | | | | | | | | | | | | | | | Zoning Bylaw - Erosion Control | Erosion control law in place and being enforced by site visits. Will update w/ BMP focus |
| 5h | | | | | | | | | | | | | | | | | Erosion Control Guidelines | Will include with recommended BMP List for distribution. Old version is being updated. |
| 5i | | | | | | | | | | | | | | | | | Subdivision Rules & Regulations | Made changes to stormwater regs in the Subdivision Rules & Regulations. Update as necess. |
| 5j | | | | | | | | | | | | | | | | | Water Sampling | Health Department and County continue to sample water quality and report to DPW. |
| 5k | | | | | | | | | | | | | | | | | Stormwater Posters | Displayed 4 Stormwater posters in Town buildings. |
| | | | | | | | | | | | | | | | | | | |
| ***5.6: Pollution Prevention & Good Housekeeping in Municipal Operations*** | | | | | | | | | | | | | | | | | | |
| 6a | | | | | | | | | | | | | | | | | Stormwater Mitigation w/ BMP's | The Town continues to apply for grants for Stormwater Mitigation using BMP's. |
| 6b | | | | | | | | | | | | | | | | | Pollution Control & Mitigation Measures | Built salt shed and developed a plan for snow removal based on DEP's Priority Resource Map |
| 6c | | | | | | | | | | | | | | | | | BMP Projects on Town-Owned Land | The Town continues to apply BMP's to townwide projects. |
| 6d | | | | | | | | | | | | | | | | | DPW: On-Site Stormwater Containment | DPW inspects Transfer Station drainage facilities quarterly and entire site annually. |
| 6e | | | | | | | | | | | | | | | | | DPW Environmental Audit - EPA Program | Constructed Salt Shed and Interior washing area in DPW Garage. |
| 6f | | | | | | | | | | | | | | | | | DPW Maintenance Program | GIS mapping w/ attributes for monitoring DPW operations is being developed by a consultant. |
| 6g | | | | | | | | | | | | | | | | | DPW Training | Employees are trained about stormwater impacts. DPW attends stormwater seminars |
| 6h | | | | | | | | | | | | | | | | | Tree Planting Program | Town has completed a Tree Inventory and Management Plan for Sandwich Village. |
| 6i | | | | | | | | | | | | | | | | | DPW Brochures | DEP and other agency brochures/FAQ are made available to employees/public. |

Note: Many of the BMP's above will continue beyond the 5-year permit period.
[ ] = Goals anticipated to be completed in the season & year shown above. Words in Red = goals not yet accomplished under this year.

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Bureau of Resource Protection - Watershed Management

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| BMP ID # | PERMIT YEAR ONE | | | | PERMIT YEAR TWO | | | | PERMIT YEAR THREE | | | | PERMIT YEAR FOUR | | | | STATUS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Spring 03 | Summer 03 | Fall 03 | Winter 03-04 | Spring 04 | Summer 04 | Fall 04 | Winter 04-05 | Spring 05 | Summer 05 | Fall 05 | Winter 05-06 | Spring 05 | Summer 05 | Fall 05 | Winter 05-06 | Goals | Comments |
| ***5.1: Public Education & Outreach*** | | | | | | | | | | | | | | | | | | |
| 1a | | | | | | | | | | | | | | | | | Current Educational Brochures | Brochures available at Town buildings and distributed at Stormwater events. Rain Barrel Raffle. |
| 1b | | | | | | | | | | | | | | | | | Development Review | Continue to enforce stormwater and erosion regulations during development review. |
| 1c | | | | | | | | | | | | | | | | | Public Display of Stormwater Mgmt Plan | Stormwater Management Plan is complete. Water & Sewer article. |
| 1d | | | | | | | | | | | | | | | | | Public Meeting | Scheduled for this year. |
| 1e | | | | | | | | | | | | | | | | | Proposed Educational Brochure | Distributed over 150 bookmarks, 150 door hangers and 25 posters. |
| 1f | | | | | | | | | | | | | | | | | Outfall & Catch Basin ID & Mapping | Continued updates to GIS Drainage Layer. GIS complete. |
| 1g | | | | | | | | | | | | | | | | | Web Site Information | Will complete following new web-site upgrade. |
| 1h | | | | | | | | | | | | | | | | | Educational Festival | Held Water Festivals at Elementary Schools w/ County and AmeriCorps. |
| 1i | | | | | | | | | | | | | | | | | Educate DPW Employees | Educated DPW employees about disposal and containment of hazardous wastes |
| 1j | | | | | | | | | | | | | | | | | Educational Video | Not complete. Under consideration by Americorps as part of Project Storm Team |
| 1k | | | | | | | | | | | | | | | | | Catch Basin Stencils | Developed and purchased 1,000 storm drain markers. Will glue to CB's w/ AmeriCorps. |
| 1l | | | | | | | | | | | | | | | | | Stormwater Posters | Displayed 4 stormwater posters in several Town offices. |
| 1m | | | | | | | | | | | | | | | | | Student Involvement | Assisted Environmental Science Classes at High School. |
| 1n | | | | | | | | | | | | | | | | | Stormwater Committee | Project Storm team continues to meet to discuss stormwater and implement Phase II Regs |
| 1o | | | | | | | | | | | | | | | | | Environmental Expo Review Team | Member of Environmental Expo Review Team for Sandwich High School |
| ***5.2: Public Involvement & Participation*** | | | | | | | | | | | | | | | | | | |
| 2a | | | | | | | | | | | | | | | | | Development Review | Continue to enforce stormwater and erosion regulations during development review. |
| 2b | | | | | | | | | | | | | | | | | Public Meeting | Scheduled for this year. |
| 2c | | | | | | | | | | | | | | | | | Public Display of Stormwater Mgmt Plan | To be displayed at Town Buildings. Water & Sewer article. |
| 2d | | | | | | | | | | | | | | | | | Proposed Educational Brochure | Distributed over 150 bookmarks, 150 door hangers and 25 posters. Rain Barrel Raffle. |
| 2e | | | | | | | | | | | | | | | | | Illicit Discharge Identification | Performed inspections during CB and outfall data collection. Continue inspecting shorelines. |
| 2f | | | | | | | | | | | | | | | | | Outfall & Catch Basin ID & Mapping | W/ AmeriCorps, identified over 2,500 CB's and outfalls w/ GPS. Report is available. GIS complete. |
| 2g | | | | | | | | | | | | | | | | | Water Monitoring Program | Health Dept performs annual sampling. |
| 2h | | | | | | | | | | | | | | | | | Educational Video | Not complete. Under consideration by Americorps as part of Project Storm Team |
| 2i | | | | | | | | | | | | | | | | | Educational Festival | Organized Water Festivals at Elementary Schools w/ County and AmeriCorps. |
| 2j | | | | | | | | | | | | | | | | | Student Involvement | Taught HS class, interacted w/ students on projects & involved them with data collection. |
| 2k | | | | | | | | | | | | | | | | | Stormwater Committee | Formed Cape-wide group w/ CCC to develop & distribute educational info related to stormwater |
| ***5.3: Illicit Discharge Detection & Elimination*** | | | | | | | | | | | | | | | | | | |
| 3a | | | | | | | | | | | | | | | | | Household Hazardous Waste Program | Continue to distribute info and schedule household hazardous waste collection days w/ County. |
| 3b | | | | | | | | | | | | | | | | | Sandwich Village Stormwater Assessment | Upgrading drainage facilities in the Village area near Shawme Pond and Mill Creek. |
| 3c | | | | | | | | | | | | | | | | | Illicit Discharge & Dumping Identification | Continued inspections of illicit discharges. |
| 3d | | | | | | | | | | | | | | | | | Catch Basin Cleaning | Continue to clean & monitor CB conditions. Currently mapping all town-owned CB's on GIS. |
| 3e | | | | | | | | | | | | | | | | | Outfall & Catch Basin ID & Mapping | W/ AmeriCorps, identified over 2,500 CB's and outfalls w/ GPS. Report is available. GIS complete. |
| 3f | | | | | | | | | | | | | | | | | Educational Information | Displayed posters & distributed brochures to public & developers. Rain Barrel Raffle. W&S Article |
| 3g | | | | | | | | | | | | | | | | | Allowable Non-Stormwater Discharges | Will continue to search for non-stormwater discharges that may be significant polluters. |
| 3h | | | | | | | | | | | | | | | | | Town Bylaw - Illegal Disposal | Town By-law includes illegal disposal law and fines. Will identify all town regs in one form. |
| 3i | | | | | | | | | | | | | | | | | Water Sampling | Town sampled Mill Creek in Village for future BMP grants in an effort to restore shell fishing |
| | | | | | | | | | | | | | | | | | | |

Note: Many of the BMP's above will continue beyond the 5-year permit period.
[ ] = Goals anticipated to be completed in the season & year shown above. Words in Red = goals not yet accomplished under year shown above.