TOWN OF DUXBURY

DEPARTMENT OF PUBLIC WORKS
TOWN OFFICES
878 TREMONT STREET
DUXBURY, MASSACHUSETTS 02332

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P 5/1/08

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April 23, 2008

Ms. Ann Herrick – CIP
U. S. Environmental Protection Agency – Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Mr. Fred Civian
Massachusetts Dept. of Environmental Protection
One Winter Street – 5th Floor
Boston, MA 02108

Re: Annual NPDES General Permit for MS4's Report
Permit Number: MA041034/MaDEP Transmittal Number: W114295

To Whom It May Concern:

I hereby am filing the above referenced report on behalf of the Town of Duxbury, MA. This report is structured per the General Permit requirement, Part II F (see Attachment A).

a) The following is a self-assessment review of compliance with the permit conditions. To assist, I have attached the Town of Duxbury's Program Summary (Attachment B) and our Implementation Schedule (Attachment C).

1. Public Education

1A. Drainage Posters in Schools and Public Buildings
Completed in April of 2004 (4/28/04 report).

1B. Stencil Catch Basins
Completed summer of 2006 (4/25/07 report)

1C. Pamphlets in Water Bills
Completed in October of 2005 (4/27/06 report).

1D. Educational Material on Web-Site
Completed. (4/27/06 report).

1E. Educate Community Groups
The Town of Duxbury Conservation Agent, Joe Grady has participated in and is on the steering committee for the Watershed Action Plan for the south coastal watershed, being funded by the EOEA.

2. Public Participation

2A. Stencil Catch Basins
See 1B. above.

2B. Planning Board and Planning Director work on water quality goals
Every year the Planning Director and Planning Board meet to review the Subdivision Rules & Regulations including stormwater quality issues.

2C. Paint Day Collections
The D.P.W. hosted Paint Day Collections on every 3rd Saturday of the month from April to October 2007 and will resume in April of 2008.

2D. Open Space & Rec. Committee
The Open Space & Rec. Committee meet regularly and have currently been working on maintaining open space areas which preserves water quality, maintains watersheds and promotes interest in preserving Duxbury's open space areas. The committee sponsors Earth Day, trail days and other pertinent events. In January 2007, the Committee mailed out 7,366 surveys to assess residents' knowledge, use, feelings, and beliefs regarding relevant aspects of the Open Space and Recreation Plan (see Attachment 2D for the survey executive summary and results). Feedback from this survey was used to help determine appropriate goals for the *Open Space and Recreation Plan* update, which was published on March 31, 2008.

2E Community Preservation Committee
The CPC meets regularly and received approval from 2008 Town Meeting to purchase two large land parcels totaling 146.5 acres (see Attachment 2E). One of the parcels contains 106 acres and borders the South River (part of South River Watershed). They continue to investigate and negotiate with other land-owners throughout the Town to obtain significant amounts of additional land.

2. Public Participation Extras

2F. Duxbury Bay Management Commission
Attachment 2F is the 2007 Annual Report for the Duxbury Bay Management Commission. As can be seen in the attachment this group are the "Keepers of the Bay" and are involved in many issues that affect the Bays including water quality.

2G. Fish Ladder Restoration
As noted in last years report, in 2006 the Island Creek Herring run restoration project was completed with the involvement of many townspeople, Boards and Committees. Last spring a monitoring and management program was established (see Attachment 2F). The statewide moratorium on herring stocking was lifted and Island Creek was stocked last year. Plans are to stock it again this year.

3. Illicit Discharge Detection and Elimination

3A. Map Drainage System

The Town is continuing its efforts toward creation of a drainage map layer for our GIS system. The GPS unit has been purchased and mapping of manholes, catch basins and outfalls is scheduled to begin this month.

3B. Coord. with the Div. of Marine Fisheries on Testing Bay Outfalls
The Conservation Agent continues to coordinate with the Div. of Marine Fisheries to perform annual water quality testing in the Duxbury and Kingston Bays.

3C. Investigate Pollution Hot Spots as needed via Test Results
The Div. of Marine Fisheries notifies the Board of Health about any potential locations of illicit discharges. This year no new potential locations have been found.

3D. Stencil Catch Basins
See 1B. above.

3E. Paint Day Collections
The D.P.W. hosted Paint Day Collections on every 3rd Saturday of the month from April to October 2007 and will resume in April of 2008.

4. Construction Site Runoff Control

4A. Proposed Zoning Changes re: drainage quality to Town Mtg.
Completed in March of 2003 (4/28/04 report).

4B. Proposed Conservation Commission Bylaw Changes to Town Mtg.
Completed in March of 2003 (4/28/04 report).

4C. Projects Reviewed by Development Review Team (DRT)
The DRT meets very regularly and stormwater issues are a top priority. The DRT includes representatives from each Town Department.

4D. Review and Update Subdivision Rules & Reg.'s re: drainage BMP's.
Completed in November of 2004 (4/27/05 report).

4E. Enforce Approvals by Regulatory Authorities
Enforcement is an on-going process by all permitting authorities. Checks and balances are in the system such as construction inspection, as-built plans, certificates of compliance, occupancy permits, bonds, etc.

5. Post Construction Runoff Control

5A. Review BMP Operation Manuals
It is standard operating procedure for the Conservation Agent and Commission to review Stormwater Operation and Maintenance Plans for all applicable projects.

5B. DRT review of BMP Operation Manuals
It is standard operating procedure for the DRT to require and review Stormwater Operation and Maintenance Plans for all applicable projects.

5C. Maintain BMP's of Projects Accepted by the Town
Upon acceptance by the Town, each street is added to the street sweeping, catch basin cleaning, and BMP monitoring (typically detention ponds) lists.

5D. Require Annual Maintenance / Inspection reports for regulated projects
It is standard operating procedure for all regulatory authorities to request Maintenance / Inspection reports for regulated projects.

5E. Bylaw to Town Meeting
The Planning Director, Conservation Agent, Health Agent and DPW Director are working on a bylaw to submit for Town Meeting action.

5. Post Construction Runoff Control Extras

5G. Revised Conservation Rules and Regulations
Completed in March of 2006 (4/27/06 report).

5H. Estuaries Project
Our Conservation Commission with the Mass. DEP and UMASS Dartmouth are exploring the development of Total Maximum Daily Loads (TMDL's) for nitrogen loadings for the Duxbury, Plymouth and Kingston Bays. During the summer of 2007 water samples were taken with the help of Conservation staff.

6. Municipal Good Housekeeping

6A.& 6B. **(beyond NPDES permit requirement)** Snug Harbor Drainage
Completed. (4/27/06 report).

6D. Sweep Streets
We swept the Town's streets between March and November of 2007. We began sweeping again in March of 2008. There is an ongoing as needed sweeping process throughout the year.

6E. Clean Catch basins
In the Fall of 2006, the DPW purchased a new catch basin cleaner to keep up this valuable program. Catch basins are cleaned on a regular basis.

6F. Staff Training
Completed. (4/27/06 report)

6. Municipal Good Housekeeping Extras

6G. Halls Corner Bay Rd. Drainage Project

The Town previously had received a grant from Coastal Zone Management to study outfalls coming from the Bay Rd. area and flowing into the Kingston Bay. The Town contracted with a consultant to track down all of the outfalls and connecting watersheds. As part of this work a drainage map of this area was created.

Also as part of this project an assessment of each outfall was done, the outfalls were prioritized from a polluting standpoint, our Conservation Agent obtained a grant from Coastal Zone Management ($125,000). The first phase (Depot and Chestnut Streets) of this BMP installation project in the Halls Corner / Bay Road area was completed in July 2007. Design of the second phase (Bay Road) is nearing completion and should be out to bid within a month. Both phases should significantly help the receiving waters of the Kingston Bay.

6H. Rte 3A Drainage
Completed 2006. (4/27/07 report)

6I. Elm St. Drainage
During preparation of last year's report the Duxbury DPW was in the process of designing and permitting a new drainage system and BMP's for about ½ mile of Elm St. The DPW has installed a number of leaching catch basins which have virtually eliminated direct discharge of street runoff into Island Creek. The DPW is working toward completion of this project and has some additional leaching basins to install.

6J. Senior Center Parking Lot Upgrade

The parking lot at the Duxbury Senior Center was enlarged and stormwater BMP's were installed as part of the project. The BMP's include catch basins with deep sumps and hoods, oil / water separator, sediment forebay, energy dissipation bowl and vegetated detention basin. Runoff from the existing parking lot was also directed through the BMP's.

6K. Union Bridge Road Drainage

To correct flooding problems in the area the DPW designed and installed three leaching pits to collect, clean and recharge stormwater.

6L. Partridge Road Drainage

During 2007 the DPW constructed a grass-lined swale and installed a leaching pit to treat and infiltrate runoff. The work eliminated a direct discharge into Blue Fish River.

6M. Bay Road Swale

The DPW has designed a grass swale and drainage ditch along Bay Road between Bayview Road and Bay Ridge Lane. The swale and ditch will treat stormwater runoff which currently discharges directly into Kingston Bay.

6N. Powder Point Bridge West Drainage

The DPW plans to install a leaching pit in the Town parking area at the west end of Powder Point Bridge. Currently, stormwater runoff from the parking area and adjacent roads flow through a riprap channel into Duxbury Bay. Over time the runoff has eroded the riprap and underlying soil, washing it into the bay. The leaching pit will be installed to intercept a portion of this runoff thereby minimizing erosion. The riprap channel will also be reconstructed as part of this project. The shellfish beds in the immediate vicinity will be better protected with the installation of this leaching system.

b) BMP Appropriateness Assessment

We are pleased with the BMP's selected and their results. Street sweeping and catch basin cleaning are a staple of a good program. Duxbury has had and continues to improve our regulatory authority to ensure no adverse affects on the environment. Duxbury has adopted the CPA and is very proactive at buying and maintaining open space. Duxbury has a very involved and interested group of volunteers on its committees. We also have close relationships with the relevant state authorities. Duxbury has very successful Paint Day, Hazardous Material and Recycling Programs. The public is well educated and open to new ideas. Our increased public education efforts have received positive comments.

c) Progress Towards Measurable Goals Assessment

We are making progress. We continue to put out public awareness messages. Our Paint Day and Hazardous Waste Day Collections are a continued success. The Division of Marine Fisheries continues to test Duxbury Bay. Our DRT continues to support the Local Boards with the regulation of proposed projects. Our efforts to continually improve water quality throughout the community are highlighted in the projects listed under "Municipal Good Housekeeping Extras" above. These projects set an example for private entities within town. They show that not only does Duxbury enforce stormwater regulations but also adheres to them.

d) Test Results

None available at the time of this writing.

e) Next Reporting Cycle

Our on-going activities shall remain for the next cycle. We are continuing our land acquisitions for open space. Our largest endeavor will be our drainage mapping that will be also a part of our GIS system. This will be a valuable tool for many years to come.

f) Changes to BMP's and Goals

No changes have been discussed or are proposed at this time.

g) Reliance on Other Entities

The Town relies significantly on the Division of Marine Fisheries &Wildlife for the testing they do in Duxbury Bay. We note that the Massachusetts DEP adopted new Stormwater Regulations in January 2008. These regulations give the regulatory entities in Town more power to enforce these important regulations.

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: Peter Buttkus

Printed Name: Peter Buttkus

Title: Acting Director of Public Works

Date: 4/24/08

Cc: Town Manager
Operations Manager
Conservation Agent
Planning Director
Director of Inspectional Services
Health Agent