

## **Bioretention Cell deliverables**

- A. Final design and construction plans for the BMP as described, submitted for review and comment to the DEP project officer prior to construction, Final plans must be reviewed and stamped by a professional engineer prior to review by the DEP project officer.
- B. Construction permits and approvals
- C. Final “as built” drawings of the BMPs
- D. Certificate/Letter from the designer stating the BMPs have been installed according to design specifications
- E. Vendor Information Forms from all bidders who respond to public bid opportunities for any aspects of the work

**Deliverable A:** Existing Conditions, Proposed Improvements, Detail – stamped engineer drawings

**Deliverable B:** Massachusetts Department of Environmental Protection, Order of Conditions, DEP file number 322-640 signature page submitted as “permits and approvals”

**Deliverable C:** Included in Deliverable A

**Deliverable D:** Request for Information Form, RFI No. 06-01 attached

**Deliverable E:** Only one bidder, Geosyntec Consultants responded to the town’s request for proposal

## **Weevil Stocking deliverables**

- A. A plan for conducting and evaluating the weevil stocking program, for review and approval by DEP prior to commencing the weevil introduction.
- B. Stocking of a minimum of 12,000 milfoil weevils in Dudley Pond
- C. Reports documenting pre- and post stocking conditions for three consecutive growing seasons, as described in the proposal and further outlined in the weevil stocking plan. A final report for this task will document all activities related to weevil stocking and monitoring, including maps of stocking areas.

**Deliverable A:** Conversations between Robert Hartzel of Geosyntec Consultants and s319 Project Coordinator, Jane Peirce were held on several occasions in which Mr. Hartzel discussed the BMP for the introduction of weevils and how they would be introduced and monitored.

**Deliverable B:** 15,000 weevils were introduced to two areas of Dudley Pond on July 26, 2006. The notice of this is included in Attachment D, Educational Pieces

**Deliverable C:** The complete Dudley Pond Weevil Monitoring Report is Attachment B

## Catch Basin Stenciling deliverables

- A. Photographs and a report describing the catch basin stenciling task and documenting the activity, including a map of locations, written as a technology transfer piece for the benefit of others who may be contemplating such a task

**Deliverable A:** During July and August of 2006 volunteers from the Dudley Pond Association and Wayland High School students stenciled many of the 106 catch basins in the watershed.

Each volunteer was given the Instructions for Stenciling piece that follows, the stencil, paint and 2 x 4's required. The Dudley Pond Association had purchased two stencils for the project which meant that not more than two volunteers could paint at the same time.

Most volunteers worked in pairs and one swept and cleaned the area preparing it for the paint. Each volunteer or pair of volunteers received a map for their assigned area and a corresponding sheet with the catch basins numbered. They kept track of the time spent in preparing the area and in spraying the stencil.

The biggest problem that was encountered was the paint builds up on the lettering of the stencil. The paint dries quickly and it is difficult to remove layers of dried paint. We found that applying a small amount of silicone spray to the stencil prior to the first spraying allowed us to pull the dried paint from the stencil. However, the removal of the paint was a longer and more difficult task than initially anticipated.

In 2006 five roads surrounding Dudley Pond were slated for resurfacing. Due to an exceptionally wet spring, all resurfacing in town was pushed ahead and resurfacing wasn't completed until early September. We opted not to paint the catch basins in September as they would soon be covered with fallen leaves and winter's sand and salt. These catch basins were stenciled in the late spring of 2007 after the town had completed its winter street cleaning.

# INSTRUCTIONS FOR STENCILING STORM DRAINS AND CATCH BASINS

## Material List

### Plastic Stencil

White marking paint (one can for 3-4 drains)

Stiff corm or street broom

Wheel barrow or garden cart

1 long and 1 short 2x4

Pair of vinyl or plastic gloves

List and map of drains to be marked

## Process

1. Locate the proper drain on your list
2. Make sure that the paved surface on which you will paint the stencil is even and smooth  
**It is preferable** to use the area directly in front of the drain towards the center of the road  
Find another position if the pavement is rough or broken
3. Carefully sweep all loose material well out of the area to be painted. This is necessary to prevent the overspray of paint that looks amateurish
4. Lay the stencil flat on the pavement and weight it down with the 2 x 4's supplied to hold the stencil close to the ground
5. **Thoroughly shake the can of paint as long as it takes to hear the marble(s) in the can mix the paint**  
Keep shaking for another minute. The paint can is made to spray in an upside down position  
Keep your finger low against the spout so as not to interfere with the spray pattern  
It is best to wear vinyl or rubber gloves
6. Keep the can 9-12 inches from the stencil and spray moving back and forth over the stencil for thorough coverage of the patterns  
Try to get most of the paint within the letters as we have to clean off the stencil when the paint builds up on it

**You should get 3 or 4 stencils from each can of paint**



High School student, Danielle Smith sweeps around a catch basin preparing it for the paint.



Using a stick or a broom or rake handles all dirt and debris blocking the catch basin was removed



Ready to Paint  
Basin 41 7/8/06

It's important to ensure that the stencil is as flat on the ground as possible to prevent fuzzy lettering and running of the paint



your text here

**Painting Basin 41**

Holding the can of paint 9-12 inches from the stencil and using a forward and back stroke produced the best results



The condition of the road was a big factor in the quality of the finished product.

## **This was on the Dudley Pond Website**

During July, 2006 volunteers from the Dudley Pond Association stenciled many of the catch basin(s) in the watershed. A hand out was left at each home as catch basins were stenciled asking residents to keep the catch basins clean of leaves, sand and salt used during the winter and use fertilizers and weed killers sparingly. These pollutants all find their way into Dudley Pond either directly or indirectly. The text of that handout appears below.

“As you may know, the Town of Wayland was awarded an s319 grant to deal with Non-Point Source Pollution for its Dudley Pond Comprehensive Water Quality Improvement Project. This project is part of a long-term program to improve the quality of water entering Dudley Pond. This project is funded by the Environmental Protection Agency through the Massachusetts Department of Environmental Protection, the Town of Wayland, the Dudley Pond Association and citizen volunteers.

GeoSyntec Consultants was awarded the contract to implement much of the stormwater infrastructure recommendations outlined in the grant award. Those recommendations include

- Installing a special type of garden that improves the quality of stormwater from the paved areas of the Middle School and Highway Department
- Making structural improvements to an area across from the Highway Department to improve the quality and flow of water entering the pond
- Introducing native milfoil eating weevils, an important component of a balanced approach to aquatic vegetation control
- Stenciling 100 catch basins that drain into Dudley Pond to encourage the reduction of pollutants from entering these drains

Pollution comes from many different sources, including:

- Fertilizers, herbicides, and insecticides
- Oil, grease, and toxic chemicals from urban runoff
- Sediment from improperly managed construction sites
- Eroding stream banks
- Bacteria and nutrients from livestock, pet wastes, and faulty septic systems
- Careless disposal of toxins into catch basins

Additional information on things that we all can do to improve the quality of the water entering Dudley Pond and other bodies of water may be found at <http://www.mass.gov/dep/water/resources/nonpoint.htm>”

We were fortunate to receive help and support from two Wayland High School students, Ben Ducharme and Danielle Smith. All Wayland High School students are required to contribute 30 hours of community service during the year. Thanks Ben and Danielle for choosing the s319 grant program as part of your community service!

## **Public Education and Outreach deliverables**

- A. Copies of all materials developed and distributed for this task
- B. URL of web site with all materials posted
- C. A report describing the effectiveness of the outreach program with recommendations for other outreach and education activities to follow

**Deliverable A:** All educational pieces are included under Attachment D

**Deliverable B:** [http://www.dudleypond.org/S319\\_Grant.htm](http://www.dudleypond.org/S319_Grant.htm)

**Deliverable C:**

From early 2004 when the original proposal for this project was being prepared, the Town of Wayland Selectmen's Office, School Department, Board of Road Commissioners, Highway Superintendent, Surface Water Quality Committee, Police Chief and the Executive Board of the Dudley Pond Association held several meetings where the plan was laid out and each department enthusiastically signed on to provide the land, manpower, equipment and support to deliver a successful project to the town. This kind of enthusiasm and support is not often found between numerous boards with different missions and focus.

Upon receiving official notice in December 2004 that the project was approved for s319 funding, the Dudley Pond Association (DPA) immediately rolled out a Capital Campaign to raise the \$12,000 in-kind cash needed for the project. Every household in the Dudley Pond watershed received a letter outlining the project and requesting a donation. Residents of the town and in particular those in the Dudley Pond watershed surpassed the \$12,000 goal by spring 2005.

The Dudley Pond Association publishes a bi-annual newsletter and a portion of the 2005, 2006 and 2007 newsletters defined the project and updated on the progress. Also at each spring and fall Dudley Pond meeting, Judy Currier, a member of the DPA spoke about the project and answered any questions concerning the project.

Information on the general overview of the project and what it hoped to accomplish was placed on the Dudley Pond website and updates were made when the weevils were introduced and when Catch basins were stenciled.

In March 23, 2006 a letter to the Editor, explaining the project the cooperation among town departments appeared in the Wayland-Weston Town Crier. On May 25, 2006, Judy Currier and DPA Treasurer, Jamie Pierce were featured on the "Community Pulse" show on the Wayland Cable Channel. A moderator asked questions specific to the s319 project and Judy and Jamie described what was to happen. This interview was taped live on May 25 and re-broadcast on June 8, 2006. In September 2006, again the Wayland-Weston Town Crier followed the progress of the planting at the bioretention cell with photographs on the front page of the newspaper.

The plan was to send a large mailing to watershed residents and do a newspaper story in the spring of 2007 touting the success of the weevils in curbing the milfoil infestation. Alas, that was not to be. Milfoil in Dudley Pond exploded in 2007 with most of the pond having a very dense infestation. The Wayland Surface Water Quality Committee spent a good deal of time and effort trying to curb the problem. The DPA Timeline included in Attachment D, Educational Pieces, was presented at a joint meeting of Dudley Pond residents, the Town Administrator, members of the Finance Committee, Board of Health, Surface Water Quality Committee, Affordable Housing Committee and Conservation Commission. This meeting was facilitated by Fred Turkington, the Town Administrator, to present the magnitude of the problem once to all interested Boards and Committees to ensure that everyone was on the same page and understood that the town needed to find some monies and solutions to control the outbreak of milfoil.