

A. PROJECT SNAPSHOT

Project 04-15/319, Dudley Pond Comprehensive Water Quality Improvement Project

- A1. Project start date: Notice to Proceed with tasks outlined in this project was March 28, 2005
- A2. Date closed: Final Reporting to close the contract is June 30, 2008
- A3. Basin and HUC 12 watershed location: Dudley Pond is located in Wayland, Massachusetts in the SuAsCo Basin, HUC ID: 010700050104, Sudbury River – Hop Brook to Mouth
- A4. Segment and waterbody information: Dudley Pond MA82029
- A5. Status of Waterbody: Category 5
- A6. Priority pollutants targeted: Nutrients, sediment and Eurasian Water Milfoil
- A7. Estimated annual pollutant removal and method of determination:

(1) Nitrogen, phosphorus and TSS load via bioretention cell

Fraction impervious	0.9	
Nitrogen export	9.01 lbs/ac/yr	129.9611 lbs/yr
Phosphorous export	1.69 lbs/ac/yr	24.37672 lbs/yr
TSS export	606 lbs/ac/yr	8741.003 lbs/yr
Assumed hydraulic control	70%	
(hydraulic control provided by BMP – assume TSS reductions are proportional)		
TSS export with BMP	424.2 lbs/ac/yr	6118.702 lbs/yr
Net annual TSS load reduction		2622.301 lbs/yr

(2) Milfoil Weevils – negligible

Weevil population data and information on weevil-related milfoil damage is obtained by collecting samples of Eurasian milfoil along the identified transects within each monitoring site. Samples are collected by snorkeling through the Eurasian milfoil bed and removing the top 30 centimeters of ten stems, taken in pairs of five evenly spaced intervals. The collected stems are individually analyzed in the laboratory for the presence of weevils (eggs, larvae, pupae and adult weevils) and also for evidence of weevil damage. Geosyntec did not observe any significant evidence of milfoil stem damage that could be attributable to weevils.

(3) Diver Hand Pulling

Divers pulled milfoil plants from the outlet cove, the inlet area, the Chateau Cove, the Mansion Beach Cove, and Rocky Point. These were the “hot spots” in 2004 and seemed to be the areas of most concentrated re-growth in 2005. 46,000 milfoil plants were removed in 2005. Divers estimated that this was approximately 30% of the milfoil population. 12,958 were paid through matching funds in this grant.

A8. BMPs installed, number and type:

1 bioretention cell

25,000 Milfoil weevils

Professional Diver Hand pulling of Eurasian milfoil