

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**SECTION 319 NPS PROJECT 04-15/319**

PROJECT TITLE: Dudley Pond Comprehensive Water Quality Improvement Project  
NPS CATEGORY: Resource Restoration  
INVESTIGATOR: Town of Wayland  
LOCATION: SuAsCo Watershed  
TARGETED POLLUTANTS: Nitrogen, phosphorus and Eurasian milfoil

**DESCRIPTION:**

Dudley Pond is an 84-acre great pond in the Concord River watershed. The Pond is Category 5 listed for turbidity and exotic species. In addition to turbidity from nonpoint watershed sources, nuisance growth of Eurasian milfoil is a serious problem for the Pond that significantly impairs its ecological and recreational value. This project is part of a long-term strategy to mitigate water quality impairment in Dudley Pond using both in-lake and watershed BMPs.

This project will reduce sediment and nutrient loads to Dudley Pond by implementing low impact development BMPs and restoring a section of eroding riverbank. To help control aquatic vegetation, milfoil weevils will be introduced and diver hand-pulling will be conducted in targeted areas. Targeted pollutants include sediment, nutrients, and Eurasian milfoil.

**Project tasks include:**

1. Construction of a bioretention cell;
2. Outlet protection/bank restoration;
3. Introduction of milfoil weevils;
4. Milfoil hand pulling;
5. Catch basin stenciling; and
6. Public outreach and education.

**Results:**

1. Net annual TSS load reduction from the bioretention cell is approximately 2622 lbs/yr.
2. The outlet protection/bank was not restore
3. There was no evidence of milfoil weevil destruction or the presence of weevils one year after introduction into Dudley Pond
4. Professional divers removed 46,000 milfoil plants in 2005. Divers estimated that this was approximately 30% of the milfoil population.

PROJECT COST: \$ 70,458

FUNDING: \$ 42,150 by the U.S. EPA  
\$ 9,200 by the Town of Wayland  
\$ 19,108 by the Dudley Pond Association

DURATION: 2005 - 2008