

On Wednesday, July 26, Dudley Pond became Home to fifteen thousand milfoil weevils. Our new neighbors, Middfoil[®] Weevils, are native insects that feed exclusively on Eurasian water milfoil, the highly invasive weed that, if untreated, threatens to turn Dudley Pond into a swamp. With the introduction of these tiny bugs, it is hoped that Dudley Pond will be among the fifty plus percent of threatened lakes and ponds that have had success with this method.

The weevils were raised in Ohio by EnviroScience, Inc. They arrived in blue coolers via overnight delivery to GeoSyntec Consultants who introduced the weevils to their new home Wednesday afternoon. The adult weevils arrived attached to two inch long sprigs of milfoil. Using twist ties, the sprigs of milfoil and the weevils were secured to host plants in the pond. Once attached, they relocate to the fuller and fatter fronds of the host milfoil and lay eggs. The larvae take their nourishment from the inside of the plants. The adults feed on the plant surface, so the milfoil is simultaneously damaged inside and out.

The eggs hatch and the cycle repeats. From spring to early fall there typically are two or three generations working to consume as much milfoil as they can eat. In the fall when the milfoil becomes dormant, the weevils will fly to shore and bury themselves in the banks where they'll spend the winter. In springtime, when the milfoil revives, so will the insects. They'll fly back to the pond weeds and continue their life cycle.

Ideally, as the insects destroy more and more of the milfoil and deplete their own food supply, they lay fewer and fewer eggs. When the milfoil density increases again due to the smaller number of predators, the adults react by laying more eggs. The ebb and flow continues.

EnviroScience, Inc., working with Middlebury College in Vermont, has conducted eight years of intensive field application and more than twelve years of university research. Their scientists believe that weevil introduction has been proven to be the only long-term, environmentally-friendly alternative to herbicides and mechanical harvesting for large scale infestations. Weevils, in fact, are indigenous to Canada and northern New England.

As you all know, Dudley Pond has had serious milfoil infestations since 1991. Until 2003 it had been treated with an herbicide known as Sonar. The Sonar "knocked down" the milfoil plants. They seemed to disappear for a year or two but, by the third year, would return with another serious infestation. The Weevil project will not have the immediate dramatic effect of the herbicide. Rather, it is intended to be a long term control method that should keep the serious infestations under control.

The Weevil Project is only one component of The Dudley Pond Comprehensive Water Quality Improvement Project under an s319 Grant funded in part by the US Environmental Protection Agency through the Massachusetts Department of

Environmental Protection. The purpose of the grant is to improve the overall quality of the water entering Dudley Pond.

Other portions of this project include the construction of a bio-retention cell (an engineered garden that functions as a filter) at the Middle School that will lessen the amount of runoff contaminants flowing into the pond, watershed catch-basin stenciling warning against spilling pollutants down storm drains, the reconstruction of an eroded inlet pipe area across from the Highway Department, and education of the public to raise awareness about environmental measures we all need to take to keep our lakes and ponds healthy.

Two stocking sites and one control site were selected. The GPS locations of the two stocking sites will be provided to the divers so that hand pulling doesn't occur in the three areas. Later this year and next year, inspections of the three sites will provide further information on the anticipated success of this project.

The entire Dudley Pond Water Quality Improvement Project is being managed by GeoSyntec Consultants, a national company with offices in 28 states. GeoSyntec's hydrologists, engineers and scientists are national leaders on storm water management.



For more information on the Dudley Pond Project visit http://www.dudleypond.org/S319_Grant.htm.