

What is a Mechanical Harvester doing on Lake Tohopekaliga?



Mechanical harvester that has been modified to harvest hydrilla in deep water

Mechanical harvesters are often used on Lake Tohopekaliga (Toho) and other waterbodies to harvest unwanted aquatic plants. From late January to March 2012, a modified mechanical harvester will be operating on Lake Toho south of Goblet's Cove as part of a demonstration study for Osceola County's Hydrilla and Hygrophila Demonstration Project.

Background:

Osceola County, headwaters of the Kissimmee River Basin, continues to have significant problems with the invasive aquatic plant, hydrilla. Where the plant occurs, it can impede

water flow and block water control structures, damage boat motors, cause substantial economic hardships, interfere with various water uses, displace native aquatic plant communities, and adversely impact freshwater habitats.



Hydrilla topped-out at the surface of the water on Lake Toho

Osceola County was awarded a \$2.881 million dollar grant by the Environmental Protection Agency to conduct the Demonstration Project on Hydrilla and Hygrophila in the Upper Kissimmee Chain of Lakes (KCOL) to find new and alternative ways to manage hydrilla and hygrophila in KCOL. The primary purpose of the Demonstration Project is to discover new herbicides, develop new technology processes or practices, or a new combination or uses of technologies, processes or practices for the

purpose of proving technologically feasible and cost effective means to manage hydrilla, hygrophila and other exotic aquatic vegetation in the Upper Chain of Lakes within the Kissimmee River Basin of Osceola County.

Deep water mechanical harvesting is an aquatic plant management technique that is being considered as part of an integrated pest management (IPM) program for hydrilla. This demonstration will investigate deep water mechanical harvesting as a new option for hydrilla management.



*Hydrilla
Hydrilla verticillata
Photo by Vic Ramey
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Close-up view of hydrilla, an invasive aquatic plant

Description:

A modified mechanical harvester will uproot weakly rooted hydrilla growing mid-water column in water 6 to 8 foot deep. One 100 acre study area will be harvested in late January/early February 2012 on Lake Tohopekaliga (Toho). The project will determine the longevity of control which is a key variable in evaluating cost efficiency compared to current chemical control costs. Environmental concerns related to mechanical harvesting will be investigated including fish by-catch and water quality impacts.



View of the front of the mechanical harvester while harvesting hydrilla

Summary:

It is hoped that this deep water harvesting demonstration will help identify conditions and parameters that are acceptable for mechanical harvesting to reduce pesticide use and provide more site-specific management of hydrilla while also allowing more precise removal of invasive aquatic plants for such critical reasons as flood control and navigation. The uprooting of weakly and shallow rooted hydrilla in deep water by mechanical means may provide a year or more of control which would significantly reduce costs and makes mechanical harvesting a more feasible management option in Florida.

Project Review:

The mechanical harvesting demonstration study has been reviewed by the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, and Osceola County Lakes Management.

For More information:

Visit the Hydrilla and Hygrophila Demonstration Project website at <http://plants.ifas.ufl.edu/osceola> or contact Stacia Hetrick at the Osceola County Extension Office at 321-697-3000.



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