

# Lake Iamonia Habitat Enhancement

## Leon County, FL



### Introduction

Lake Iamonia, near Tallahassee in the northeast corner of Leon County, is regionally famous for quality sunfish fishing and waterfowl hunting. The 5,757-acre lake exchanges water with the Ochlockonee River during periods of flooding. The majority of the lake's surface is covered by lily pads and other aquatic vegetation. Lake Iamonia is shallow and contains sinkholes, most of them inactive. Because the lake has a large connected sinkhole, called Iamonia Sink, which drains the lake during severe droughts, natural "drydown" events occurred in 1910, 1917

and 1934. In 1938, an earthen dam was constructed around Iamonia Sink to prevent the lake from disappearing and "save the lake." This well-intentioned effort prevented the lake from going through natural drought cycles, accelerating the accumulation of organic sediments (muck) on the lake bottom. Although muck development is a natural process, the rapid and excessive accumulation of this material hinders fish reproduction, reduces oxygen levels in the water, fosters floating plant island (tussock) formation and reduces recreational opportunities.



### Objectives

- During natural "drydowns," conduct mechanical removal of excess aquatic plants and associated organic sediments.
- Create additional fish spawning habitat by removing muck down to the historic mineralized soils.
- Using mechanical means, reduce the number and volume of tussocks in the lake that can form from degraded substrates.



### Approach

Muck is most economically removed using conventional heavy equipment on a dry lake bottom. During periods of natural drought, such as the Lake Iamonia drydown, the lake water gradually recedes, allowing for most aquatic animals (turtles, fish, and alligators) to seek refuge. A work site is selected near an approved upland disposal area. By selecting the muck removal area to be near shore, conservation efforts ensure the most important and critically productive littoral zone of the lake is suitably enhanced. Private contractors using off-road trucks and tracked excavators were employed for the project. During 2012, 150,000 cubic yards of material were removed from 24 acres of lake bottom in Lake Iamonia. The project cost was approximately \$180,000 funded by the Aquatic Habitat Conservation and Restoration Subsection. Tall Timbers Research Station partnered with the FWC to accept the muck and spread it on old clear-cut areas.

### Benefits

Removing 24 acres of muck from the 5,727-acre Lake Iamonia will not fully restore the lake. However, the project has accelerated the recovery process at this one site by removing the excess muck that was depleting oxygen from the water and smothering the bottom. Muck removal creates habitat diversity by providing mineralized sandy soil for fish reproduction, improving oxygen levels in the water, and reducing tussock formation. This enhancement also increases the lake's recreational value for fishing, waterfowl hunting and wildlife viewing.



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