

Lake Apopka

Water quality improvements, north shore restoration

FAST FACTS

Once a world-class bass fishery, 50 years of abuse tagged Lake Apopka with the infamous title of Florida's most polluted large lake.

In response to the District's efforts, water quality has improved for more than a decade. Phosphorus levels in the lake are down 56 percent, and water clarity is 54 percent better than earlier conditions.

The story of Lake Apopka is a familiar one to many Floridians. It was once a world-class bass fishery, luring the nation's top fishermen to the lake. Then, a century-long decline occurred, traced to the loss of 20,000 acres of wetlands to farming operations, agricultural discharges laden with phosphorus to the lake, treated wastewater discharges and discharges from citrus processing plants.

Restoring Lake Apopka

The Lake Apopka Restoration Act of 1985 and Florida's Surface Water Improvement and Management (SWIM) Act in 1987 paved the way for restoration work to begin.

The primary actions to restore the lake's ecosystem are:

- Restore the former muck farms to wetlands to reduce the amount of phosphorus going into Lake Apopka.
- Remove phosphorus and other suspended sediments from the lake by filtration through the marsh flow-way. Since 2003, the marsh flow-way has treated twice the volume of the lake.
- Conduct annual harvests of gizzard shad to reduce the phosphorus concentration in the lake. Since harvesting began in 1993 through summer 2009, more than 15 million pounds of the "trash fish" have been removed.
- Stabilize sediments and improve shoreline habitat (known as the littoral zone) by planting native emergent plants.
- Increase lake level fluctuations.

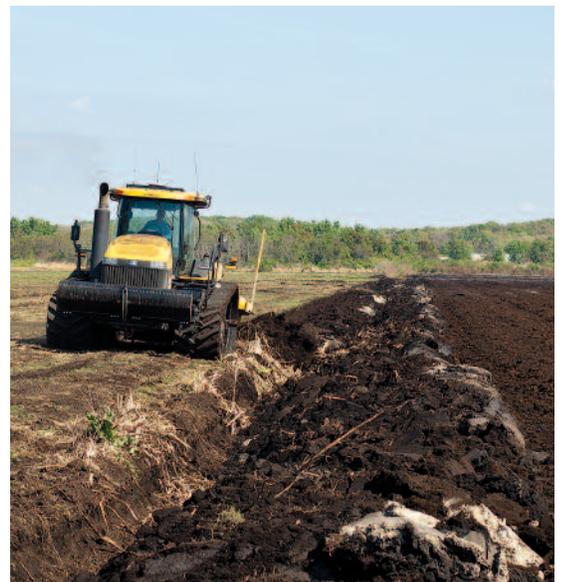
The north shore

The Lake Apopka North Shore Restoration Area (NSRA) is located along the north side of Lake Apopka in western Orange County and eastern Lake County. It primarily includes former agricultural areas. Purchase of the farms has removed the NSRA from agricultural production and restored the area to a more natural condition.

Restoration of wetlands on the NSRA reduces stormwater discharges to Lake Apopka and related nutrient loading, accelerating the restoration of the lake. The restoration and remediation plan focuses on the infrastructure requirements and soil inversion work needed in the NSRA to prepare the system for reflooding and wetland restoration. Soil inversion was completed in May 2009, reducing contaminants to safe levels on nearly 4,000 acres of the NSRA.

As the necessary infrastructure construction is completed for each phase, a biological assessment will be prepared for review and submission to the U.S. Fish and Wildlife Service (USFWS). With USFWS concurrence, saturation and restoration flooding may begin.

This infrastructure is designed to help establish full wetland habitat with a fairly wide range of water levels. The infrastructure will function to release water from the fields during rainy periods when desirable water levels are exceeded.



A tractor pulls a special plow that places potentially contaminated soil deep below the surface as part of a soil inversion project.

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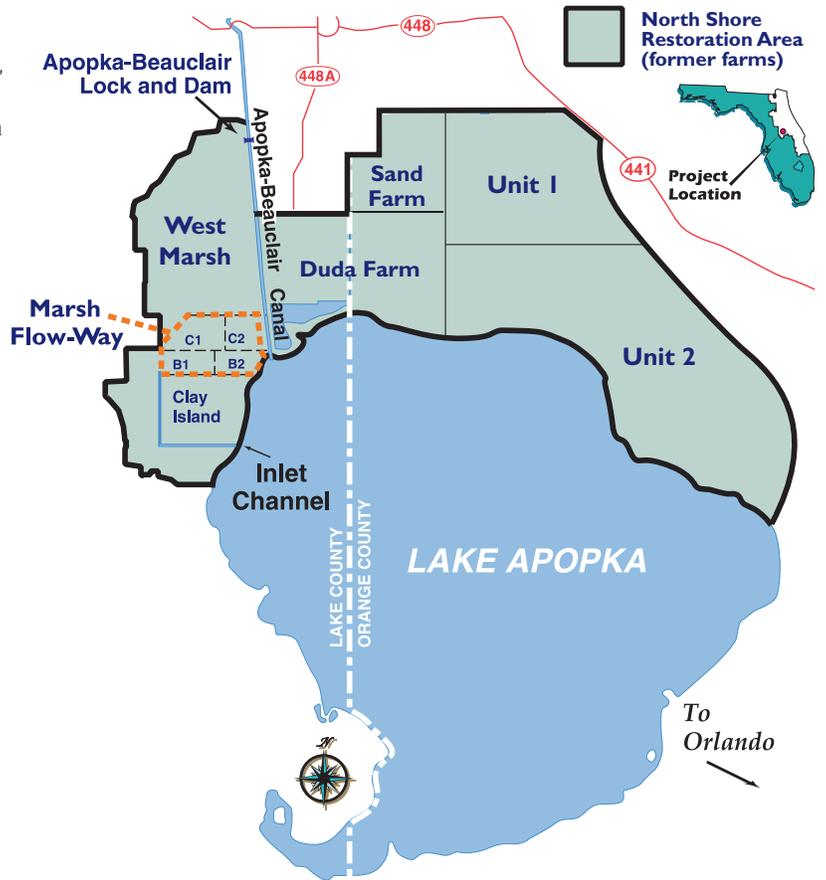
As the infrastructure work and soil preparation are completed in phases and USFWS has given approval, an area can then be saturated to begin the restoration part of the project. During this saturation period, monitoring of soil pesticide concentrations will be ongoing to ensure that pesticide levels are below the target levels.

Once the fields have been saturated and wetland plant coverage is sufficient, additional water can be added to an area. The current strategy for habitat restoration on these fields will be a variety of emergent marsh habitat for an extended period. Increase in water levels and reconnection of areas of the NSRA to Lake Apopka could occur first after contaminant levels in fish have been shown not to present a risk to bird health.

For more information

Contact David Walker, basin program manager, at (386) 329-4833 or dwalker@sjrwmd.com.

Also, visit the District's Web site at floridaswater.com/lakeapopka for additional information on Lake Apopka.



The Lake Apopka Marsh Flow-Way treats water from the lake in wetland cells, releasing cleaner water back to the lake.



Eelgrass beds are starting to naturally revive with improvements in Lake Apopka's water.

