

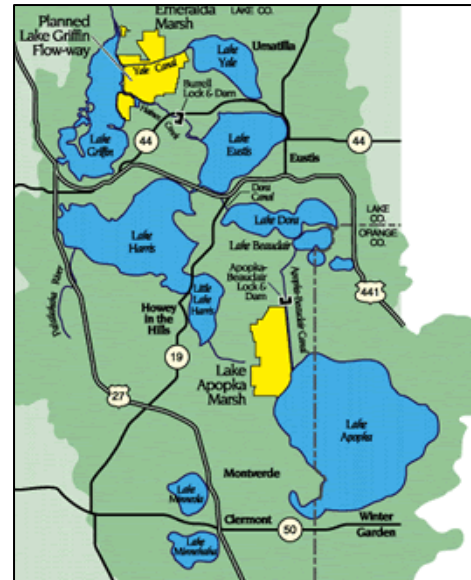
History and Hope for the Harris Chain of Lakes

This article is the first in a series written by the Lake County Water Authority to inform the public about the current water quality problems in Lake County and the efforts underway to correct them.

Water has never been hard to find in Florida. Copious rainfall and flat terrain underlain with limestone create ideal conditions for vast freshwater marshes, large inland lakes and seemingly endless caches of underground water. Nowhere is this more evident than in central and south Florida. Lake County, in particular, has more than 1,000 named lakes and is home to the greatest concentration of large lakes in the state. Three major rivers, all flowing north, course through the county including the Ocklawaha, the Palatka and the St. Johns.

Lake County, once a world-renowned fishing and recreation destination, underwent a dramatic transformation beginning in the early 1900's. Lake Apopka, the 50,000-acre headwater of the Harris Chain of Lakes, was reduced to 30,000 acres with the completion of the Apopka-Beauclair Canal. Water that once flowed slowly over 20,000 acres of wetland into Lakes Harris and Beauclair was now funneled rapidly through a single channel seven miles long and less than 100 feet across. Similar activity elsewhere in the county eliminated thousands of acres of wetlands surrounding Lakes Harris, Denham, Yale and Griffin. Statewide, countless acres were lost to the philosophy that wetlands were nothing more than snake and mosquito infested wastelands that should be made "useful" for the benefit of society.

The Harris Chain of Lakes



**Muck farm harvest at the County Fair.
Lake Apopka is in the background.
(courtesy of Florida Archives)**

Wetland draining activities of the early 1900's facilitated many important things at the time including creation of large agricultural tracts called "muck farms" which, among other things, provided food for American troops during World War II. This new farmland proved to be an incredibly productive though unsustainable agricultural resource. Once the fertile sediment began to dry, the exposed marshes of Lake Apopka began to sink below the surface of Lake Apopka. Crop production became more and more dependant on the need to pump water seeping into the farms back to Lake Apopka.

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Algae Bloom on Lake Harris

The promises of a bountiful harvest soon gave way to a cascade of massive ecological damage. Clear lakes which once teemed with beneficial aquatic plants and sportfish quickly turned green as free-floating algae took advantage of a new source of phosphorus-rich food generated by agricultural, sewage and industrial discharge, as well as stormwater runoff from increasingly urbanized



areas. The algae shaded out and killed most of the aquatic vegetation which once stabilized the lake bottom and provided habitat for fish. Without rooted plants to anchor the sediment, waves scoured the shallow lake bottoms stirring up the sediments causing even more food to be released for the algae.

For decades, scientists worked to determine the best course of action to repair the damage. Direct municipal sewage discharge was eliminated throughout the county in the 1960s and 1970s. Stormwater treatment became mandatory in the 1980s. Most importantly, however, during the 1980s and 1990s, legislators made a decision to have the State purchase most of the muck farms surrounding Lake Apopka. The ecological damage had already been done but restoration was now possible.

The St. Johns River Water Management District has been the key agency involved with restoring agricultural land surrounding Lake Apopka, Lake Griffin and many other lakes in their eighteen-county district. Locally, the Lake County Water Authority (LCWA) is also participating in the restoration process.



Created in 1953, the LCWA is an independent agency governed by its own elected board. Over its history, the agency has been involved with many things, but its largest endeavor so far is to construct and operate a water treatment facility on the Apopka-Beauclair Canal to clean water flowing from Lake Apopka into the rest of the Harris Chain of Lakes. The Nutrient Reduction Facility (NuRF)

Site of the Nutrient Reduction Facility

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will bridge the gap between water quality problems leftover from the historic agricultural operations and the restoration efforts currently underway by the St. Johns River Water Management District.

Construction of the NuRF is expected to begin within a matter of weeks and represents the collective accomplishment of the LCWA, the St. John's River Water Management District and the Florida Department of Environmental Protection. Once the facility is operational, cleaner water will be released downstream of Lake Apopka resulting in increased water transparency which in turn will encourage growth of beneficial submerged aquatic vegetation and better habitat for sportfish throughout the Harris Chain of Lakes.

Water may always be easy to find in Florida. Clean water, on the other hand, requires careful planning, cooperation and tremendous effort from government agencies and citizens alike. The Lake County Water Authority's NuRF project is a crucial step toward cleaner water.