

Nutrient Reduction Facility (NuRF) Fact Sheet

Project Purpose and Process:

Discharge from Lake Apopka is the single largest controllable source of pollution in Lake County. The NuRF will utilize off-line liquid alum injection to remove pollutants flowing out of Lake Apopka into the rest of the Harris Chain of Lakes. Alum was selected because of its reliability and history of successful use in many different water treatment applications.

Location:

The project will be constructed adjacent to the Apopka-Beauclair Canal near the County Road 48 bridge and the St. Johns River Water Management District's lock and dam facility. The difference in water level upstream and downstream of the lock and dam provides the ability to treat over 90% of average annual Lake Apopka discharge without the need for pumps.

Funding Sources:

The Florida Department of Environmental Protection will provide \$3.7 million for construction of the NuRF and first-year monitoring costs. The St. Johns River Water Management District has provided use of the land on which the NuRF will be constructed. The remaining \$3.7 million for construction cost and approximately \$1 million in annual operation and maintenance cost for the facility will be paid by the Lake County Water Authority.

Project Contractor:

Many companies submitted competitive bids for this project. Gibbs & Register based in Winter Garden, Florida, was awarded the bid for the lowest price and proven capability. Gibbs & Register has performed several restoration-oriented projects in the local area.

Construction and Operation:

Once alum combines with pollutants in the water, it forms heavy snowflake-like particles called "floc" which sink to the bottom. To collect the floc, two 9-acre settling ponds must be constructed. The alum floc will be pumped from the ponds using a remote control dredge to a centrifuge for dewatering. The dewatered floc can then be further dried for use in a variety of beneficial applications.

Benefits Downstream:

Because of its off-line design, the NuRF will retain all of the target pollutants and alum by-products sending only clean water downstream. The process is expected to remove at least 67% of the target algae-feeding nutrients and will assist in achievement of lake management goals for Lakes Beauclair, Dora, Eustis and Griffin. Clearer water will allow more beneficial plant growth resulting in better fish habitat and less sediment resuspension.

Project Timeline:

The project will begin in October 2007 and is expected to be complete no later than February 2009. Improvements to the downstream lakes will depend on the amount of rainfall and discharge from Lake Apopka. Smaller lakes may see improvements within months during normal rainfall conditions. Many other restoration projects are underway which will provide benefits as well.



Lake County
WATER AUTHORITY

For more information contact the Lake County Water authority at (352) 343-3777 or visit the LCWA website: www.lcwa.org