

THE LAKE COUNTY WATER AUTHORITY'S NUTRIENT REDUCTION FACILITY: NURF 2.0 AND POTENTIAL UPGRADES

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Flood discharge from Lake Apopka is the single largest controllable source of pollution in Lake County. Construction of the Nutrient Reduction Facility (NuRF) was completed in March 2009 and the facility utilizes off-line liquid aluminum sulfate (i.e. alum) injection to reduce total phosphorus concentrations flowing out of Lake Apopka into the Harris Chain of Lakes. The NuRF is now over 10 years-old and has treated in excess of 65 billion gallons of water while removing over 32,000 pounds of total phosphorus. From September 2017 to September 2018 the facility treated over 35 billion gallons of water and operated in sustained shifts of 24/7, which further strained the already aged equipment.

In 2019, the Lake County Water Authority (LCWA) had an engineering site evaluation performed at the NuRF to identify areas needing improvement and upgrades to maintain operation efficiency. Focus areas included: inflow treatment technologies, dredge technology, process technology and improvements to the on-site storage area for dewatered sediment. Results of the site evaluation defined capital improvement costs, a scope of work, and separated the improvement plans into three phases. All the proposed improvements are dependent on available funding over the next several years and total approximately \$4.5 million. At present, the LCWA Board of Trustees has approved \$1.4 million in capital improvement projects and an overview of proposed and initiated projects will be shared in this presentation.