



Nutrient Enrichment in Oyster Lake

PROJECT TO IDENTIFY SOURCE OF NUTRIENT
ENRICHMENT IN OYSTER LAKE, THEN DESIGN,
PROPOSE, AND IMPLEMENT PLAN FOR
MITIGATION.

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This project is to be conducted by a graduate student in the University of West Florida Environmental Science M.S. program with support from the Choctawhatchee Basin Alliance to expand on a preliminary nutrient analysis completed in March-April, 2013, as part of a UWF Environmental Science graduate program class project. The objective of the project is two-fold: first, to identify the source of nutrient enrichment in Oyster Lake, and second, to design, propose, and assist in the implementation of management practices to reduce the nutrient concentration in the lake.

The project will include a thorough analysis of the Oyster Lake watershed using a combination of GIS and field surveys. Land uses, stormwater structure types and locations, and water flow directions will be verified and the results compared to the 2001 watershed analysis by Hartman and Associates for the Walton County Stormwater Master Plan.

Surface water sampling will be conducted in all drainages flowing into the lake with the goal of isolating the contribution of each land use in the watershed and identifying the source(s) of nutrient enrichment.

Limited groundwater sampling will be conducted to determine if there is a groundwater component to the eutrophication of the lake.

Once the sources of nutrient enrichment are identified, a long-term sampling plan will be proposed for monitoring in conjunction with the CBA sampling program already in place for Florida LAKEWATCH.

Additionally, community level management practices proven to reduce watershed nutrient concentrations will be studied and a plan will be designed and proposed to the Walton County Coastal Dune Lakes Advisory board and Oyster Lake community stakeholders.