

# SANTA FE NUTRIENT SOURCE STUDY

PHASE 1

Lake Santa Fe is designated as an Outstanding Florida Waterbody, but water quality has degraded in recent years. While the lake is not considered impaired by the State, Alachua County has initiated an effort to reduce total nitrogen and phosphorous loading to the lake in an effort to prevent further water quality degradation. This Nutrient Source Study is a phased project, with the first phase being a literature and data review to analyze, compile, and summarize water quality and hydrologic data to identify potential nutrient sources.

Nutrient sources to the lake were found to include natural and anthropogenic stressors. Anthropogenic sources include onsite sewage treatment and disposal systems (OSTDS) in the watershed, stormwater runoff, agricultural and residential fertilizer use, and irrigation. The nutrient loading from OSTDS within 200 m of the lake to groundwater was estimated as 10,915 lbs N/yr and 633 lbs P/yr. The septic system at Alachua County's Santa Fe Park and Boat Ramp was recently upgraded to an aerobic treatment unit designed to reduce nutrient pollution. Alachua County is offering rebates to property owners that upgrade their septic systems.

Over 65% of the phosphorus entering the lake is from controllable sources like agriculture and urban runoff. Urban runoff also contributes the largest share of controllable nitrogen discharges to the lake. Phase Two of the study identified 8 places where there were concentrated stormwater discharges to the lake from pies and swales. The nutrient loads from these areas were estimated and recommendations were made for potential stormwater projects. One of those projects, addressing the discharge at the Trout Street boat ramp in Melrose, is already being designed and will soon have its own fact sheet!

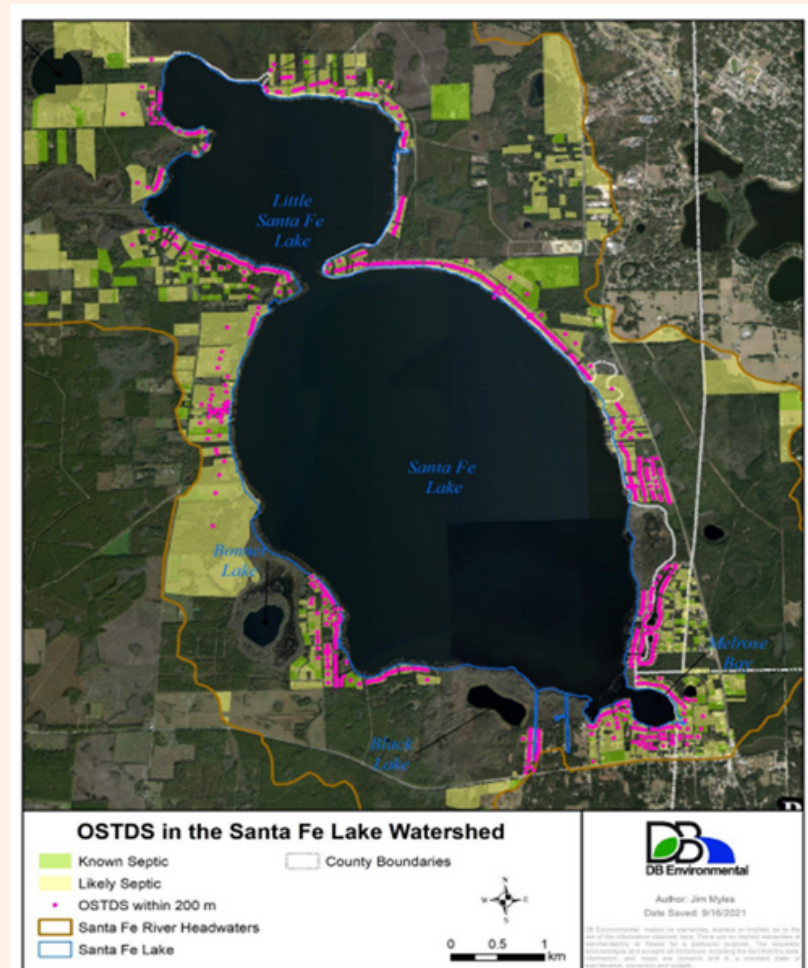


Figure 1: Figure from final report for Phase 1 depicting the 760 OSTDS sites within 200 m of Santa Fe Lake. These sites will be the focus of mitigation strategies for OSTDS sites in Phase 2.