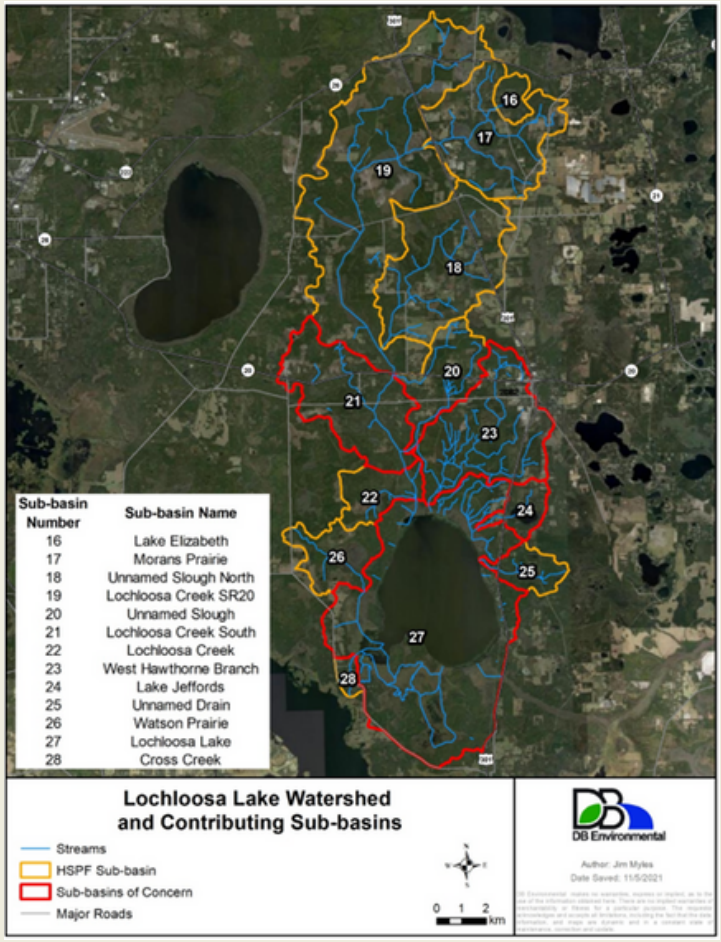
Lochloosa Lake Nutrient Source Evaluation

Lochloosa Lake

Lochloosa Lake is an outstanding Florida waterbody (OFW) with a 56,589-acre watershed. The lake is connected to Orange Lake through Cross Creek and Lochloosa Slough. The Lake is impaired for nutrient pollution. Lochloosa's basin management action plan (BMAP) requires Alachua County to reduce loading by 411 pounds of total phosphorous per year and 4,055 pounds of total nitrogen per year by identifying and implementing nutrient reduction projects within the watershed.

Lochloosa Lake Nutrient Source Evaluation

The Lochloosa Lake Nutrient Source Evaluation is a water quality improvement project that addresses the excessive nutrient loading to Lochloosa Lake in a comprehensive manner. This project takes a phased approach to identifying loading sources, assessing current water quality conditions, identifying projects to reduce nutrient loading, and prioritizing projects. The first phase (Phase 1) was a risk assessment of the nutrient sources to the lake that identified and prioritized the most at-risk basins for nutrient loading. The second phase (Phase 2) of the project is evaluating the basins prioritized in Phase 1 and assessing potential nutrient reduction projects.



Phase 1

Phase 1 consisted of a literature review, modeling of nutrient loading to the lake, assessment of surface water quality, a spatial survey of soil and stream sediments, and evaluation of nutrient release from watershed soils. Phase 1 identified sub-basins 21, 23, 27, and 24 as having high to moderate risk from nutrient loading and suggested stormwater infrastructure improvements or treatment wetlands as potential reduction strategies.

Phase 2

Phase 2 is focused on the nutrient fluxes and their relationships with flow in the prioritized basins. Additional work will be done to map stormwater infrastructure and streams and investigation of high phosphatic soils. A model will be calibrated to estimate the size of a future treatment wetland needed to achieve the required nutrient reductions.