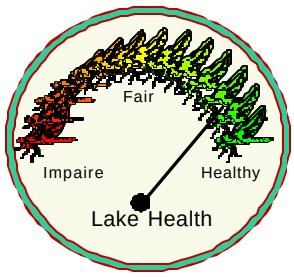


EcoSummary

Lake Hall

09/05/2001



Background

Three lakes in Leon County, Florida, were sampled in the fall of 2001 by the Florida Department of Environmental Protection's Bureau of Laboratories as part of a Statewide lakes monitoring program. Lake Hall, in northern Leon County, is located adjacent to Maclay State Gardens, a state recreation area and botanical gardens (Figure 1). Lying within the Tifton Upland/ Tallahassee Hills Subecoregion (65h), the land is predominately a combination of hardwood and pine forest, mixed with longleaf pine and xerophytic oaks. Historically, land use within the basin has been cropland and pasture, however, there has been an increase in residential usage.

Samples were collected from Lake Hall on September 5, 2001. Biological sampling consisted of FDEP's Lake Condition Index method. The Lake Condition Index (LCI) is a biological assessment method that uses benthic macroinvertebrate data to evaluate the overall ecological health of a lake. Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), ortho-phosphate, total phosphorus, algal growth potential, BOD, chlorophyll, TOC, color, TSS, and turbidity analysis; see Figure 2.

Results

The ammonia and nitrate-nitrite concentration in Lake Hall in September 2001 (0.01 mg/L and 0.004 mg/L, respectively) were below respective detection limits. TKN concentration (0.4 mg/L) was lower than 80% of Florida Lakes. The ortho-phosphate and total phosphorus level (0.027 mg/L and 0.0331 mg/L, respectively) were also lower than 80% of Florida Lakes. The LCI score for Lake Hall (50.66) ranked it in the "good" range (greater than or equal to 35, but slightly less than 55, which indicates the "very good: range) (Figure 2). Overall, Lake Hall appeared to be in good ecological health in September of 2001.

Figure 1. Overview Map of the Lake Hall Area

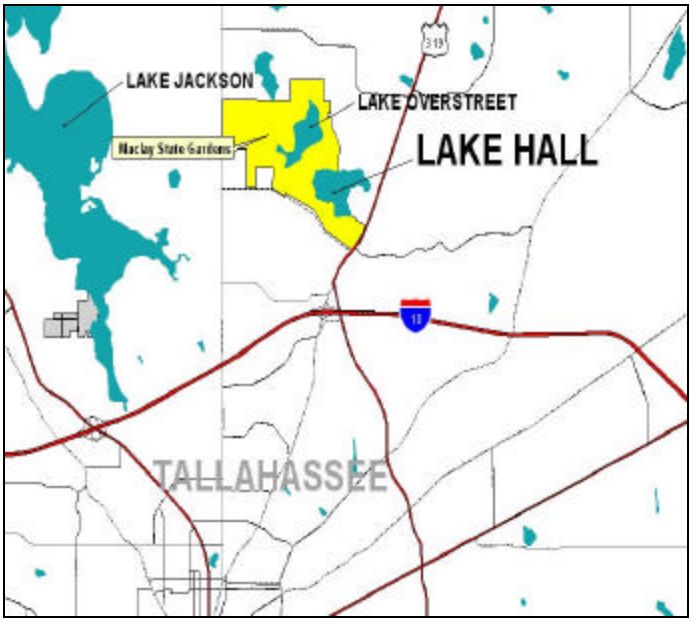


Figure 2. Data Table

Lake Hal			
STORET Number	99LAKES02	Macroinvertebrate Parameters	
Sampling Date	9/5/01	LCI Results	Healthy
Chemistry Data:		LCI Score	50.66
Ammonia (mg/L)	0.01U	Physical Chemical	
Nitrate-Nitrite (mg/L)	0.004 U	Habitat Assessment	na
TKN (mg/L)	0.4	Sample Depth (m)	2.2
Total Phosphorus (mg P/L)	0.0331	Specific Conductivity (umhos/cm)	24
Orthophosphate (mg P/L)	0.027	Dissolved Oxygen (mg/L)	5.89
Algal Growth potential (mg Dry Wt/L)	0.233 U	pH (SU)	5.61
BOD (mg/L)	1.1	Temperature (deg C)	29.17
Chlorophyll (ug/L)	0.85 U	Bacteria Parameters	
TOC (mg/L)	3.3 I	*Enterococci* (col/100mL)	1 KQ
Color (PCU)	5 U	*Escherichia coli* (col/100mL)	1 KQ
TSS (mg/L)	4 U	Fecal Coliforms (col/100mL)	1 KQ
Turbidity (NTU)	1.1	Total Coliforms (col/100mL)	1 KQ

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