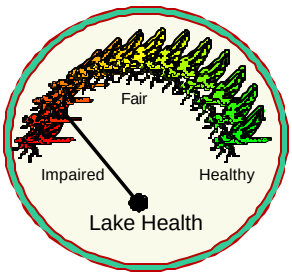


EcoSummary

Moore Lake

11/01/2001



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. Moore Lake, in southern Leon County, was one of these lakes (Figure 1).

Samples were collected from Moore Lake on November 1, 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. Lake habitat assessment procedures were also performed.

Results

The ammonia concentration in Moore Lake (0.4 mg/L) was relatively high, exceeding the values found in 95% percentile for Florida lakes (Figure 2). The source of the ammonia is not known. Nitrate-nitrite (0.01 mg/L) and TKN (1.0 mg/L) concentrations were relatively average for Florida lakes. The ortho-phosphate level was below the detection limit. Similarly, the total phosphorus concentration was below the practical quantitation limit. *Enterococci* and *Escherichia coli* densities complied with the EPA single-sample guideline values of 61 CFU/100mL and 235 CFU/100 mL, respectively, for "designated beach areas." Fecal and total coliform levels complied with Class III water quality standards.

The LCI score for Moore Lake (10.38) was in the "very poor" range (< 18) (Figure 2). While the LCI interpretation is most suitable for lakes with color values below 40 PCU, the color in Moore Lake (80 PCU) is similar enough to this benchmark to make a reasonable comparison. There is no current explanation for these poor results, and follow up biological evaluation of the lake is recommended.

Figure 1. Overview Map of the Moore Lake Area

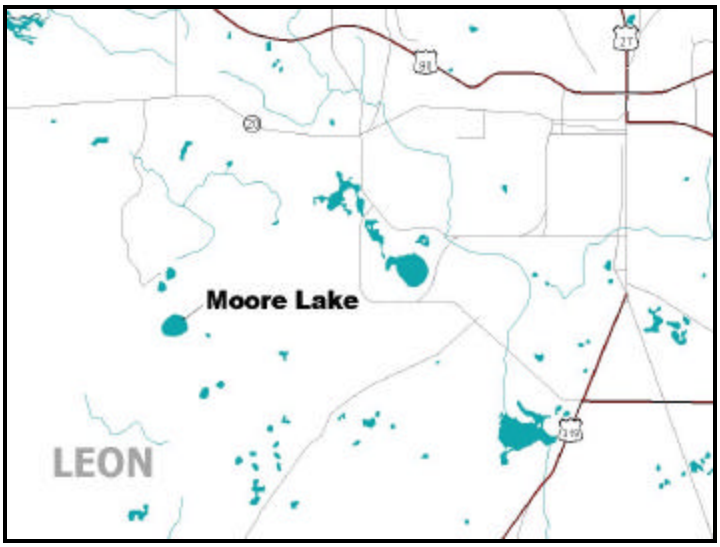


Figure 2. Data Table

Moore Lake - Leon County, FL			
STORET Number	LAKES05	Macroinvertebrate Parameters	
Sampling Date	11/1/2001	LCI Score	10.38
Chemistry Data		Region 65, Acid, Evaluation	very poor
Ammonia (mg/L)	0.4	Bacteria Parameters	
Nitrate-Nitrite (mg/L)	0.01	*Enterococci* (col/100 mL)	4
TKN (mg/L)	1	*Eschericia coli* (col/100 mL)	6
Ortho-Phosphate (mg/L)	0.004 U	Fecal Coliforms (col/100 mL)	2
Total Phosphorus (mg/L)	0.017 I	Total Coliforms (col/100 mL)	40
Algal Growth Potential (mg Dry Wt/L)	0.12 I,J	Physical-Chemical Data	
BOD (mg/L)	0.65 A,I	Habitat Assessment	116
Chlorophyll (ug/L)	0.85 U	Sample Depth (m)	0.75
TOC (mg/L)	11	Specific Conductance (umho/cm)	25
Color (PCU)	80 A	Dissolved Oxygen (mg/L)	6.3
TSS (mg/L)	4 U	pH (SU)	6.4
Turbidity (NTU)	0.7	Temperature (deg. C)	18.5

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