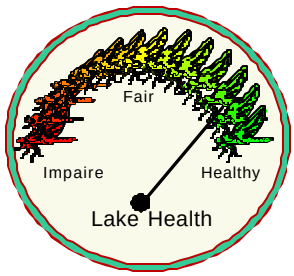


EcoSummary

Lake Overstreet

9/5/2001



Purpose and 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 Overstreet, located in Leon County, is part of Lake Jackson drainage basin (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 Overstreet 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, TOC, color, TSS, and turbidity analysis; see Figure 2.

Results

Total Kjeldahl nitrogen (0.41 mg/L), nitrite-nitrate (0.004 mg/L) and ammonia (0.01 mg/L) levels were indicative of oligotrophic conditions (concentrations of these nutrients were below 90% of other Florida lakes). The total phosphorus (0.038 mg/L) level was also in the acceptable range (less than the values found in 70% of other state lakes). Turbidity (0.9 NTU), ortho-phosphate (0.008 mg/L) and color (5 PCU) were all in the good range, measuring less than those found in 90% of Florida lakes. Fecal and total coliform levels (less than 1 CFU/100 mL) complied with Class III water quality standards.

The LCI score for Lake Overstreet (35.09) was in the "good" range (35-54) (Figure 2). Overall, Lake Overstreet appeared to be in good ecological health in September of 2001.

Figure 1. Overview Map of the Lake Overstreet Area

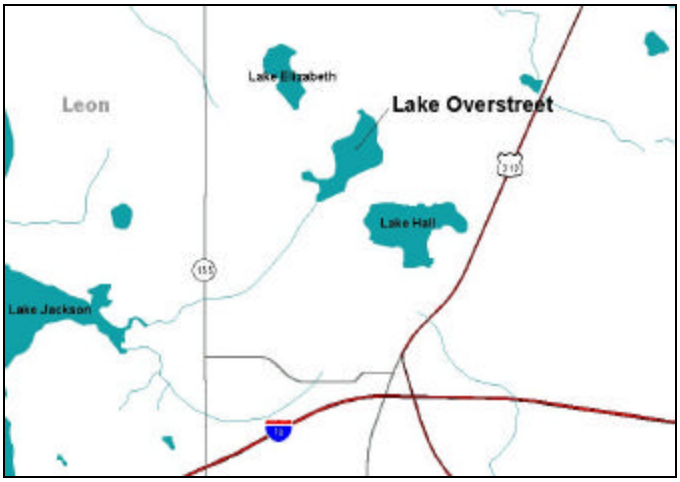


Figure 2. Data Table

Lake Overstreet			
STORET		22020212	
Sampling Date		9/5/01	
Macroinvertebrate Parameters		**Physical-Chemical Data**	
LCI	35.09	Sample Depth (m)	3.25
LCI Evaluation	Good	Specific Conductivity (umho/cm)	20
LCI Region	Panhandle West	Dissolved Oxygen (mg/L)	-
Number of Taxa	15	pH (SU)	5.02
Number of EPT Taxa	1	Temperature (deg. C)	21.18
Number of ETO Taxa	1	**Chemistry Data**	
Hulbert Index	5	Ammonia (mg/L)	0.01 U
% Dominant Taxon	41.94	Nitrate-Nitrite (mg/L)	0.004 U
Florida Index	5	TKN (mg/L)	0.41
% Diptera	55.91	Total Phosphorus (mg/L)	0.038 I
Total Number of Chironomidae	7	Ortho-phosphate (mg/L)	0.008 I
% Filter-Feeders	4.3	Color (PCU)	5 U
Bacteria Parameters		Turbidity (NTU)	0.9
Fecal Coliforms (col/100 mL)	1 KQ	TSS (mg/L)	4 U
Total Coliforms (col/100 mL)	1 KQ		

"U"- Value Reported is the Minimum Detection Limit; "I"- Value Reported is Less Than the Minimum Quantitation Limit, and Greater Than or Equal to the Minimum Detection Limit; "Q"- Sample Held Beyond Normal Holding Time; "K"- Actual Value is Known to be Less Than the Criterion of Detection

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