EcoSummary

Gap Lake, Washington County
March 9, 1994 - March 10, 1994

Lake Condition Index: A developmental biological assessment tool used by FDEP biologists to indicate ecosystem health and identify impairment in Florida Lakes.

Purpose

As part of the development of lake biocriteria in the state, an intensive biological, physical and chemical assessment of this lake was conducted. Gap Lake supports a biologically diverse community and is of good water quality. It is considered a reference lake.

Background

The watershed of this lake is characterized by the presence of relict sand dunes forming ridges reaching elevations of approximately 200 ft. Cypress swamps are characteristic of much of the land below 100 ft. The surface water input to this lake occurs primarily by rainfall; however, it does drain a small area to the north and northeast. The southern one-half is characterized by relatively high banks with adjacent uplands established in a mature live oak and magnolia woodland. These steep banks are of easily erodible material.

Results

Because of time constraints, water samples were taken on March 9 for analyses and biological and physical data were collected on March 10. Results of physicochemical and biological assessment indicated Gap Lake had good water quality. The sampled biological community (primarily insects) was diverse (55 taxa), with pollution intolerant taxa present, (e.g., high oxygen demanding Hexagenia spp.). Nutrient analyses indicated a system with limited nutrient availability. A pH of 3.9 and conductivity of 14 umhos/cm is indicative of a cypress swamp influenced system. Dissolved oxygen was high from top to bottom during this index period.

Significance

This lake provides a reservoir of biological diversity. The minimal loss of native vegetation in the watershed provides a significant buffer to nonpoint source runoff. Gap Lake provides baseline data necessary to compare similar environments to detect varying degrees of impact.

Suggestions

Good stewardship of the watershed is paramount to the maintenance of good water quality and biological integrity of this lake. Periodic monitoring is encouraged.

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