A site map can be viewed by clicking on the report site name.

EcoSummary

Lake Sellers in Ocala National Forest

July 8, 2002

LAKE BIOASSESSMENTS

VERY GOOD

Lake Condition Index (LCI): A developmental biological assessment tool used by FDEP biologist to indicate ecosystem health and identify impairment in Florida lakes

For samples collected before June 8, 2004
All field and laboratory methods followed FDEP Standard Operating Procedures and met FDEP quality assurance/quality control standards.
For samples collected on or after June 8, 2004
All field and laboratory methods followed FDEP Standard Operating Procedures (SOPs) and met DEP quality assurance/quality control standards.

Purpose



Lake Sellers has been sampled by FDEP Central District biologists for over ten years as a reference lake. The near-pristine lake in Ocala National Forest has consistently shown excellent results over the years. It is important to monitor the continuing health of this lake. Also, the data obtained will be useful in the further refinement of FDEPs Lake Condition Index bioassessment methodology. This report focuses on the two most recent sampling events: October 9, 2000 and July 8, 2002.

Watershed Characteristics

The 388-acre lake lies within sand pine scrub area in the southern half of Ocala National Forest just east of SR 19. It is bisected north and south by the Lake/Marion county line. The only development on the shore of the lake is a 4-H camp (Camp Ocala) operated by the University of Florida, which is located on the south shore. Within the lakeshed, the only other portion of developed land is a limited number of low-density residences. The rest of the land is either natural, or is sustainably-managed pine timberland. Lake Sellers is a part of the 45 square mile Ninemile Creek drainage basin. A tributary of Alexander Springs Creek, Ninemile Creek flows out of the southeastern end of the lake near the 4-H camp.

The lake is oligotrophic, extremely clear (Secchi depth >7.0 m), and quite acidic, with pH

values around 4.0 su.

Results

On both occasions, Lake Sellers received an excellent rating on the LCI. Twenty-four different macroinvertebrate taxa were collected in 2000, and twenty-one in 2002. The lake recieved Hulbert Index scores of 13 and 15 in 2000 and 2002, respectively. The Hulbert Index is based on the number of different lake water-quality sensitive macroinvertebrate taxa present. Shannon-Weiner diversity index values were 3.70 and 3.82 in the two years. The most abundant invertebrate collected in the subsample in 2000 was the chironomid midge (a.k.a. "bloodworm") *Cladotanytarsus*. In 2002, it was another chironomid, *Pseudochironomus*, which is a good water quality indicator taxon.

Water chemistry results were also excellent. All nutrient values were very low, many in fact below detection limits. Dissolved oxygen, conductivity, pH, and Secchi depth were all very good.

The lake habitat assessment was also very good. Lake Sellers received a score of 125 out of a possible 140 points, or 89%.

Lake Sellers has very high aquatic macrophyte (plant) diversity. In August 2002, FDEP Central District biologists performed an FQI (Floristic Quality Index) on Lake Sellers. This currently experimental procedure is designed to assess the health of lakes based on the macrophyte community present. Lake Sellers received an FQI score of 5.87, which is the highest score obtained in the Central District during the ten-lake initial testing phase.

Significance

These results show that Lake Sellers remains in excellent ecological health. The very good, biological, chemical, and habitat assessment results all attest to this.

Suggestions

Since Lake Sellers is within the Ocala National Forest, its health should be safeguarded for the forseeable future. The lake will continue to be sampled to make sure that it remains healthy, and as a comparison to other lakes in central Florida.

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