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

# EcoSummary

## TELEGRAPH CREEK AT BABCOCK RANCH

**September 4, 2002**

*ECOREG REF STREAMS*

*EXCELLENT*

Stream Condition Index (SCI): The standardized biological assessment tool used by FDEP biologist to indicate ecosystem health and identify impairment as compared to reference (natural) conditions of streams within the various ecoregions of Florida

**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



A repeat Stream Condition Index sampling was performed at this site in order to examine the water quality in the stream, detect seasonal variation, and document the organisms that inhabit an unimpacted stream in this geographical area. This is important because information from streams that are relatively unaffected by human activities is needed as a standard to compare with other streams, and to determine whether human activities are having an adverse effect on those streams. The biological standards on which the SCI is based also require further refinement. Telegraph Creek was used as a reference stream during the development of the Stream Condition Index, but had not been sampled for several years.

## Watershed Characteristics

The drainage basin for Telegraph Creek includes pine flatwoods, scrub, improved pasture, marsh, and palmetto prairies. Major land uses in the area include cattle grazing, hunting, nature tours, and hay fields. Babcock Ranch is one of the major landowners in the basin. Big Island Canal, which dates from the 1930's, also drains Telegraph Swamp and reduces the flow in Telegraph Creek. A large portion of the

property is being evaluated for preservation, and much of the rest is being considered for a planned unit development. The creek flows into the Caloosahatchee River.

## Results

The SCI indicated that Telegraph Creek has excellent water quality and supports a healthy aquatic insect community. **The stream scored 27 points out of 31 possible, and was rated "Excellent". Water chemistry met Class 3 standards for all parameters tested.** Nutrient concentrations (nitrogen and phosphorus) were fairly low, with nitrite/nitrate and total phosphorus among the lowest 20 percent of Florida streams. The sample site is located in a forested natural area with an unaltered riparian (stream bank) zone. The habitat consisted of roots/undercut banks (35%), sand (38%), snags (20%), and leaf mat (7%). Flow was moderate (0.2 m/sec). The habitat score was 147 out of 160 possible points.

## Significance

These results confirm that this stream still has excellent water quality and supports a healthy aquatic community. The SCI score was slightly lower than that of the April 2002 sampling (31 out of 31 possible), but was still excellent. High summer flows had removed much of the leaf mat that was present in April, and flow was still much greater. The seasonal difference in the SCI did not appear significant.

## Suggestions

Encourage good land use practices in the basin, and maintain a monitoring program to further refine Stream Condition Index standards for streams and to detect effects of changes in local land use.

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Published by the Florida Department of Environmental Protection
Tallahassee, Florida
For more information on the DEP Bioassessment programs, please visit
our web site at http://www.dep.state.fl.us/water/bioassess

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