EcoSummary

Faka Union Canal @ Collier County CR 858, 13 miles southwest of Immokalee

August 14, 2002

GOOD

NPS BIOASSESSMENTS

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 canal, look for seasonal differences, and further document the organisms that inhabit a potentially impacted canal in this geographical area. This is important because waters that are affected by human activities do not necessarily have poor water quality, and the biological standards on which the SCI is based require further refinement.

Watershed Characteristics

The Faka Union Canal's drainage basin is fairly undeveloped at present, and includes pine flatwoods, a variety of natural wetlands, row crops, borrow pits, and improved pasture. The canal flows into the Gulf of Mexico in the Ten Thousand Islands.

Results

The SCI indicated that the Faka Union Canal has good water quality and supports an adequate aquatic insect community. **The canal scored 25 points out of 31 possible, and was rated "Good". Water chemistry met Class 3 standards for all parameters tested except dissolved oxygen, which was 3.8 parts per million**

(standard = 4.0). Nutrient concentrations were just below the median for all Florida streams. The riparian (canal bank) zone was covered by a mixture of low vegetation, grasses, and shrubs. Pines were the dominant trees, but were well back from the edge of the canal. The in-stream habitat consisted of sand (73%), with rock (23%) and undercut bank/roots (3%). Flow was slow (less than 0.01 m/sec). The habitat score was 82 out of 160 possible points.

Significance

These results indicate that this canal has adequate water quality and supports a fairly healthy aquatic community, despite the relatively poor habitat. The SCI was somewhat lower than in March 2002 (31 out of 33 points), but not unexpectedly so. Summer conditions of high temperature and lower dissolved oxygen could explain the lower score.

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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