TMDL STUDIES

EcoSummary

Myrtle Slough, WBID 1995, above end of Nichols Rd, off SR 31, Desoto Co.

February 17, 2004

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



Two Stream Condition Index samplings (September 17, 2003 and February 17, 2004) were performed at Myrtle Slough (WBID 1995) in order to examine the water quality in the stream and document the organisms that inhabit a potentially impacted stream in this geographical area. This Myrtle Slough (one of three in the area) is on the TMDL Planning List and 1998 303D list as possibly failing to meet water quality standards for nutrients, biological oxygen demand, dissolved oxygen, and fecal coliform bacteria. This study is to determine whether the biological community is being adversely affected by conditions in the stream.

Watershed Characteristics

Myrtle Slough's drainage basin includes citrus groves, improved pasture and pine flatwoods. Several agricultural drainage canals and a recently developed dairy are upstream. Residential development is very sparse. The area around the sample site is mainly citrus and pasture. The slough flows into Prairie Creek, then to the Punta Gorda water supply reservoir, and into the Peace River. The sample site is at

latitude 26° 50' 29.6" N, longitude 82° 17' 09.1" W and its STORET number is 25020639FTM.

Results

The SCIs indicated that Myrtle Slough has adequate water quality to support a healthy aquatic insect community. The stream scored 31 points out of 33 possible on both dates, and was rated "Excellent". Six Class 1 species (sensitive to pollution) were found. Water chemistry met Class 3 standards for nutrients, dissolved oxygen, and bacteria. Other sites in the drainage basin have had violations of dissolved oxygen and fecal coliform standards. The site is located in a wooded area. The riparian (stream bank) zone on both sides had a variety of trees and subcanopy, with little ground cover. The woods extended 50 to 100 meters from the slough on both sides. The in-stream habitat consisted of sand (72%), with areas of exposed roots (11%), leaf mats (9%), and snags (8%). Flow was moderate (about 0.25 m/sec). The mean habitat score was 134 out of 160 possible points, in the lower optimal range.

Significance

These results indicate that this stream has adequate water quality to support a very healthy aquatic community. Although conditions such as dissolved oxygen may not always meet state-wide water quality standards, they do not currently have adverse effects on the biological community.

Suggestions

Continued use of good land management practices in the basin should be encouraged , and a monitoring program to detect effects of changes in local land use should be maintained.

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