EcoSummary

Spring Creek at Old US 41, Bonita Springs, Lee Co

April 3, 2001

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 single Stream Condition Index sampling was performed at this site 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 is important because streams which are affected by human activities do not necessarily have poor water quality, and the biological thresholds on which the Stream Condition Index is based require further refinement.

Watershed Characteristics

Spring Creek's drainage basin includes residential areas in various stages of development. Above the sampling site the creek is channellized , then divides into two ditches which drain residential land that is rapidly being developed. Below the sampling site the creek flows through more residential areas and a golf course. Marine influence from Estero Bay is evident a short distance below the sampling site. The creek flows into Estero Bay.

Results

The SCI indicated that Spring Creek has adequate water quality to support a healthy

aquatic insect community. **The SCI score of 23 is in the middle of the "Good" category. Water chemistry met Class 3 standards for all parameters tested except dissolved oygen, which was 2.2 parts per million (standard is 4.0).** The sample site is located upstream of the box culvert under Old US 41. The riparian (stream bank) zone vegetation was disturbed, with a dirt road and pine trees along one side and a ten meter wide strip of brush separating the creek from residential construction on the other. The stream bed has been channelized. The in-stream habitat consisted of aquatic vegetation (76%) over sand and silt, with 2.5 % woody detritus. Flow was moderate(0.20 to 0.1 m/sec). The habitat score was 86 out of 160 possible points.

Significance

These results indicate that this stream has adequate water quality to support a healthy aquatic community, but are not conclusive. The Stream Condition Index has not been calibrated for streams as far south as Spring Creek, and the site's canal-like structure may limit the usefulness of the SCI at this particular site.

Suggestions

Encourage good land use practices in the basin, and maintain a monitoring program to further refine the SCI for more tropical conditions and to detect effects of changes in local land use.

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