EcoSummary

Manuel's Branch above weir, Fort Myers

March 8, 2001

EXCELLENT

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 an urban area. This is important because streams 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 Manuel s Branch drainage basin is urban and suburban Fort Myers, including residential, commercial, and light industrial areas. Lee Memorial Hospital and Ft. Myers High School are adjacent, and the canal for which Canal Street is named is the upper portion of Manuel's Branch. Bank restoration and revegetation projects have been done near the sample site. The creek flows into the Caloosahatchee River.

Results

The SCI indicated that Manuel's Branch has adequate water quality to support 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. The site is located in a residential area, with a high school on one side. The riparian (stream bank) zone on one side was grass with a paved jogging trail, scattered trees, and a football field; the other had a dense growth of native and exotic trees, with sparse vegetation under them. The weir at the downstream end of the sample site maintains a minimum depth of 0.3 meters on the upstream side, and is approximately one meter above the usual level of the stream on the downstream side. The in-stream habitat consisted of sand and silt (83%), with small patches of vegetation, roots, leaf mats, and snags. Flow was slow (less than 0.05 m/sec). The habitat score was 78 out of 160 possible points.

Significance

These results indicate that this stream has adequate water quality to support a healthy aquatic community, despite its urban setting. However, it is located at the southern edge of the Peninsula Ecoregion, and the SCI may need adjustment in this area.

Suggestions

Encourage good land use practices in the basin, especially stormwater best management practices and steam bank maintenance. Also 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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