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

EcoSummary

Billy's Creek @ Marsh Avenue, Ft. Myers

February 13, 2002

NPS BIOASSESSMENTS

GOOD

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 further examine the water quality in the stream and document the organisms that inhabit an impacted stream in this geographical area. This is important because impacted streams may have good water quality, and the biological indicator thresholds upon which the SCI is based require further refinement.

Watershed Characteristics

Billy's Creek flows into the Caloosahatchee River just above the US 41 bridges. Its drainage basin includes urban and suburban residential areas, orange groves, and industrial/commercial property. Major land uses in the area include high and medium density residential, commercial, agriculture, and light industry. Billy's Creek collects stormwater from much of east Fort Myers.

Results

The SCI indicated that Billy's Creek supports a healthy aquatic community. The site is located in a residential area with a disturbed riparian (stream bank) zone. The creek is

channelized, one bank has a few trees, and the other is an open field. Numerous drainage ditches flow to the creek. The in-stream habitat consisted of a thick growth of aquatic vegetation (94%), with a few open patches of sand, silt, and leaf mat. Flow was slow, (0.1 m/sec). The stream scored 73 out of 160 possible habitat points. **Billy's Creek had an SCI score of 25 out of 31 possible points, and rated "Good". Water chemistry met Class III standards for all parameters tested.** Nutrient concentrations (nitrogen and phosphorus) were in the lower 20% for Florida streams, except for total Kjeldahl nitrogen, which was in the lower 60%. Conductivity (dissolved minerals) was 969 mmho/cm, a high value for a freshwater stream.

Significance

These results indicate that Billy's Creek supports a reasonably healthy aquatic community despite the amount of stormwater the creek receives and the lack of diverse habitat. The bank habitat does not provide the shade, snags, and leaf litter that might increase the in-stream habitat diversity.

The high conductivity could affect the insect community, and could be caused by groundwater inflow or flow upstream from the Caloosahatchee River.

Suggestions

Improved stormwater treatment and bank habitat restoration might improve conditions, but could be expensive. The site should be monitored occasionally as an example of an urban stream.

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