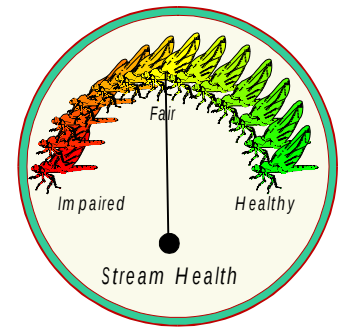


EcoSummary

BioRecon Report



Leitner Creek at East Terry Street, Bonita Springs September 11, 1996

BioReconnaissance (BioRecon): A rapid, cost effective screening mechanism for identification of biological impairment.

Purpose

A single BioRecon sampling was performed at this site in order to determine the water quality in the stream and document the organisms that inhabit a potentially impacted stream in this geographical area. This is important because impacted streams may have good water quality, and the biological thresholds on which BioRecon is based require further refinement.



Basin Characteristics

The drainage basin for Leitner Creek includes mainly residential areas, with some undeveloped pine flatwoods. Major land uses in the area include low and medium density residential. The creek flows into the Imperial River, which flows into Estero Bay.

Results

The BioRecon indicated that Leitner Creek barely supports a healthy aquatic community. The site is located in a residential area with an unaltered riparian (stream bank) zone on one side and a retention pond and street on the other. The in-stream habitat consisted of sand (78%), but with small amounts of snags, vegetation, leaf packs, rocks, and exposed roots. Flow was strong (0.2 to 1.0 m/sec). Leitner Creek met all three BioRecon thresholds for a healthy stream. There were 25 different taxa (minimum threshold = 18), a Florida Index score of 10 (threshold = 10), and 5 caddisflies or mayflies (threshold = 4). Water chemistry indicated that dissolved oxygen was 3.1 parts per million, below the Class III standard of 5 ppm. There was some evidence of erosion on the banks.

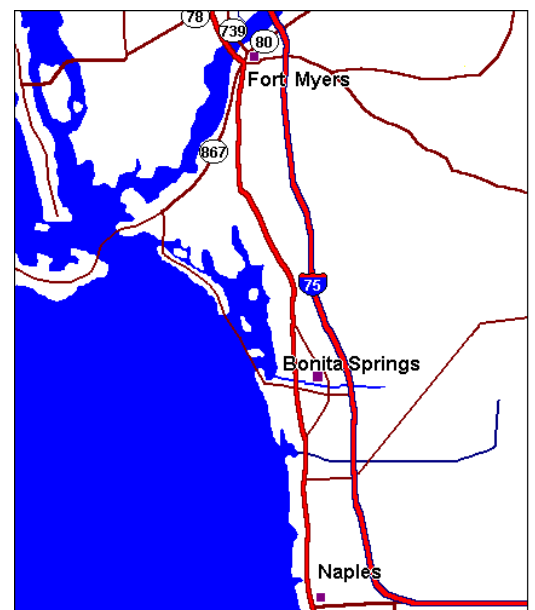
Significance

These results show that this stream has barely adequate water quality, probably due to stormwater runoff and lack of habitat upstream. The rapid flow in the stream may reduce the effects of low dissolved oxygen.

Leitner Creek flows into an Outstanding Florida Water, and its low D.O. could contribute to problems downstream. Increased development without proper stormwater treatment could make its already marginal water quality worse.

Suggestions

Encourage good land use practices in the basin, and maintain a monitoring program to further refine BioRecon thresholds for streams and detect effects of changes in local land use.



For more information, contact Albert Walton, FDEP South District, 7451 Golf Course Blvd., Punta Gorda, FL 33982 (941)639-4967.

Published by the Florida Department of Environmental Protection, Tallahassee, FL, 1997.