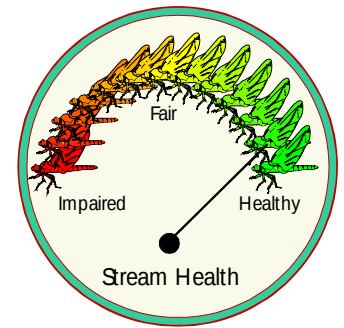


EcoSummary

BioRecon Report



Orange River at Hendry Property 27 August 1997

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

Purpose

A repeat BioRecon was performed at Orange River in order to examine the water quality in the stream and document the organisms that inhabit a reference stream in this geographical area. This is important because more information is needed about the range of variation in best-available streams, and the biological thresholds on which BioRecon is based require further refinement.

Basin Characteristics

The Orange River's drainage basin includes urban open (undeveloped) land, low density residential, scrub, and improved pasture. Hardwood forest, cypress, and vegetated wetlands line the river. Major land uses in the area include low density residential and open land. The river receives some stormwater from Lehigh Acres, filtered through a marsh. The river flows into the Caloosahatchee River.

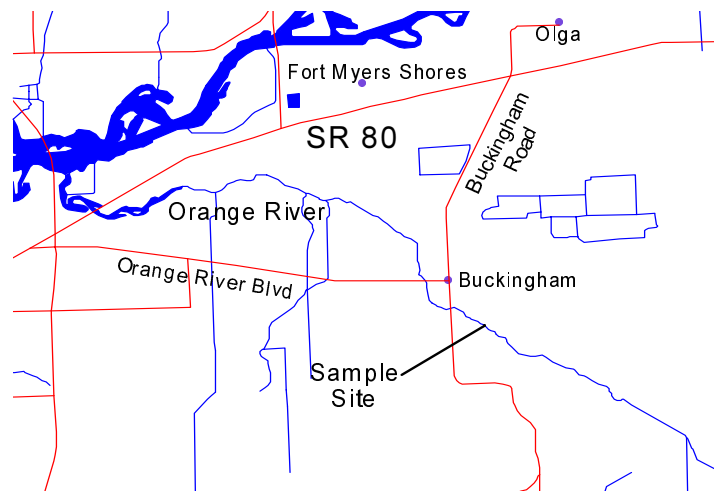


Results

The BioRecon indicated that the Orange River has adequate water quality to support a healthy aquatic insect community. The site is located in a forested natural area with an unaltered riparian (stream bank) zone on one side, but open grass on the other. The habitat consisted of shell/rock rubble (63%), with a good amount of roots/undercut bank (15%). Sand, snags, and leaves were also present. Flow was strong (0.4 to 0.7 m/sec). **The Orange River passed**

all three BioRecon thresholds for a healthy stream.

There were **30** different taxa (minimum threshold = 18), a Florida Index score of **21** (threshold = 10), and **9** caddisflies or mayflies (threshold = 4). **Water chemistry indicated that the river met Class III standards for all parameters tested.**



Significance

These results confirm that this river has adequate water quality, despite some potential problems.

Land in the immediate drainage area is mostly pine/palmetto flatwoods ("open urban") or hardwood forest with sparse residential use. Drainage canals upstream have affected the hydroperiod. Potential exists for impacts to the stream from more intensive residential development.

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.

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