

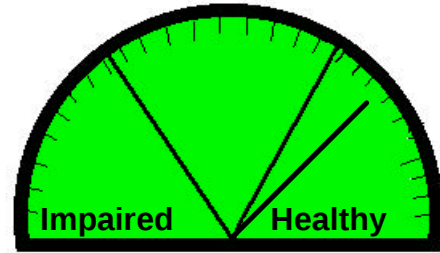


ECOSUMMARY

A Biorecon Assessment

BioRecon: A rapid, cost-effective screening mechanism for identification of biological impairment.

Surface Water Assessment & Monitoring Program South District



Stream Health

Oak Creek at Hull Street, De Soto Co.

March 12, 1997

Purpose

A single BioRecon 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 impacted streams may have good water quality, and the biological thresholds on which BioRecon is based require further refinement. In addition, there is a possibility that Oak Creek was affected by groundwater from a nearby railroad tie preservation site.



Oak Creek

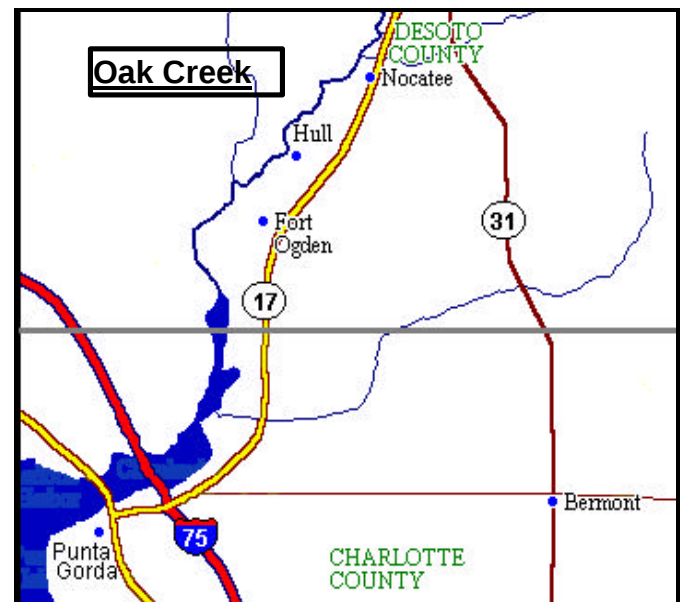
Basin Characteristics

The drainage basin for Oak Creek is small. It includes pasture, orange grove, hardwood forest, and scrub. Major land uses in the area include grazing, agriculture, and low density residential. The waste site is on the opposite side of a sand ridge from Oak Creek and surface drainage is away from the creek. The creek flows into the Peace River.

Results



The BioRecon indicated that Oak Creek supports a very healthy aquatic insect community. The site is located in a forested natural area with an unaltered riparian (stream bank) zone. The stream was 2 meters wide and 0.25 meters deep, with some deeper pools. The habitat consisted of sand and silt (50%, 10%), with a good amount of exposed roots (30%) and benthic leaf mats (20%). Flow was moderate (0.2 m/sec). **Oak Creek passed all three BioRecon thresholds for a healthy**



stream. There were **28** different taxa (minimum threshold = 18), a Florida Index score of **19** (threshold = 10), and **7** caddisflies or mayflies (threshold = 4). Water chemistry

met Class 3 standards for all parameters sampled. Conductivity (dissolved solids) was slightly higher than typical for a freshwater stream.

Significance

These results confirm that this stream supports a healthy aquatic community. There was no evidence of toxicity from the waste site.

Land in the immediate drainage area includes orange groves and a few houses with septic systems. Potential exists for impacts to the stream from more intensive agricultural and 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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