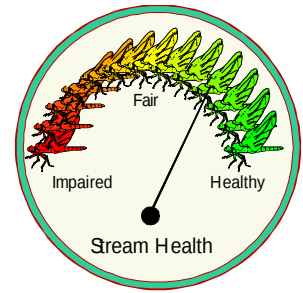


EcoSummary

BioRecon Report

**Deep Creek @ Old River Road,
Station Dc02**

5 August 1998



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

Purpose

As part of the ongoing Deep Creek watershed TMDL test study, biorecons were conducted on Deep Creek which flows into the Suwannee River. Deep Creek at Old River Road was sampled to check its water quality and ecosystem health.

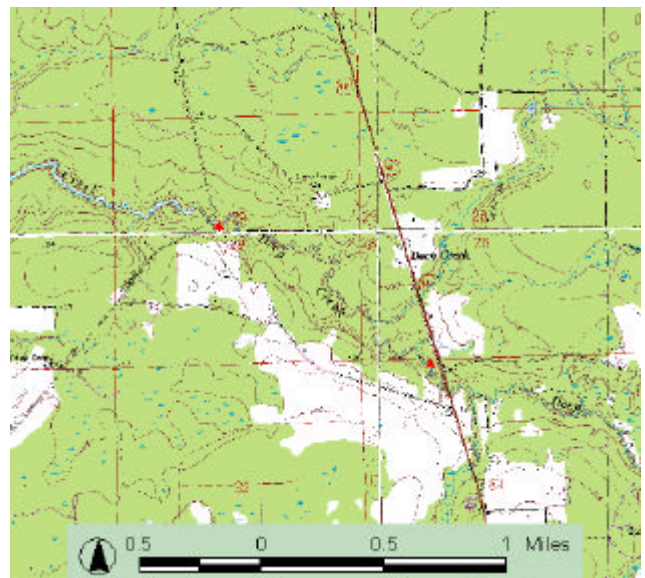
Background

The upland drainage basin for Deep Creek includes upland pine forest, marshlands, and cypress swamps, mostly inside the Osceola National Forest Wildlife Management Area. Several pristine swamps such as Pinhook Swamp and Impassable Bay drain into Deep Creek.



The flow was measured at 2.332 cfs under ambient low flow conditions.

Another survey was conducted on October 20 after a receding flood. Conductivity (59.8 umhos/cm) and pH (3.8) were lower but the dissolved oxygen level was higher at 6.68 mg/l. The flow was measured at 89.5 cfs.



Results

This site definitely appears to be healthy since it met all of the 3 metrics for a healthy flowing stream. There were 22 different taxa (minimum threshold = 17) with a Florida Index score of 12 (minimum threshold = 6). The EPT score was 5 (minimum threshold = 3) with no caddisflies or stoneflies found but 5 species of mayflies were collected.

Adults and larvae of the dragonflies, Hagenius brevistylus and Progomphus obscurus, were very common. So was the dobsonfly, Corydalus cornutus. These aquatic insects have a long aquatic life cycle and they are very good indicators of clean water in an undisturbed ecosystem.

Conductivity (140.3 umhos/cm) and dissolved oxygen (4.25 mg/l) were low, typical of swamp runoff but the pH was slightly above neutral at 7.15. The average depth was 0.48 feet and the width was 11.5 feet. The average velocity was 0.42 feet/sec.

Significance

Land in the immediate drainage area is not densely developed. Since most of the area is inside the Osceola National Forest, little potential exists for impacts from residential and commercial development.

Suggestions

Encourage good land management practices in the basin. Maintain a monitoring program to detect pollution impacts from changes in local land use, such as DOT highway improvement practices.



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