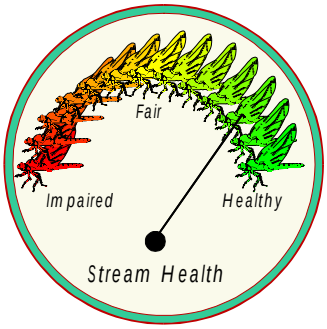
EcoSummary

BioRecon Report



Reedy Canal at Poinciana Blvd. (CR 531), Osceola Co. August 15, 1996

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

Purpose

Reedy Canal was chosen as a test site for the DEP Surface Water Assessment and Monitoring Program's BioRecon Pilot Study because the biological health of the canal had not been assessed since 1988.

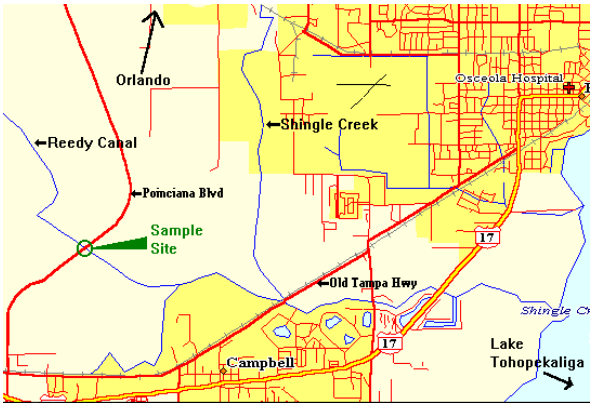
Basin Characteristics

Despite its name, Reedy Canal is not a part of the nearby Reedy Creek watershed. This man-made canal originates in the Reedy Creek Swamp, but empties into Shingle Creek, which flows into Lake Tohopekaliga less than a mile downstream. Land use in the watershed is approximately 40% forest-ed wetland and 40% field and pasture. Only about 10% is residential. Commercial activi-ties account for the other 10% of land use in the watershed. The canal flows during most or all of the year, presumably due to groundwater seepage from the surrounding wetlands, through which it was originally cut.

Results

The BioRecon assessment showed Reedy Canal to be in unexpect-edly good biological health. Twenty-six different macroinverte-brate species were collected — well above the threshold value for total taxa. The score for Florida Index (good water quality) species was 20, whereas the number of EPT (larval mayfly, stonefly, and caddisfly species) was eight. Both values were twice the threshold values required for a healthy rating in peninsular Florida streams.

The habitat assessment was suboptimal due to channelization, erosion, and scarcity of some habitat types. However, good flow and abundant aquatic vegetation help to support a healthy macro-inverte-brate com-munity. The dissolved oxygen level in the canal was good, conduc-tivity and pH measurements were normal, and water clar-ity was good. Comparing these biological and chemical measurements with those taken here in the mid-1980's suggests that water quality in the canal has remained good since that time.



Significance

Although Reedy Canal is not a natural water body, its origin in the cypress wetlands of Reedy Creek Swamp and the modest amount of development in its immediate watershed help to maintain it as an eco-logically healthy system. Because it contributes to Lake Tohopekaliga and the Kissimmee River, it is important to preserve water quality in the canal. Hopefully, bene-ficial land management practices will be used in the watershed, allowing ecosystem health to remain good in Reedy Canal.

Suggestions

While not measured in this sampling effort, the presence of cattle in the canal is a potential source of nutrient and bacteria input. Subsequent sampling of this system should include analyses for these. Limiting cattle access to the canal would reduce such impacts, and also allow riparian vege-tation to become better established, reduc-ing habitat smothering and siltation. Such management techniques would help to im-prove aquatic habitats, enhancing the aqua-tic community, as well as the physical and ecological stability of the system as a whole.

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