A site map can be viewed by clicking on the report site name.

EcoSummary

Soldier Creek at SR 419

April 16, 2002

TMDL STUDIES

HEALTHY

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

For samples collected before June 8, 2004
All field and laboratory methods followed FDEP Standard Operating Procedures and met FDEP quality assurance/quality control standards.
For samples collected on or after June 8, 2004
All field and laboratory methods followed FDEP Standard Operating Procedures (SOPs) and met DEP quality assurance/quality control standards.

Purpose



A biorecon was performed at Soldier Creek to further monitor the health of this stream. In 1996-97, a study was carried out by FDEP Central District biologists to assess the health of the different tributaries flowing into Lake Jesup (see http://www.dep.state.fl.us/water/bioassess/docs/biorepts/otherepts/jessup.pdf.) This bioassessment was designed as a follow-up to that study. In addition, the data obtained will be useful in the further refinement of FDEP's bioassessment protocols.

Watershed Characteristics

Soldier Creek (a.k.a. Soldier's Creek) enters 8140-acre Lake Jesup at its extreme western end after joining Gee Creek within Seminole County's Soldier's Creek Park. It originates in wetlands located in the city of Lake Mary, flowing southeast, south, and then basically eastward before entering Lake Jesup.

Land use in the 18.5-acre watershed is roughly 60% residential developments. A considerable portion of the basin, however, is within Seminole County's Spring Hammock Preserve, and is thus protected land.

Results

The creek received a healthy rating on the biorecon. There were 31 different macroinvertebrate taxa collected, including 6 from the sensitive EPT group (larval mayflies, stoneflies, and caddisflies). Soldier Creek was given score of 19 on the Florida Index, based on the number of different pollution-intolerant invertebrates found there.The most abundant macroinvertebrate taxa collected were the amphipod *Hyalella azteca* and the caddisflies *Cheumatopsyche* and *Triaenodes*.

In addition to the biorecon, the level of total coliform bacteria in the water was measured, with a result of 621 colonies/100mL. This value is above average for Florida's streams, but does not constitute a violation of water quality standards.

The habitat assessment was good, Soldier Creek scoring 124 out of a possible 160 points, placing it in the optimal category.

Significance

These results suggest that Soldier Creek is in good health. The good biological results and habitat assessment are indicative of a healthy system.

Suggestions

Streamside landowners should help to minimize the amount of pollution entering the system by reducing or eliminating the use of pesticides, herbicides, and inorganic fertilizers, maintaining septic and sewer systems, and controlling invasive exotic plant species on their properties. Preservation of a part of the watershed within public property should help to sustain the ecological health of Soldier Creek.

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