



EcoSummary

Otter Creek at Newsome Road near
Clarksville, Calhoun County
May 19, 1999



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

Introduction

Otter Creek at Newsome Road, a tributary of Fourmile Creek, is located in Calhoun County. This area is located in subregion 65G (Dougherty/Marianna Plains) with local use mostly agricultural and silviculture, with some residential use. Otter Creek was placed on the 303(d) list for violations of coliform bacteria and excessive nutrients. Waterbodies on the 303(d) list are required by EPA to have a Total Maximum Daily Load (TMDL) study performed on them. The purpose of the TMDL is to determine the amount of pollution reduction needed to restore the system to a condition suitable for its designated use. In this case, the designated use is for recreation and maintenance of a healthy, well-balanced aquatic community. DEP's Water Quality Assessment Section is charged with assessing the status of selected waterbodies on the 1998 303(d) list that were placed on the list with limited data. The data available for these selected waterbodies consisted of less than 10 observations in the STORET database, historical STORET data, or qualitative non-point source survey data only. Recent water quality data suggest that the Otter Creek watershed is currently meeting standards for Class III waterbodies, including criteria for coliform bacteria and excessive nutrients. According to the 1998 305(b) report, it is partially meeting its designated use and its status is fair.

Results and Discussion

Physical/chemical parameters and nutrients were sampled in May of 1999. Surface water samples were collected and analyzed for total ammonia, nitrite-nitrate, total Kjeldahl nitrogen (TKN), and total phosphorus. Samples were also analyzed for total suspended solids (TSS), turbidity, fecal and total coliform bacteria levels plus other chemical parameters. Aquatic macroinvertebrate communities were not sampled at this time. Most measured physical/chemical parameters and water quality variables met acceptable criteria for Class III waterbodies, including coliform bacteria and excessive nutrients. Fecal coliform (200 colonies/ml) and total coliform (890 colonies/ml) levels were below the Class III standards of 800 colonies/ml and 2400 colonies/ml, respectively. TKN (0.35 mg/l) and total phosphorus (0.015 mg/l) levels were very low when compared with other Florida streams. Concurrent hydrolab and chemistry samplings at three other Otter Creek and Fourmile Creek sites revealed similar results. Dissolved oxygen values ranged from 6.28 mg/l to 8.29 mg/l. Adequate dissolved oxygen is necessary to maintain a healthy, well-balanced aquatic ecosystem.

Conclusions

Otter Creek at Newsome Road met acceptable levels for the measured physical/chemical and water quality parameters, including coliform bacteria and excessive nutrients. Only turbidity (32 ntu) was elevated, indicating some disturbance upstream in this normally clear stream. It is recommended that Otter Creek remain on the 303(d) list and monitored periodically for water quality, especially

for turbidity.

For more information, please contact:
Jerrell J. Daigle
2600 Blair Stone Road Tallahassee, FL 32399-2400
(850) 921-9479
email: daigle_j@dep.state.fl.us

Published by the Florida Department of Environmental Protection,
Tallahassee, FL.
For more information on the DEP Bioassessments program, please visit our
website at <http://www2.dep.state.fl.us/water/Slerp/bio/>