EcoSummary

Ward's Creek

01/24/01

Background

Florida DEP selected Ward's Creek, as well as five other streams that flow across the Georgia-Florida line, for biological and water quality evaluation. Data from these efforts will be used for documenting potential out-of-state pollution sources for the Total Maximum Daily Load (TMDL) program. Ward's Creek receives stormwater from Thomasville, Thomas County, Georgia, enters Florida in Jefferson County, and flows into Lake Miccosukee. (See Figure 1.) The sampling area is in the Tifton Upland/Tallahassee Hills subregion of the Southeastern Plains ecoregion. This subregion is characterized by upland and hilly areas, both clay and sandy soils, and extensive pine and hardwood forests. Agricultural land uses are present in the watershed.

Samples were collected in all six selected interstate streams in January 2001. Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), total phosphorus, color, turbidity, total suspended solids (TSS), total organic carbon (TOC), biochemical oxygen demand (5-day, BOD), *Enterococci*, *Escherichia coli*, fecal coliform, and total coliform analysis; see Figure 2.

Figure 1: Overview Map of Sampling Area

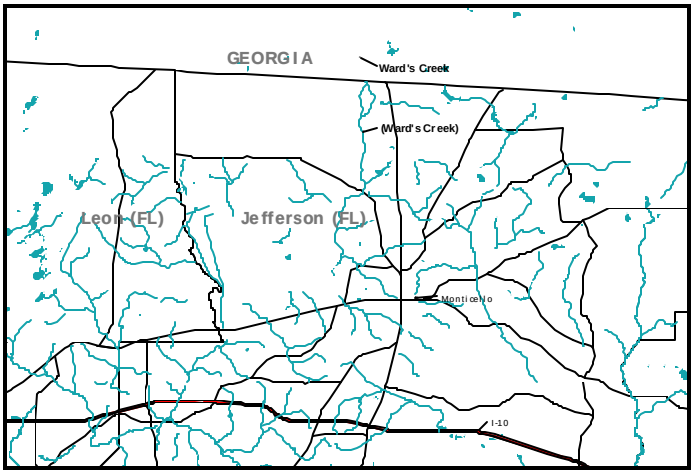

Figure 2: Data Table

Station	Ward's Creek
Sampling Date	01/24/01
Bacteria Parameters	
Enterococci (col/100 mL)	126 O
Escherichia coli (col/100 mL)	34 O
Fecal Coliforms (col/100 mL)	56 Q
Total Coliforms (col/100 mL)	400 Q
BOD (mg/L)	1.7 A
Physical-Chemical Data	
Specific Conductance (umho/cm)	95
Dissolved Oxygen (mg/L)	5.78
pH (SU)	6.40
Temperature (deg. C)	7.17
Nutrient Data	
Ammonia (mg/L)	0.01 U
Nitrate-Nitrite (mg/L)	0.004 U
TKN (mg/L)	0.38
Total Phosphorus (mg/L)	0.052
TOC (mg/L)	7.6
TSS (mg/L)	4 U
Color (PCU)	60
Turbidity (NTU)	3.1 A

A = an average value, I = below practcal quantitation limit,
J = Estimated value, Q = outside holding time,
U = below minimum detection limit

Results

Nitrate-nitrite, ammonia, TKN, and total phosphorus concentrations were low in Wards Creek (Figure 2). *Enterococci* concentration (126 org/100 mL) was above the EPA single-sampling guideline value of 108 col/100 mL for "infrequently used full body contact recreation areas." *Escherichia coli* concentration was below the EPA light-use guideline value (406 col/100 mL). Fecal and total coliform levels complied with Class III water quality standards.

Overall, the only parameter of concern in Ward's Creek was *Enterococci*. It is not known whether wildlife or anthropogenic activities contributed to the *Enterococci* concentration.

FOR MORE INFORMATION, CONTACT:
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