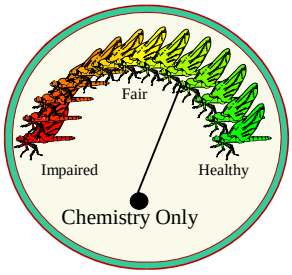


EcoSummary

Troy Spring

4/18/06



Background

Florida DEP's Division of Recreation and Parks selected Troy Spring for biological and water quality monitoring. Data from these efforts will be used for documenting conditions within the park and for making resource protection decisions. Troy Spring, located in Lafayette County; flows into the west side of the Suwannee River (see Figure 1). The surrounding property was purchased by the state of Florida in 2001, and construction, with the addition of boardwalks, facilities, trails and camping grounds, has just been completed to improve the public use of Troy Springs.

Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen, total phosphorus, color, turbidity, *Enterococci*, *Escherichia coli*, fecal coliform, and total coliform analysis; see Figure 2. Habitat assessment, qualitative periphyton sampling, and benthic invertebrate stream condition index (SCI) sampling were conducted.

Results

The nitrate-nitrite concentration (2.3 mg/L) at the sampling site was higher than the values found in 95% of Florida streams (Figure 2). The ammonia and total Kjeldal nitrogen concentrations were below minimum detection limits (see Figure 2). Total phosphorus (0.03 mg/L) was below the practical quantitation limit. *Enterococci* and *E. coli* concentrations complied with the EPA single-sample guideline value of 61 CFU/100 mL and 235 CFU/100 mL, respectively, for "designed beach areas". Fecal and total coliform levels complied with Class III water quality standards. Dissolved oxygen (1.1 mg/L) was less than the Class III water quality standard (5.0 mg/L), but this was likely due to sampling near the spring vent, where conditions would be representative of typical (low dissolved oxygen) groundwater levels.

In conclusion, elevated nitrate-nitrite levels in Troy Spring continue to be cause for concern. Continued monitoring is recommended, especially in order to assess any potential effects from increased public use related to recent infrastructure improvements.

Figure 1: Overview Map of the Troy Spring Area

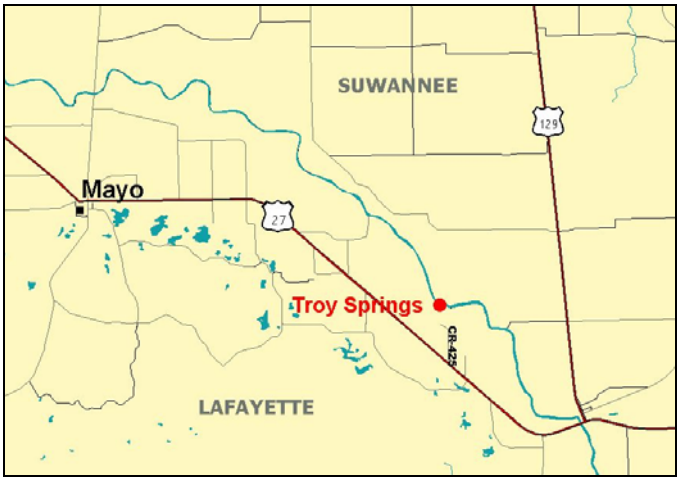


Figure 2: Data Table

TROY SPRINGS	
Sampling Date	4/18/2006
Chemistry Data	
Turbidity (NTU)	0.25
Color (PCU)	5
Ammonia (mg/L)	0.01 U
Nitrate-Nitrite (mg/L)	2.3
TKN (mg/L)	0.08 U
Total Phosphorus (mg/L)	0.03 I
Physical-Chemical Data	
Temperature (deg. C)	21.5
pH	7.1
Dissolved Oxygen (mg/L)	1.1
Specific Conductance (umhos/cm)	369
Bacteria Parameters	
Enterococci (col/100mL)	14 B
Escherichia coli (col/100mL)	2 K
Fecal Coliforms (col/100 mL)	2 K
Total Coliforms (col/100mL)	6 B

"U"- Value Reported is the Minimum Detected; "K"- Actual Value is Known to be Less Than the Value Given; "I"- Value Reported is Less Than the Minimum Quantitation Limit and Greater Than or Equal to the Minimum Detection Limit; "A"- Value Reported is the Mean of Two or More Determinations

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