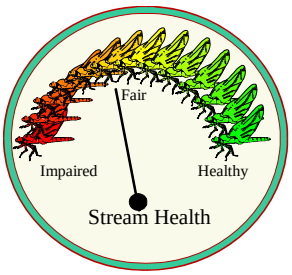


EcoSummary

De Leon Springs

5/24/2006



chemistry only

Background

Florida DEP's Division of Recreation and Parks selected De Leon Springs for biological and water quality monitoring. Data from these efforts will be used for documenting existing conditions and for making resource protection decisions. De Leon Springs, located in Volusia County, flows into Spring Garden Lake; see Figure 1. De Leon Springs is a Floridan Aquifer-dominated system known for its recreational and aesthetic qualities.

Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), total phosphorus, color, and turbidity analysis; see Figure 2.

Results

The nitrate-nitrite concentration (0.71 mg/L) at the sampling site was higher than the values found in 90% of other Florida streams (0.64 mg/L); see Figure 2. The elevated nitrate-nitrite level in De Leon Springs is related to nitrogen loading in the recharge basin. Ammonia (0.044 mg/L) and TKN (0.26 mg/L) continued to be non-problematic. Total phosphorus was below the practical quantitation limit.

Enterococci and *Escherichia coli* concentrations were below the EPA single-sample guideline values of 61 CFU/100 mL and 235 CFU/100 mL, respectively, for "designated beach areas." Fecal and total coliform levels complied with Class III water quality standards.

In conclusion, elevated nitrate-nitrite levels continue to be of concern in De Leon Springs.

Figure 1: Overview Map of the De Leon Springs Area

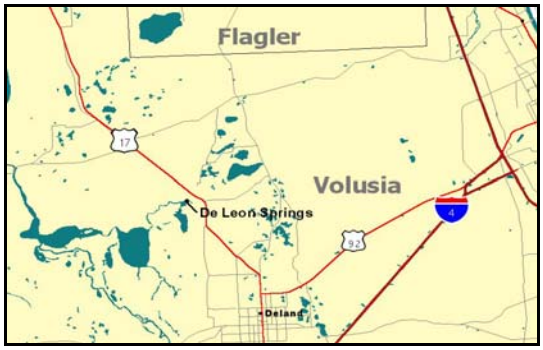
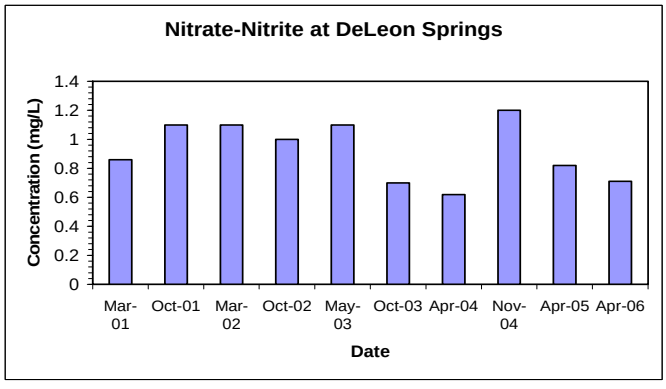


Figure 2: Data Table

DeLEON SPRINGS	
Sampling Date	5/24/2006
Chemistry Data	
Turbidity (NTU)	0.35 Q
Color (PCU)	5 Q
Ammonia (mg/L)	0.044 Q
Nitrate-Nitrite (mg/L)	0.71
TKN (mg/L)	0.26 I
Total Phosphorus (mg/L)	0.056 I
Physical-Chemical Data	
Temperature (deg. C)	24.1
pH	6.98
Dissolved Oxygen (mg/L)	7.9
Specific Conductance (umhos/cm)	736
Bacteria Data	
Escherichia coli (col/100 mL)	2 BQ
Enterococci (col/100 mL)	20 BQ
Fecal Coliforms (col/100 mL)	2 BQ
Total Coliforms (col/100 mL)	12 BQ

"Q" = Outside of holding time; "I" = Below practical quantitation limit

Figure 3: Nitrate-Nitrite Values Over Time



FDEP Bureau Of Laboratories

FOR MORE INFORMATION, CONTACT:
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