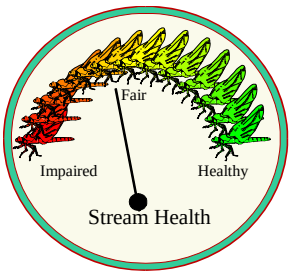


EcoSummary

De Leon Springs

11/6/2007



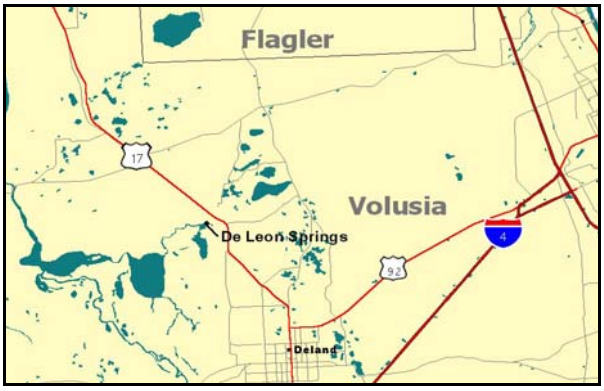
chemistry only

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.

Figure 1: Map of the De Leon Springs Area



Results

The nitrate-nitrite concentration (0.38 mg/L) at the sampling site was higher than the values found in 80% of other Florida streams, but lower than those found in most Florida springs. The elevated nitrate-nitrite level in De Leon Springs is related to nitrogen loading in the recharge basin. The ammonia concentration (0.089 mg/L) was slightly higher than average compared to typical Florida streams, and the TKN concentration (0.43 mg/L) was low. Total phosphorus was below the practical quantitation limit.

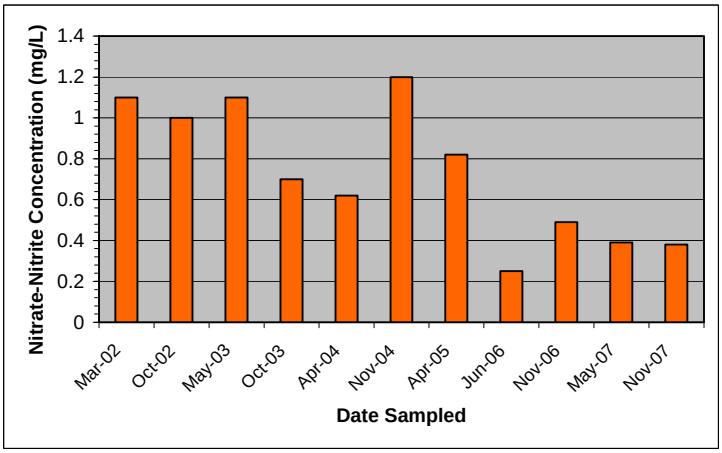
In conclusion, moderately enriched nitrate-nitrite levels continue to be a concern in De Leon Springs.

Figure 2: Data Table

DeLEON SPRINGS	
Sampling Date	11/6/2007
Chemistry Data	
Turbidity (NTU)	1.0 Q
Color (PCU)	10 Q
Ammonia (mg/L)	0.089
Nitrate-Nitrite (mg/L)	0.38
TKN (mg/L)	0.43 J
Total Phosphorus (mg/L)	0.060 I
Physical-Chemical Data	
Temperature (deg. C)	22.5
pH	6.82
Dissolved Oxygen (mg/L)	6.55
Specific Conductance (umhos/cm)	818

"A"= Value reported is the mean of two or more determinations; "J"= Estimated value; "I" = Below practical quantitation limit

Figure 3: Nitrate-Nitrite Values Over Time



FDEP Bureau Of Laboratories

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