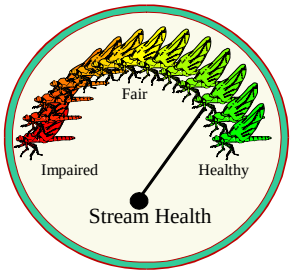
EcoSummary

Silver Glen Springs

5/4/2004



Background

Florida DEP's Division of Water Resource Management selected Silver Glen Springs for biological and water quality monitoring as part of the Springs Initiative. Data from these efforts will be used for documenting conditions within springs throughout Florida and for making resource protection decisions. Silver Glen Springs Recreation Area is located in Marion and Lake Counties, Florida, in the Ocala National Forest; see Figure 1. Silver Glen Springs flows into Lake George and is a popular location for boaters to gather.

Samples were collected from Silver Glen Springs in May 2004. Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), total phosphorus, *Escherichia coli*, *Enterococci*, fecal coliform, and total coliform analyses; see Figure 2. Habitat assessment, qualitative periphyton sampling, and benthic invertebrate stream condition index (SCI) sampling were conducted.

Results

The nitrate-nitrite concentration (0.021 mg/L) in Silver Glen Springs was lower than the values found in 70% of Florida streams, and lower than most springs in Florida; see Figure 2. Total phosphorus and TKN concentrations were below practical quantitation limits. The ammonia concentration was below the detection limit.

The SCI score of 21 for Silver Glen Springs was in the "good" range, but lower than the previous sampling (27); see Figure 3. The overall habitat score (120) was in the lower end of the "optimal" range. Habitat smothering and water velocity continued to be problematic in the spring run. The bacteria data was not reported due to holding time issues. The periphyton community was dominated by diatoms, with some blue-green and green algal taxa. In conclusion, smothering of macroinvertebrate habitats and water velocity were the issues of concern in Silver Glen Springs, although biological health was in the lower portion of the "good" range.

Figure 1: Overview Map of the Silver Glen Springs Area

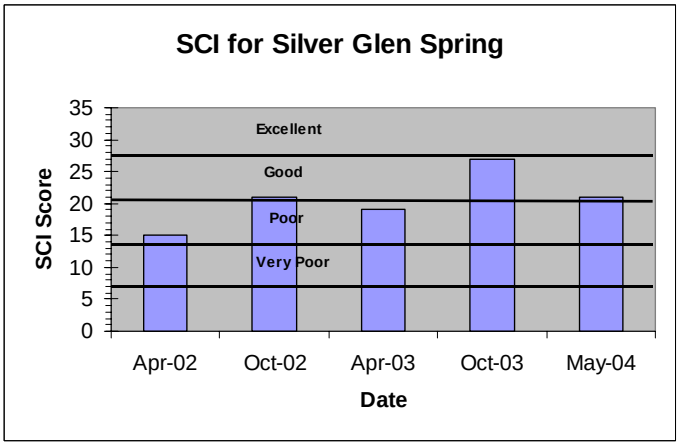


Figure 2: Data Table

SILVER GLEN SPRINGS			
Sampling Date		5/4/2004	
Macroinvertebrate Data		**Periphyton Data**	
SCI Score	21		
SCI Evaluation	good	% Bacillariophyta	76.97
Number of Taxa	21	% Cyanophycophyta	21.05
EPT Index	1	% Chlorophycota	1.97
Florida Index	9	% Dominant Taxon	31.6
% Dominant Taxon	39.1	**Physical-Chemical Data**	
% Diptera	19.1	Habitat Assessment Score	120
Number of Chironomidae	9	Temperature (deg. C)	24.1
% Filter-Feeders	5	pH	8.6
Chemistry Data		Dissolved Oxygen (mg/L)	8.3
Turbidity (NTU)	0.25 Q	Specific Conductance (umhos/cm)	1961
Color (PCU)	5 UQ	**Bacteria Data**	
Ammonia (mg/L)	0.01 U	*Escherichia coli* (col/100 mL)	NA
Nitrate-Nitrite (mg/L)	0.021	*Enterococci* (col/100 mL)	NA
TKN (mg/L)	0.09 I	Fecal Coliforms (col/100 mL)	NA
Total Phosphorus (mg/L)	0.053 I	Total Coliforms (col/100 mL)	NA

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

Figure 3: Stream Condition Index Scores Over Time



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