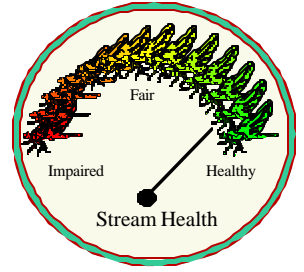




EcoSummary

Smith Creek
8/3/94-6/22/99



Background

Since 1992, minimally disturbed reference streams have been sampled throughout Florida for the purpose of establishing biological community expectations and identifying specific thresholds for assessing stream health. The Stream Condition Index (SCI) has been the primary assessment method, which consists of collecting 20 D-frame dipnet sweeps (0.5 m in length) of the most productive habitats in a 100 m reach of stream. The organisms are sub-sampled, sorted, and identified to the lowest practical taxonomic level. Seven measurements of invertebrate health are calculated and compared with the expectations established by the reference site sampling. These reference streams are sampled periodically to maintain accurate expectations to which other streams in the same region are compared. Smith Creek, a tributary of the Ochlockonee River, is located in Apalachicola National Forest.

Smith Creek was sampled four times from August 1994 to present. Stream Condition Index (SCI) sampling was conducted; see Figures 2 & 3. Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), total phosphorus, and turbidity analysis; see Figure 2.

Results and Discussion

Water quality parameters (low nutrients, sufficient dissolved oxygen, etc.) were consistently good in Smith Creek.

Stream Condition Index results indicated that Smith Creek scored in the "excellent" or "good" category for all events.

In conclusion, Stream Condition Index and water quality data indicated that Smith Creek is a healthy aquatic ecosystem.

Figure 1: Overview Map of the Deep Creek Area

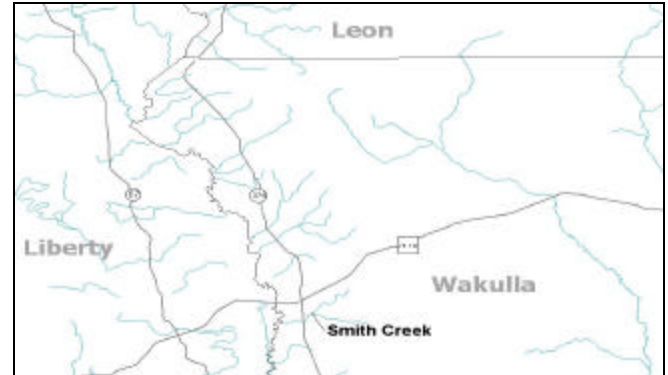
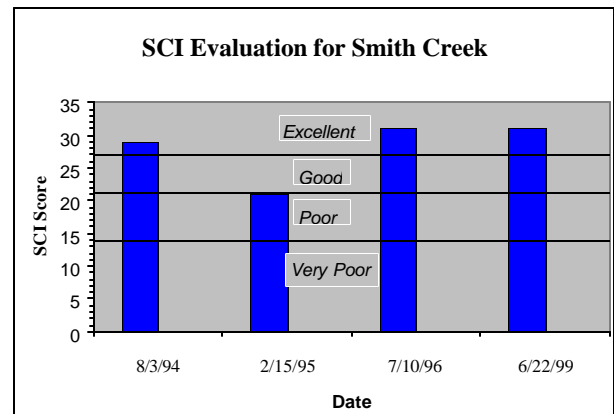


Figure 2: Data Table

Smith Creek				
Station	Smith Creek			
Station Nickname	SMITHREF			
STORET	22020064			
Sampling Date	8/3/94-6/22/99			
Date	8/3/94	2/15/95	7/10/96	6/22/99
SCI	29	21	31	31
Temperature (deg. C)	23.5	13.1	24.5	22.5
pH (SU)	4.28	6.9	7.14	5.8
Dissolved Oxygen (mg/L)	8.4	10.4	6.6	6.7
Specific Conductivity (umho/cm)	35	32	121	13
Turbidity (NTU)	1.4 A	-	1.9	1.8
TKN (mg/L)	0.70	0.60	0.18	0.67
Nitrate-Nitrite (mg/L)	0.008 I	0.01 U	0.01 U	0.004 U
Ammonia (mg/L)	0.019 I	0.01 U	0.012	0.1 U
Total Phosphorus (mg/L)	0.017	0.029	0.047	0.055

"I"-Value between the laboratory detection limit and laboratory practical quantitation limit; "U"-Below detection limit; "A"-Average value

Figure 3: SCI Evaluation



FOR MORE INFORMATION, CONTACT:

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