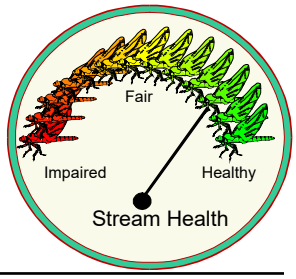


EcoSummary

Econfina River
08/03/94-01/30/01



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. The Econfina River is a reference stream in the Florida panhandle; see Figure 1. The Econfina River flows southwest through Taylor County into the Gulf of Mexico.

Samples were collected from the Econfina River on four occasions from August 1994 to January 2001. Benthic macroinvertebrate 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

Nutrient concentrations were not problematic in the Econfina River, tending to be lower than average for Florida streams on most sampling dates. SCI scores for the Econfina River were in the "excellent" range for three of the four sampling trips. The SCI score was in the "good" range in February, 1995; see Figures 2 & 3. Overall, the results indicate that the Econfina River is a healthy system.

Figure 1. Overview Map of the Econfina River Area

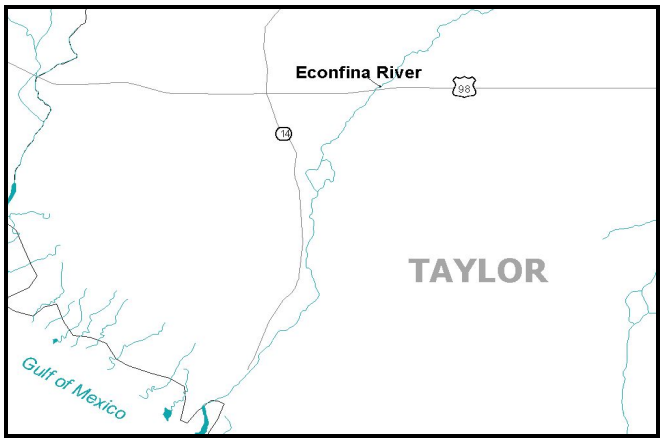
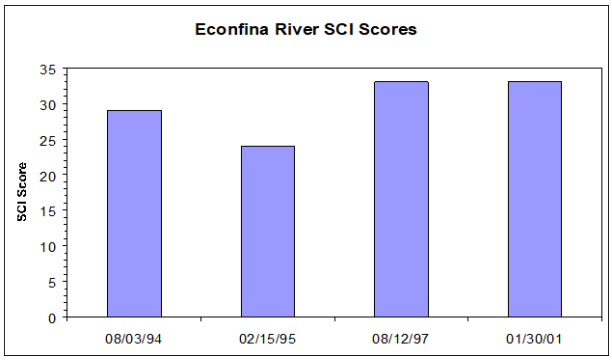


Figure 2. Data Table

Econfina River @ 98 -- 22050023				
Sampling Date	08/03/94	02/15/95	08/12/97	01/30/01
Macroinvertebrate Parameters				
SCI Score	29	24	33	33
Panhandle Evaluation	Excellent	Good	Excellent	Excellent
Physical-Chemical Data				
Temperature (deg. C)	24	14.2	25	16
pH (SU)	6.6	7.2	6.7	7.47
Specific Conductance (umho/cm)	158	105	115	448
Dissolved Oxygen (mg/L)	4.3	9.8	4.9	-
Nutrient Data				
Ammonia (mg/L)	0.025	0.054	0.039	0.01 BDL
Nitrate-Nitrite (mg/L)	0.016	0.02 BDL	0	0.01
TKN (mg/L)	1.3	1.1	1.1	0.21
Total Phosphorus (mg/L)	0.064	0.098	0.08	0.063
Turbidity (NTU)	2.2	-	5.5	-

Figure 3. SCI Scores over Time



FOR MORE INFORMATION, CONTACT:
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