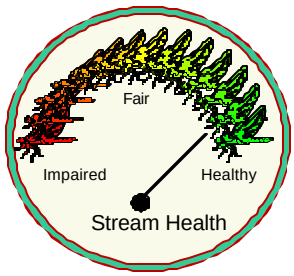


EcoSummary

Steinhatchee River

10/3/2001

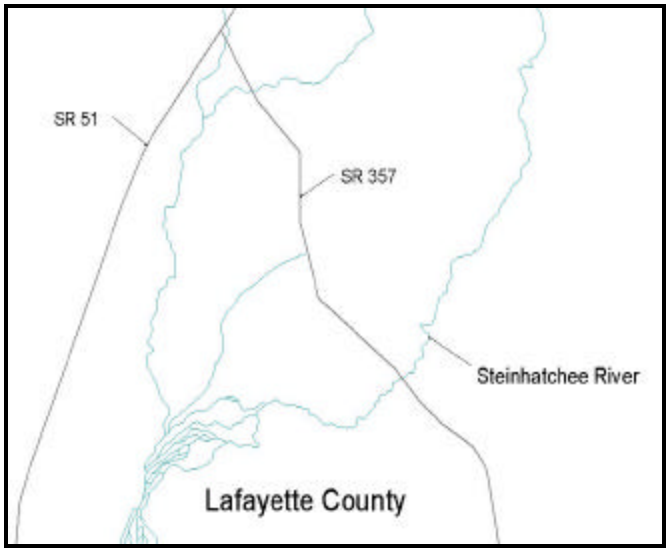


Background

The Steinhatchee River, located within the Suwannee River Basin, was sampled as part of a FDEP Total Maximum Daily Load (TMDL) program rotating basin assessment. Previous dissolved oxygen, metals, and bioassessment data placed the Steinhatchee River on the TMDL Planning List. Data from this current sampling will be combined with past and future data to determine the TMDL status of the river (*e.g.*, potential placement on the Verified List or removal from the Planning List). The sampling site for this event was located upstream from State Road 357 in Lafayette County, Florida; see Figure 1.

The site was sampled on October 3, 2001. Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen (TKN), total phosphorus, color, total organic carbon (TOC), and total suspended solids (TSS) analysis; see Figure 2. Habitat assessment and benthic macroinvertebrate biological reconnaissance (BioRecon) sampling was conducted. A BioRecon was done at this site to determine the overall ecological health of the system, especially with respect to the reported low dissolved oxygen values.

Figure 1: Overview Map of the Steinhatchee River Area



Results

The nitrate-nitrite (0.086 mg/L) and TKN (1.1 mg/L) concentrations were relatively average for a Florida stream; see Figure 2. The ammonia (0.16 mg/L) and total phosphorus concentrations (0.32 mg/L) were both slightly higher than the values found in 80% of Florida streams. There was no visual evidence of nutrient induced imbalances (*e.g.*, algal mats, excessive macrophyte growth)

The overall habitat assessment score (131) was in the optimal range (>120). The BioRecon indicated that the invertebrate community of the Steinhatchee River (WBID 3573B) was healthy, as all three BioRecon parameters were above the threshold values. Because invertebrates integrate effects over time, these results suggest that the low dissolved oxygen reported from this site may be a natural occurrence that has not adversely affected the biota.

Figure 2: Data Table

Steinhatchee River	
Station	Steinhatchee River@ 357
Station Nick Name	LAFAY1
WBID	3573B
STORET Number	22050040
Sampling Date	10/3/2001
Macroinvertebrate Parameters	
Biorecon Evaluation	Healthy
Bioregion	Panhandle East
Number of Taxa	43 - pass
Number of Ephemeroptera Taxa	7
Number of Plecoptera Taxa	0
Number of Trichoptera Taxa	6
EPT Index	13 - pass
Florida Index	19 - pass
Physical-Chemical Data	
Habitat Assessment Total Score	131
Sample Depth (m)	0.37
Specific Conductance (umho/cm)	413
Dissolved Oxygen (mg/L)	7.1
pH (SU)	7.3
Temperature (deg. C)	17.4
Chemistry Data	
Ammonia (mg/L)	0.16
Nitrate-Nitrite (mg/L)	0.086
TKN (mg/L)	1.1
Total Phosphorus (mg/L)	0.32
Color (PCU)	250
TOC (mg/L)	33
TSS (mg/L)	4 U

"U" - Below Limits of Detection

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