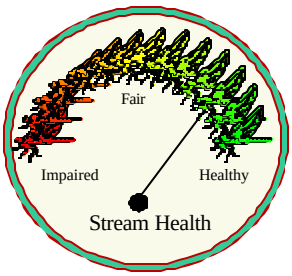


EcoSummary

Camp Branch @ 25A
03/13/00



Background

Camp Branch is located in Hamilton County, northwest of Lake City, Florida (see Figure 1). Camp Branch is in the Tifton Upland/ Tallahassee Hills Subecoregion (65h). This area is characterized by heterogeneous hilly and upland areas. Irregular plains of both clay and sandy soils are marked with pine/hardwood forests, and the eastern end of the region gradually drifts into lower swampy areas. Some agriculture is present, as is evergreen forest and pasture.

The Florida DEP sampled Camp Branch as part of a Fifth Year Inspection of the PCS Phosphate Chemical Complex and Mines in March 2000. Camp Branch was selected as a site for the collection of biological and water quality monitoring parameters. Water chemistry samples were taken for ammonia, nitrate-nitrite, total Kjeldahl nitrogen, total phosphorus, fecal coliform, and total coliform analysis; see Figure 2. Habitat assessment, qualitative periphyton and phytoplankton sampling, and benthic invertebrate stream condition index (SCI) sampling were conducted.

Results

The ammonia concentration (0.021 mg/L) was non-problematic, lower than values in roughly 90% of state streams (see Figure 2.) The nitrate-nitrite (NO_x) value (0.26 mg/L) was elevated, measured to be higher than the values found in 75% of Florida streams. Total Kjeldahl nitrogen measured in the good range (0.58 mg/L), lower than roughly 80% of state streams. Total phosphorus was quite elevated (1.3 mg/L), higher than roughly 95% of state streams. The overall habitat assessment score (129) was in the optimal range. Fecal and total coliform levels complied with the Class III water quality standard of 800 col/100ml and 2400 col/100ml, respectively. The macroinvertebrate stream condition index (SCI) score of 29 for Camp Branch was in the "excellent" range. The periphyton community was dominated by diatoms with some blue-green and green taxa. The dominant taxa represent a mixed community, with both oligotrophic and eutrophic taxa present.

In conclusion, nitrate-nitrite and total phosphorus levels were extremely elevated, while the remaining water chemistry was in the good category. The habitat assessment score for Camp Branch was in the optimal range, and the SCI scored in the excellent category. The periphyton community was represented by taxa indicative of both oligotrophic and eutrophic conditions.

Figure 1: Overview Map of the Camp Branch Area

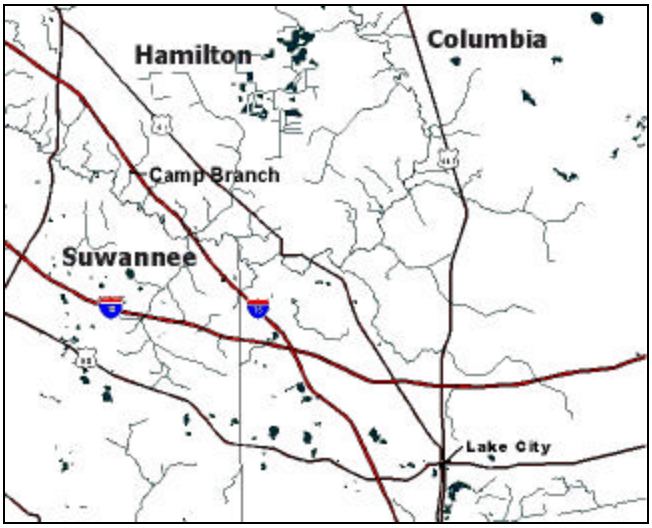


Figure 2: Data Table

Camp Branch			
Station		Camp Branch	
Station Nickname		CAMPBR25A	
STORET		21010054	
Sampling Date		3/13/00	
Macroinvertebrate Parameters		**Phytoplankton Parameters**	
SCI	29	Number of Taxa	9
SCI Evaluation	Excellent	% Bacillariophyceae	62.51
SCI Region	Northeast	% Chlorophyceae	13.64
Number of Taxa	44	% Cyanophyceae	6.81
Number of Ephemeroptera	4	% Domiant Taxon	26.92
Number of Plecoptera	1	Chlorophyll a (ug/L)	1.0 U
Number of Trichoptera	1	**Periphyton Parameters**	
EPT Index	6	Number of Taxa	28
% Dominant Taxon	9.76	% Bacillariophyceae	89.19
Florida Index	20	% Chlorophyceae	2.03
% Diptera	59.15	% Cyanophyceae	7.43
Number of Chironomidae	3	% Domiant Taxon	18.3
Number of Orthocladiinae	14	Chlorophyll a (mg/m^2)	5.2
Total Number of Chironomidae	17	**Physical-Chemical Data**	
% Filter-Feeders	19.21	Habitat Assessment	129
Chemistry Data		Sample Depth (m)	0.3
Ammonia (mg/L)	0.021	Specific Conductivity (um ho/cm)	139
Nitrate-Nitrite (mg/L)	0.26	Dissolved Oxygen (mg/L)	9
TKN (mg/L)	0.58	pH (SU)	7.02
Total Phosphorus (mg/L)	1.3	Temperature (deg. C)	12.2
Ortho-phosphate (mg/L)	1.2	**Bacteria Parameters**	
Color (PCU)	-	Fecal Coliforms (col/100 mL)	530
Turbidity (NTU)	-	Total Coliforms (col/100 mL)	1090 B

"B" - Results based on colony counts outside the acceptable range
"U" - Below the detection limit

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