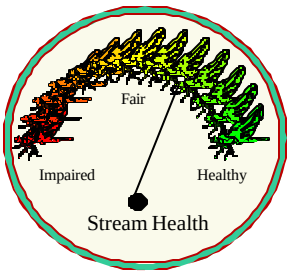
EcoSummary

Lloyd Creek
8/13/92-6/22/99



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. Lloyd Creek is a reference stream located in Jefferson County north of U.S. Route 27 and east of the small town of Lloyd.

Samples were collected from Lloyd Creek eight times from March 1992 to present. Benthic macroinvertebrate SCI and BioRecon sampling were conducted; see Figure 2. Water chemistry samples were taken for nitrate-nitrite, total Kjeldahl nitrogen (TKN), total phosphorus, and turbidity analysis; see Figure 2.

Results and Discussion

Dissolved Oxygen values have met acceptable criteria for Class III water bodies for all sampling dates. Nitrate-nitrite values in Lloyd Creek were relatively elevated, exceeding the levels found in 60% to 80% of other Florida streams. Other nutrients were not problematic.

Stream Condition Index (SCI) scores were calculated for all of the sampling events (See figure 2 and 3). Lloyd Creek has scored in the "poor" category twice, with all other sampling events scoring in the "excellent" or "good" category. The dynamic fluctuations in water level at Lloyd Creek may have contributed to the "poor" SCI results on two occasions, as steep banks make sampling in this stream difficult during high water conditions. The four "good" to "excellent" SCI results since 1994 suggest the stream is currently healthy.

Figure 1: Overview Map of the Lloyd Creek Area

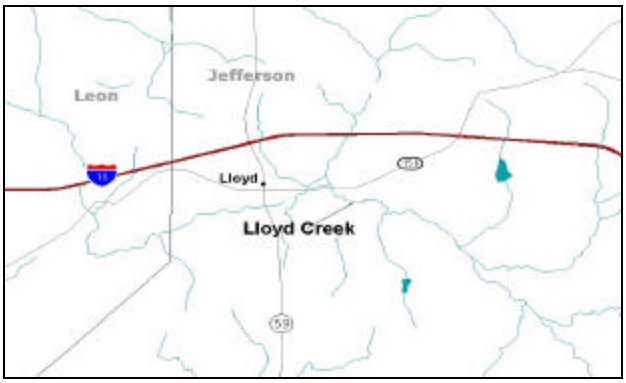


Figure 2: Data Table

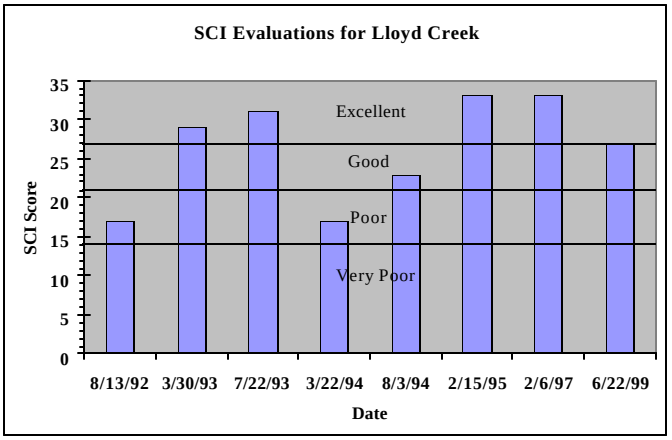
Lloyd Creek

Station	Lloyd Creek
Station Nickname	LLOYDREF
STORET	2208061
Date Sampled	8/13/92 - 6/22/99

Date	8/13/92	3/30/93	7/22/93	3/22/94	8/3/94	2/15/95	2/6/97	6/22/99
SCI	17	29	31	17	23	33	33	27
Temperature (deg.C)	19	17	25	19.5	24	14.7	14	23
pH (SU)	-	6.3	7.2	6.9	6.77	6.59	5.9	6.4
Dissolved Oxygen (mg/L)	8.1	8.6	7	8.1	9.7	8.4	10.3	7.1
Specific Conductivity (umho/cm)	55	40	64	50	75	40	41	42
Turbidity (NTU)	6.1	4.1	-	4.5	10	-	4.1	4
TKN (mg/L)	0.27	0.42	-	0.47	0.61	0.62	0.4	0.39
Nitrate-Nitrite (mg/L)	0.4	0.23	-	0.15	0.22	0.24	0.26	0.37
Ammonia (mg/L)	-	0.023 T	-	0.07	0.026 A	0.061	0.039	0.1 BDL
Total Phosphorus (mg/L)	-	0.15	-	0.11	0.15	0.140	0.110	0.180

"BDL"- Below detection limits; "T"- Value reported is less than the criterion of detection; "A"-Average value

Figure 3: SCI Evaluation



FOR MORE INFORMATION, CONTACT:
Shannon Gerardi, FDEP Environmental Assessment Section
2600 Blair Stone Road MS#6511 Tallahassee, FL 32399-2400 (850) 245-8071
shannon.gerardi@dep.state.fl.us