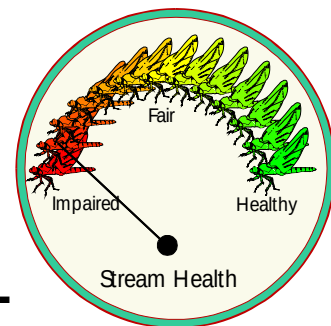


EcoSummary

BioRecon Report



Dry Creek at Highway 29 in Molino, FL February 15, 1996

BioReconnaissance (BioRecon): A rapid, cost effective screening mechanism for identification of biological impairment.

Purpose

A BioRecon was performed at this site in order to assess any impacts to the stream from agricultural non-point source runoff. The Dry Creek watershed has been intensively farmed for years. Biomonitoring is used to see if Best Management Practices (BMP) for agriculture have been effective.

Basin Characteristics

Dry Creek is a second order tributary of Jacks Branch at the bioassessment monitoring location. Jacks Branch flows into the Perdido River and Bay which is a part of the Perdido Ecosystem Management Area. The Dry Creek watershed has a low yield of groundwater resulting in only about 30% of the total runoff consisting of base flow. The base



flows of other streams in the Perdido Ecomanagement Area comprise 55 to 75% of the total flow. The Dry Creek watershed is characterized by clay soils and level to gently sloping land. Most of the land is graded for row crops, mostly cotton with some corn and soybean. Some of the watershed has

pasture for livestock. Many of the first order branches were plowed in the past and are now swales or pasture. Dry Creek's source elevation is 195 feet above mean sea level with a length of 3.1 miles and 19.3 feet average fall per mile (Florida Stream Gazetteer).

Results

The BioRecon monitoring indicated the Dry Creek watershed was impaired. The BioRecon found only 8 total taxa (≥ 24 metric target value), 0 Florida Index (≥ 22 metric target value), and 0 EPT (≥ 11 metric target value). The aquatic community structure was dominated by pollution tolerant organisms. The site habitat was degraded. Sediment had smothered the benthic substrate and eliminated water velocity. The riparian buffer zone of native vegetation was absent. The riparian zone vegetation was dominated by non-native shrubs (Chinese privet).

Significance

The results confirm that this stream is impacted by human activities. Dry Creek does not meet Class III State Surface Water Quality Standards 62-302 for recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. The riparian zone vegetation along streams such as Dry Creek provide the food and habitat for aquatic macroinvertebrates, which become the food for fish and wildlife of the Perdido basin ecosystem. Elimination of watershed forested wetland reduces the diversity and productivity of a stream ecosystem.



Suggestions

An agriculture BMP program can be initiated. Implementation of a stream restoration program then could proceed to restore native riparian vegetation and eliminate introduced exotics such as Chinese privet.



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