

EcoSummary

BioRecon Report



Catfish Branch near Yellow River Aquatic Preserve Boundary at Eglin Road 736 February 10, 2000

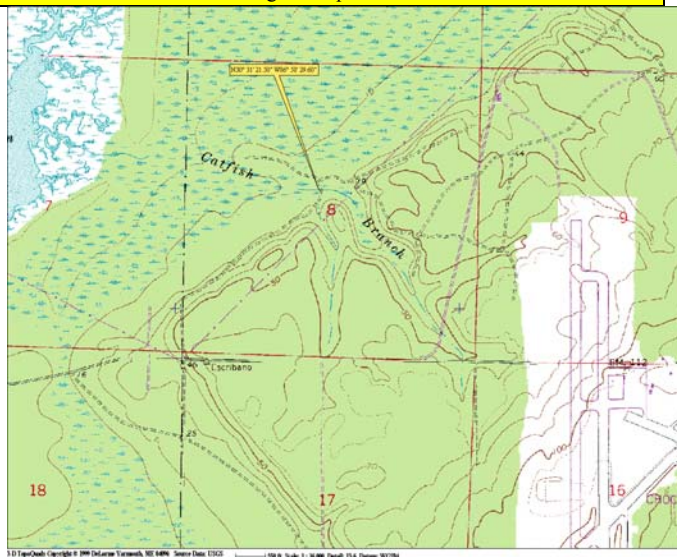
BioRecon: A rapid, cost-effective screening mechanism for identification of biological impairment

Purpose

A bioassessment was performed on Catfish Branch in an effort to document the environmental health of streams flowing into the Yellow River Aquatic Preserve (YRAP). The BioRecon was conducted in partnership with the YRAP staff.

Basin Characteristics

Catfish Branch at the bioassessment site is a second order stream originating near Choctaw Field on Eglin Air Force Base. The creek is located about 6 miles southeast of Milton in Santa Rosa County (Lat. 30° 31' 21.5" Long. 86° 58' 29.6"). This stream flows to Catfish Basin on Blackwater Bay at Grassy Point in the Pensacola Bay system. This site drains the Gulf Coast Flatwoods subecoregion (75a).



Results

The BioRecon indicated a healthy biological community. All 3 biological indicators surpassed thresholds established for healthy aquatic ecosystems:

Biometrics	Value	Thresholds
Taxa Richness	34	≥24
Florida Index	25	≥22
EPT	17	≥17

This Catfish Branch site passed the thresholds to rate a healthy aquatic wildlife community. Sediment filled the stream channel which limited fish habitat. The stream habitat assessment score was rated suboptimal at 59%. The 8 individual habitat parameter scores ranged from optimal (artificial channelization, riparian buffer zone width), suboptimal (substrate diversity water velocity, bank stability), marginal (riparian zone vegetation quality substrate availability), and poor (habitat smothering). Silvicultural activities and a logging road ford above the site affected these parameters.

Significance This Catfish Branch site met Class III State Water Quality Standards 62-302 for recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. It flows into Catfish Basin, one of the least developed bayous in the western panhandle. The water quality was excellent; however, the habitat was lacking, which limited the productivity of the stream's fish and wildlife. The lack of habitat was due to the absence of a forest overstory due to previous clear cutting of the riparian zone. The resulting shrub overstory lacks large woody debris, which contributes to the most important fish and wildlife habitat in panhandle streams. Catfish Branch had only 10% of the woody debris that was historically present in southeastern coastal streams.

Suggestions

Historical silviculture activity has reduced the riparian zones in many Northwest Florida streams. Forest management to restore and protect native riparian and transitional zone forests would enhance fish and wildlife diversity and productivity. Using best management practices for dirt roads, especially minimizing effects on stream morphology is important to protect stream ecosystems. Examples of observed watershed problems were a road ford damming the stream, road sediment filling wetlands/ stream channel, a dry tributary channel caused by an eroded road bed built in the stream riparian zone which captured the flow, and fire management impacts to watershed riparian zones. Catfish Branch's diversity and productivity would improve with a mature riparian forest overstory to provide natural habitat conditions in the stream. For more information, contact Donald Ray, FDEP Northwest District, 160 Governmental Center, Pensacola, FL 32501 (850) 595-8300x1126 or SC 695-8300