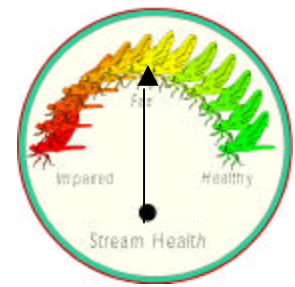


EcoSummary

BioRecon Report



Fundy Bayou Creek ford Southwest of Choctaw Field East of Escribano Point February 08, 2000

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

Purpose

A bioassessment was performed on Fundy Bayou Creek 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

Fundy Bayou Creek at the bioassessment site is a second order stream originating south of Choctaw Field on Eglin Air Force Base. The creek is located about 8 miles southeast of Milton in Santa Rosa County (Lat. 30° 30' 06.4" Long. 86° 59' 45.3"). This stream flows to Fundy Bayou on Blackwater Bay at Escribano Point in the Pensacola Bay system. This site drains the Gulf Coast Flatwoods subecoregion (75a).



Results

The BioRecon indicated a suspect biological community. Two of 3 biological indicators passed thresholds established for healthy aquatic ecosystems:

Biometrics	Value	Thresholds
Taxa Richness	28	≥24
Florida Index	25	≥22
EPT	7	≥17

This Fundy Bayou Creek site failed to meet the EPT threshold to rate a suspect aquatic wildlife community. Sediment filled the stream channel, which limited fish and wildlife 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 Fundy Bayou Creek site marginally 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 Fundy Bayou, a rare undeveloped bayou 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. Fundy Bayou Creek 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 affects 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. Fundy Bayou Creek 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) 595-8300 ext. 1126 or SC 695-8300