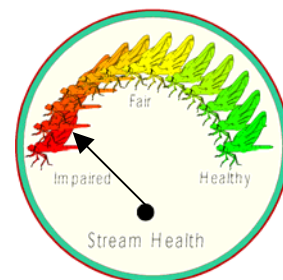




EcoSummary

BioRecon Report



Double Branch Steephead below Buck Pond Santa Rosa County February 17, 2000

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

Purpose

A bioassessment was performed on Double Branch in an effort to document the environmental health of streams flowing into the Yellow River Aquatic Preserve (YRAP). The site was sampled to determine if the Buck Pond dam impacted the down stream community. The BioRecon was conducted in partnership with the YRAP staff.

Background

Double Branch at the bioassessment site (Lat. 30° 33' 4.75" Long. 86° 54' 37") is a first order stream originating west of State Road 87 about 8 miles south of Milton in Santa Rosa County. This stream flows to Weaver Creek and Weaver River, which forms a delta with the Yellow River at the mouth of Blackwater Bay before emptying into Pensacola Bay. Double Branch drains the Southern Pine Plains and Hills ecoregion (65f).



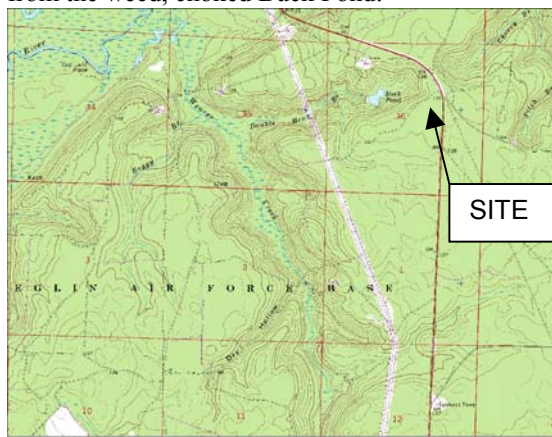
Results

The BioRecon indicated an impaired biological community. All 3 biological indicators failed thresholds established for a healthy aquatic wildlife community:

Biometrics	Value	Thresholds
Taxa Richness	20	≥24
Florida Index	18	≥22
EPT	5	≥17

The biota was impacted by the Buck Pond dam's physical and water quality changes to the stream. It was dominated by blackflies and net spinning caddisflies characteristically found below organically enriched waters such as impoundments. The dam's discharge channel dredged along the uplands isolated the stream's natural sinuous channel, which had become a stagnant mosquito breeding area. The pine and palmetto of the artificially created riparian zone provided

limited habitats to the stream comparable to native wetland or transitional forest riparian zone. In cleared open areas, the invasive exotic torpedo grass replaced the natural habitat of woody debris, leaf pack, roots/undercut banks. Mud, muck, and silt covered 85% of the stream bottom severely limiting fish and wildlife habitat. These organic sediments were mainly decaying plants and algae, which were discharged from the weed, choked Buck Pond.



Significance

This Double Branch site did not meet 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. The dam had a negative impact on stream hydrology and impaired the fish and wildlife community. The impoundment's maximum daily load for organic sediment was surpassed and led to downstream deposition and accumulation that smothered aquatic wildlife habitats. Organically enriched areas below impoundments are typically ideal habitats for water moccasins and 3 were observed. Sediment from nonpoint sources such as dirt roads, silviculture, and mining contributed to the impairment of this tributary of Weaver Creek.

Suggestions

Restoration of the stream's natural hydrology in the form of dam removal and reconnecting the stream to its natural sinuous channel would benefit the watershed's fish and wildlife community. Also preservation of the watershed's steep hillside transitional forests (note steep terrain on the above map) would prevent erosion from filling the stream channel's fish and wildlife habitat. Discarded beverage containers, tires, and other litter could be policed at the site by an adopting civic organization like the Boy/Girl Scouts of America. For more information, contact Donald Ray, FDEP Northwest District, 160 Governmental Center, Pensacola, FL 32501 (850) 595-8300 x1126 or SC 695-8300