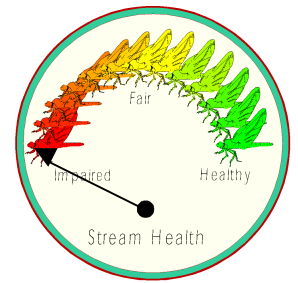


EcoSummary

BioRecon Report



Persimmon Hollow Creek below Black Oak Road Santa Rosa County February 22, 2000

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

Purpose

A bioassessment was performed on Persimmon Hollow 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.

Background

Persimmon Hollow Creek at the bioassessment site is a second order stream originating near I-10. The creek is located about 3 miles east of Milton in Santa Rosa County (Lat. 30° 36' 4.7" Long. 86° 58' 57"). This stream is the source waters for Pelican Bayou. It is part of the Pensacola Bay system and flows into Blackwater Bay just north of I-10. This site drains the Gulf Coast Flatwoods subcoregion (75a) and Southern Pine Plains and Hills (65f) in the headwaters.



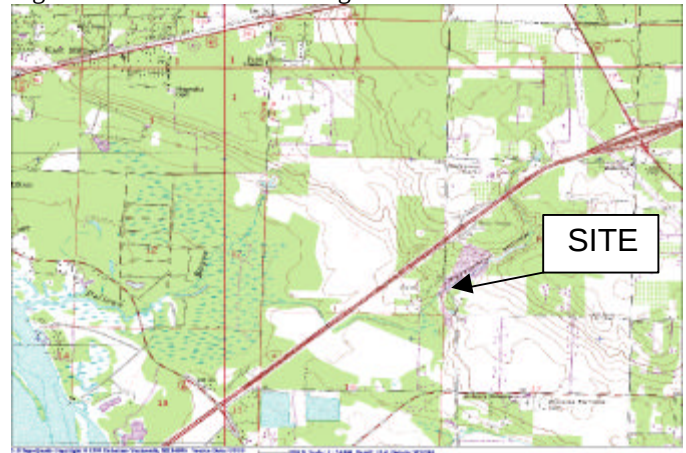
Results

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

Biometrics	Value	Thresholds
Taxa Richness	0	≥24
Florida Index	0	≥22
EPT	0	≥17

Persimmon Hollow Creek's stream channel was completely filled by sediment runoff from local mining operations, which eliminated all aquatic wildlife. The stream habitat assessment score was rated poor at 4%. After September 1998 flooding, exacerbated by culverts and road fill across wetlands impounding runoff, the U.S. Department of Agriculture used federal emergency watershed funds to facilitate stormwater removal from this area. Federal money was used to construct a rock-lined artificial channel 3700 feet long, 50 feet wide and 4 feet deep with nonlined sections extending another 500 feet.

The rocks were placed over the existing sediment filled stream channel, eliminating the second order stream. The streamside riparian zone was bulldozed and removed during the channel-straightening project. The newly constructed streambed was at higher elevation than remaining wetland areas.



Significance

This Persimmon Hollow Creek 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 stream's surface water base flow is permanently sealed under sediment, geotextile, and rock; thus preventing Persimmon Hollow Creek from meeting State designated use. Sediment loading, along with altered habitats from channelization and culverts, negatively affects the Yellow River Aquatic Preserve's fish and wildlife in Pelican Bayou and the upper portion of Blackwater Bay. Habitat destruction from sedimentation and replacement of a permanent stream with a wet weather stormwater channel could affect the federally endangered Gulf of Mexico sturgeon.

Suggestions

Restoration of the stream's natural hydrology (i.e. depth, sinuosity) and riparian wetland forests would benefit the Aquatic Preserve's fish and wildlife community. Use of best management practices for mining to keep sediment and turbidity out of State Waters is important to prevent habitat destruction. Replacing culverts with bridges that span the streamside wetlands and restoration of the watershed's natural hydrological patterns could re-establish Pelican Bayou as a nursery area for aquatic wildlife in the Pensacola Bay basin. Also, sturgeon access and migration routes to the Bayou would be restored. **For more information, contact Donald Ray, FDEP Northwest District, 160 Governmental Center, Pensacola, FL 32501 (850) 595-8300 x1126 or SC 695-8300**