EcoSummary

BioRecon Report

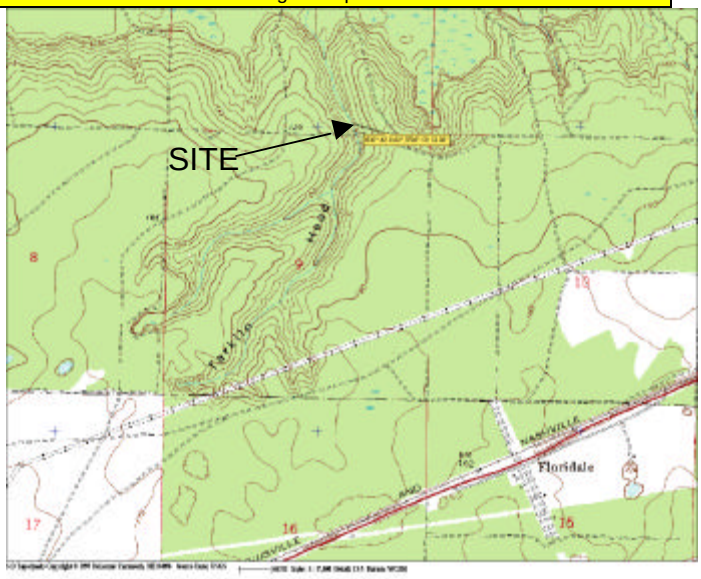
Tarkiln Head Branch Blackwater River State Park

12 August 1998

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

Purpose

A BioRecon was performed at this site ~ 2 miles southeast of the Blackwater State Park to assess the impacts of a dirt road to the biota and wildlife habitat in upper Tarkiln Head Branch. This bioassessment was a partnership with the Blackwater River State Forest and the Gulf Coast Plain Ecosystem Partnership.



Background

Tarkiln Head Branch at the bioassessment site is located in Range 26W Township 2N section 9 northern border (Lat. 30° 42' 0.6" Long. 86° 50' 52"). It is a second order tributary to the Blackwater River, which is classified as Outstanding Waters under the Florida Water Quality Standards. The Blackwater River flows into Pensacola Bay via Blackwater Bay and East Bay. The Yellow River Marsh along Blackwater Bay is a State Aquatic Preserve. Tarkiln Branch drains the southern pine plains and hills of subecoregion 65F.

Results

The BioRecon indicated complete impairment to the biological community. All 3 biological indicators failed to meet thresholds established for healthy aquatic ecosystems:

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

The aquatic community below the dirt road was eliminated. Road sediments created an impoundment that prevented downstream flow. The stream habitat was eliminated. Sediment deposition (sand 50% & clay 50%) below the road filled all productive habitats. These sediments wash down stream after rainfall creating turbid conditions in the river and bays and eventually deposit in the Pensacola Bay system.

Significance

The results confirm that this stream is degraded by human activities. This Tarkiln Head Branch site does 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. Sediment runoff from the dirt road had smothered wildlife habitat and killed local wetland vegetation. This runoff contributes to downstream turbidity and the filling of river and bay bottoms. Tarkiln Head is located in a steephead area. Steepheads are a distinct type of slope forest found only in Northwest Florida. They are formed when groundwater leaks through porous sand onto a sloping surface at the head of the stream. Steephead streams can easily disappear after upland erosion deposits sediment into the channel. In contrast, a stream developed by surface runoff from rainfall is better able to wash sediments from its channel.

Suggestions

Stream restoration has begun with the Blackwater River State Forest and the Gulf Coastal Plain Ecosystem Partnership closing the road. Volunteers planted vegetation to stabilize sediments and filter runoff. Historical silviculture activity has reduced the riparian zones in many Northwest Florida streams. Forest management to restore native riparian and transitional zone forest would enhance fish and wildlife diversity and productivity. Manage the area to protect headwater seeps and restore if anthropogenically impacted. **For more information, contact Donald Ray, FDEP Northwest District, 160 Governmental Center, Pensacola, FL 32501 (850) 595-8300 x1126 or SC 695-8300**