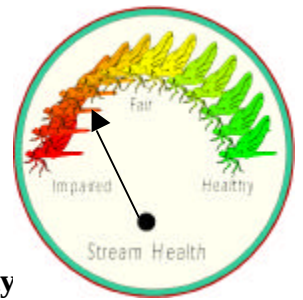


EcoSummary

BioRecon Report



Tarkiln Head Branch Mouth at Blackwater River, Santa Rosa County

August 12, 1998

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

Purpose

A BioRecon was performed at this site 100 meters above the confluence of the Blackwater River to assess the impacts from dirt road and silviculture practices to the biota and wildlife habitat in Tarkiln Head Branch. This bioassessment was a partnership with the Blackwater River State Forest and the Gulf Plain Ecosystem Partnership. A bioassessment was performed here on 08/08/96 as part of a TMDL study for the Blackwater River.



Background

Tarkiln Head Branch at the bioassessment site (Lat. 30° 42' 29" Long. 86° 51' 3") 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 and East Bays. The Yellow River Marsh along Blackwater Bay is a State Aquatic Preserve. Tarkiln Branch drains the southern pine plains and hills of subecoregion 65F.

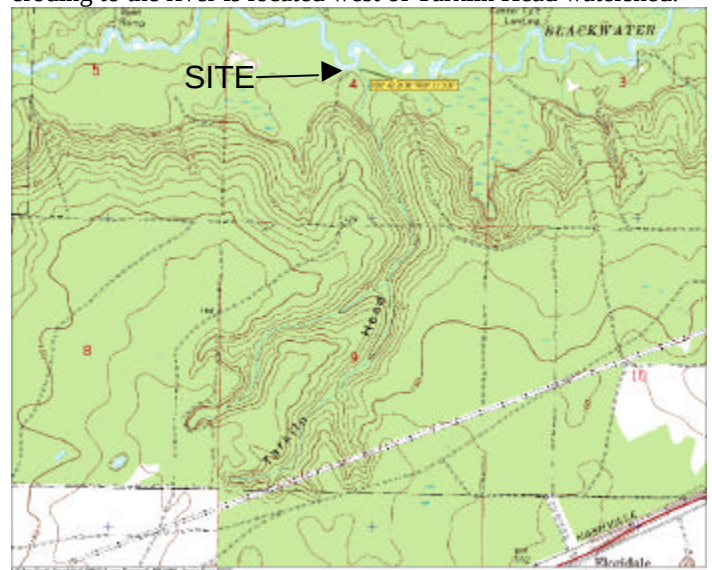
Results

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

<u>Biometrics</u>	<u>1998</u>	<u>1996</u>	<u>Thresholds</u>
Taxa Richness	26	21	≥24
Florida Index	21	14	≥22
EPT	8	5	≥17

The aquatic community has a high potential for recovery at this site if sedimentation from upstream dirt road and silviculture practices is controlled. This stream site had an old growth riparian forest, rare today in Northwest Florida. The good habitat assessment score of 86% was only reduced by the habitat smothering and decreased stream velocity from

sediments filling the channel upstream. The stream habitat scored in the upper optimal range for coverage of substrate availability (75%). However, silt (45%) and sand (5%) smothered productive habitats. These sediments wash downstream after rainfall creating turbid conditions in the river and bays and eventually deposit in the Pensacola Bay system. New large sand deposits were observed in Blackwater River above and below Tarkiln Head's mouth. A very large gully eroding to the river is located west of Tarkiln Head watershed.



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 dirt road and silviculture practices had smothered wildlife habitat and eliminated upstream riparian wetland vegetation. This runoff contributes to downstream turbidity and the filling of river and bay bottoms.

Suggestions

Stream restoration has begun with the Blackwater River State Forest and the Gulf Coastal Plain Ecosystem Partnership closing roads. 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. For more information, contact Donald Ray, FDEP Northwest District, 160 Governmental Center, Pensacola, FL 32501 (850) 595-8300 x1126 or SC 695-8300