A site map can be viewed by clicking on the report site name.

EcoSummary

Pritchett Mill Br @ Teddar Rd Sect11
T5N R31W
July 22, 1997

IMPAIRED

FLORIDA AMBIENT

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

For samples collected before June 8, 2004
All field and laboratory methods followed FDEP Standard Operating Procedures and met FDEP quality assurance/quality control standards.
For samples collected on or after June 8, 2004
All field and laboratory methods followed FDEP Standard Operating Procedures (SOPs) and met DEP quality assurance/quality control standards.

Purpose

A bioassessment was performed at this site on the East Fork of Pritchett Mill Creek to assess the nonpoint source runoff impacts of the clay surfaced Tedder Road stream approaches to its biota and wildlife habitat. This bioassessment was in technical support of the ecosystem partnership between FDEP and Escambia County to address dirt road sedimentation issues.



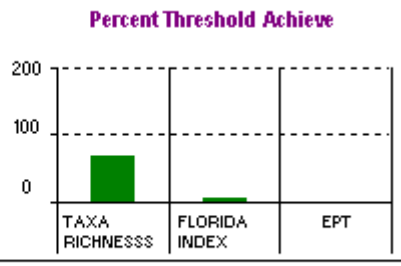
Watershed Characteristics

East Fork Pritchett Mill Branch at the bioassessment site is a first order stream, located about 1.5 miles southwest of Century (Lat. 30 degrees 57' 33.7" Long. 87 degrees 18' 29.8"). Pritchett Mill Branch flows into Pensacola Bay via the Escambia River and Bay. This site (STORET station 33020061) drains the Southern Pine Plains and Hills of subecoregion 65f.

Results

The BioRecon indicated a severely impaired biological community. Results from this pre-paved condition indicated stream community failed to meet thresholds for all 3 biometrics. See biometric results given below:

Biometrics	Value	Threshold
TAXA RICHNESS	16	>= 24
FLORIDA INDEX	1	>= 22
EPT	0	>= 17



Values and Percent Threshold Attained for Panhandle West BioRecon Metrics

Clay road sediments filled the stream channel sample reach and left a slick clay bottom in depositional areas. About 90% of the wildlife habitat was smothered with clay and silt. The original wildlife habitats included woody debris, leaf pack/mats, undercut banks/roots, and aquatic vegetation along with a gravel bottom substrate now smothered with road clay. This sediment load will be eventually transported to Pensacola Bay via the Escambia River and Bay. The 3-culvert crossing impeded flowing waters during low flow and washed out during heavy rain events. Below Tedder Road, the original stream channel was filled with road material which caused a braided stream condition, evidence of past road washouts. The stream above Tedder Road was impounded by the road fill's path through its riparian wetland floodplain. Damming from road fill material created stagnant conditions, which caused dissolved oxygen problems (2.86 mg/l) in violation of Florida Water Quality Standards (minimum 5 mg/l to protect fish and wildlife). This Tedder Road stream crossing was on the Natural Resources Conservation Service's (NRCS) paving priority list for Escambia County. The NRCS had listed the County's 25 most impacted sites where dirt road runoff filled stream channels. This site was one of the 25 verified as impaired by FDEP bioassessments. The East Fork Pritchett Mill Branch watershed land use was mostly silviculture with a few scattered homes. Both stream banks had been logged during the past year but maintained a 10 to 12 meter buffer zone. The stream habitat rated a poor 49% mainly from sediment impacts.

Significance and Suggestions

With road sediment over-load, this Pritchett Mill 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. Dirt road sediment runoff that exceeds an amount a stream is able to assimilate (i.e. Total Maximum Daily Load or "TMDL") is a common problem across Northwest Florida. The Panhandle is unique to Florida in having topography with highly erodible soils on sloping land, intense thunderstorms and tropical storms. This combination causes the area to be susceptible to excessive erosion, which leads to sediments filling Northwest Florida's wetlands and waterways. If sedimentation from dirt road erosion were eliminated and Tedder Road were engineered to allow natural flow at this stream crossing, the stream's hydrology (i.e. depth/width ratio) should improve after normal rainfall cycles. Restoration of the stream hydrology, elimination of dirt road sediment runoff, and maintenance of a >18 meter riparian forest buffer zone will allowed the watershed's fish and wildlife habitat (woody debris, leaf packs, undercut banks, roots, and aquatic vegetation) to return to healthy status. It is recommended that Escambia County prioritize paving stream crossings using the NRCS list and that the other 15 Northwest District Counties

develop a similar list.

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For more information on the DEP Bioassessment programs, please visit
our web site at http://www.dep.state.fl.us/water/bioassess

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