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

EcoSummary

Pine Barren Cr @ Still Rd Sect20 T5N R32W

July 10, 1997

FLORIDA AMBIENT

IMPAIRED

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 Pine Barren Creek to assess the nonpoint source runoff impacts of the clay surfaced Still 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.



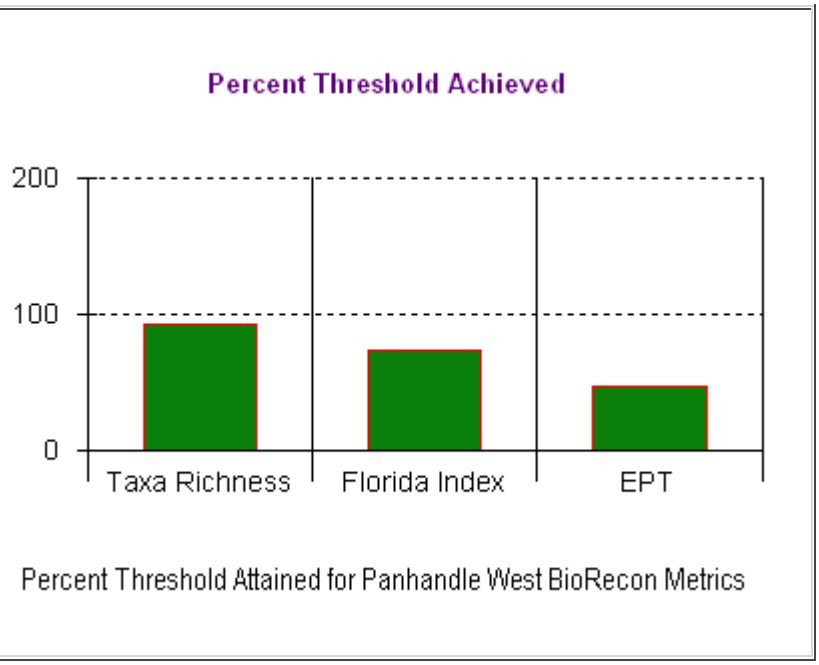
Watershed Characteristics

Pine Barren Creek at the bioassessment site is a third order stream, located about 3 miles southwest of Bratt (Lat. 30 degrees 55' 57.2" Long. 87 degrees 27' 24.7"). Pine Barren Creek flows into Pensacola Bay via the Escambia River and Bay. This site (STORET station 33020064) drains the Southern Pine Plains and Hills of subecoregion 65f. The Pine Barren Creek watershed land use was mostly agriculture with some silviculture with a few scattered homes.

Results

The BioRecon indicated an 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	22	>= 24
Florida Index	16	>= 22
EPT	8	>= 17



Clay road sediments filled much of the stream channel sample reach. The area above the bridge was virtually dammed by road fill runoff creating an alluvial delta (Note photograph). This sediment load is eventually transported to Pensacola Bay via the Escambia River and Bay. The stream habitat rated a low suboptimal 62% mainly from sediment impacts. This Still 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.

Significance and Suggestions

With road and agricultural sediment over-load, this Pine Barren 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. 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 affected by intense thunderstorms and tropical storms. This combination after deforestation causes the area to be susceptible to excessive erosion. The erosion caused by vegetative removal leads to sediments filling Northwest Florida's wetlands and waterways. Elimination of sediment runoff from Still Road should improve the stream's hydrology (i.e. depth/width ratio) after normal rainfall cycles. Elimination of dirt road sediment runoff, and maintenance of a >18 meter riparian forest buffer zone will allow 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.

For more information, please contact
Donald H. Ray
Northwest District Office
160 Government Center, Pensacola, FL 32502
(850) 595-8300 (Suncom 695-8300 x 1126)
E-mail: donald.ray@dep.state.fl.us

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our web site at http://www.dep.state.fl.us/water/bioassess

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