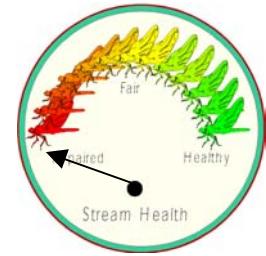




EcoSummary

BioRecon Report



Alabama Hollow Choctaw OLF Road, Eglin Air Force Base, Santa Rosa County August 3, 1999

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

Purpose

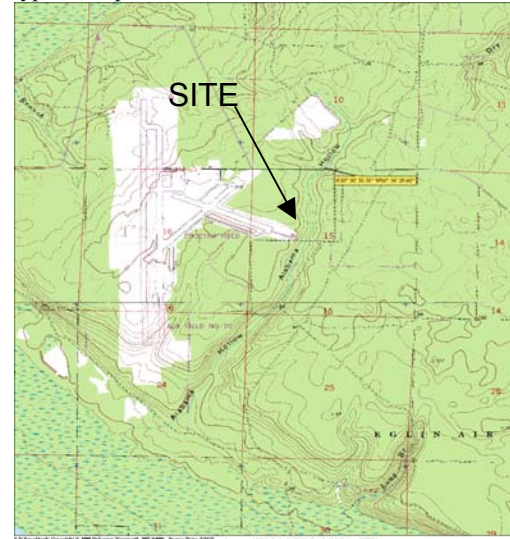
A bioassessment was performed on Alabama Hollow to assist in documenting the impacts of sedimentation to environmental health of the streams on Eglin Air Force Base. The BioRecon was conducted in partnership with the U.S Geological Service and Eglin Air Force Base's Jackson Guard.

Basin Characteristics

Alabama Hollow at the bioassessment site is a second order stream originating east of Choctaw Field. The creek is located about 8 miles south southeast of Milton in Santa Rosa County (Lat. 30° 30' 50.5" Long. 86° 56' 29. 6"). This stream flows to Fundy Bayou, part of East Bay in the Pensacola Bay system. This site is located in the southern pine plains and hills of 65F and drains to the Gulf Coast Flatwoods subcoregion 75A.



groundwater springs called steepheads. Steepheads are a distinct type of slope forest stream found 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 if the area is disturbed. For example, upland erosion or development activities can fill the stream channel or ravine. In contrast, a stream developed by surface runoff from rainfall is better able to wash sediment from its channel. Steephead habitats contain many species of endemic biota as well as rare northern plants. Protection of the stream's steep sandy hillside and its transitional zone natural vegetation is an important management tool to preserve this rare Florida community.

Suggestions

Historical silviculture activity had eliminated the riparian zones in this stream. Forest management to restore and protect native riparian and transitional zone forests would enhance fish and wildlife diversity and productivity. Using best management practices for dirt roads, especially minimizing affects on stream morphology is important to protect sensitive steephead ecosystems. Examples of observed area watershed problems were road culverts damming the stream, road sediment filling wetlands and stream channel, and fire management impacts in riparian habitats containing many rare plants species such as, Ashe's magnolia, native camellia (*Stewartia*), and loblolly bay (*Gordonia*). Removal of vegetation along these steep slopes by fire allows downward movement of the exposed soil to fill the riparian wetland and stream channel. **For more information, contact Donald Ray, FDEP Northwest District, 160 Governmental Center, Pensacola, FL 32501 (850) 5958300 or SC 695-8300**

Results

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

Biometrics	Value	Hicks Branch Value	Thresholds
Taxa Richness	0	34	≥24
Florida Index	0	22	≥22
EPT	0	17	≥17

This former Alabama Hollow Creek stream site was now a planted pine plantation in lieu of a fish and aquatic wildlife community. It appeared historical silviculture practices eliminated the stream above Choctaw OLF Road. Biometrics of Hick Branch headwaters, about 3000 feet northwest of Alabama Hollow's headwaters, is given above for comparison of the expected aquatic community of small streams in the area.

Significance

This Alabama Hollow Creek site failed to 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 area's geology is characterized by deep sandy soils in which streams begin from