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

EcoSummary

Whiting Field Branch East of State Road 87 above Clear Creek

February 25, 2003

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.

Introduction

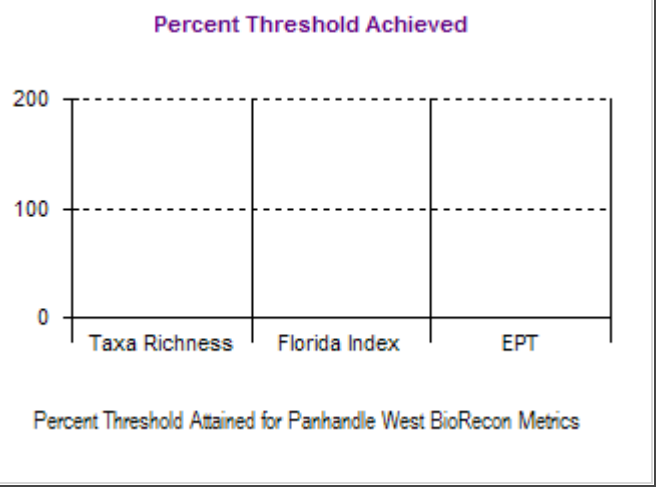


This biological assessment was conducted as an ecosystem partnership with the United States Fish and Wildlife Service (USFWS) for an Ecosystem Restoration Project in "Whiting Field Branch". Sand mining, historical logging activities and runoff directed from Whiting Field runways had caused sediments to completely fill Whiting Field Branch's stream channel and its riparian wetlands. The channel filling sediments originated from this hillside runoff eroding a mile-long gully as large as 300 feet wide and 30 feet deep. The USFWS has initiated a restoration project in Whiting Field Branch that will include re-constructing a sinuous channel and re-planting wetland riparian vegetation. This BioRecon documents the pre-restoration benthic invertebrate community's condition in Whiting Field Branch. The BioRecon sample reach (Latitude 30 degrees 42 minutes 47.9 seconds North, Longitude 87 degrees 2 minutes 40.5 seconds West) is located just west of the Whiting Field boundary about 4 miles north of Milton. This Whiting Field Branch site (STORET # 33030147) is a second order stream draining southern pine plains and hills of subecoregion 65F. Whiting Field Branch is tributary to Clear Creek and flows into Pensacola Bay via the Blackwater River, Blackwater Bay, and East Bay. The Blackwater River segment below Clear Creek is 303d listed for Total Suspended Solids. The Blackwater River is designated as "Outstanding Florida Water" as is the Yellow River Aquatic Preserve in Blackwater Bay.

Results and Discussion

This Whiting Field Branch site totally failed all three biometrics to indicate a completely impaired condition.

Biometrics	Value	Threshold
Taxa Richness	0	>= 24
Florida Index	0	>= 22
EPT	0	>= 17



The habitat assessment rated a lowest possible score (7%) caused by sedimentation completely burying the stream. During heavy rainfall high water velocity washes tons of sediments downstream. The aquatic biota was completed eliminated by excess sediment loading (100% habitat smothering). These sediments caused the surface water stream to flow under ground except during periods of significant rainfall. The watershed's entire riparian wetland forest was eliminated by sediment fill. The filled former stream riparian area had become an unauthorized dump (tires, trash, and household appliance observed), shooting range, and four-wheeler activity site. The landowner is working with the USFWS on these safety and health issues and to prevent this abusive land use. An Atlantic white cedar forest (listed as Type 97 by the Society of American Foresters) was the naturally dominant riparian zone.

Conclusions

The Whiting Field 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. Sediments from the sand mining pits and erosion due to Whiting Field runway stormwater runoff have been the major sources impacting stream health. These sediments have filled the gully that was Whiting Field Branch, eliminating the stream and its riparian wetland zone's aquatic wildlife habitats. The Whiting Field Branch drainage's future sediment load should decrease significantly since Whiting Field has greatly reduced stormwater discharges, the mine pit operator agreed to implement soil erosion control, and the USFWS's restoration plan will re-establish native riparian vegetation. Sediment loading and total suspended solids in the Blackwater River and Bay, along with East Bay, should be reduced upon completion of this USFWS stream restoration project. Whiting Field Branch's aquatic fish and wildlife should return after the stream habitat and flow is restored to its original channel. Post-restoration biometric scores should approach Point Baker Branch; an

adjacent first order tributary located a few hundred yards away to the southwest, just west of State Road 87 (46 Taxa, 30 Florida Index, 24 EPT).

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