

Conserving Black Creek Crayfish with Stream Enhancement

Middleburg, FL



Introduction

Tucked in the rolling sandhills of northeast Florida, Black Creek is a dark water stream flowing into the St. Johns River a mile north of Green Cove Springs. Historically, Black Creek's tributaries were unpolluted and characterized by cool, tannin-stained water, high oxygen content and low turbidity which provided critical habitat for the

Black Creek crayfish, a state-listed threatened species. This species of crayfish is found only in these high-quality streams in Clay, Duval, St. Johns and Putnam counties. Urbanization of the surrounding watershed has led to soil erosion and turbidity, especially at stream crossings and access roads in the Black Creek drainage area. The result has been loss of habitat needed to sustain healthy, robust populations of Black Creek crayfish.

Objectives

- Stabilize stream crossings to reduce silt and turbidity generated when the military, forestry and other local traffic uses stream crossings and adjacent access roads.
- Improve access for military maneuvers, resource management and maintenance, and public use opportunities.
- Protect critical stream habitat for the Black Creek crayfish.

Approach

The Florida Fish and Wildlife Conservation Commission (FWC) partnered with the Florida Department of Military Affairs and Florida Forest Service (Florida Department of Agriculture and Consumer Affairs) on strategies to stabilize the stream crossings of Black Creek tributaries. The FWC provided 3,800 tons of granite rock to Camp Blanding Joint Training Center near Middleburg to enhance 35 stream crossings. The FWC also



Before stream crossing enhancement



After stream crossing enhancement

supplied 160 tons of granite rock, 975 tons of topsoil, 282 tons of iron slag, and four 30-foot sections of plastic pipe to Jennings State Forest west of Middleburg to replace culverts and restore the hydrological flow of area streams. Camp Blanding received the 2018 Military Conservation Partner Award from the U.S. Fish and Wildlife Service for its wide-ranging conservation actions, including improvements to about 55 stream crossings to help Black Creek crayfish and other efforts benefiting imperiled wildlife such as the red-cockaded woodpecker and gopher tortoise.

Benefits

Stabilizing stream crossings contributes to conserving Black Creek crayfish on about 1,750 acres of sensitive northeast Florida stream habitat. The projects also enhance opportunities for military training maneuvers, improve access for forestry and land management activities and enhance public access. The FWC's Aquatic Habitat Conservation and Restoration Section will use these projects as blueprints for future partnerships with other agencies to enhance black water streams throughout the state.



Armored vehicle using stream crossing stabilized to protect Black Creek Crayfish habitat.

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