

Weeks Bay (Fish River)

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Alabama

HUC #031602050201

Background

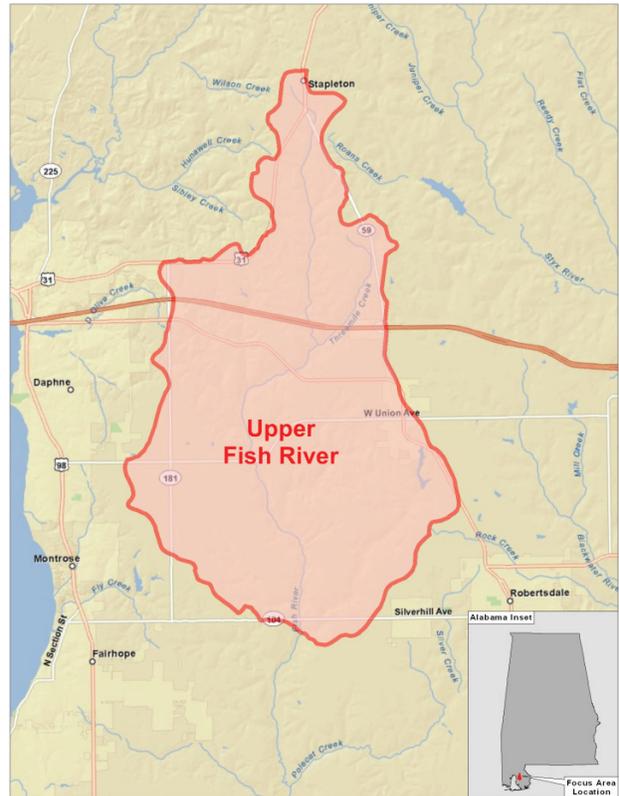
Weeks Bay is a small estuary, receiving fresh water from the Magnolia and Fish Rivers that drains a 198-square-mile watershed into Mobile Bay. The Weeks Bay watershed encompasses a rich mosaic of upland and coastal habitats. In 1986, Weeks Bay was designated as the nation's 16th National Estuarine Sanctuary and the name was changed to the Weeks Bay National Estuarine Research Reserve (one of five Reserves in the Gulf of Mexico region).

Weeks Bay is of great importance to the eastern Mobile Bay System. This highly productive area serves as a nursery for commercially important shellfish and finfish, as well as a diverse array of other flora and fauna. Weeks Bay acts as a filter for nutrients and sediments, provides shoreline stabilization, and offers recreational and educational opportunities for the local population and tourists. The area also serves as important habitat for numerous species of plants and animals, including rare, threatened, and endangered species such as the brown pelican, eastern indigo snake, and the Alabama red-bellied turtle. Habitat loss resulting from development, natural erosion processes, sedimentation, dredge-and-fill practices, exotic species, and hydrologic modifications are some of the principle environmental concerns in the region.

The entire length of Fish River, from Weeks Bay to its source, is on the 303(d) list. The initiative will focus on the headwaters of Fish River. The economy in this watershed is heavily dependent on agriculture; however, the watershed has experienced a 37 percent increase in developed land, as reported by the South Alabama Regional Planning Commission. Row crops and livestock production are the major farm enterprises. Approximately 60 percent of the land in the watershed is used for agriculture or forest management. Agricultural runoff adds sediment, nutrients, pesticides, and bacteria to surface waters.

Goals / Objectives

The objective of this initiative is to help producers voluntarily implement a combination of three core and supporting practices that: reduce the amount of agricultural-related nitrogen, phosphorus, and sediment leaving the field; reduce agricultural impacts on water quality; and enhance or maintain wildlife habitat.



Resource Concern	Total Acres Needing Treatment
Water Quality – Excessive Suspended Sediment and Turbidity in Surface Water and Excessive Nutrients and Organics in Surface Water	22,400
Water Quality – Harmful Levels of Pathogens in Surface Water	5,750
Soil Erosion – Classic Gully, Ephemeral Gully, and Stream Bank	500
Fish and Wildlife – Threatened and Endangered Species, Declining Species, Species of Concern	25,000

Actions

This initiative will focus on reducing soil erosion, improving water quality, and improving wildlife habitat on cropland, pastureland, and forestland by:

- Installing grade control structures to stabilize eroding gullies
- Implementing precision agriculture to reduce chemical application overlap and protect sensitive environmental areas
- Increasing adoption of residue and tillage management, cover crops, and conservation crop rotations to reduce sheet and rill erosion and improve soil organic matter, which will result in cleaner runoff and improved water quality
- Planting grass and trees to stabilize eroding areas
- Installing cross-fences and watering facilities to facilitate grazing distribution
- Controlling cattle access to streams to improve water quality and streambank stability
- Planting and managing native plant species to improve wildlife habitat and to assist with restoration of a multitude of declining species

Outcomes and Impacts

Anticipated long-term outcomes of this initiative are: a significant decrease in sediment deposited into the Gulf of Mexico, resulting in decreased turbidity, decreased levels of absorbed nutrients, and improved dissolved oxygen content; improved water quality in Weeks Bay; improved fish and wildlife habitat; and, increased community awareness about resources and best management practices to support conservation and renewal of our natural resources.



Typical gully needing repair.



Residue and tillage management.

Partners

Weeks Bay Foundation is a non-profit organization provides assistance and support to the Weeks Bay National Estuarine Research Reserve's goals and programs. This support includes monitoring of dissolved oxygen, saturation, specific conductivity, salinity, temperature, pH, turbidity, fecal coliform, pesticide concentrations, and transport paths of fine sediments.

U.S. Fish and Wildlife Service will continue to assist with riparian restoration projects and restoration of other native habitats.

Baldwin County Soil and Water Conservation District provides technical and financial assistance for conservation practices that improve water quality by reducing sediment, nutrients, and pesticides in runoff.

Alabama Cooperative Extension System will assist with producer meetings and technical assistance to promote precision agriculture.

USDA-Agricultural Research Service will assist with producer meetings to encourage adoption of conservation tillage and other practices which serve to improve soil quality. They will also assist with evaluation of conservation tillage adoption barriers and successes and assist with economic evaluation.

Alabama Department of Conservation and Natural Resources has technical resources for habitat recovery and monitoring.