Alabama

Introduction and General Description

Alabama is one of the most ecologically diverse States in the nation. The geography, ranging from the Appalachian mountains in northeast Alabama to the lower coastal plain in the southern part of the State, encompasses a whole host of ecological communities including coastal marsh, pitcher plant bogs, coastal pine savannah, bottomland hardwoods, upland hardwoods, karst springs and sinkholes leading to underground caverns, and unique gravel/cobble and bedrock streams. The majority of the State is drained by the sixth largest river system in the United States – the Mobile River system. The Tennessee River flows through the Cumberland Plateau region of the northern portion of the State and the Chattahoochee, Pea, Choctawhatchee, and Conecuh rivers drain the southeastern portion of the State. Alabama ranks first in the nation in freshwater fisheries diversity with more than 750 species of freshwater fishes, mussels, aquatic snails, and crayfishes.

Alabama has 9 national wildlife refuges – Wheeler NWR, Eufaula NWR, Choctaw NWR, Bon Secour NWR, Grand Bay NWR, Key Cave NWR, Fern Cave NWR, Blowing Wind Cave NWR, and Watercress Darter NWR.

The Alabama Department of Wildlife and Freshwater Fisheries developed a Comprehensive Wildlife Conservation Strategy (CWCS) that identifies wildlife species and habitat of greatest conservation need. In summary, 314 aquatic and terrestrial species were identified with the greatest conservation needs. These imperiled fauna include 24 mammals, 26 reptiles, 14 amphibians, 28 birds, 57 fish, 93 mussels, 34 aquatic snails, and 28 crayfishes.

The fauna identified in greatest conservation need in the CWCS were associated with 15 key habitats and 15 river basins, including several types of forest, wetlands, and other unique communities such as caves and coastal beaches. The Partners program worked closely with Alabama Wildlife and Freshwater Fisheries in developing the strategy and will continue our close collaboration with the State and other partners in delivering priority conservation actions on private lands in the State. The Service will use the CWCS to guide our partnership efforts in conserving Federal trust resources. The CWCS for Alabama can be viewed at www@dcnr.state.al.us

Alabama Activities

- Bottomland hardwood restoration
- Longleaf pine ecosystem restoration
- Wetland restoration (plugging ditches, building levees, installation of water control structures, etc.)
- Restoration, enhancement, protection of habitat for migratory birds (including wood duck boxes)
- Wetland enhancement
- In-stream restoration
- Stream bank stabilization and restoration
- Restoration of riparian and flood plain areas
- Restoration of fish habitat
- Cave gating and fencing to protect cave adapted species
- Restoration, enhancement,

protection of habitat for threatened, endangered, or rare species
- Pitcher plant bog restoration
- Outdoor classrooms

Habitats of Special Concern

Critically endangered habitats (>98 percent decline) that occur in Alabama include longleaf pine forests and savannahs in the coastal plain, black belt prairie, and Atlantic white cedar swamps. Gulf Coast pitcher plant bogs and large streams and rivers are considered endangered with an 85 to 98 percent decline. Riparian forests, including bottomland hardwoods, are considered threatened with significant declines since European settlement. Other habitats of special concern include karst springs and underground caverns, and cedar glades. Many of these habitats are inhabited by species listed as threatened or endangered under the Endangered Species Act. Of the States east of the Colorado River, Alabama ranks first in the number of listed endangered and threatened species

Threats

Prior to European settlement the longleaf pine ecosystem occupied 90 million acres in the southeast. Today less than 3 million acres remain. The longleaf pine ecosystem has declined in quality and quantity because of land clearing for agriculture and development, fire suppression, and conversion to faster growing loblolly and slash pine plantations. The decline of the longleaf pine ecosystem is important because it is home to at least 87 species that have been designated by State and Federal agencies as rare, threatened, endangered, or of special concern including the gopher tortoise, eastern indigo snake, red-cockaded woodpecker, flatwoods salamander, and dusky gopher frog. The decline of the longleaf pine ecosystem has been implicated in the serious decline of bobwhite quail and Bachman's sparrow.

Pitcher Plant Bogs

Gulf Coast pitcher plant bogs that once occurred on approximately 1.2 million acres in the lower coastal plain are now estimated to occur on less than 5,000 acres in natural or nearly natural condition. Another 24,000 acres of bog habitat probably remains in degraded or hydrologically altered condition. Even these liberal estimates indicate that at least 97 percent of the former bog habitat has been destroyed or seriously altered.

Fire suppression is the primary reason for the decline in quality of pitcher plant bogs. Drainage and

Grand Bay Savannah

Remnant longleaf pine forest near Flomaton, Alabama

conversion of bogs to pine monocultures, cropland, pasture, and residential commercial development have combined to reduce both the quality and quantity of bog habitat.

Riparian Forests and Bottomland Hardwoods

Bottomland hardwood and riparian forests have declined significantly since colonial times in Alabama with conversion of approximately 3.8 million acres to some other land use (50 percent decline in acreage). Bottomland hardwood and riparian forest have been converted to cropland,

pasture, and extensive reservoir projects for flood control, navigation and water supply.

Perennial Streams

Unaltered or degraded perennial stream habitat may be Alabama's most endangered ecosystem. In the last century at least 75 percent of Alabama's large mainstem rivers have been impounded for hydroelectric generation, flood control, navigation, and water supply. An additional 1,930 miles of perennial streams are degraded due to point and non-point source pollution. Many of the remaining free-flowing streams are inhabited by federally-listed threatened or endangered species including 36 species of mussels, 10 species of snails and 16 species of fish.

Conservation Strategies

The Alabama Wildlife and Freshwater Fisheries' CWCS was developed to help guide restoration efforts for imperiled species in Alabama. The CWCS mission is similar to the Partners program and emphasizes preventing additional species from becoming endangered or threatened, restoring and protection imperiled habitats, increasing funding for non-game wildlife, building both public and private partnerships, and promoting voluntary conservation. The Plan is a valuable tool for the Partners program as it identifies priority species for conservation as well as declining habitats in need of restoration. The Partners program will continue its close collaboration.

Gopher Tortoise (threatened)

Longleaf Pine Restoration Initiative

In order to help reduce the decline in the longleaf pine ecosystem, the Partners Program developed a partnership with the Alabama Soil and Water Conservation Committee, the Longleaf Alliance and Auburn University. The partnership encourages private landowners to convert loblolly or slash pine plantations to longleaf pine through cost share assistance. The partnership is not just another tree planting program as landowners are encouraged to plant native grasses and forbs as part of the restoration effort and use controlled burning to maintain the ecosystem. Restoration of the longleaf ecosystem can vary in cost from $210 to $400 per acre.

The Cahaba River Initiative

The Cahaba River focus area is an extraordinary repository of aquatic biodiversity. It supports 66 rare or imperiled species, including 10 fish and mussel species listed as threatened or endangered. The Cahaba, Alabama's longest free-flowing river, supports eleven snails and one fish that are Cahaba River basin endemics. Increased development pressure and streambank erosion from cattle watering from the river and increased nutrients threaten the aquatic system. The Partners Program entered into a cooperative agreement with the Cahaba River Society to develop a grassroots partnership with private landowners along the river to improve water quality and protect the aquatic ecosystem. The agreement provides for fencing, development of alternative water sources for cattle, wetland restoration (tree planting and ditch plugging) and riparian restoration. Fencing costs can range from $3,700 to 5,800 per mile. Riparian vegetation restoration can cost $200 to $300 per acre.

Paint Rock River Watershed Initiative

The Paint Rock River, located in north east Alabama is home to11 federally-listed or candidate species -- the palezone shiner, the Tennessee pigtoe mussel, the shiny pigtoe mussel, the fine-rayed pigtoe mussel, the pink mucket, the Alabama lampmussel, the slabside pearly mussel, the rough pigtoe, the pale lilliput snail, and the snail darter. The Partners Program has developed a partnership with the Nature Conservancy and

the Natural Resources Conservation Service in fencing livestock from the river and tributaries, restoring riparian vegetation, repairing stream banks and wetlands in the watershed.

Partners

Alabama Environmental Council
Alabama Rivers Alliance
Kimberly Clark, Inc.
International Paper Co.

Cahaba River above Centerville, Al

Alabama Soil and Water Conservation Committee
Alabama Association of Conservation Districts
Natural Resources Conservation District
Alabama Department of Conservation and Natural Resources
Auburn University
The Longleaf Alliance
Baldwin County Soil and Water Conservation District
Choccolocco Creek Watershed Conservancy Dist.
Alabama Forestry Commission
City of Citronelle
Daphne Middle School
Alabama Audubon Society
Mobile County Wildlife and Conservation Association
Mobile Bay National Estuary Program
Newton Middle School
Weeks Bay Estuarine Research Reserve
Weeks Bay Foundation
Alabama Coastal Foundation
Coastal Land Trust
Cahaba River Society
Alabama Department of Environmental Management
U.S. Army Corps of Engineers
Lauderdale Soil and Water Conservation District
Tennessee Valley Authority
The Nature Conservancy
Alabama Natural Heritage Program
Alabama Water Watch
Youth Conservation Corps
Americorps
Choctawhatchee Watershed Authority
Alabama Forest Resources Center
Volkerts and Associates, Inc
Alabama State Docks
Baldwin County School District
Alabama Forestry Commission
Mobile County Forestry Planning Committee
Baldwin County
Gulf Coast Resource Conservation and Development
Boy Scouts of America
Geological Survey of Alabama
Black Warrior--Cahaba River Land Trust
Society to Advance the Resources of Turkey Creek
Samford University
Jefferson County Land Development Commission

Accomplishments

- Since 1988, wildlife habitat on private lands has been restored, enhanced, or protected on over 170 Partners for Fish and Wildlife projects.
- The Partners Program has carried out restoration activities on over 30,000 acres.
- 22 miles of riparian habitat have been restored and 1 mile fenced.
- Over 7200 acres for wetland have been restored or protected
- 5 acres of cedar glades have been restored

Future Needs

- Restore 1.5 million acres of longleaf pine habitat by replanting cropland, pasture, and pine monocultures with native forest and understory species.
- Manage 1.5 million acres of longleaf pine habitat by prescribed burns on private land.
- Create new partnerships to help restore longleaf pine/pine savannah or wetland habitats through a joint venture effort.
- Restore and protect 1 million acres of wetland. At majority of the acres should be restored to bottomland hardwood wetlands intermixed with freshwater and brackish herbaceous and/or shrub wetland habitat.
- Restore or enhance 7,500 miles of riparian and/or stream habitat.
- Work with private landowners, State and federal agencies and conservation organizations to control exotic species.

Geographic Focus Areas in Alabama developed in collaboration with our partners

Contact

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