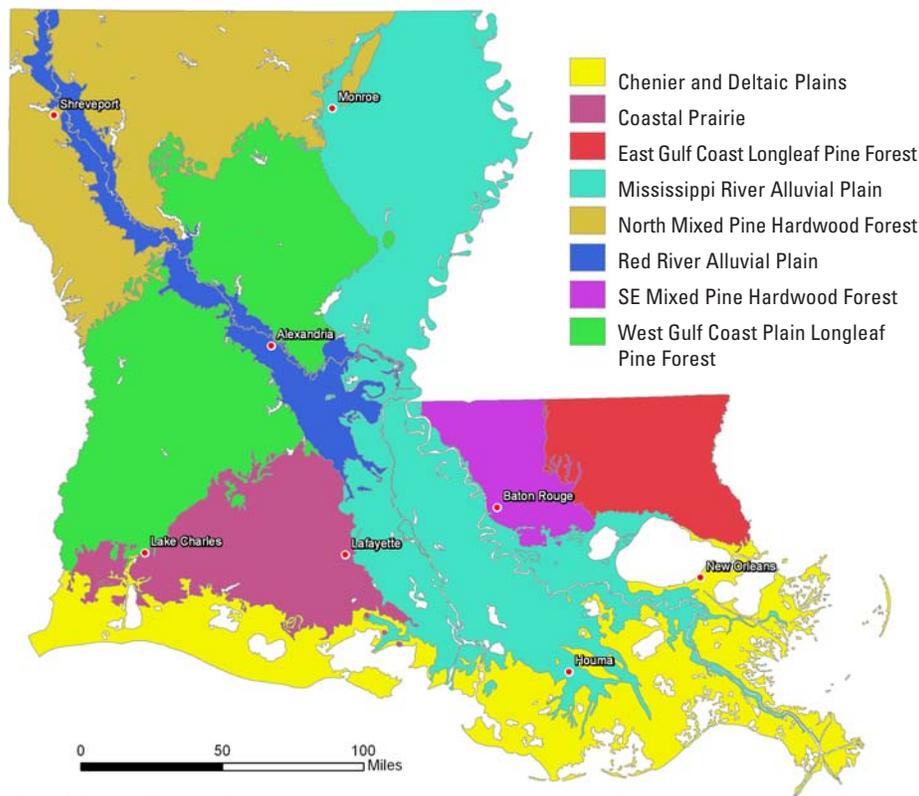


## Appendix A: Louisiana



*Louisiana Ecoregions*

### Introduction and Overview

Since the passage of the first Farm Bill legislation in 1985, the U.S. Fish and Wildlife Service (Service) has actively pursued habitat improvement projects on private lands through available conservation programs throughout the State. Likewise, the Service, since 1987, has utilized the Partners for Fish and Wildlife Program as its primary on-the-ground voluntary habitat improvement delivery tool on private lands. Initially, Partners projects were pursued with collaborating private landowners primarily in wetland habitat-types. However, over time and with the improvements to available Geographic Information Systems (GIS), the Service has incorporated extensive landscape-level targeting of Partners projects in priority areas for various federal trust resources in Louisiana and throughout the Lower Mississippi River Valley. This five-year strategic planning effort for the Partners Program focuses on our collaborative conservation efforts to conserve important habitats in Louisiana.

Louisiana is a topographically and biologically diverse State with a subtropical climate moderated by the Gulf of Mexico. Topographically, the State consists of uplands and upland terraces in the southeastern, northwestern, and north-central regions dissected by the Mississippi and Red River alluvial valleys; a prairie terrace in the southwestern portion and extensive coastal marshes bordering the Gulf of Mexico. Plant communities found within these regions are representative of five major plant communities in Louisiana: longleaf pine, mixed pine/upland hardwoods, bottomland hardwoods, prairie, and coastal marsh.

Of these major plant communities, Louisiana has four major habitat types of special concern due to historical and/or current habitat losses: coastal marsh, bottomland hardwoods, prairie, and longleaf pine and associated savannahs. Louisiana has lost approximately 20 percent of its coastal marshes over the last century, and continues to lose approximately 24 square miles each year.

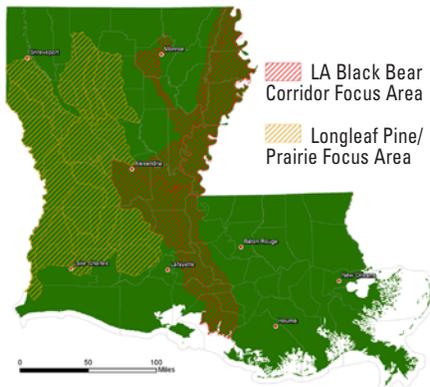
Louisiana’s coastal marshes are threatened by sediment deprivation (due to levees and upstream dams), erosion, subsidence, canal dredging, saltwater intrusion and other causes, but extensive multi-agency planning and restoration efforts have been underway over the past decade through the Coastal Wetland Protection, Planning, and Restoration Act in an attempt to stem and reverse this coastal loss trend. The State has lost approximately 70 percent of its original bottomland hardwood forests, almost 90 percent of its longleaf pine communities, and 99.9 percent of its native prairies. Bottomland hardwood habitats in the State are threatened by urban development and conversion to agriculture, while longleaf pine communities are still at risk from development and conversion to other forest types. The few remnant prairies left in Louisiana continue to be degraded by exotic Chinese tallow-tree invasion and fire suppression. A regular regimen of prescribed fire is essential to maintain the longleaf and prairie ecotypes.

For additional information on Louisiana’s diverse ecoregions, the Louisiana Department of Wildlife and Fisheries (2006) has further identified many additional terrestrial, aquatic, and marine sub-habitats within these four major habitat types as part of their Comprehensive Wildlife Conservation Strategy.

Within those habitat-types (and adjoining waterways), at least 16 plant and animal species are listed as federally endangered or threatened in Louisiana. Additionally, the Louisiana pine snake is currently a candidate for listing, and is not receiving federal protection.

### Overview of Focus Areas

The Service has identified two focus areas for the Partners Program in Louisiana where most of voluntary partnership efforts will be directed over the next five-years; the Louisiana Black Bear Corridor Focus Area, and the West Central Louisiana Longleaf Pine/Prairie Focus Area.



Louisiana Focus Areas

**Louisiana Black Bear Corridor Focus Area**

This focus area is intended to benefit the federally-threatened Louisiana black bear, and is part of a multi-agency, landscape-level planning effort to establish bear travel corridors connecting disjunct remnant bear populations from northeast Louisiana to south-central Louisiana. Research has indicated that there has been virtually no interchange of individuals between the Tensas River Basin bear population and the northern Pointe Coupee Parish bear population due to bottomland hardwood loss and conversion to a vast expanse of uninterrupted agricultural land.

This separation of bear habitat and lack of individual interchange among the remnant black bear populations has led to concern regarding the genetic isolation of these remnant populations of Louisiana black bear. The genetic isolation of populations of animals can lead to genetic vigor issues within the population, such as problems with reproductive viability and reduced disease resistance. For this reason, one of the main goals of Louisiana black bear restoration in Louisiana (as stated within the U. S. Fish and Wildlife Service’s Louisiana black bear recovery plan) is to ensure the unimpeded exchange of individuals between at least two of the three remaining subpopulations of Louisiana black bears in the state (the coastal, northern Atchafalaya, and the Tensas populations).



USFWS

Restoring bottomland trees within a potential black bear use area

The Service, the Louisiana Department of Wildlife and Fisheries, and the Louisiana Black Bear Conservation Committee have completed the sixth year of female bear relocations to the Red River WMA/Three Rivers WMA/Lake Ophelia NWR complex as part of this bear recovery strategy.

Logically, another major component of this effort is to encourage the restoration of bottomland hardwood habitat between the remnant bear populations. Therefore, a multi-agency group including the Service, the Natural Resources Conservation Service (NRCS), the Louisiana Department of Wildlife and Fisheries (LADWF), the Louisiana Black Bear Conservation Committee, and The Nature Conservancy (TNC) has identified a corridor of agricultural land which (when reforested), would connect the Tensas River National Wildlife Refuge to northern Pointe Coupee parish. This corridor has received preferential ranking for the Wetland Reserve Program and the Partners Program for the past six years.

**Priority Habitat**  
Wetland: Bottomland Forest Types

**Five-Year Target (FY 2007-2011)**  
500 acres

**Focus species\***  
Louisiana Black Bear (T); bald eagle (T); pallid sturgeon (E)

**Threats**  
Urban development and conversion to agriculture



Louisiana Black Bear Corridor Focus Area

**Action Strategies**

Work with private landowners and other partners to develop and implement habitat improvement projects on marginal agricultural and pasture land. Work with all partners to leverage project funding using all available conservation programs. Primary activities include planting bottomland tree seedling and hydrology restoration via ditch plugging, levee and water control structure installation, and excavation of wetland swale topography.

**Priority Habitat**  
Upland: Native Grasslands and Prairie

**Five-Year Target (FY 2007-2011)**  
50 acres

**Focus species\***  
Louisiana Black Bear (T); bald eagle (T)

**Threats**  
Urban development

**Action Strategies**  
Work with private landowners and other partners to develop and implement habitat improvement projects in uplands utilizing all available conservation programs. Primary activity is tree planting and invasive species control.

**Priority Habitat Type**  
Riparian

**Five-Year Target (FY 2007-2011)**  
Two miles

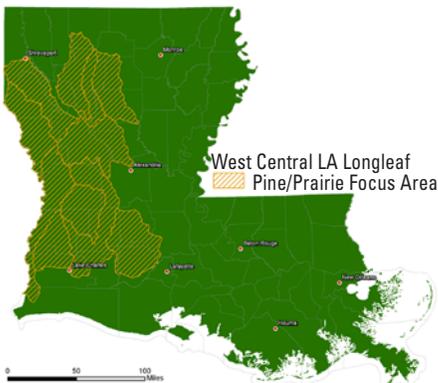
**Focus species\***  
Louisiana Black Bear (T); bald eagle (T); pallid sturgeon (E)

**Threats**

Siltation from poor agriculture and forestry practices, residential and commercial development, road construction and maintenance, discharge of pollutants, habitat alterations, and other natural and human-related factors

**Action Strategies**

Work with private landowners and other partners to develop and implement habitat improvement projects using all available conservation programs. Activities include planting tree seedlings, fencing livestock out of streams, providing alternative watering sources, and installing heavy use area protection in streams.



West Central Louisiana Longleaf Pine/Prairie Focus Area

**West Central Longleaf Pine/Prairie (WCLPP) Focus Area**

The WCLPP focus area consists of a broad area of the west-central and southwest portions of the State that were historically vegetated with longleaf pine and were interspersed with various prairie habitats.

Like the demise of longleaf pine across the southeastern United States, most longleaf pine in Louisiana was converted to loblolly and slash pine plantations in the early to mid 20<sup>th</sup> century. In Louisiana today, longleaf pine habitats persist mostly on National Forests and other public lands.



USFWS

Reestablished native prairie plants and habitat in Louisiana

Today many species of plants, animals and insects that require longleaf pine forests are either threatened or endangered with global extinction. The future fate of the red-cockaded woodpecker, the Louisiana pine snake, and the Louisiana slimy salamander are closely tied to the restoration of longleaf pine habitats in Louisiana. Many other listed species or species of concern (as identified in the State Wildlife Action Plan) such as the Louisiana pearlshell mussel, Bachman’s sparrow, southern crawfish frog, and bobwhite quail stand to benefit from the restoration of longleaf pine habitat.

Prairie habitats in Louisiana once stretched over approximately 2.5 million acres, primarily on the Gulf Coast prairie terrace in the southwestern portion of the state. Nearly 1,000 species of herbaceous plants, and over 100 species of butterflies and dragonflies can be found in Louisiana prairies. However, the advent of rice culture brought to the state in the late 19<sup>th</sup> and early 20<sup>th</sup> century initiated the rapid demise of this incredibly diverse habitat. Today, only a few hundred acres remain (representing a 99.9 percent loss) with small remnants scattered across railroad rights-of-way, edges of marshes, and adjoining longleaf pine stands. The few remnant prairies left in Louisiana continue to be degraded by exotic Chinese tallow-tree invasion and lack of fire, which is essential to maintain the ecotype.

Some Federal trust species, and species of State concern once common on Louisiana prairies include Attwater’s prairie chicken, Bachman’s sparrow, Henslow’s sparrow, whooping crane, bobwhite quail, loggerhead shrike, southern crawfish frog, and western slender glass lizard, among many others.

A multi-agency effort has been underway for several years now to increase the supply of native prairie seed for local prairie restoration efforts and coordinate restoration strategies. Groups associated with this effort include Service, the NRCS, LADWF, the Cajun Prairie Habitat Preservation Society, the U.S. Geological Survey – Biological Research Division, TNC, McNeese State University, and numerous local Soil and Water Conservation Districts. These same groups are currently working with the Farm Services Agency to finalize a second Conservation Reserve Enhancement Program which will authorize the restoration of 18,000 acres of prairie/grassland habitat through 15 year agreements with private landowners.

**Priority Habitat**

Wetland: Bottomland Forest Types

**Five-Year Target (FY 2007-2011)**  
100 acres

**Focus Species\***

Louisiana pearlshell (T); bald eagle (T)

**Threats**

Urban development and conversion to agriculture

**Action Strategies**

Work with private landowners and other partners to develop and implement habitat improvement projects using all available conservation programs. Activities include planting trees and hydrology restoration via ditch plugging, levee and water control structure installation, and excavation of wetland swale topography.

**Priority Habitat**

Upland: Longleaf Pine

**Five-Year Target (FY 2007-2011)**  
400 acres

## *Focus Species\**

Red-cockaded woodpecker (E); Louisiana pearlshell (T); American chaffseed (E); Geocarpon minimum (no common name) (T); Louisiana pine snake (SOC); Bachman's sparrow (SOC); paniced indigobush (SOC)

## *Threats*

Loss of longleaf pine habitat to monoculture forestry; lack of prescribed burning and residential and commercial development

## *Action Strategies*

Work with private landowners and other partners to develop and implement habitat improvement projects using all available conservation programs. Activities include providing technical assistance to landowners to improve existing degraded longleaf pine stands and to restore longleaf pine on appropriate sites, thinning, prescribed burning, applying herbicides, establishing and maintaining firebreaks, and planting longleaf seedlings and native plant ground cover.

## *Priority Habitat*

Riparian

## *Five-Year Target (2007-2011)*

Two miles

## *Focus species\**

Louisiana pearlshell (T); bald eagle (T)

## *Threats*

Development; poor forestry and agricultural practices

## *Action Strategies*

Work with private landowners and other partners to develop and implement voluntary habitat improvement projects using all available conservation programs. Conservation actions include tree planting to reestablish a native buffer, fencing livestock out of streams, providing alternative watering sources, and installing heavy use area protection in streams.

\*E=federally listed endangered species; T=federally listed threatened species; C=federal candidate species; SOC=species of concern

## **Stakeholders Involved**

The Partners Program has working partnerships with numerous Federal and State agencies, non-governmental organizations, local conservation groups, corporations, families, farmers, ranchers and other individuals. Some of the former and current cooperators within the Louisiana Partners Program include:

- More than 160 private individuals.
- Louisiana Department of Wildlife and Fisheries
- Natural Resources Conservation Service
- Farm Services Agency
- The Nature Conservancy
- Baton Rouge Audubon Society
- Cajun Prairie Habitat Preservation Society
- Black Bear Conservation Committee
- Ducks Unlimited
- Cajun Electric Power Cooperative
- Mercury Electric Company
- Deltic Farm and Timber Company
- Allied Development, Inc.
- Hackberry Rod and Gun Club
- Flat River Farms
- River Road Plantation
- Inglewood Plantation
- Brown Land Corporation
- Reed Properties
- Bel-Kraus Properties
- Dixie Plantation
- Ophelia Land Company
- Red Delta Land Company

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- Louisiana Department of Wildlife and Fisheries. 2006. Louisiana Comprehensive Wildlife Conservation Strategy <http://www.wlf.state.la.us/> (Accessed October 2, 2006).
- USFWS, 1995. Louisiana black bear recovery plan. U.S. Fish and Wildlife Service. Jackson, Mississippi Field Office.