

Mississippi's Comprehensive Wildlife Conservation Strategy

What is a wildlife action plan?

Congress asked each state to develop a wildlife action plan, known technically as a comprehensive wildlife conservation strategy. These proactive plans examine the health of wildlife and prescribe actions to conserve wildlife and vital habitat before they become more rare and more costly to protect.

Mississippi snapshot

Geography: Mississippi's 47,716 square mile area includes 44 miles of coastline, 450 square miles of open water and five major river systems that empty into the Gulf of Mexico or the Mississippi River. Elevations range from sea level to 806-foot Woodall Mountain in Tishomingo County. Forests dominate the landscape, comprising over half the land area, and about 37 percent of the land is in agricultural production.

Landscape: As more than two-thirds of the State is in private ownership, conservation management programs coordinated through state, federal and non-profit organizations are geared toward private land stewardship. These include Farm bill conservation programs, conservation easements, and cost-share and partner programs that benefit both game and non-game wildlife. The U.S. Forest Service holds the largest percentage of public land, and, together with federal wildlife refuges and state wildlife management areas, these lands serve as important habitat for many of the endangered species in the state.



Small stream swamp forest/MMNS

Wildlife: Lying directly above the geographic center of the Gulf of Mexico, Mississippi is in the main flyway for transgulf bird migrants. Black bear wander the bottomlands along the Mississippi, Pearl and Pascagoula Rivers. The Gulf sturgeon spends much of its life in marine environments of the Mississippi Sound, but moves to the freshwater of the Pearl and Pascagoula Rivers to spawn.

Mississippi's planning approach

The Mississippi Department of Wildlife Fisheries and Parks coordinated the development of the strategy with the help of internal committees, a large statewide advisory committee, and an extensive team of experts. The goal of the strategy was to provide a guide for the effective and efficient long-term conservation of Mississippi's biodiversity. Expert surveys and data from the Mississippi Natural Heritage Program led to the identification of 297 Species of Greatest Conservation Need, as well as their habitats. Sixty-four habitat subtypes were grouped into inland terrestrial, flowing water, standing water and marine categories.

"I am pleased to introduce the Mississippi Department of Wildlife Fisheries and Parks' new effort to serve as steward of ALL of our state's wildlife resources: the Mississippi Comprehensive Wildlife Conservation Strategy. This strategy has been developed in compliance with a congressional mandate and will serve as Mississippi's blueprint for fish and wildlife conservation for the next half century. It is my hope that the success of this effort will be measured by the cultivation of lasting conservation partnerships and the promise of fish and wildlife resources for future Mississippians."
– Sam Polles, Ph.D.
MDWFP Executive Director



Swallow-tailed Kite/Bruce Reid

“Mississippi’s Comprehensive Wildlife Conservation Strategy is the most comprehensive plan devised in the State to address the needs of Mississippi’s wildlife resources. It will serve well as the foundation for determining the best ways to conserve our natural resources for generations to come.”

*– Cathy Shropshire, Ph.D.
Mississippi Wildlife Federation Executive Director*

Habitat subtypes were prioritized according to the number of Species of Greatest Conservation Need found in each subtype, and by the degree of imperilment of these species. Our collaborators helped identify 23 general threats and 30 potential conservation actions needed to abate the greatest threats to wildlife and habitats. Mississippi’s strategy represents a habitat-based approach to

conserve rare and declining, as well as common, species.

Primary challenges to conserving wildlife in Mississippi

Mississippi identified 23 statewide priority threats to the identified species of greatest conservation need. While the threats vary greatly among the diverse habitat types, **urban and suburban development**, **incompatible forestry practices** and **stream channel modification**

were high priority threats for many of the habitats. One goal of the strategy is to engage all stakeholders in balancing wildlife conservation needs with ongoing economic activities.

Urban and suburban development includes primary home construction as well as development of associated infrastructure (e.g. subdivision roads and driveways, sewer and stormwater utilities). Impacts may include habitat destruction, disturbance, fragmentation and introduction of invasive species.

Incompatible forestry practices involve poor forestry BMP implementation and site management activities that result in altered structure and composition of adjacent natural habitats or degraded stream or wetland habitats. Examples include excessive chemical use, effects of some harvesting equipment, significant site alteration prior to planting (bedding) and excessively high stocking densities.

Channel modification includes construction and use of ditches, levees, dikes, drainage tiles, flow diversion, dredging,

Wildlife	Total number of species	Species in need of conservation*	Threatened/endangered listed species
Mussels	82	49	12
Crayfish	74	34	0
Fishes	213	74	4
Amphibians	59	18	1
Reptiles	84	35	10
Birds	270	70	8
Mammals	65	17	5
Totals	847	297	40

**Each state is using its own criteria for this category. Mississippi focuses on species 1) listed by state or federal statute as threatened or endangered; 2) ranked as critically imperiled, imperiled or vulnerable by the Mississippi Natural Heritage Program; 3) with low or rapidly declining population density, low reproductive potential and narrow geographic distributions but not listed as endangered, threatened, imperiled or vulnerable; 4) identified as a conservation priority under national plans and peer reviewed reviewed publications.*

Some animal groups were not included in this first CWCS version. Insects, snails, marine fishes and invertebrates were deemed insufficiently well-known to evaluate. Plans are being developed to identify species in need from these groups, and to include them in future iterations.

Wildlife highlights

Highlight habitats	Wildlife (examples)	Issue (examples)	Action (examples)
Small Stream Swamp Forest	Black Bear, Rafinesque's Big-eared Bat, River Frog, Swallow-Tailed Kite	<ul style="list-style-type: none"> • Incompatible Water Quality • Invasive Species 	<ul style="list-style-type: none"> • Encourage and improve agriculture/forestry/watershed land-use planning and Best Management Practices to address non-point pollution, erosion and water quality issues. • Control exotic and invasive species - plants and animals.
Tombigbee River Drainage	Red Salamander, Southern Walleye, Ridged Mapleleaf Mussel, Black-Knobbed Map Turtle	<ul style="list-style-type: none"> • Channel Modification 	<ul style="list-style-type: none"> • Maintain/improve/restore hydrologic and channel sinuosity and floodplain integrity.
Estuarine Marshes	Black Skimmer, Saltmarsh Topminnow, Mississippi Diamondback Terrapin	<ul style="list-style-type: none"> • Altered Hydrology (flow) • Second Home/Vacation Home Development 	<ul style="list-style-type: none"> • Encourage buffers and improve land use practices adjacent to wetland habitats. • Encourage retention, preservation and conservation of remaining natural habitat through purchase, easements, MOAs. • Develop/improve urban/suburban/infrastructure land use development planning/zoning.

Recommended actions to conserve Mississippi's wildlife



Tombigbee River System/MMNS

channelization, filling of wetlands, destabilization of streambanks or channels (head-cutting), and other alterations to stream channels and natural flow regimes.

Working together for Mississippi's wildlife

Representatives from over 290 natural resources agencies, conservation organizations, agriculture and forest products industries, technical experts, conservation educators and academics were invited to participate on the Advisory Committee. This group, which included 179 active members, met quarterly to review and develop sections of the strategy. Their role was to provide input and advice during the development of the strategy, to recommend existing plans or strategies for incorporation, and to review and comment on drafts of the strategy prior to submission. All meeting agendas and minutes were posted on the strategy webpage, and the public was encouraged to participate.

Individual briefings and group presentations were provided to interested individuals, organizations and agencies throughout the development of the strategy. A promotional brochure was used for presentations, and was distributed to potential stakeholders and the public. A website, www.mdwfp.com/cwcs, served as the primary method of providing material to the public and stakeholders for additional review and comments. Finally, news media throughout the state reported on the development of the strategy.



Black Skimmers/Bruce Reid

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