

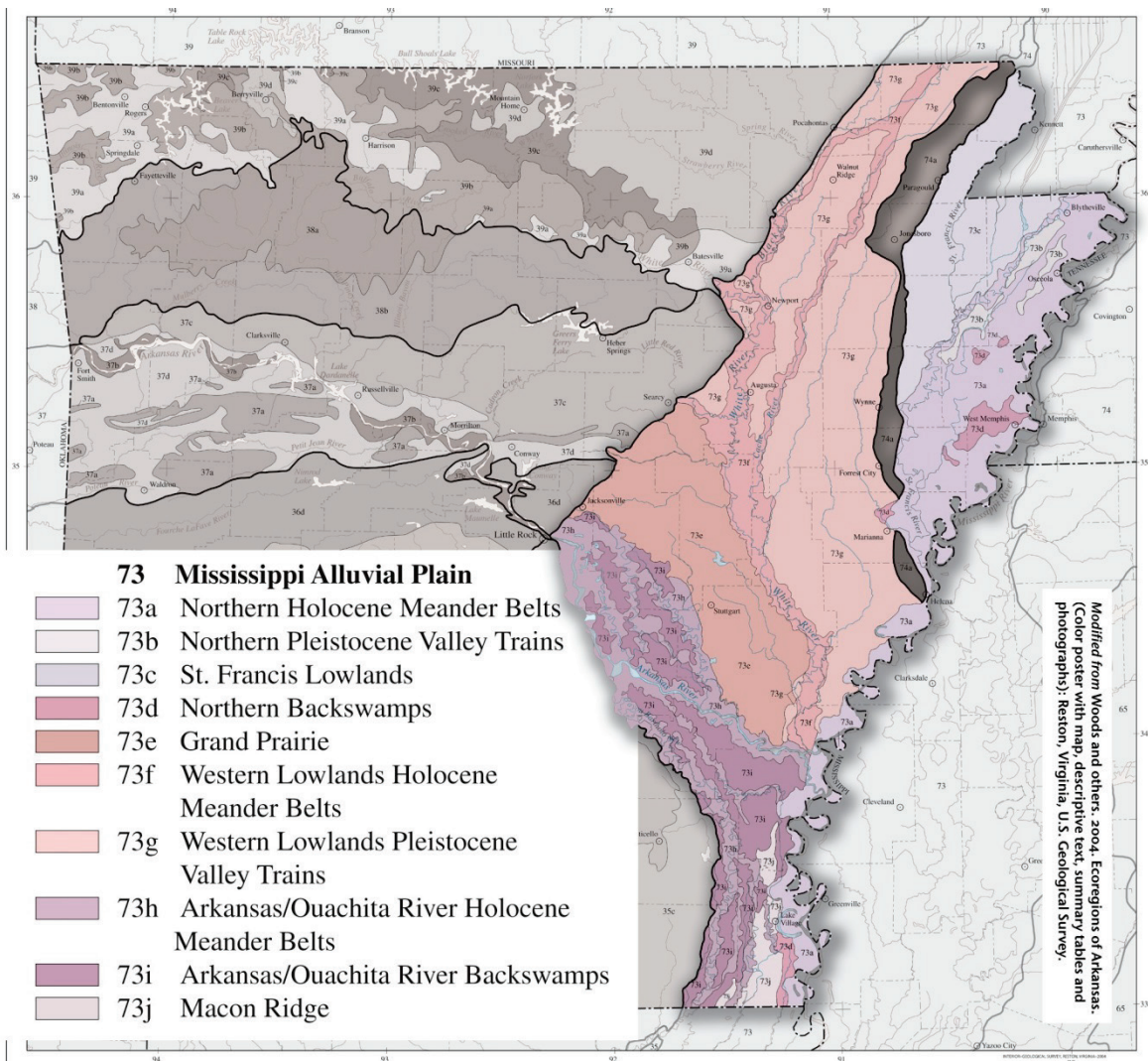
Mississippi Alluvial Plain (Ecoregion 73)

The Mississippi Alluvial Plain (73) extends along the Mississippi River from the confluence of the Ohio and Mississippi rivers southward to the Gulf of Mexico; temperatures and annual average precipitation increase toward the south. Ecoregion

73 is a broad, nearly level, agriculturally-dominated alluvial plain. It is veneered by Quaternary alluvium, loess, glacial outwash and lacustrine deposits. River terraces, swales and levees provide limited relief, but overall, the Mississippi Alluvial Plain (73) is flatter than neighboring ecoregions in Arkansas, including the South Central Plains (35).

Nearly flat, clayey, poorly-drained soils are widespread and characteristic. Streams and rivers have very low gradients and fine-grained substrates. Many reaches have ill-defined stream channels.

Figure 3.19. Mississippi Alluvial Plain ecoregion.



Ecoregion 73 provides important habitat for fish and wildlife and includes the largest continuous system of wetlands in North America. It is also a major bird migration corridor used in fall and spring migrations.

Potential natural vegetation is largely southern floodplain forest and is unlike the oak–hickory and oak–hickory–pine forests that dominate uplands to the west in Ecoregions 35, 36, 37, 38 and 39; loblolly pine, so common in the South Central Plains (35), is not native to most forests in the Arkansas portion of Ecoregion 73.

The Mississippi Alluvial Plain (73) has been widely cleared and drained for cultivation; this widespread loss or degradation of forest and wetland habitat has impacted wildlife and reduced bird populations.

Presently, most of the northern and central sections of Ecoregion 73, including Arkansas, are in cropland and receive heavy treatments of insecticides and herbicides; soybeans, cotton and rice are the major crops and aquaculture is also important. Agricultural runoff containing fertilizers, herbicides, pesticides and livestock waste have degraded surficial water quality.

Concentrations of total suspended solids, total dissolved solids, total phosphorus, ammonia nitrogen, sulfates, turbidity, biological oxygen demand, chlorophyll a and fecal coliform are high in the rivers, streams and ditches of Ecoregion 73; they are often much greater than elsewhere in Arkansas, increase with increasing watershed size and are greatest during the spring, high-flow season.

Fish communities in least altered streams typically have an insignificant proportion of sensitive species; sunfishes are dominant followed by minnows. Man-made flood control levees typically flank the Mississippi River and, in effect, separate the river and its adjoining habitat from the remainder of its natural hydrologic system; in so doing, they interfere with sediment transfer within Ecoregion 73 and have reduced available habitat for many species.

Between the levees that parallel the Mississippi River is a corridor known as the “batture lands”. Batture lands are hydrologically linked to the Mississippi River, flood-prone and contain remnant habitat for “big river” species (e.g., pallid sturgeon) as well as river-front plant communities; they are too narrow to map as a separate level IV ecoregion.

Earthquakes in the early nineteenth century offset river courses in Ecoregion 73. Small to medium size earthquakes still occur frequently; their shocks are magnified by the alluvial plain’s unconsolidated deposits, creating regional land management issues.

Northern Holocene Meander Belts

73a. The Northern Holocene Meander Belts ecoregion is a flat to nearly flat flood-plain containing the meander belts of the present and past courses of the Mississippi River. Point bars, natural levees, swales and abandoned channels marked by meander scars and oxbow lakes are

common and characteristic.

Ecoregion 73a tends to be slightly lower in elevation than adjacent ecoregions. Its abandoned channel network is more extensive than in the Southern Holocene Meander Belts (73k) of Louisiana. Ecoregion 73a is underlain by Holocene alluvium; it lacks the Pleistocene glacial outwash deposits of Ecoregion 73b. Soils on natural levees are relatively coarse-textured, well-drained and higher than those on levee back slopes and point bars; they grade to very heavy, poorly-drained clays in abandoned channels and swales. Overall, soils are not as sandy as the Northern Pleistocene Valley Trains (73b) and are finer and have more organic matter than the Arkansas/Ouachita River Holocene Meander Belts (73h).

Natural vegetation varies with site characteristics. Younger sandy soils have fewer oaks and more sugarberry, elm, ash, pecan, cottonwood and sycamore than Ecoregion 73d.

Widespread draining of wetlands and removal of bottomland forests for cropland has occurred. Soybeans, cotton, corn, sorghum, wheat and rice are the main crops. Catfish farms are increasingly common and contribute to the already large agricultural base.

Northern Pleistocene Valley Trains

73b. The Northern Pleistocene Valley Trains ecoregion is a flat to irregular alluvial plain composed of sandy to gravelly glacial outwash overlain by alluvium; sand sheets, widespread in the St. Francis Lowlands (73c), are absent. The Pleistocene outwash deposits of Ecoregion 73b are usually coarser and better drained than the alluvial deposits of Ecoregions 73a, 73d and 73f. They were transported to Arkansas by the Mississippi River and its tributaries and have been subsequently eroded, reduced in size and fragmented by laterally migrating channels or buried by thick sediments.

Ecoregion 73b has little local relief or stream incision. Elevations tend to be slightly higher than adjacent parts of Ecoregions 73a and 73d.

Cropland is extensive and has largely replaced the original forests; soybeans are the main crop and cotton is also produced. The few remaining forests are dominated by species typical of higher bottomlands such as Nuttall oak, willow oak, swamp chestnut oak, sugarberry and green ash. There are more lowland oaks in Ecoregion 73b than in Ecoregions 73a and 73d.

St. Francis Lowlands

73c. The St. Francis Lowlands ecoregion is flat to irregular and has many relict channels. Ecoregion 73c is mainly composed of late-Wisconsinan age glacial outwash deposits and, in contrast to Ecoregion 73b, is partly covered by undulating sand sheets.

“Sand blows” and “sunk lands” occur and have been attributed to the New Madrid earthquakes of 1811-12 (~ magnitude 8). Loess, which veneers older outwash deposits in Ecoregion 73g, is

absent. Topography, lithology and hydrology vary over short distances and natural vegetation varies with site characteristics.

Cropland is extensive and has largely replaced the original forests; soybeans, corn, and cotton are the most common crops but wheat, sorghum and rice are also produced.

Although the streams of the St. Francis Lowlands (73c) have been extensively channelized, water quality tends to be better than in the less channelized areas of Ecoregion 73g because of a lack of loess veneer in Ecoregion 73c.

Northern Backswamps

73d. The Northern Backswamps ecoregion is made up of low-lying overflow areas on floodplains and includes poorly-drained flats and swales. Water often collects in its marshes, swamps, oxbow lakes, ponds and low gradient streams.

Soils developed from clayey alluvium including overbank and slack-water deposits; they commonly have a high shrink-swell potential and are locally rich in organic material. Water levels are seasonally variable.

Native vegetation in the wettest areas is generally dominated by bald cypress–water tupelo forest; slightly higher and better drained sites have overcup oak–water hickory forest and the highest, best-drained areas support Nuttall oak forest. Today, bottomland forest, cropland, farmed wetlands, pastureland and catfish farms occur.

Backswamps are important areas for capturing excess nutrients from local waters and for storing water during heavy rain events.

Grand Prairie

73e. The Grand Prairie ecoregion is a broad, loess-covered terrace formerly dominated by tall grass prairie and now primarily used as cropland. It is typically almost level. However, incised perennial and intermittent streams occur and a narrow belt of low hills is found in the east.

Prior to the 19th century, flatter areas with slowly to very slowly permeable soils (often containing fragipans) supported Arkansas' largest prairie. They were generally bounded by open woodland or savanna. In all, about 400,000 acres of prairie grasses and forbs occurred in Ecoregion 73e and were a sharp contrast to the bottomland forests that once dominated other parts of the Mississippi Alluvial Plain (73). Low hills were covered by upland deciduous forest containing white oak, black oak and southern red oak. Drier ridges were dominated by post oak. Narrow floodplains had bottomland hardwood forests.

Cropland has now largely replaced the native vegetation. In the process, some prairie species have been extirpated from the ecoregion (e.g., greater prairie chicken); others have been sharply

reduced in population and restricted to a few prairie remnants.

Distinctively, rice is the main crop; soybeans, cotton, corn and wheat are also grown. Rice fields provide habitat and forage for large numbers and many species of waterfowl; duck and goose hunting occurs.



Western Lowlands Holocene Meander Belts

Western Lowlands Holocene Meander Belts

73f. The Western Lowlands Holocene Meander Belts ecoregion is a flat to nearly flat floodplain containing the meander belts of the present and past courses of the White, Black and Cache rivers. Its meander belts are narrower than the Northern Holocene Meander Belts (73a), but point bars, natural levees, swales and abandoned channels are common in both regions.

Soils on natural levees are relatively coarse-textured, well-drained and higher than those on levee back slopes and point bars; they grade to heavy, poorly-drained clays in abandoned channels and swales.

Natural vegetation varies with site characteristics. Today, Ecoregion 73f contains some of the most extensive remaining tracts of native bottomland hardwood forest in the Mississippi Alluvial Plain (73). Cropland also occurs.

Flood control levees are less developed and riverine processes are more natural and dynamic than in Ecoregion 73a. Backwater flooding in the White River occurs well upstream of its confluence with the higher Mississippi River; as a result, riparian and natural levee communities are less common and oak-dominated communities are more widespread than in Ecoregion 73a.

Wetlands in the Cache-lower White River systems have been designated as one of only nineteen “Wetlands of International Importance” in the United States by the Ramsar Convention on Wetlands.

Regulation of White River flow, in combination with the downcutting of the Mississippi River for navigation (and related wing levees and cutoffs), have altered flood regimes on the lower White River, thereby increasing stream bank instability and bottomland forest mortality in Ecoregion 73f.

Most streams and rivers in Ecoregion 73f are fed by the Ozark Highlands and Boston Mountains; sediment load is generally less than in the Mississippi River.

Western Lowlands Pleistocene Valley Trains

73g. The terraces of the Western Lowlands Pleistocene Valley Trains are largely composed of Pleistocene glacial outwash that was transported to Arkansas by the Mississippi River and deposited by braided streams. Physiography is widely muted by windblown silt deposits (loess), sand sheets, or sand dunes; loess and sand sheets are more widespread than in the Northern Pleistocene Valley Trains (73b) and St. Francis Lowlands (73c).

Many interdunal depressions called “sandponds” occur and are either in contact with the water table or have a perched aquifer. Elevations are higher than adjacent parts of the Northern Holocene Meander Belts (73a) and Western Lowlands Holocene Meander Belts (73f); consequently, uplands are rarely if ever flooded.

Native plant communities are different from more frequently inundated ecoregions; for example, post oak and loblolly pine are native to Ecoregion 73g but are absent from lower, overflow areas. Sandpond forest communities are generally dominated by overcup oak, water hickory, willow oak and pin oak; understory in a few sandponds may include pondberry (*Lindera melissifolia*), federally listed as endangered.

Today, cropland is extensive and the main crops are soybeans and cotton. Commercial crawfish, baitfish and catfish farms are common. The Western Lowlands Pleistocene Valley Trains (73g) ecoregion is a wintering ground for waterfowl. Duck hunting is widespread.

Arkansas/Ouachita River Holocene Meander Belts

73h. The Arkansas/Ouachita River Holocene Meander Belts ecoregion is a flat to nearly flat floodplain containing the meander belts of the present and past courses of the lower Arkansas and Ouachita rivers. Point bars, natural levees, swales and abandoned channels, marked by meander scars and oxbow lakes, are common and characteristic. Soils on natural levees are relatively coarse-textured, well-drained and higher than those on levee back slopes and point bars; they grade to heavy, poorly-drained clays in abandoned channels and swales. Overall, soils have less organic matter than in the Northern Holocene Meander Belts (73a).



Arkansas/Ouachita River Holocene Meander Belts

The modern, active Arkansas River meander belt comprises only a small portion of Ecoregion 73h. The rest of Ecoregion 73h contains small streams flowing in abandoned courses of the Arkansas River. These small streams are usually underfit relative to the older channels, higher than the adjacent Arkansas/Ouachita River Backswamps (73i) and have small watersheds. Bayou Bartholomew inhabits the longest section of abandoned channels. It flows against the edge of and receives drainage from the South Central Plains (35); habitat diversity is sufficient for Bayou

Bartholomew to be one of the most species-rich streams in North America. The pink mucket and the fat pocketbook mussels, both federally listed as endangered, have been collected from the Bayou.

Within an abandoned course, bald cypress and water tupelo often grow in the modern stream channel adjacent to a strip of wet bottomland hardwood forest dominated by overcup oak and water hickory. In the rest of Ecoregion 73h, cropland and pastureland are widespread; soybeans, rice and wheat are the main crops.

Arkansas/Ouachita River Backswamps

73i. The flats, swales and natural levees of the Arkansas/Ouachita River Backswamps ecoregion include the slackwater areas along the Arkansas and Ouachita rivers, where water often collects into marshes, swamps, oxbow lakes, ponds and sloughs. Ecoregion 73i, in contrast to the Northern Backswamps (73d), is widely veneered with natural levee deposits. Soils derived from these natural levee deposits are coarser and are not as poorly drained as the clayey soils of the Northern Backswamps (73d). As a result, willow oak and water oak are native instead of species adapted to wetter overflow conditions.

Drainage canals and ditches are common. This artificial drainage, together with the sandy veneer of natural levee deposits, help explain why Ecoregion 73i is more easily and widely farmed than the Northern Backswamps (73d). Rice, cotton and soybeans are important crops but forests and forested wetlands also occur.

Macon Ridge

73j. Macon Ridge is underlain almost entirely by Pleistocene glacial outwash deposits that were transported to Arkansas by the Mississippi River and deposited by braided streams. It is veneered by windblown silt deposits (i.e. loess) like Ecoregions 73e, 73g and 74a. Soils are influenced by loess and contrast with the alluvial soils of Ecoregions 73a and 73h.

Macon Ridge (73j) is a continuation of the Western Lowlands Pleistocene Valley Trains (73g) but is better drained and supports drier plant communities. Its eastern edge is 20 to 30 feet above the adjacent, lithologically and physiographically distinct, Northern Holocene Meander Belts (73a).

The western side of Macon Ridge (73j) is lower than the eastern side and is about the same elevation as the lithologically and physiographically distinct Arkansas/ Ouachita River Holocene Meander Belts (73h).

Native forest types range from those of better drained bottomlands dominated by willow oak, water oak and swamp chestnut oak to upland hardwood forests dominated by white oak, southern red oak and post oak. Prairies and loblolly pine- dominated areas may also have occurred on Macon Ridge (73j).

Today, Ecoregion 73j is a mosaic of pastureland, forest and cropland. Soybeans, cotton and oats are major crops (adapted from Woods and others 2004).

Mississippi Alluvial Plain Ecoregion: Species of Greatest Conservation Need (SGCN)

Species of greatest conservation need (SGCN) in the Mississippi Alluvial Plain are presented by taxa association (Table 3.27). A higher priority score indicates a greater need for actions to conserve the species. A ranked list of all SGCN associated with the ecoregion is presented in Table 3.28.

Table 3.27. SGCN by taxa association.

Taxa Association	Common Name	Scientific Name	Priority Score
Amphibian	Illinois Chorus Frog	<i>Pseudacris illinoensis</i>	43
	Crawfish Frog	<i>Lithobates areolatus</i>	23
	Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	19
	Mole Salamander	<i>Ambystoma talpoideum</i>	15
	Dwarf Salamander	<i>Eurycea quadridigitata</i>	15
	Bird-voiced Treefrog	<i>Hyla avivoca</i>	15
Bird	Piping Plover	<i>Charadrius melodus</i>	43
	Red-cockaded Woodpecker	<i>Picooides borealis</i>	43
	Henslow's Sparrow	<i>Ammodramus henslowii</i>	33
	Sprague's Pipit	<i>Anthus spragueii</i>	33
	King Rail	<i>Rallus elegans</i>	33
	Interior Least Tern	<i>Sterna antillarum athalassos</i>	31
	Buff-breasted Sandpiper	<i>Calidris subruficollis</i>	29
	Swallow-tailed Kite	<i>Elanoides forficatus forficatus</i>	29
	Rusty Blackbird	<i>Euphagus carolinus</i>	29
	Bewick's Wren	<i>Thryomanes bewickii</i>	29
	Ruddy Turnstone	<i>Arenaria interpres</i>	24
	Smith's Longspur	<i>Calcarius pictus</i>	24
	Common Nighthawk	<i>Chordeiles minor</i>	24
	Migrant Loggerhead Shrike	<i>Lanius ludovicianus migrans</i>	24
	Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	24
	American Woodcock	<i>Scolopax minor</i>	24
	Cerulean Warbler	<i>Setophaga cerulea</i>	24
	American Bittern	<i>Botaurus lentiginosus</i>	23
	Willow Flycatcher	<i>Empidonax traillii</i>	23
	Purple Gallinule	<i>Porphyrio martinicus</i>	23
	Le Conte's Sparrow	<i>Ammodramus leconteii</i>	21
	Sedge Wren	<i>Cistothorus platensis</i>	21
	Sharp-shinned Hawk	<i>Accipiter striatus</i>	19
	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	19
	American Black Duck	<i>Anas rubripes</i>	19

	Anhinga	<i>Anhinga anhinga</i>	19
	Eastern Whip-poor-will	<i>Antrastomus vociferus</i>	19
	Sanderling	<i>Calidris alba</i>	19
	Dunlin	<i>Calidris alpina</i>	19
	Stilt Sandpiper	<i>Calidris himantopus</i>	19
	Chimney Swift	<i>Chaetura pelagica</i>	19
	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	19
	Northern Bobwhite	<i>Colinus virginianus</i>	19
	Tricolored Heron	<i>Egretta tricolor</i>	19
	Common Gallinule	<i>Gallinula chloropus</i>	19
	Purple Finch	<i>Haemorhous purpureus</i>	19
	Wood Thrush	<i>Hylocichla mustelina</i>	19
	Least Bittern	<i>Ixobrychus exilis</i>	19
	Short-billed Dowitcher	<i>Limnodromus griseus</i>	19
	Swainson's Warbler	<i>Limnothlypis swainsonii</i>	19
	Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	19
	Black-bellied Plover	<i>Pluvialis squatarola</i>	19
	Bell's Vireo	<i>Vireo bellii</i>	19
	Trumpeter Swan	<i>Cygnus buccinator</i>	17
	American Kestrel	<i>Falco sparverius</i>	15
	American Golden-Plover	<i>Pluvialis dominica</i>	15
Fish	Alabama Shad	<i>Alosa alabamae</i>	52
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	48
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	43
	Crystal Darter	<i>Crystallaria asprella</i>	38
	Stargazing Darter	<i>Percina uranidea</i>	38
	Western Sand Darter	<i>Ammocrypta clara</i>	33
	Bluehead Shiner	<i>Pteronotropis hubbsi</i>	33
	Stonecat	<i>Noturus flavus</i>	29
	Lake Sturgeon	<i>Acipenser fulvescens</i>	27
	Alligator Gar	<i>Atractosteus spatula</i>	27
	Plains Minnow	<i>Hybognathus placitus</i>	27
	American Eel	<i>Anguilla rostrata</i>	24
	Paddlefish	<i>Polyodon spathula</i>	24
	Blue Sucker	<i>Cycleptus elongatus</i>	23
	Sabine Shiner	<i>Notropis sabiniae</i>	23
	Suckermouth Minnow	<i>Phenacobius mirabilis</i>	23
	Flathead Chub	<i>Platygobio gracilis</i>	23
	Central mudminnow	<i>Umbra limi</i>	23
	Brown Bullhead	<i>Ameiurus nebulosus</i>	19
	Goldeye	<i>Hiodon alosoides</i>	19
	Mooneye	<i>Hiodon tergisus</i>	19
	American Brook Lamprey	<i>Lethenteron appendix</i>	19
	Pealip Redhorse	<i>Moxostoma pisolabrum</i>	19
	Striped Mullet	<i>Mugil cephalus</i>	19
	Channel Shiner	<i>Notropis wickliffi</i>	19

	Gilt Darter	<i>Percina evides</i>	19
	Highfin carpsucker	<i>Carpionodes velifer</i>	17
	Goldstripe Darter	<i>Etheostoma parvipinne</i>	17
	Lake Chubsucker	<i>Erimyzon sucetta</i>	15
	Swamp Darter	<i>Etheostoma fusiforme</i>	15
	Shoal Chub	<i>Macrhybopsis hyostoma</i>	15
Insect	Dukes' Skipper	<i>Euphyes dukesi</i>	32
	Prairie Mole Cricket	<i>Gryllotalpa major</i>	32
	Lace-winged Roadside-Skipper	<i>Amblyscirtes aesculapius</i>	27
	Giant Stag Beetle	<i>Lucanus elephus</i>	25
	Woodland Tiger Beetle	<i>Cicindela unipunctata</i>	23
	Yehl Skipper	<i>Poanes yehl</i>	23
	Golden-banded Skipper	<i>Autochton cellus</i>	21
	tiger beetle	<i>Cicindela lepida</i>	21
	red milkweed beetle	<i>Tetraopes quinque maculatus</i>	21
	Six-banded Longhorn Beetle	<i>Dryobius sexnotatus</i>	19
	Dion Skipper	<i>Euphyes dion</i>	19
	Gray Comma	<i>Polygonia progne</i>	19
	Ant-like Tiger Beetle	<i>Cicindela cursitans</i>	17
	Beach-dune Tiger Beetle	<i>Cicindela hirticollis</i>	17
	Gorgone Checkerspot	<i>Chlosyne gorgone</i>	15
	Monarch	<i>Danaus plexippus</i>	15
	Broad-winged Skipper	<i>Poanes viator</i>	15
	Twelve-spotted Tiger Beetle	<i>Cicindela duodecimguttata</i>	13
	winter stonefly	<i>Allocaenia malverna</i>	11
	Bronze Copper	<i>Lycaena hyllus</i>	11
Mammal	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	63
	Indiana Bat	<i>Myotis sodalis</i>	62
	Little Brown Bat	<i>Myotis lucifugus</i>	33
	Rafinesque's Big-Eared Bat	<i>Corynorhinus rafinesquii</i>	29
	Southeastern Bat	<i>Myotis austroriparius</i>	24
	Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>	19
	Southern Bog Lemming	<i>Synaptomys cooperi</i>	19
	American Badger	<i>Taxidea taxus</i>	16
	Long-tailed Weasel	<i>Mustela frenata</i>	15
	Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	15
Mussel	Scaleshell	<i>Leptodea leptodon</i>	95
	Fat Pocketbook	<i>Potamilus capax</i>	76
	"Ozark" Fanshell	<i>Cyprogenia aberti</i>	52
	Purple Lilliput	<i>Toxolasma lividum</i>	52
	Pink Mucket	<i>Lampsilis abrupta</i>	46
	Salamander Mussel	<i>Simpsonaias ambigua</i>	34
	Rabbitsfoot	<i>Quadrula cylindrica</i>	33
	Ohio Pigtoe	<i>Pleurobema cordatum</i>	27
	Pink Heelsplitter	<i>Potamilus alatus</i>	23
	Ouachita Kidneyshell	<i>Ptychobranchnus occidentalis</i>	23

	Pondhorn	<i>Uniomerus tetralasmus</i>	23
	Elktoe	<i>Alasmidonta marginata</i>	19
	Hickorynut	<i>Obovaria olivaria</i>	19
	Gulf mapleleaf	<i>Quadrula nobilis</i>	19
	Lilliput	<i>Toxolasma parvum</i>	19
	Texas Lilliput	<i>Toxolasma texasiense</i>	19
	Tapered Pondhorn	<i>Uniomerus declivis</i>	19
	Round Pigtoe	<i>Pleurobema sintoxia</i>	17
	Rainbow	<i>Villosa iris</i>	17
	Little Spectaclecase group	<i>Villosa sp. Cf lienosa</i>	17
	Southern Mapleleaf	<i>Quadrula apiculata</i>	15
	Fawnsfoot	<i>Truncilla donaciformis</i>	15
Reptile	Midwest Worm Snake	<i>Carphophis amoenus</i>	19
	Western Chicken Turtle	<i>Deirochelys reticularia miaria</i>	19
	Graham's Crayfish Snake	<i>Regina grahamii</i>	19
	Ornate Box Turtle	<i>Terrapene ornata ornata</i>	19
	Gulf Swampsnake	<i>Liodytes rigida</i>	15
	Slender Glass Lizard	<i>Ophisaurus attenuatus</i>	15

Table 3.28. Species of greatest conservation need (SGCN) in the Mississippi Alluvial Plain ranked by priority score. A higher priority score indicates a greater need for actions to conserve the species. Of the 377 SGCN, 141 occur in this ecoregion.

Priority Score	Common Name	Scientific Name	Taxa Association
95	Scaleshell	<i>Leptodea leptodon</i>	Mussel
76	Fat Pocketbook	<i>Potamilus capax</i>	Mussel
63	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Mammal
62	Indiana Bat	<i>Myotis sodalis</i>	Mammal
52	Alabama Shad	<i>Alosa alabamae</i>	Fish
52	"Ozark" Fanshell	<i>Cyproaenia aberti</i>	Mussel
52	Purple Lilliput	<i>Toxolasma lividum</i>	Mussel
48	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Fish
46	Pink Mucket	<i>Lampsilis abrupta</i>	Mussel
43	Piping Plover	<i>Charadrius melodus</i>	Bird
43	Sicklefin Chub	<i>Macrhybopsis meeki</i>	Fish
43	Red-cockaded Woodpecker	<i>Picoides borealis</i>	Bird
43	Illinois Chorus Frog	<i>Pseudacris illinoensis</i>	Amphibian
38	Crystal Darter	<i>Crystallaria asprella</i>	Fish
38	Stargazing Darter	<i>Percina uranidea</i>	Fish
34	Salamander Mussel	<i>Simpsonaias ambigua</i>	Mussel
33	Western Sand Darter	<i>Ammocrypta clara</i>	Fish
33	Henslow's Sparrow	<i>Ammodramus henslowii</i>	Bird
33	Sprague's Pipit	<i>Anthus spragueii</i>	Bird
33	Little Brown Bat	<i>Myotis lucifugus</i>	Mammal
33	Bluehead Shiner	<i>Pteronotropis hubbsi</i>	Fish
33	Rabbitsfoot	<i>Quadrula cylindrica</i>	Mussel
33	King Rail	<i>Rallus elegans</i>	Bird
32	Dukes' Skipper	<i>Euphyes dukesi</i>	Insect
32	Prairie Mole Cricket	<i>Gryllotalpa major</i>	Insect
31	Interior Least Tern	<i>Sterna antillarum athalassos</i>	Bird
29	Buff-breasted Sandpiper	<i>Calidris subruficollis</i>	Bird
29	Rafinesque's Big-Eared Bat	<i>Corynomorhinus rafinesquii</i>	Mammal
29	Swallow-tailed Kite	<i>Elanoides forficatus forficatus</i>	Bird
29	Rusty Blackbird	<i>Euphagus carolinus</i>	Bird
29	Stonecat	<i>Noturus flavus</i>	Fish
29	Bewick's Wren	<i>Thryomanes bewickii</i>	Bird
27	Lake Sturgeon	<i>Acipenser fulvescens</i>	Fish
27	Lace-winged Roadside-Skipper	<i>Amblyscirtes aesculapius</i>	Insect
27	Alligator Gar	<i>Atractosteus spatula</i>	Fish
27	Plains Minnow	<i>Hvboanathus placitus</i>	Fish
27	Ohio Pigtoe	<i>Pleurobema cordatum</i>	Mussel
25	Giant Stag Beetle	<i>Lucanus elephus</i>	Insect
24	American Eel	<i>Anaquilla rostrata</i>	Fish
24	Ruddy Turnstone	<i>Arenaria interpres</i>	Bird
24	Smith's Longspur	<i>Calcarius pictus</i>	Bird
24	Common Nighthawk	<i>Chordeiles minor</i>	Bird
24	Migrant Loggerhead Shrike	<i>Lanius ludovicianus miarans</i>	Bird
24	Southeastern Bat	<i>Myotis austroriparius</i>	Mammal
24	Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	Bird
24	Paddlefish	<i>Polvodon spathula</i>	Fish
24	American Woodcock	<i>Scolopax minor</i>	Bird
24	Cerulean Warbler	<i>Setophaga cerulea</i>	Bird
23	American Bittern	<i>Botaurus lentiginosus</i>	Bird

23	Woodland Tiger Beetle	<i>Cicindela unipunctata</i>	Insect
23	Blue Sucker	<i>Cycleptus elongatus</i>	Fish
23	Willow Flycatcher	<i>Empidonax traillii</i>	Bird
23	Crawfish Frog	<i>Lithobates areolatus</i>	Amphibian
23	Sabine Shiner	<i>Notropis sabinae</i>	Fish
23	Suckermouth Minnow	<i>Phenacobius mirabilis</i>	Fish
23	Flathead Chub	<i>Platyqobio gracilis</i>	Fish
23	Yehl Skipper	<i>Poanes yehl</i>	Insect
23	Purple Gallinule	<i>Porphyrio martinicus</i>	Bird
23	Pink Heelsplitter	<i>Potamilus alatus</i>	Mussel
23	Ouachita Kidneyshell	<i>Ptychobranhus occidentalis</i>	Mussel
23	Central mudminnow	<i>Umbra limi</i>	Fish
23	Pondhorn	<i>Unio merus tetralasmus</i>	Mussel
21	Le Conte's Sparrow	<i>Ammodramus leconteii</i>	Bird
21	Golden-banded Skipper	<i>Autochton cellus</i>	Insect
21	tiger beetle	<i>Cicindela lepida</i>	Insect
21	Sedge Wren	<i>Cistothorus platensis</i>	Bird
21	red milkweed beetle	<i>Tetraopes quinquemaculatus</i>	Insect
19	Sharp-shinned Hawk	<i>Accipiter striatus</i>	Bird
19	Elktoe	<i>Alasmidonta marginata</i>	Mussel
19	Brown Bullhead	<i>Ameiurus nebulosus</i>	Fish
19	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Bird
19	American Black Duck	<i>Anas rubripes</i>	Bird
19	Anhinga	<i>Anhinga anhinga</i>	Bird
19	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Bird
19	Sanderling	<i>Calidris alba</i>	Bird
19	Dunlin	<i>Calidris alpina</i>	Bird
19	Stilt Sandpiper	<i>Calidris himantopus</i>	Bird
19	Midwest Worm Snake	<i>Carphophis amoenus</i>	Reptile
19	Chimney Swift	<i>Chaetura pelagica</i>	Bird
19	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Bird
19	Northern Bobwhite	<i>Colinus virginianus</i>	Bird
19	Western Chicken Turtle	<i>Deirochelys reticularia miaria</i>	Reptile
19	Six-banded Longhorn Beetle	<i>Dryobius sexnotatus</i>	Insect
19	Tricolored Heron	<i>Egretta tricolor</i>	Bird
19	Dion Skipper	<i>Euphyes dion</i>	Insect
19	Common Gallinule	<i>Gallinula chloropus</i>	Bird
19	Purple Finch	<i>Haemorhous purpureus</i>	Bird
19	Goldeye	<i>Hiodon alosoides</i>	Fish
19	Mooneye	<i>Hiodon tergisus</i>	Fish
19	Wood Thrush	<i>Hylocichla mustelina</i>	Bird
19	Least Bittern	<i>Ixobrychus exilis</i>	Bird
19	American Brook Lamprey	<i>Lethenteron appendix</i>	Fish
19	Short-billed Dowitcher	<i>Limnodromus ariseus</i>	Bird
19	Swainson's Warbler	<i>Limnothlypis swainsonii</i>	Bird
19	Pealip Redhorse	<i>Moxostoma pisolabrum</i>	Fish
19	Striped Mullet	<i>Muqil cephalus</i>	Fish
19	Channel Shiner	<i>Notropis wickliffi</i>	Fish
19	Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	Bird
19	Hickorynut	<i>Obovaria olivaria</i>	Mussel
19	Gilt Darter	<i>Percina evides</i>	Fish
19	Black-bellied Plover	<i>Pluvialis squatarola</i>	Bird

19	Gray Comma	<i>Polygonia progne</i>	Insect
19	Gulf mapleleaf	<i>Quadrula nobilis</i>	Mussel
19	Graham's Crayfish Snake	<i>Reaina arahamii</i>	Reptile
19	Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>	Mammal
19	Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	Amphibian
19	Southern Bog Lemming	<i>Synaptomys cooperi</i>	Mammal
19	Ornate Box Turtle	<i>Terrapene ornata ornata</i>	Reptile
19	Lilliput	<i>Toxolasma parvum</i>	Mussel
19	Texas Lilliput	<i>Toxolasma texasiense</i>	Mussel
19	Tapered Pondhorn	<i>Unio merus declivis</i>	Mussel
19	Bell's Vireo	<i>Vireo bellii</i>	Bird
17	Highfin carpsucker	<i>Carpionodes velifer</i>	Fish
17	Ant-like Tiger Beetle	<i>Cicindela cursitans</i>	Insect
17	Beach-dune Tiger Beetle	<i>Cicindela hirticollis</i>	Insect
17	Trumpeter Swan	<i>Cyanus buccinator</i>	Bird
17	Goldstripe Darter	<i>Etheostoma parvipinne</i>	Fish
17	Round Pigtoe	<i>Pleurobema sintoxia</i>	Mussel
17	Rainbow	<i>Villosa iris</i>	Mussel
17	Little Spectaclecase group	<i>Villosa sp. Cf lienosa</i>	Mussel
16	American Badger	<i>Taxidea taxus</i>	Mammal
15	Mole Salamander	<i>Ambystoma talpoideum</i>	Amphibian
15	Gorgone Checkerspot	<i>Chlosyne gorgone</i>	Insect
15	Monarch	<i>Danaus plexippus</i>	Insect
15	Lake Chubsucker	<i>Erimyzon sucetta</i>	Fish
15	Swamp Darter	<i>Etheostoma fusiforme</i>	Fish
15	Dwarf Salamander	<i>Eurycea quadridigitata</i>	Amphibian
15	American Kestrel	<i>Falco sparverius</i>	Bird
15	Bird-voiced Treefrog	<i>Hyla avivoca</i>	Amphibian
15	Gulf Swampsnake	<i>Liodytes riada</i>	Reptile
15	Shoal Chub	<i>Macrhybopsis hvostoma</i>	Fish
15	Long-tailed Weasel	<i>Mustela frenata</i>	Mammal
15	Slender Glass Lizard	<i>Ophisaurus attenuatus</i>	Reptile
15	American Golden-Plover	<i>Pluvialis dominica</i>	Bird
15	Broad-winged Skipper	<i>Poanes viator</i>	Insect
15	Southern Mapleleaf	<i>Quadrula apiculata</i>	Mussel
15	Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	Mammal
15	Fawnsfoot	<i>Truncilla donaciformis</i>	Mussel
13	Twelve-spotted Tiger Beetle	<i>Cicindela duodecimguttata</i>	Insect
11	winter stonefly	<i>Allocaenia malverna</i>	Insect
11	Bronze Copper	<i>Lycaena hylus</i>	Insect

Habitats that occur in the Mississippi Alluvial Plain

Of the 37 terrestrial habitats in Arkansas, 14 occur in the Mississippi Alluvial Plain ecoregion (Table 3.29). Of 18 ecobasins in Arkansas, three occur in the Mississippi Alluvial Plain ecoregion (Figure 3.20). These associations are described in the Section 4. Terrestrial Habitats and Section 5. Aquatic Habitats.

Table 3.29. Terrestrial Habitats in the Mississippi Alluvial Plain.

Habitat Name

Crop Land

Cultivated Forest

Herbaceous Wetland

Lower Mississippi Alluvial Plain Grand Prairie

Lower Mississippi Flatwoods Woodland and Forest

Lower Mississippi River Bottomland Depression

Lower Mississippi River Dune Woodland and Forest

Lower Mississippi River High Bottomland Forest

Lower Mississippi River Low Bottomland Forest

Lower Mississippi River Riparian Forest

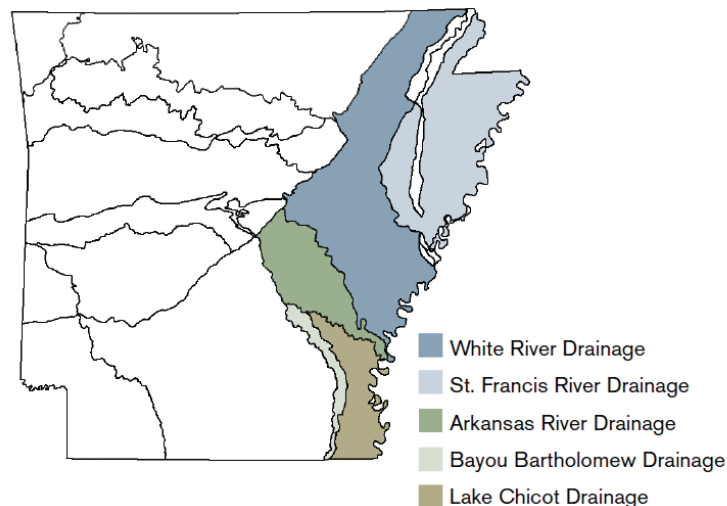
Mud Flats

Pasture Land

Ponds, Lakes, and Water Holes

Urban/Suburban

Figure 3.20. Ecobasin Distribution in the Mississippi Alluvial Plain.



Problems faced by Species of Greatest Conservation Need (SGCN)

Taxa association teams listed problems faced by SGCN individually in the Species Reports, pages 44-1113. A summary of the problems faced by SGCN in the Mississippi Alluvial Plain is presented below. Each problem has a score which is a sum of all Species Priority Scores associated with species for which this problem was assigned. A higher score implies a higher quantity of SGCN and/or more greatly imperiled species associated with problems listed here.

Table 3.30. Problems faced by SGCN in the Mississippi Alluvial Plain ecoregion.

Problem faced	Score
Agricultural practices	2149
Dam	1657
Forestry activities	1502
Grazing/Browsing	1025
Channel alteration	959
Resource extraction	909
Channel maintenance	861
Water diversion	684
Road construction	646
Urban development	631
Confined animal operations	465
Fire suppression	450
Conversion of riparian forest	434
Parasites/pathogens	286
Recreation	253
Exotic species	253
Commercial/industrial development	237
Predation	198
Commercial harvest	115
Non-point source pollution	105
unknown	86
Management of/for certain species	74
Municipal/Industrial point source	69

Crossbreeding	48
Interspecific competition	48
Incidental take	27
Excessive groundwater withdrawal	21

Conservation actions needed in the Mississippi Alluvial Plain

Descriptions of conservation actions linked to individual species on the list of SGCN are presented in the Species Reports, pages 45-1082. Below are categories of conservation actions recommended by the taxa association teams (Figure 3.21). An explanation of the categories follows in Table 3.31.

The score associated with the conservation action category is the sum of all priority scores associated with species for which a conservation action has been assigned, weighted by the importance of the conservation action category to the species. A higher score implies a higher quantity of SGCN and/or more greatly imperiled species would be affected by actions within this conservation action category.

These scores may be used as guides to directing the apportionment of funding toward conservation actions benefiting habitats and species of greatest conservation need.

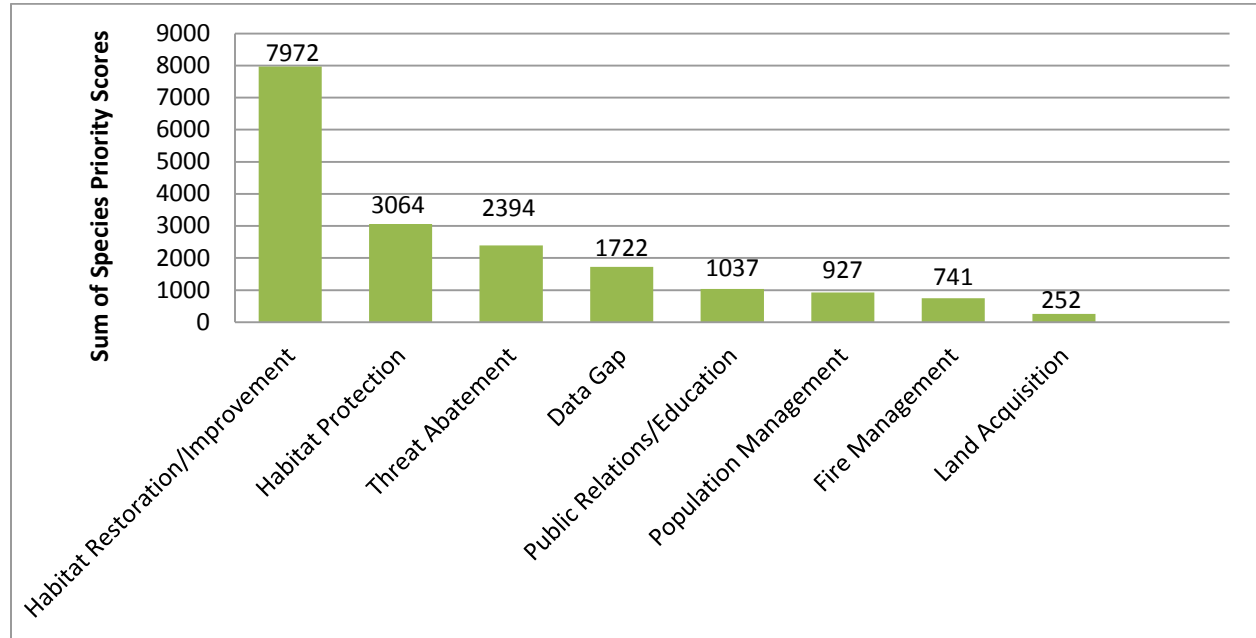


Figure 3.21. Conservation action categories recommended for the Mississippi Alluvial Plain.