

## Iatan/Weston Missouri River Corridor Conservation Strategies:

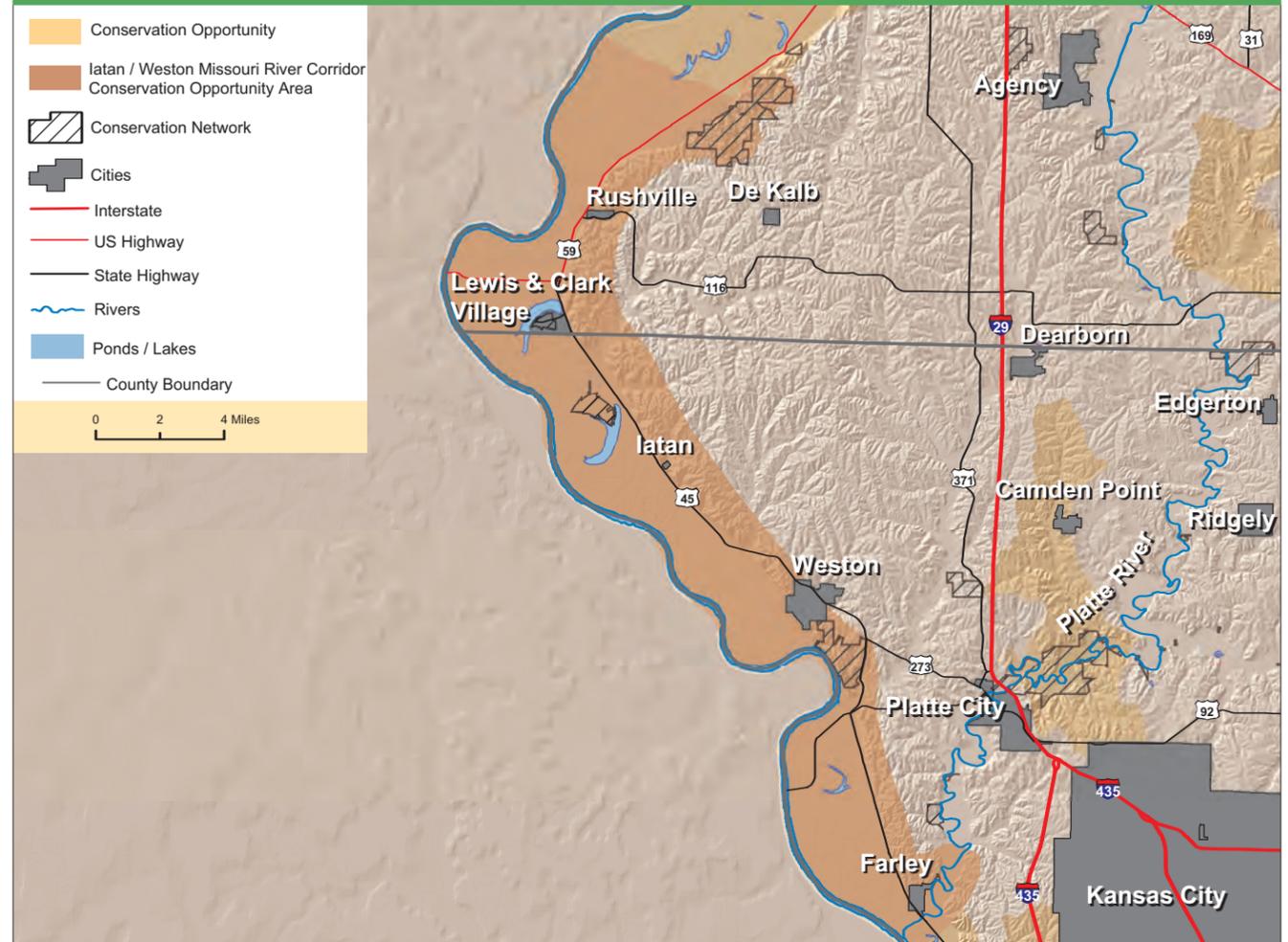
- Restore, to the extent possible, the natural hydrologic processes and connectivity of the Missouri River to its associated floodplain using levee setbacks, dike notching, chute restoration, etc.
- Restore in-stream habitats for native plants and animals.
- Reduce or eradicate invasive plants and animals.
- Conserve high quality marshes, wetlands, woodlands and forests for neotropical migratory songbirds and species of conservation concern.
- Restore natural communities associated with historic floodplain (wet prairies, marshes, riparian forests) and upland habitats on river bluffs (oak/hickory woodlands and forests).
- Build partnerships through outreach and education; increase private landowner participation in habitat improvements; build public support.



*Yellow marsh cress* is native to both North America and Eurasia. This wetland plant prefers flood-prone areas with a history of disturbance.

Jim Rathert, Missouri Department of Conservation

## Iatan/Weston Missouri River Corridor Conservation Opportunity Area



### Priority Research and Inventory Needs

- Inventory terrestrial and aquatic species of conservation concern and invasive species.
- Survey for Great Plains toads, Woodhouse's toads and plains spadefoots.
- Gather baseline data for pre-project habitat parameters (biotic and abiotic).
- Research best methods to control invasive species.
- Gather information on public opinion and attitudes.

### Conservation Partners

**Existing:** Audubon Missouri; Mid-America Regional Council; Farm Service Agency (FSA); Natural Resources Conservation Service (NRCS); U.S. Army Corps of Engineers (USACE); U.S. Fish and Wildlife Service (USFWS); Missouri Department of Natural Resources (DNR); Missouri Department of Conservation (MDC)

**Potential:** National Wild Turkey Federation (NWTf); Kansas City Power and Light (KCP&L); Burroughs Audubon Society; Midland Empire Audubon Society; Ducks Unlimited (DU); The Nature Conservancy – Missouri Chapter; Northland Trails and Greenways Initiative; Pheasants Forever (PF); Platte County Parks and Recreation; Kansas Department of Wildlife and Parks

### Funding Sources

**Existing:** MDC annual budget; DNR annual budget; USACE Recovery and Mitigation Funds; FSA Conservation Reserve Program; NRCS Wetland Reserve Program; Missouri Bird Conservation Initiative Grants

**Promising Future Sources:** NWTf Wild Turkey Super Fund; DU Conservation Projects Program; PF Wetland Restoration Projects; Missouri Conservation Heritage Foundation Grants; KCP&L Corporate Contributions Program; MDC State Wildlife Grants; MDC Wildlife Diversity Funds; USFWS Partners for Fish and Wildlife Program; Environmental Protection Agency Region 7 Funds

### Existing Conservation Network

Bluffwoods Conservation Area; Weston Bend State Park; Little Bean Marsh Conservation Area and Natural Area; Lewis and Clark State Park; Samuel City Access; KCP&L Iatan Marshes



Jim Rathert, Missouri Department of Conservation

*King Rails* are rare nesters in Missouri. This state endangered bird depends on permanent marshes. King rails prefer wetlands with abundant grasses, sedges, rushes and cattails. They prey primarily on aquatic beetles, semiaquatic beetles, fish, mollusks and crustaceans.

## Weston Bend State Park



*A scenic overlook at Weston Bend State Park offers one of the most expansive views of the Missouri River. Because the park is located along a wooded river corridor, it offers excellent bird watching, especially during spring and fall migrations.*

David Bedan

### Conservation Challenges

The Iatan/Weston Missouri River Corridor has been altered by channelization, drainage and conversion to agriculture. Dams on the upper Missouri River have radically altered the water flow conditions beneficial for some fish. Sizable patches of second-growth forest still remain on bluffs. Finding ways to promote both agriculture and native ecosystems will be key to future

conservation success. Other potential challenges include the public's limited knowledge about river restoration, lack of consistent funding, river level fluctuations, urbanization and increased transportation infrastructure, changing agency priorities, controlling invasive species, performance measures and coordination of multiple partners' needs.

To learn more about the Iatan/Weston Missouri River Corridor Conservation Opportunity Area, please contact:



Missouri Department of Conservation  
Wildlife Division  
P.O. Box 180  
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# Iatan/Weston Missouri River Corridor

## Conservation Opportunity Area



Central Dissected  
Till Plains



*Wooded river bluffs provide important habitat for migrating birds.*

David Bedan

On July 4, 1804, the Lewis and Clark expedition traveled a stretch of the Missouri River between Kansas City and St. Joseph. At that time, the river flowed in a braided channel with numerous islands, side chutes and backwaters. Nearly annual flooding created a complex and shifting mosaic of bottomland forest, marshes, wet prairies and sandbars. Large portions of the bottoms were open prairie and marsh complexes. This particular stretch contained small amounts of wet prairie and more extensive timberlands.

Extensive draining, bank stabilization and leveeing drastically altered the Missouri River floodplain. Today, most of the islands are gone and the rich bottomland soils are now productive cropland. While most wetlands have been drained, some remain. Many wetlands are in conservation ownership or wetland reserve programs.

The adjacent bluffs are primarily covered with woodlands and forest, with some land cleared for pasture.

The broad alluvial plain of the Iatan/Weston Missouri River Corridor formerly supported an abundance of marsh plants and animals. Some can still be found at small scattered marshes throughout the COA. Several toads, including the Great Plains toad and plains spadefoot, are restricted to the Missouri River floodplain.

Bluff woodlands and forests provide habitat for various animals. Weston Bend State Park is known for neotropical migrating birds during spring and fall migration, along with breeding species such as worm-eating warblers and scarlet tanagers. The Missouri River and its tributaries also support a variety of aquatic species of conservation concern, including brassy minnows, silver chub and sturgeon chub.

## Loess Hills Conservation Strategies

- Assess the quality of prairie, savanna, woodland and aquatic habitats.
- Conserve native plants and animals on key private land tracts.
- Develop management plans for each Loess Hills focus area.
- Conserve 100% of existing higher quality loess hill prairies (less than 50 acres total).
- Develop and conduct a long-term outreach and education program.



Tom Nagel, Missouri Department of Conservation

Missouri's loess hill prairies are at the southern edge of a chain of loess hills that continue into Iowa.

### Priority Research and Inventory Needs

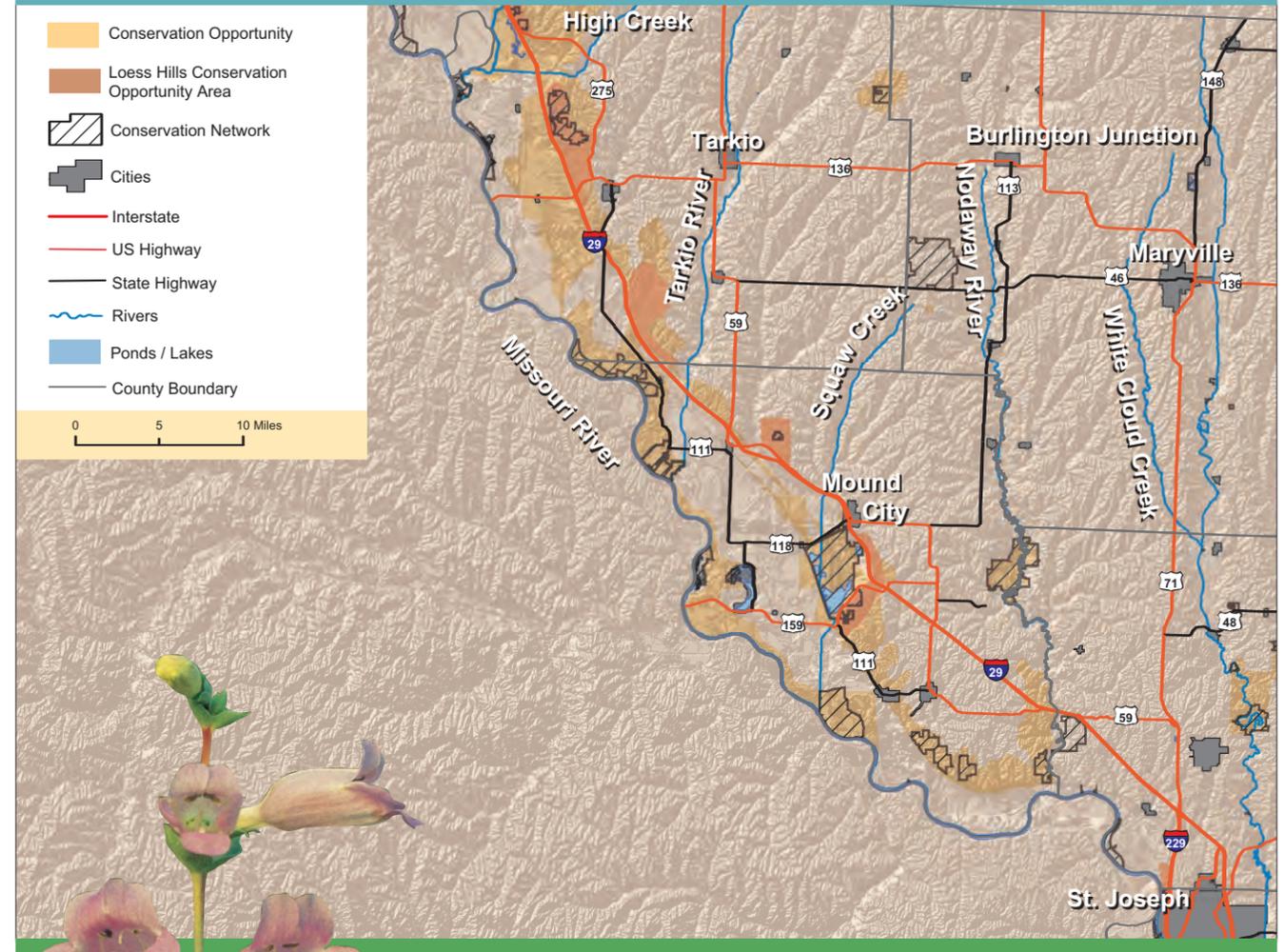
- Identify standards for measuring high quality loess hill prairies.
- Inventory dry loess/glacial till woodlands.
- Inventory Mill Creek.

### Conservation Partners

**Existing:** The Nature Conservancy – Missouri Chapter; Friends of Squaw Creek; Midland Empire Audubon; Missouri Western State College (including student chapter of the Wildlife Society); private landowners; U.S. Fish and Wildlife Service (USFWS); Missouri Department of Conservation (MDC)

**Potential:** Missouri Prairie Foundation; The Nature Conservancy – Iowa Chapter; Quail Unlimited; Pheasants Forever; Conservation Federation of Missouri; Missouri Native Plant Society; The Wildlife Society – Missouri Chapter; National Wild Turkey Federation (NWTF); Natural Resources Conservation Service (NRCS)

## Loess Hills Conservation Opportunity Area



Large beardtongue grows on loess hill prairies in Missouri. It is more commonly found on prairies of the Great Plains.

Jim Rathert, Missouri Department of Conservation

### Funding Sources

**Existing:** USFWS annual budget; USFWS Partners for Fish and Wildlife Program; MDC annual budget; NRCS Wildlife Habitat Incentive Program

**Promising Future Sources:** MDC State Wildlife Grants; MDC Wildlife Diversity Fund; NWTF Wild Turkey Super Fund

### Existing Conservation Network

Jamerson C. McCormack Conservation Area; (McCormack Loess Mound Natural Area); Brickyard Hill Conservation Area; (Brickyard Hills Loess Mound Natural Area); Star School Hill Prairie Conservation Area and Natural Area; Little Tarkio Prairie Conservation Area and Natural Area; Squaw Creek National Wildlife Refuge; (Squaw Creek Loess Hills Research Natural Area); Sunbridge Hills Conservation Area; Logan Memorial Wildlife Area; Camp Geiger Boy Scout Camp; Wyeth Hill Park

## Fire-adapted Woodlands



*Twisted bur oaks dominate a dry loess woodland at McCormack Loess Mound Natural Area. Like prairies, woodlands require periodic fires to maintain their natural openness.*

Tom Nagel, Missouri Department of Conservation

## Conservation Challenges

The Loess Hills Conservation Opportunity Area occurs in a region of the state that is over 75 percent cropland with scattered pastureland. Deep loess soils are highly erodible in the absence of good farming practices. Excessive erosion degrades the long-term productivity of the land and sends massive amounts of sediments into streams. Fewer than 50 acres of native dry loess hill prairie remain

in Missouri; less than 25 acres are in conservation ownership. This fragmented landscape is bordered by an interstate highway on the west and highly productive farmland to the east. Extremely steep slopes make management challenging, while increasing urbanization and a lack of funding add to the potential challenges.

To learn more about the Loess Hills Conservation Opportunity Area, please contact:



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# Loess Hills

## Conservation Opportunity Area



Central Dissected Till Plains



*Star School Hill Prairie Natural Area offers a view of Missouri's loess hill prairies.*

Jim Rathert, Missouri Department of Conservation

Steep-sloped loess hills occur only in the extreme northwestern corner of Missouri. These bluffs run in a narrow band along the Missouri River floodplain. Loess (pronounced "luss") is ancient, wind-blown soil. Thousands of years ago, melting glaciers deposited silty soil in river valleys. Wind blew the soil, depositing it as piles of deep loess on the adjacent uplands.

Today, these loess hills feature dry prairies on steep south- and west-facing bluffs. The dry loess hill prairies harbor plants that are common to the Great Plains region but are rare in Missouri. Exposure to prevailing winds, near-constant sunlight and rapidly draining loess soils creates harsh living conditions for animals and plants. Dominant grasses include hairy grama grass, little bluestem and sideoats grama. Wildflowers include

skeleton plant, dotted blazing star, large beard tongue and soapweed yucca. Most plants in the loess hill prairies have waxy or hairy leaf surfaces or very small leaves. These features are thought to help minimize water loss.

Forests and woodlands grow on adjacent north- and east-facing loess slopes. Historically, bur oak savanna occupied these protected slopes and ravines. Open woodlands provide nesting and migratory habitat for a variety of songbirds, including Baltimore orioles, great-crested flycatchers, eastern wood-pewees and red-headed woodpeckers. Woodlands provide nesting and migratory habitat for a variety of songbirds, including Baltimore orioles, great-crested flycatchers, eastern wood-pewees and red-headed woodpeckers.

## Lower Grand River Conservation Strategies

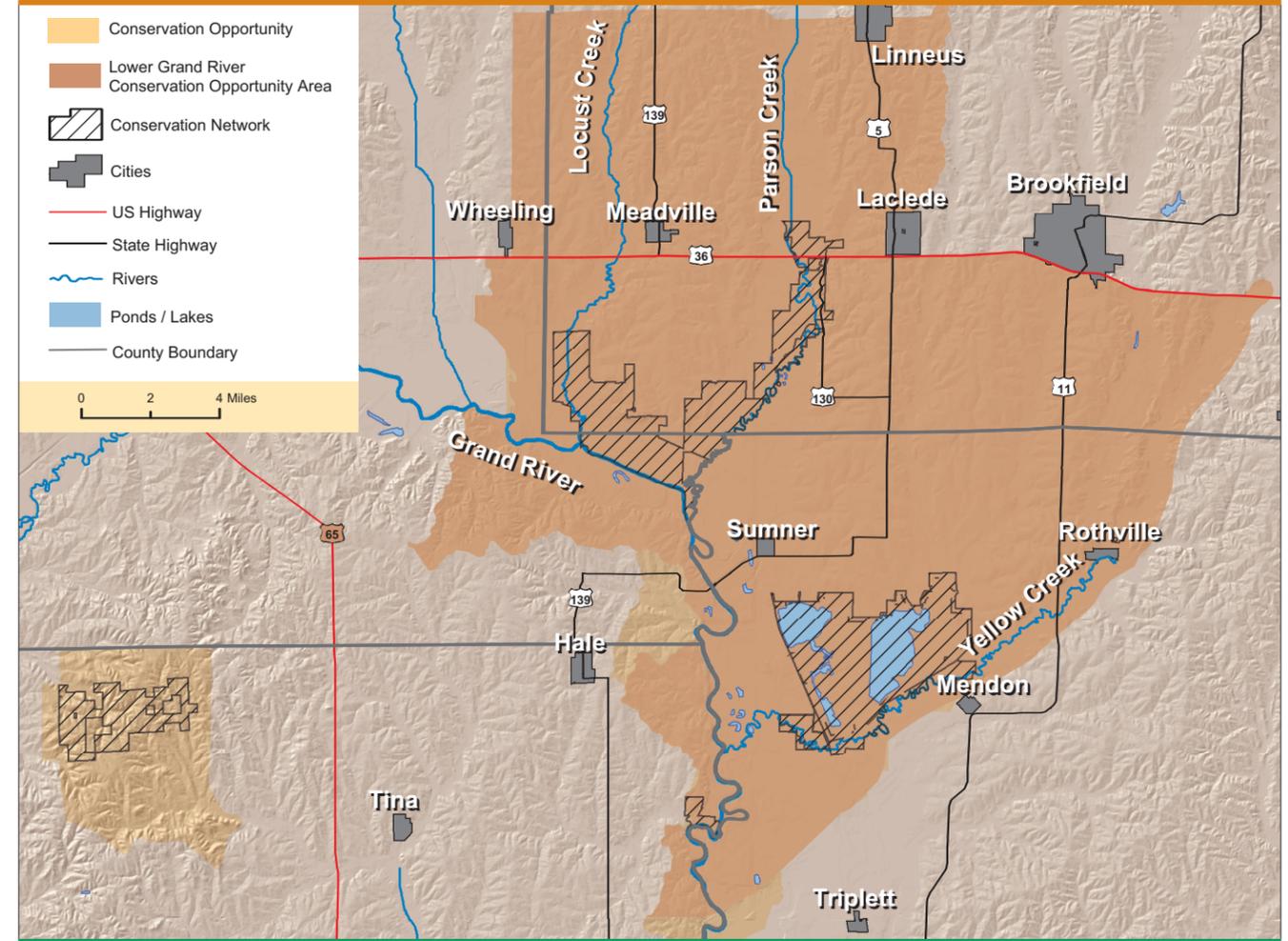
- Restore riverine habitat abundance and diversity for native plants and animals.
- Restore bottomland forests and woodlands to provide habitat for native plants and animals, with emphasis on species of conservation concern.
- Manage wetlands and wet prairie habitats to benefit resident and migratory wildlife.
- Expand wet prairie habitat to allow the connection of Eastern massasauga populations at Pershing State Park and Swan Lake National Wildlife Refuge.
- Control populations of problematic exotic and invasive plants (e.g. Johnson grass, reed canary grass, garlic mustard).
- Educate landowners about the importance of conservation practices.



Jim Rathert, Missouri Department of Conservation

*Snow geese are common migrants through Missouri. Their populations have increased to historically high levels.*

## Lower Grand River Conservation Opportunity Area



### Priority Research and Inventory Needs

- Research methods to establish diverse wet prairies
- Evaluate the relationship between current floodplain habitats and changes in historic flood timing and duration.
- Evaluate ways to keep Locust Creek from rerouting into Higgins Ditch.
- Determine the impacts of wetlands on water quality.
- Develop techniques to increase sinuosity in the channelized portion of Parson's Creek on Fountain Grove Conservation Area.

### Conservation Partners

**Existing:** Ducks Unlimited (DU); Grand River Audubon Society; National Wild Turkey Federation (NWTF); Missouri Conservation Heritage Foundation (MCHF); Natural Resource Conservation Service (NRCS); U.S. Fish and Wildlife Service (USFWS); Missouri Department of Natural Resources (DNR); Missouri Department of Conservation (MDC)

**Potential:** The Nature Conservancy – Missouri Chapter; Audubon Missouri; Missouri Brookfield Stream Team; private landowners

### Funding Sources

**Existing:** USFWS annual budget; DNR annual budget; MDC annual budget; Farm Service Agency Conservation Reserve Program; NRCS Wetland Reserve Program; NRCS Wildlife Habitat Incentive Program; NRCS Environmental Quality Incentives Program; SWCD State Cost Share Funds; EPA Region 7 Funds; DU Conservation Projects Program; QU Quail Habitat Incentive Funds; MCHF Stream Stewardship Trust Fund; Missouri Bird Conservation Initiative Grant; NWTF Wild Turkey Super Fund

**Promising Future Sources:** MDC State Wildlife Grants; MDC Wildlife Diversity Funds; National Fish and Wildlife Foundation Grants; USFWS North American Wetlands Conservation Act Grants; NRCS Conservation Security Program; Missouri Corn Growers Association Environmental Resource Coalition Research Funds

### Existing Conservation Network

Swan Lake National Wildlife Refuge (Yellow Creek Research Natural Area); Pershing State Park (Locust Creek Natural Area, Cordgrass Bottoms Natural Area, Covered Bridge State Historic Site); Fountain Grove Conservation Area; Yellow Creek Conservation Area (Yellow Creek Natural Area); Little Compton Lake Conservation Area; Floyd Memorial Conservation Area; Sumner Access

*A male common moorhen balances on a floating log. Wetlands in the Lower Grand River COA attract a variety of unusual birds on migration routes.*



Jim Rathert, Missouri Department of Conservation

## Locust Creek Natural Area



*Buttonbush* dominates the borders of this cutoff slough along Locust Creek in Pershing State Park. Locust Creek Natural Area represents one of the last examples of an active meandering river system in northern Missouri.

Tom Nagel, Missouri Department of Conservation

### Conservation Challenges

Upstream soil erosion adds extra silt to bottomland forests and wet prairies, often killing canopy trees, reducing plant diversity and favoring garlic mustard invasion. In Locust Creek Natural Area (part of Pershing State Park) silt has covered much of the state park to depths exceeding 4 feet, killing canopy trees and destroying the cordgrass wet prairie for which Cordgrass Bottoms Natural Area is recognized.

Soil and water conservation efforts and the creation of forested buffer strips along upstream river channels are needed to reduce soil erosion and sedimentation. Additional challenges to conservation success include Locust Creek flows rerouting into Higgins Ditch, water pollution, invasive species and gaining landowner support.

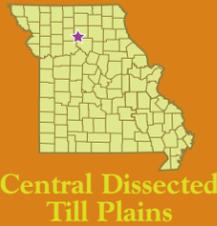
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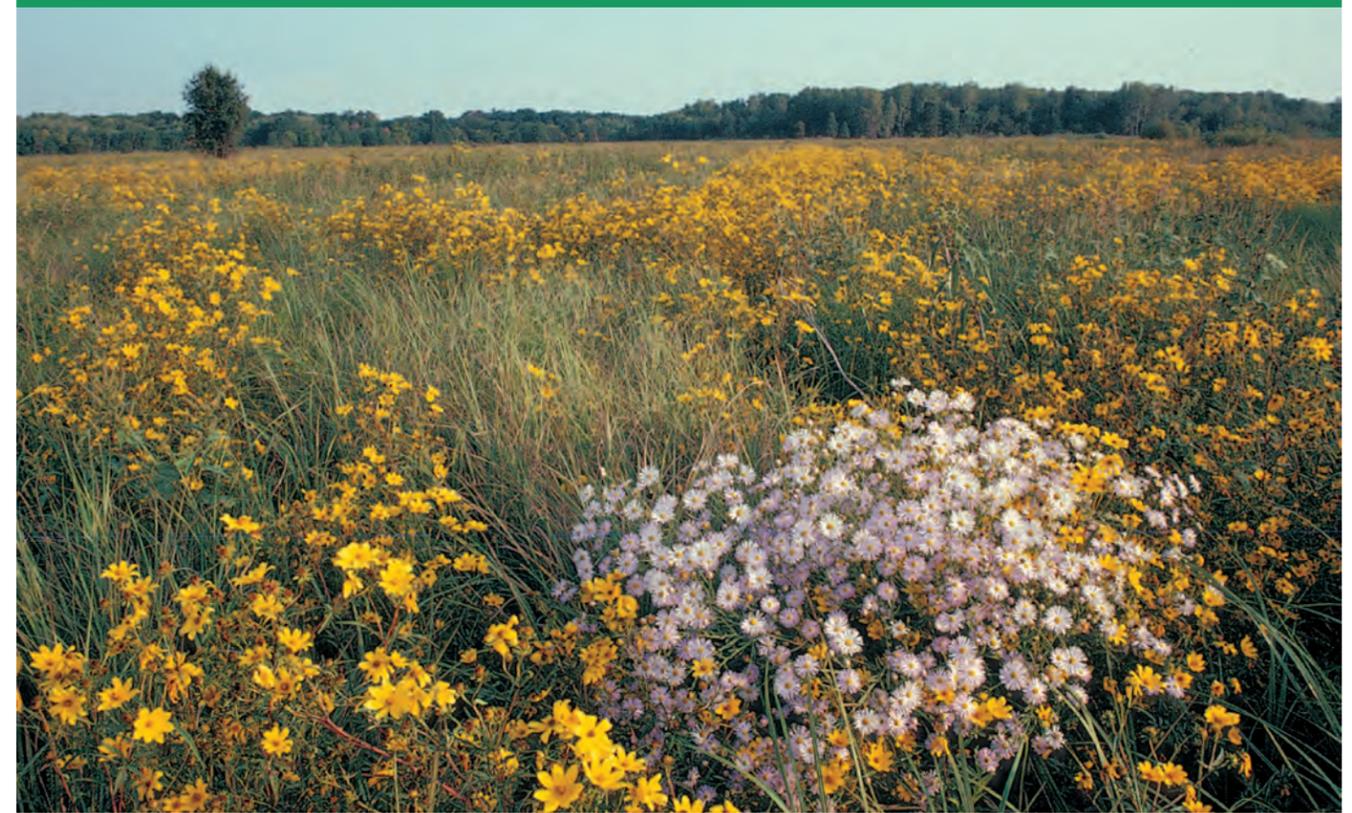
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## Lower Grand River Conservation Opportunity Area



Central Dissected  
Till Plains



*False aster* and *tickseed sunflowers* brighten this wet bottomland prairie at Pershing State Park.

Ken McCarty, Missouri Department of Natural Resources

The Grand River is a large prairie river that once meandered across a broad, open floodplain. The floodplains of Grand River and its major tributaries were historically mosaics of marsh, wet prairie and bottomland forest. Upland prairies occurred on the surrounding plains.

Swan Lake National Wildlife Refuge, Pershing State Park, Fountain Grove Conservation Area and Yellow Creek Conservation Area are core managed areas central to the Lower Grand River Conservation Opportunity Area (COA). Each managed area is known for restored wetlands and associated plants, insects, amphibians, reptiles, birds and migrating waterfowl. Streams like Yellow Creek, Locust Creek and Parson's Creek are less channelized within the COA than upstream.

Wet bottomland prairies occur on floodplains of large prairie-region rivers. Depending on frequency of flooding and soil drainage, plant communities range from extensive stands of cordgrass with scattered wildflowers to patchy sedge meadows. Animals associated with wet prairies include the eastern tiger salamander, midland brown snake, eastern massasauga, American bittern, mallard, northern harrier and sedge wren.

Bottomland forests and woodlands occur on old oxbows and low ridges along prairie rivers and streams. Shallow seasonal flooding can last for more than a month. The canopy is dominated by bur oak. Fire keeps bottomland woodlands more open. Forested and wooded bottomlands along the Grand River provide habitat for great egrets, green herons, wood ducks and bald eagles.

## Missouri/Mississippi River Confluence Conservation Strategies

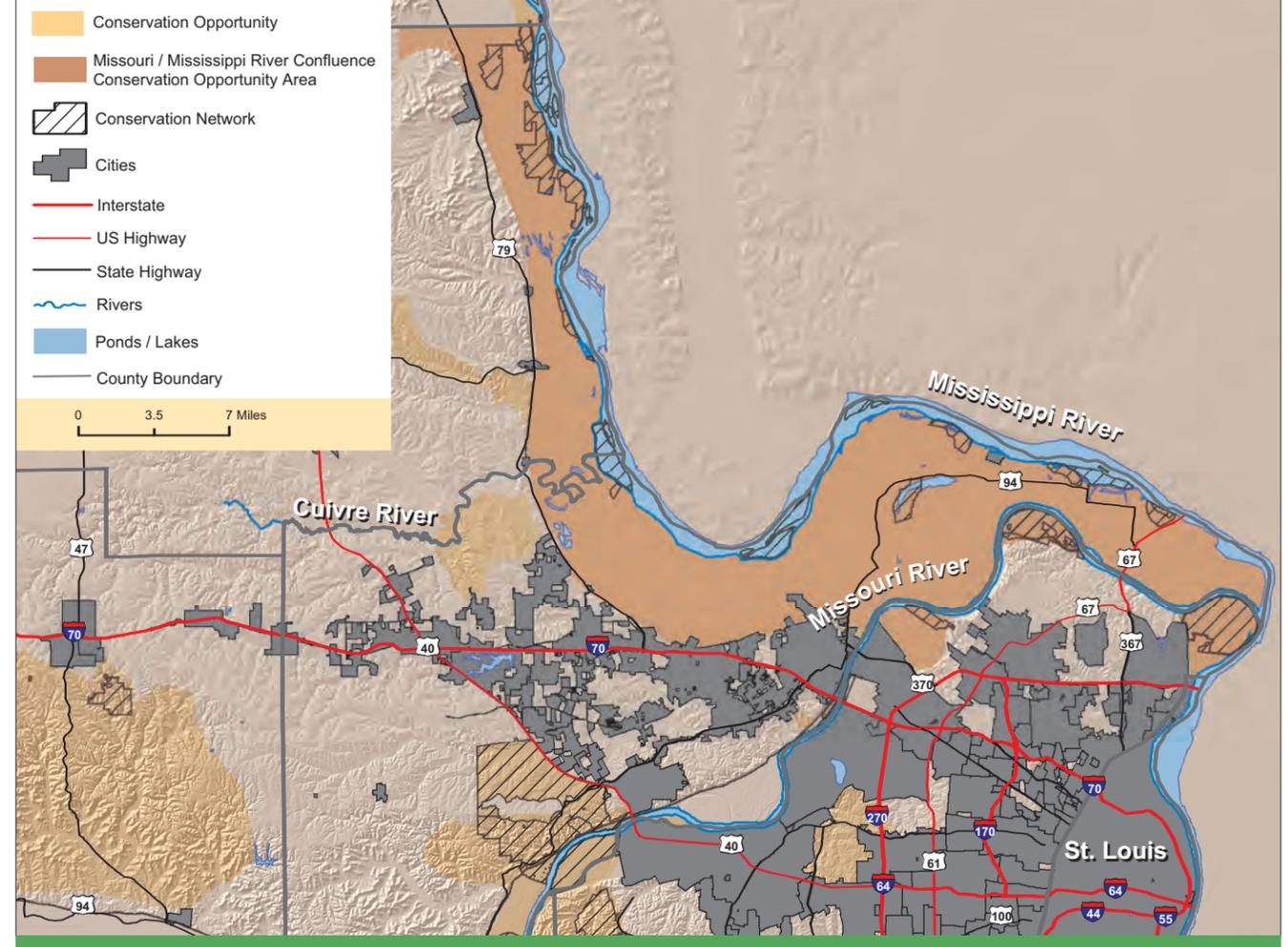
- Work with willing private landowners and public agencies to restore and conserve natural communities.
- Improve side channel and backwater habitats for aquatic animals.
- Restore areas that are most critical for conserving existing habitats; implement Best Management Practices to reduce runoff and sedimentation problems.
- Encourage local communities to maintain adequate green space to absorb flood waters on Missouri and Mississippi River floodplains.
- Work with local communities to inform and educate; use conservation as an economic stimulus by promoting the area's natural and cultural heritage.
- Improve the quality of life of the citizenry who live, work and recreate in the Missouri/Mississippi River Confluence through educational workshops, festivals, field days, Stream Team participation and expanding recreational opportunities.
- Control invasive exotic plants and animals.



A growing network of natural areas, outdoor recreation and education facilities, and historic sites radiate from the confluence of the Missouri and Mississippi rivers.

Jim Rathert, Missouri Department of Conservation

## Missouri/Mississippi River Confluence Conservation Opportunity Area



### Priority Research and Inventory Needs

- Gather data on aquatic plants and animals; identify gaps in recent survey work.
- Gather data on wetland birds; look at Breeding Bird Survey data, waterfowl counts and Christmas Bird Count data.
- Build appropriate data layers (e.g., vegetative cover, road crossings, NPDES permits, pesticide use permits).
- Inventory non-native invasive species.
- Conduct topographical survey of levees.

### Conservation Partners

**Existing:** The Nature Conservancy – Missouri Chapter (TNC); Ducks Unlimited (DU); Great Rivers Habitat Alliance; Confluence Greenway; Trust for Public Land; Pheasants Forever (PF); American Land Conservancy; Great Rivers Greenway District; Missouri Waterfowl Association; St. Louis Audubon Society; National Wild Turkey Federation (NWTf); Living Lands and Waters; Upper Mississippi River Conservation Committee; Mississippi Interstate Cooperative Resource Association; Stream Teams; River Resource Action Team; Missouri Botanical Garden; Missouri River Relief; Private Landowners; University of Missouri – Columbia; Southern Illinois University; St. Louis University; St. Charles County Parks and Recreation Department; City of St. Charles Parks & Recreation; St. Louis County Parks & Recreation; King's Lake Drainage District; Lincoln, St. Charles and St. Louis County Soil and Water Conservation Districts (SWCD); Farm Service Agency (FSA); Natural Resources Conservation Service (NRCS); Missouri Department of Natural Resources (DNR); Illinois Department of Natural Resources; Missouri Department of Conservation (MDC); U.S. Fish and Wildlife Service (USFWS); U.S. Department of Agriculture; U.S. Army Corps of Engineers (USACE); U.S. Geological Survey

**Potential:** Audubon Missouri; American Fisheries Society; Upper Mississippi Tallgrass Prairie Joint Venture; Open Space Council; Middle Mississippi River Partnership; Webster Groves Nature Study Society; National Park Service

### Funding Sources

**Existing:** MDC annual budget; DNR annual budget; TNC annual budget; USACE Section 1135 Program; USACE Section 206 Program; USACE Missouri River Mitigation Program; FSA Conservation Reserve Program; NRCS Wetland Reserve Program; NRCS Environmental Quality Incentives Program; NRCS Farm and Ranch Land Protection Program; NRCS Grassland Reserve Program; NRCS Wildlife Habitat Incentive Program; USFWS Partners for Fish and Wildlife Program; USFWS North American Wetlands Conservation Act Grant; DU Conservation Easement Program; PF Wetland Restoration Project; Great Rivers Habitat Alliance restoration annual budget; SWCD State Cost Share Funds; Great Rivers Greenway annual budget; NWTf Wild Turkey Super Fund; The Trust for Public Land annual budget

**Promising Future Sources:** USFWS Non-Game Bird Funds; USFWS Migratory Bird Conservation Fund; Missouri Bird Conservation Initiative Grants; MDC Forest Legacy Program; MDC State Wildlife Grants; MDC Wildlife Diversity Funds; National Fish and Wildlife Foundation Grants; DNR Land and Water Conservation Fund

### Existing Conservation Network

Upper Mississippi Conservation Area (Westport Island Natural Area, Norton Wood Access); B.K. Leach Conservation Area; Columbia Bottom Conservation Area; Pelican Island Natural Area (Pelican Island Access); Cuivre Island Conservation Area; Marais Temps Clair Conservation Area; St. Stanislaus County Park; Prairie Slough Conservation Area (Prairie Slough Natural Area); Sandy Island Conservation Area; Upper Mississippi River Waterfowl Area; Edward "Ted" and Pat Jones – Confluence Point State Park; Jefferson National Expansion Monument; Sandy Island Natural History Area; Riverlands Environmental Demonstration Area; Dresser Island Access; Twin River Access; Private Duck Clubs



Yellow-crowned night-herons are rare summer residents in Missouri. They nest near streams, marshes and wooded wetlands.

Jim Rathert, Missouri Department of Conservation

## Flood Protection



*The Confluence is important for floodwater storage. During the flood of 1993, it is estimated that the Confluence held 260 billion gallons of water. Without this storage capacity, communities downstream (including the city of St. Louis) would have been far more affected by flooding.*

Missouri Department of Conservation

## Conservation Challenges

Today, large river systems and their floodplains serve many human interests including agriculture, water supply, commerce, urban expansion, recreation and housing. The Missouri and Mississippi Rivers have been altered by levees, dikes, locks and dams. They are channelized and have few islands, but many sandbars. The health and diversity of native aquatic

and terrestrial plants and animals have been negatively affected. Potential obstacles to conservation success include urban sprawl, public attitude, finding willing private landowners to implement restoration actions, limited funding and staff, highly degraded habitats and lack of education about floodplain issues.

To learn more about the Missouri/Mississippi River Confluence COA, please contact:



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# Missouri/Mississippi River Confluence

## Conservation Opportunity Area



Central Dissected  
Till Plains



*For centuries, people have been drawn to the Confluence and its abundant resources.*

Jim Rathert, Missouri Department of Conservation

In 1721, French explorer Father Pierre Francois de Charlevoix wrote of the confluence of the Mississippi and Missouri rivers, "I believe this is the finest confluence in the world. The two rivers are much the same breadth, each about half a league; but the Missouri is by far the most rapid, and seems to enter the Mississippi like a conqueror, through which it carries its white waters to the opposite shore without mixing them...."

The Missouri/Mississippi River Confluence Conservation Opportunity Area (COA) is the present day floodplain of the Missouri and Mississippi Rivers in Lincoln and St. Charles Counties. Both rivers are major migratory pathways for birds. The Mississippi River corridor is the longest and most traversed migratory route for birds in the northern hemisphere.

During peak migration, ducks, geese, shorebirds, large wading birds, raptors, warblers and other songbirds utilize habitats along the Confluence and the river corridor to rest, refuel and nest.

Large wetland complexes still occur along the Mississippi River and many local citizens are working to conserve the landscape's natural resources. Focusing on the wildlife restoration opportunities following the 1993 and 1995 flood events, citizens and conservation agencies are finding that floodplain landscapes can be restored. Many flood damaged properties have been bought by conservation agencies in the past decade. Restoration projects are showing promise in restoring backwater habitat and other wetland habitats in the Missouri/Mississippi River Confluence COA.

## Mystic Plains Conservation Strategies:

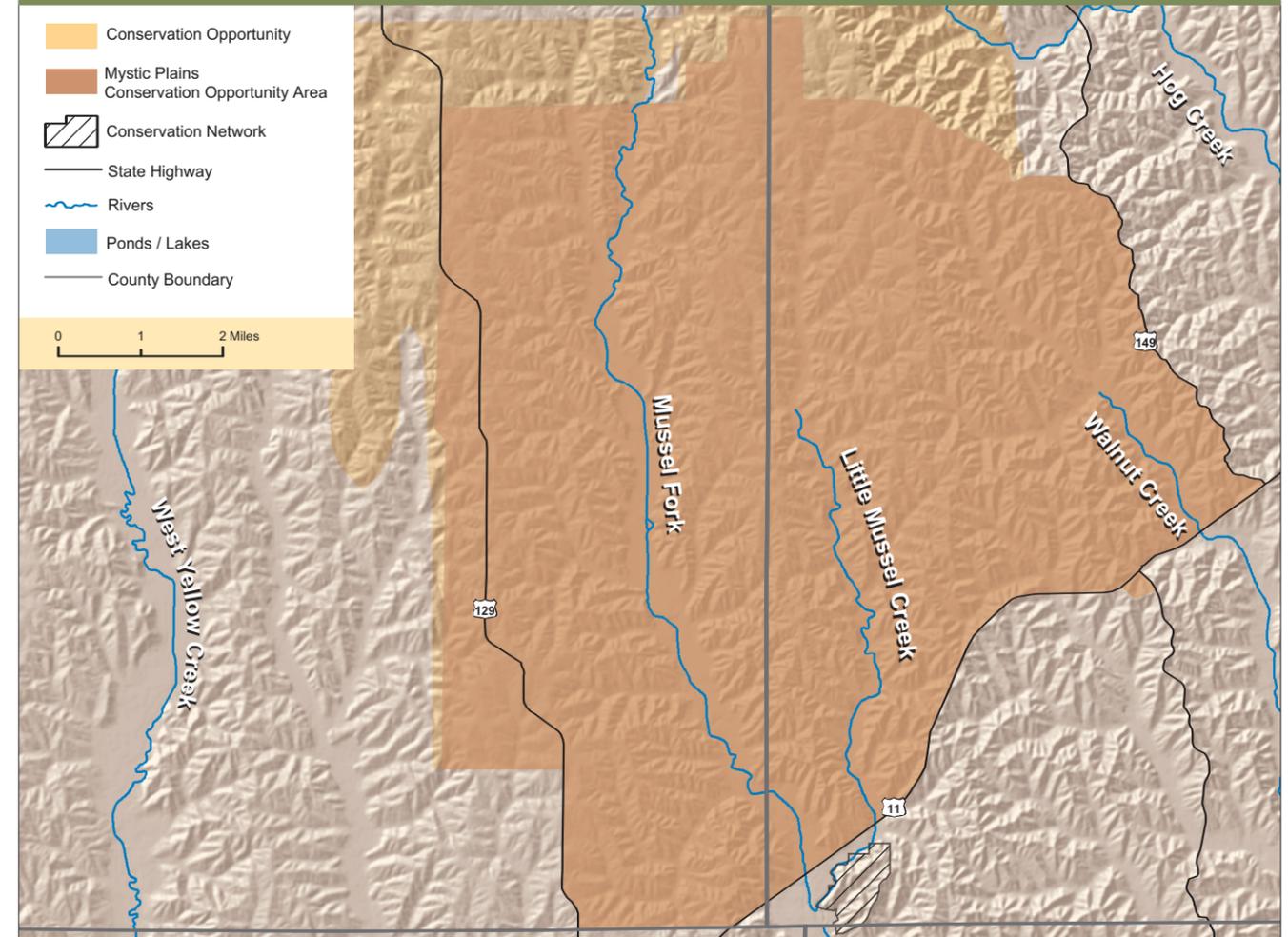
- Protect a sizable core area for prairie-chicken management through public ownership or conservation easements.
- Increase plant diversity and structural diversity of grasslands, emphasizing native plants.
- Expand incentive programs for prairie restoration.
- Develop burn assistance teams to assist private landowners.
- Maintain or increase prairie-chicken populations.
- Expand public interest in native grasslands and prairie wildlife.
- Control undesirable woody plants in uplands.
- Restore prairie-chicken nesting cover within two miles of prairie-chicken leks.



Ken McCarty, Missouri Department of Natural Resources

*Rattlesnake master* flowers among the 200 year-old white oaks on this restored savanna landscape at nearby Chariton River Hills Natural Area in Long Branch State Park. Open woodlands and savannas once occurred along streams in the Mystic Plains COA.

## Mystic Plains Conservation Opportunity Area



## Priority Research and Inventory Needs

- Inventory native prairie remnants.
- Conduct a grazing trial using patch-burn grazing in cool season pastures.
- Survey landowners to determine interest in managing land for grassland wildlife.
- Determine best methods to promote healthy prairie-chicken habitats.

## Conservation Partners

**Existing:** Missouri Prairie Foundation; National Wild Turkey Federation (NWTF); Natural Resources Conservation Service (NRCS); Missouri Department of Conservation (MDC)

**Potential:** Audubon Missouri; Grasslands Coalition; Missouri Conservation Heritage Foundation (MCHF); U.S. Fish and Wildlife Service (USFWS)



Jim Rathert, Missouri Department of Conservation

**Greater prairie-chickens** once ranged throughout native prairies in central North America. In Missouri, they historically occupied large grasslands bordered by oak savannas and woodlands. Greater prairie-chickens forage on the ground for leaves, grasses, seeds and insects.

## Funding Sources

**Existing:** MDC Private Lands Cost Share Program; Farm Service Agency Conservation Reserve Program; NRCS Wildlife Habitat Incentive Program; NRCS Environmental Quality Incentives Program; NWTF Wild Turkey Super Fund

**Promising Future Sources:** USFWS Partners for Fish and Wildlife Program; Missouri Bird Conservation Initiative Grants; MDC State Wildlife Grants; MDC Wildlife Diversity Funds; MCHF Stream Stewardship Trust Fund; MCHF Grants

## Existing Conservation Network

Private land initiative

## Grazing Grasslands



*Bison and elk no longer roam freely in Missouri's prairies, but cattle grazing may play a similar role. Landowners can help mimic the effects of bison and elk by rotating cattle to different fields and allowing other grasslands to regrow. Overgrazing prevents the success of many native prairie plants and animals.*

Cliff White, Missouri Department of Conservation

## Conservation Challenges

Very little natural vegetation remains in the Mystic Plains Conservation Opportunity Area. Most remaining grasslands are exotic, cool-season grasses like fescue and brome. Prescribed burns should be conducted to complement a diversity of native species, reduce exotics and woody invasion and enhance populations of species of conservation

concern. Potential obstacles to conservation success include gaining landowner acceptance, limited funding and staff time, lack of cost-share program continuity, few knowledgeable contractors, difficulty of applying prescribed burns on private lands and the current low priority for savanna management.

To learn more about the Mystic Plains Conservation Opportunity Area, please contact:



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# Mystic Plains

## Conservation Opportunity Area



Central Dissected  
Till Plains



*Many prairie animals persist in large, wildlife-friendly grasslands.*

Cliff White, Missouri Department of Conservation

The Mystic Plains Conservation Opportunity Area (COA) is a private land initiative in southeast Sullivan County and southwest Adair County. Identified as a Grasslands Coalition Focus Area in 1998, the Mystic Plains features large grassland expanses.

As recent as the 1940s, the Mystic Plains had one of the largest remaining prairie-chicken populations in the state. By the 1960s, however, prairie-chickens had dramatically declined in most of Missouri. Recent reintroductions of the greater prairie-chicken into grassland landscapes have shown that it can be successful. In 1998, the Mystic Plains Focus Area had more than 40 male prairie-chickens. Sullivan County has one of the highest numbers of acres enrolled in the

Conservation Reserve Program (CRP). Many ranchers remember prairie-chickens and are interested in the recovery of this prairie bird.

Many prairie animals can benefit from wildlife-friendly grasslands, including regal fritillary butterflies, western chorus frogs, northern harriers, upland sandpipers and bobolinks. Over one-third of Missouri was once native tallgrass prairie. Today, less than one percent remains. Landowners can help improve habitat for native prairie animals by replanting disturbed areas with a mixture of native warm-season grasses and wildflowers, modifying hay field management, using prescribed fires to benefit native plants and minimizing use of herbicides, insecticides and pesticides during the prairie-chicken breeding season.