

# 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.



## Loess Hills Conservation Strategies

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



Tim 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.

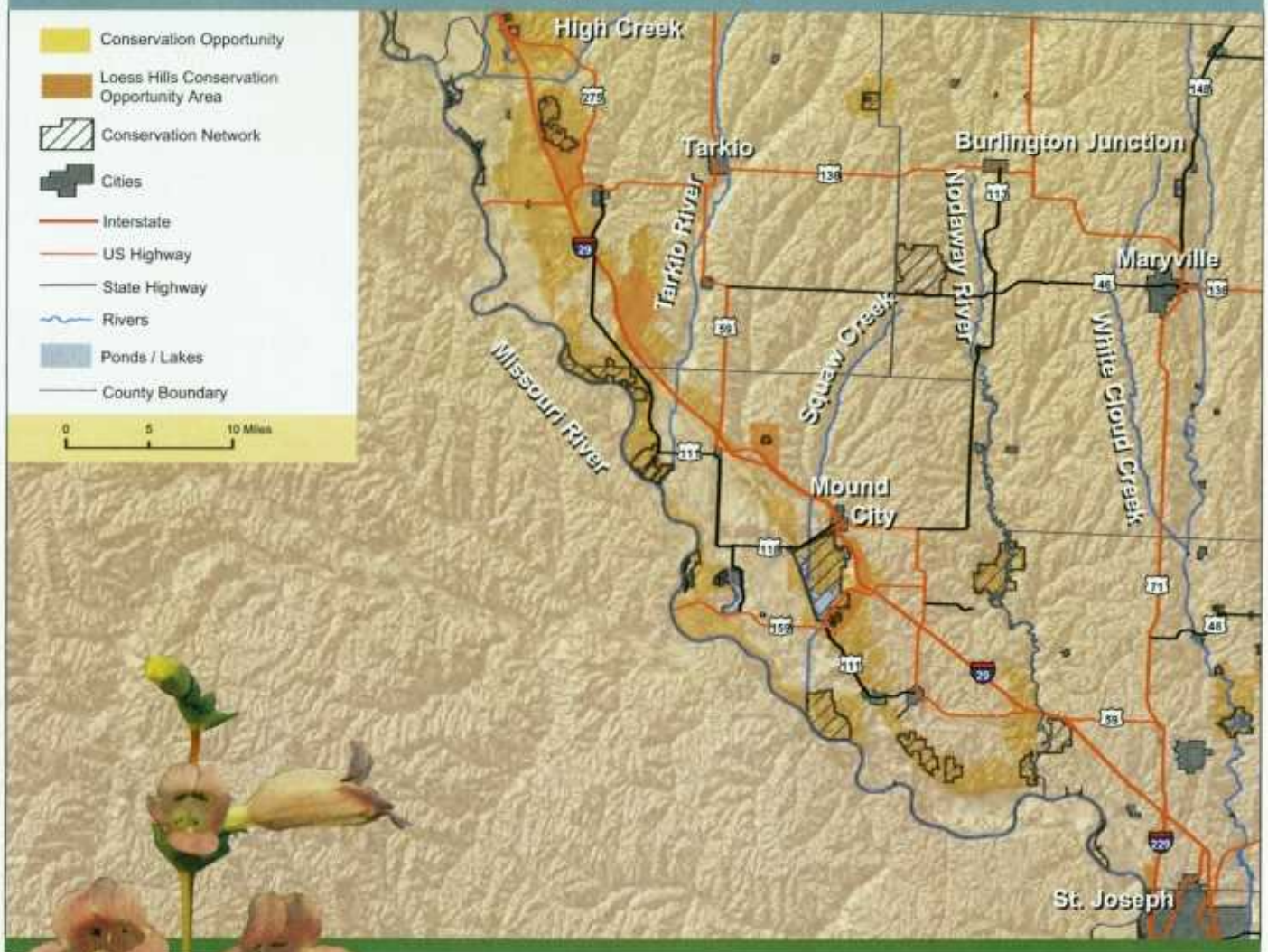
### Conservation Partners

**Existing:** The Nature Conservancy - Missouri Chapter; Missouri Natural Areas Committee; Friends of Squaw Creek; Midland Empire Audubon; Missouri Western State College (including student chapter of the Wildlife Society); Northwest Missouri State University; private landowners; Natural Resources Conservation Service (NRCS); 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; American Fisheries Society - Missouri Chapter; Society of American Foresters - Missouri Chapter; National Wild Turkey Federation (NWTF); City of St. Joseph; Farm Services Agency; Missouri Division of Tourism; Missouri Department of Transportation



## 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; 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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