

# Shoal Creek

## Conservation Opportunity Area



Ozark  
Highlands



*Shoal Creek is home to many rare fish and mussels.*

Tony Robyn, Audubon Missouri

Located in the Spring River watershed in southwest Missouri, Shoal Creek Conservation Opportunity Area (COA) highlights a high quality stream, the highest continuously flowing waterfall in the state, several tallgrass prairie restoration sites and the best remaining chert glades in Missouri. Shoal Creek flows through Joplin, providing an excellent opportunity to involve area citizens in habitat restoration and conservation.

Wildcat Park in Joplin includes 27 acres of high quality, publicly owned chert glades, chert cliffs, a spring and a one mile corridor of Shoal Creek stream bank habitat. Important chert glade plants and animals include prickly pear cactus, fame flower, blunt lobe woodsia, common least daisy, collared lizards and lichen grasshoppers.

Shoal Creek is a biologically significant stream, providing

habitat for rare aquatic mussels and fish such as Neosho mucklets, purple lilliputs, Arkansas darters, least darters and Ouachita kidneyshells. Joplin and Neosho utilize the stream for 90% of their public water consumption needs, as well as for recreation. Historically, oak savannas and woodlands surrounded Shoal Creek. Today, the landscape is a mosaic of pasture and dense second-growth oak forest.

Tallgrass prairies once dominated the broad, flat portions of the landscape. Diamond Grove Prairie is the COA's largest remnant tallgrass prairie. The prairie is home to prairie animals (including greater prairie-chickens and Henslow's sparrow) and interesting plants (royal catchfly, Muhlenberg's nut-rush and blue star). The George Washington Carver National Monument includes an 80 acre restored tallgrass prairie.

## Shoal Creek Conservation Strategies

- Restore riparian corridors.
- Restore natural communities (including chert glades, tallgrass prairies and riparian woodlands) on public and private lands.
- Identify habitat restoration opportunities for willing private landowners.
- Improve water quality and stream habitat by working with communities and willing landowners to implement Best Management Practices.
- Educate the public and policy makers about the value of natural community restoration.
- Develop an active volunteer base.



Jim Rathert, Missouri Department of Conservation

*Thin soil, cracks and crevice fractures provide limited moisture for desert-adapted plants and animals at Wildcat Glade Natural Area.*

### Priority Research and Inventory Needs

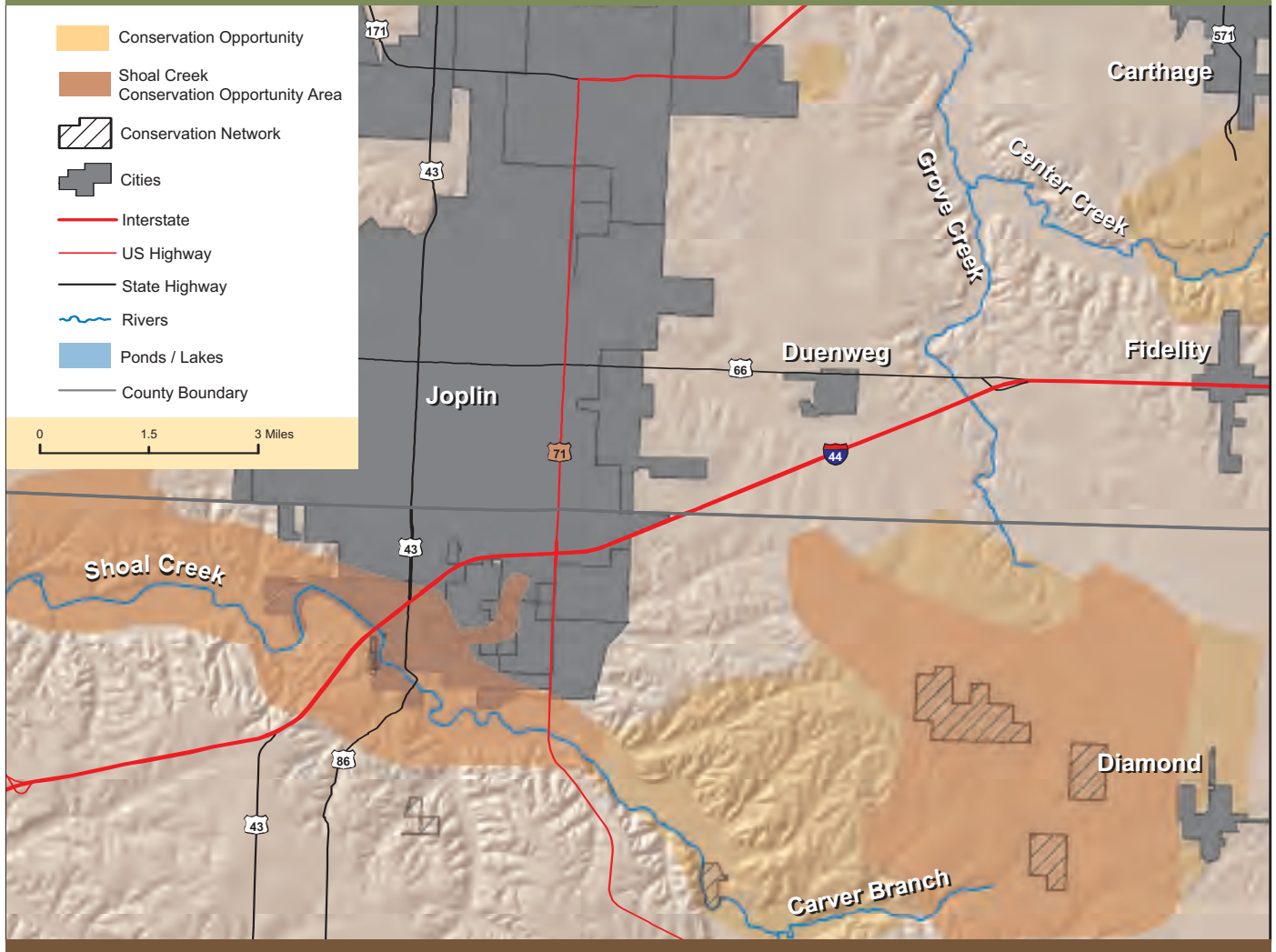
- Determine the health of riparian corridors using aerial photographs.
- Inventory natural communities.
- Identify potential sources that negatively affect water quality (runoff, erosion etc.).
- Inventory in-stream habitats.
- Develop plant and animal inventories.
- Conduct public attitude surveys.

### Conservation Partners

**Existing:** Audubon Missouri; Missouri Stream Team #2011; Ozark Regional Land Trust; Missouri Southern State University; Southwest Missouri State University; City of Joplin; Newton County Soil and Water Conservation District (SWCD); Southwest Missouri Resource Conservation and Development; Missouri Department of Natural Resources (DNR); Missouri Department of Conservation (MDC); U.S. Fish and Wildlife Service (USFWS)

**Potential:** Ducks Unlimited; Sierra Club – Ozark Chapter; Jasper County Master Gardeners; Hill ‘n’ Hollow Master Gardeners; Missouri Master Naturalists – Joplin Chapter; Shoal Creek Watershed Improvement Group; Conservation Federation of Missouri; private landowners; Upper Shoal Creek Basin Total Maximum Daily Load Planning Group; National Park Service

## Shoal Creek Conservation Opportunity Area



### Funding Sources

**Existing:** MDC annual budget; MDC Private Lands Cost Share Program; MDC Wildlife Diversity Funds; NPS annual budget; City of Joplin annual budget; Audubon Missouri annual budget; Environmental Protection Agency Mini-grants Program; DNR 319 Grants; DNR Recreational Trails Program; DNR Watershed Management Plan Development Grant; SWCD State Cost Share Funds; U.S. Department of Agriculture Sustainable Practices Grant; USFWS Endangered Species Landowner Incentive Program; USFWS Mined Lands Restoration Fund

**Promising Future Sources:** MDC State Wildlife Grants; Missouri Natural Heritage Foundation Grants

### Existing Conservation Network

Diamond Grove Prairie Conservation Area (Diamond Grove Prairie Natural Area); George Washington Carver National Monument; Wildcat Park (Wildcat Glade Natural Area, Wildcat Glades Conservation and Audubon Center, Wildcat Access)



Jim Rathert, Missouri Department of Conservation

*Lichen grasshoppers blend with the lichen-covered rocks on chert glades, becoming visible only when they jump.*

## Wildcat Glades Conservation and Audubon Center



*Wildcat Glade Natural Area provides the best example of a chert glade in Missouri. The glade vegetation ranges from lichen-covered rocks to patches of gnarled, stunted oaks. Glade plants are especially colorful in the spring and include prickly pear, glade wild onion, rock pink and Barbara's buttons. Audubon Missouri, the Missouri Department of Conservation and the City of Joplin plan to showcase Wildcat glades with the Wildcat Glades Conservation and Audubon Center, scheduled to open in late 2006.*

Jim Rathert, Missouri  
Department of Conservation

### Conservation Challenges

Chert glades are highly susceptible to development, including home and business construction, utility corridors, land filling and recreational use. Past overgrazing and fire suppression have resulted in some invasion by woody plants, especially winged sumac and the introduced cheatgrass (*Bromus tectorum*). Because so few high quality chert glades

and prairies remain in and around Joplin, conservation organizations and agencies will continue working with city administrators and private landowners to protect remaining examples. Exotic species and impacts from recreational use should be monitored, and prescribed fire applied to maintain glades, prairies, savannas and woodlands.

To learn more about the Shoal Creek Conservation Opportunity Area, please contact:



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