



# Best Management Practices for Construction and Development Projects Topeka Shiner *Notropis topeka*

**Common name** • Topeka Shiner  
**Scientific name** • *Notropis topeka*  
**Federal status** • Endangered  
**State status** • Endangered

## Purpose and Use

The information in this document is to be used to help avoid and minimize species impacts due to construction practices. It is not intended to be used as a guide to manage habitat for a given species. If that is the goal, please contact the Department of Conservation for habitat management information. Because every project and location differs, following the recommendations within this document does not ensure that impacts will not occur to the species and additional information might be required in certain instances. Following the recommendations within this document does not complete Endangered Species Act consultation that may be necessary for species listed under the federal Endangered Species Act; please contact the U.S. Fish and Wildlife Service for more information.

## Ecology

Topeka Shiners were historically widespread in western tributaries of the Mississippi River from central Missouri to southern Minnesota, west to South Dakota and western Kansas. Currently in northwest and central Missouri, they typically occupy permanent pools of small, clear, high quality headwater streams draining upland areas. Typical stream substrates are gravel, rubble, sand, or bedrock often with a slight layer of silt. Many occupied streams become intermittent in the summer, but the pools are maintained by percolation of water from subterranean flow. Topeka Shiners feed primarily on aquatic insects. Males defend small territories around green sunfish or orangespotted sunfish nests, the primary spawning location. Spawning takes place from late May to late July. Adult Topeka Shiners typically reach a length of 1.5-2 inches.

## Reasons for Decline

A combination of factors have caused the dramatic decline of the Topeka Shiner from over 80 percent of its former geographic range in Missouri and over 90 percent throughout its entire range. Threats to the Topeka Shiner include reduced water quality due to excessive animal waste, fertilizer, and pesticide runoff, unrestricted livestock access to streams and riparian areas, siltation, and non-point source pollution. Habitat destruction and degradation can result from removal of streamside vegetation, poorly-designed

stream crossings, improper gravel removal, construction, and timber clearing operations. Stream straightening (channelization) is also a major threat to Topeka Shiner habitat because it alters water temperature and the flow regime. Many of these activities, if done improperly, can trigger headcutting in the stream channel and result in habitat degradation on a watershed scale. Introduced predatory fish pose an additional threat, and impoundments that alter stream hydrology can act as barriers to fish dispersal and thus be detrimental to Topeka Shiner populations.

## Specific Recommendations

The Topeka Shiner is an excellent indicator of water quality because of its sensitivity to habitat changes. Efforts should be made to ensure our waterways are healthy through protection and/or restoration of habitat for this and other aquatic species.

- No work should occur below the high bank of the stream between May 15 and July 31 to avoid disrupting spawning activity.
- Sheet piling for coffer dams for the construction of bridge piers may be placed after July 31 but should be removed prior to May 15 of the following year. Removal of coffer dams should be coordinated with appropriate Missouri Department of Conservation personnel.
- Dams and other impoundments should not be constructed in those streams where this species occurs.
- Erosion and sediment controls should be implemented, maintained, and monitored for the duration of the project.
- For permanent road crossings, use of a span bridge may be more appropriate than placement of a culvert due to the potential of migration restriction for this species.

## General Recommendations

Refer to Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers.

If your project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or [www.modot.mo.gov/ehp/index.htm](http://www.modot.mo.gov/ehp/index.htm) for additional information on recommendations.

## Information Contacts

For further information regarding regulations for development in rivers and streams, contact:

For species information:

[Missouri Department of Conservation](#)

Resource Science Division  
P.O. Box 180  
2901 W. Truman Blvd  
Jefferson City, MO 65102-0180  
Telephone: 573/751-4115

For species information and Endangered Species Act Coordination:

[U.S. Fish and Wildlife Service](#)

Ecological Services  
101 Park Deville Drive, Suite A  
Columbia, MO 65203-0007  
Telephone: 573/234-2132

For Clean Water Act Coordination:

[Missouri Department of Natural Resources](#)

Water Protection Program  
P.O. Box 176  
Jefferson City, MO 65102-0176  
Telephone: 573/751-1300, 800/361-4827

[U.S. Army Corps of Engineers](#)

Regulatory Branch  
700 Federal Building  
Kansas City, MO 64106-2896  
Telephone: 816/983-3990

[U.S. Environmental Protection Agency](#)

Water, Wetlands, and Pesticides Division  
901 North 5th Street  
Kansas City, KS 66101  
Telephone: 913/551-7307

## Disclaimer

These Best Management Practices were prepared by the Missouri Department of Conservation with assistance from state and federal agencies, contractors and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat. Compliance with these Best Management Practices is not required by the Missouri wildlife and forestry law nor by any regulation of the Missouri Conservation Commission. Other federal laws such as the Clean Water Act and the Endangered Species Act, and state or local laws need to be considered for construction and development projects, and require permits and/or consultation with the appropriate agency. Following the recommendations provided in this document will help reduce and avoid project impacts to the species, but impacts may still occur. Please contact the appropriate agency for further coordination and to complete compliance requirements.