



Best Management Practices for Construction and Development Projects

Crystal Darter

Crystallaria asperella

Common name • Crystal Darter
Scientific name • *Crystallaria asperella*
Federal status • None
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

Crystal Darters have a large historic range, stretching from river basins in West Virginia west to Missouri and from Minnesota south to the Gulf of Mexico. In east-central to southeastern Missouri, they inhabit open channels of large, clear streams with low to moderate gradients and long stretches of silt-free sand and small gravel substrate. They prefer streams with strong current and water depths of about 3 feet. The biology of this darter in Missouri is poorly known. Studies suggest Crystal Darters may bury themselves in sand during the day and become active at night. Crystal Darters forage on aquatic insects, especially midges, blackflies, and caddis flies. Adults are commonly about 6.5 inches in length. They most likely spawn in early spring.

Reasons for Decline

Despite an historical range that included many rivers throughout east-central and southeastern Missouri, Crystal Darters never were considered common. Population declines have occurred as a result of habitat modification from activities such as channelization, dredging, and impoundments that increase siltation thereby limiting habitat for spawning and foraging.

Specific Recommendations

As a species that prefers clean and unpolluted streams, Crystal Darters may act as indicators of a healthy

ecosystem. Restoring and protecting streams for the Crystal Darter also will benefit other aquatic species.

- Avoid removing and altering the riparian corridor along streams.
- Erosion and sediment controls should be implemented, maintained, and monitored for the duration of the project.
- Dams and other impoundments should be prohibited in streams throughout the Crystal Darter's range.
- Project activities should not occur below the high water level of the stream between March 15 and June 15.
- Stream banks should be protected from erosion.

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 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.