

Neosho Madtom

Noturus placidus

Guidelines for Landowners Using Conservation Practices

Missouri Department of
Conservation

Common name ▪ Neosho Madtom
Scientific name ▪ *Noturus placidus*
State status ▪ Endangered
Federal status ▪ Threatened

Ecology

The Neosho madtom is a member of a group of small catfishes called madtoms, of which 9 species are found in Missouri. Neosho madtoms were historically located in localized areas of Missouri, Kansas, and Oklahoma. In southwestern Missouri, the Neosho madtom is found in the lower 15 miles of the Spring River, a medium-sized stream with moderate gradient, permanent flow, and abundant gravel and cobble. The fish lives at the bottom of the stream under rocks, often moving between the spaces in the gravel and cobble in riffles or runs in clear water. Neosho madtoms are most active at night, foraging primarily within three hours after sunset on aquatic insects, including larvae of caddisflies, mayflies, and midges. Spawning typically takes place in June and July. Madtoms make cavity nests in protected hiding places where the eggs are laid and then guarded by one or both parents. Neosho madtoms are the smallest Missouri catfish, with adults commonly 1.8 to 3 inches in length.

Reasons for Decline

Although there is no indication that Neosho madtoms were ever more abundant in Missouri than they are currently, habitat degradation from dam construction, sedimentation, pollution from mining and agriculture activities have led to declines in Neosho madtom numbers in Oklahoma and Kansas. Localized threats include construction of dams and impoundments, improper and untimely sand and gravel removal, pollution from lead-zinc mining and

agricultural runoff containing pesticide chemicals and waste from livestock.



Photo Credit: <http://www.ichthyophilia.com/mokan/protected.html>

Recommendations

To ensure the long-term survival of the Neosho madtom in Missouri, it is important that current and potential habitat be protected. To do this, project activities should minimize impact to streams and riparian corridors. Efforts should be made to ensure our waterways are healthy through protection and/or restoration of habitat for this and other aquatic species.

Avoid constructing stream crossings. If unavoidable, culverts and stream crossings should be constructed with the same bottom elevation as the existing streambed to avoid restricting stream flow and obstructing fish passage. Bank stabilization materials should consist only of rock, clean broken concrete or similar materials free of pollutants, silt and extraneous debris including exposed rebar. Erosion and sediment controls should be implemented, maintained and monitored for the duration of a project.

Follow proper sand and gravel removal procedures outlined in the Missouri Instream Sand and Gravel Removal Guidelines prepared by the Missouri Departments of Conservation and Natural Resources. Guidelines include the following: leave a minimum 20-foot buffer zone between the water line and the excavation area, do not mine within 20 feet of streamside vegetation, and do not alter stream channels. In addition, do not remove gravel during the Neosho madtom spawning season (June 1 to July 31).

Limit clearing of vegetation, including standing and downed timber, to that which is absolutely necessary for construction purposes. Re-establish

and maintain forested riparian corridors at least 100-foot wide along streams to reduce erosion and capture nutrient rich runoff. Discourage cattle from using streams and exclude livestock with fences to allow the area to naturally re-vegetate. Move watering areas into pastures and away from streams.

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

Consider the balance between adverse and beneficial practices when determining the overall effect of a conservation practice.

Beneficial Practices

- Limit livestock access to streams.
- Protection and restoration of riparian corridors along streams.
- Nutrient and pest management on adjacent agricultural fields that results in reduced opportunities for contamination of runoff.
- Practices that control erosion and prevent the delivery of sediment to the aquatic system will prove beneficial to this species.

Adverse Practices

- Sand and gravel removal beyond the excess material on adjacent unconsolidated bars.
- Project activities that occur below the high bank during the Neosho madtom spawning period of June 1 through July 31.
- Improper erosion and sediment control.
- Constructing dams and other impoundment structures on streams that host the fish.
- Culverts, fords, and stream crossings that create a barrier to fish passage or restrict stream flow.
- Unnecessary vehicle and equipment stream crossing.
- Removing or degrading the riparian corridor near springs and along streams.
- Unmanaged application of pesticides, animal waste or fertilizers.

Information Contacts

Missouri Department of Conservation
Policy Coordination Section
P.O. Box 180
2901 W. Truman Blvd

Jefferson City, MO 65102-0180

Telephone: 573-751-4115

<http://www.mdc.mo.gov/nathis/endangered/>

Missouri Department of Natural Resources
Division of Environmental Quality

P.O. Box 176

Jefferson City, MO 65102-0176

Telephone: 800-361-4827 / 573-751-1300

<http://www.dnr.mo.gov/env/index.html>

U.S. Army Corps of Engineers

Regulatory Branch

700 Federal Building

601 E. 12th Street

Kansas City, MO 64106-2896

Telephone: 816-389-3990

<http://www.nwk.usace.army.mil/>

U.S. Environmental Protection Agency
Water, Wetlands, and Pesticides Division

901 North 5th Street

Kansas City, KS 66101

Telephone: 913-551-7003 / 800-223-0425

<http://www.epa.gov/region7/>

U.S. Fish and Wildlife Service
Ecological Services Field Office

101 Park DeVille Dr., Suite A

Columbia, MO 65203

Telephone: 573-234-2132

<http://www.fws.gov/midwest/partners/missouri.html>

Legal

The Missouri Department of Conservation prepared these guidelines for conservation practices with assistance from other state agencies, contractors, and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat.

Compliance with these management guidelines is not required by the Missouri wildlife and forestry law or by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.

“State Endangered Status” is determined by the Missouri Conservation Commission under constitutional authority, and specific requirements for impacts to such species are expressed in the Missouri Wildlife Code, rule 3 CSR 10-4.111.

Species listed under the Federal Endangered Species Act must be considered in projects

receiving federal funds or requiring permits under the Clean Water Act, with compliance issues resolved in consultation with the U.S. Fish and Wildlife Service.