

Central Mudminnow

Umbra limi

Guidelines for Landowners Using Conservation Practices

Missouri Department of
Conservation

Common name ▪ Central Mudminnow
Scientific name ▪ *Umbra limi*
State status ▪ Endangered
Federal status ▪ None

Ecology

Central mudminnows historically occurred in lakes and ponds in central and eastern North America with the northern limit of their distribution in southern Manitoba, Canada. In Missouri, mudminnows have only been recorded in areas along the Mississippi River but are mostly found in the northeast section of the state near Clark County. They are habitat specialists occupying still waters with abundant submerged vegetation and a thick layer of organic material or muck. These conditions are generally found in ponds, marshes, and sloughs.

Mudminnows are very tolerant of low oxygen and highly acidic waters. These fish will often hide in detritus and muck on the bottom of the water to hide from predators. Central mudminnows are generalized feeders and will eat different organisms depending on what is available. They typically prey on small snails, crustaceans, and insect larvae.

Spawning occurs between April and June. Adult central mudminnows reach a length of 2 to 4 inches.

Reasons for Decline

Throughout much of their range, central mudminnows are fairly common. Although there is no evidence that central mudminnows were ever more widespread in Missouri than they are currently, destruction of wetlands is eliminating potential habitat for this species. Conversion of wetlands for urban and rural development along the Mississippi River has destroyed marshes, sloughs, and ponds this species may have historically inhabited.



Photo Credit: <http://www.ohiodnr.com/dnap/rivfish/mudmin.htm>

Recommendations

Protection and restoration of wetlands is an essential goal, not only for species like the central mudminnow, but because wetlands provide important environmental services. Because Missouri's populations are separated from populations to the north, predation from introduced fish species could easily eliminate the central mudminnow. Actions should be taken to ensure flood waters do not inundate existing mudminnow habitat and introduce predatory fishes.

Limit clearing of vegetation, including both standing and downed timber, to that which is absolutely necessary for construction purposes. Erosion and sediment controls should be strictly implemented, maintained, and monitored for the duration of a project. Re-establish and maintain forested riparian corridors at least 100-foot wide along streams to reduce erosion and capture nutrient rich runoff.

If temporary in-channel fill is necessary, culverts of sufficient size should be employed to avoid water impoundment and allow for fish passage.

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

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

Beneficial Practices

- Wetland restoration, enhancement, and creation incorporating deeper water by design (3 to 5 feet), although not deep enough to support predatory fish (>6 feet).
- 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.
- Protection and restoration of riparian corridors along streams and wetlands.
- Limit livestock access to streams.

Adverse Practices

- Activities that dewater or disturb suitable habitat during the spawning season, April 1 to June 15.
- Draining or destroying wetland habitat.
- Deepening existing habitats which would benefit predatory fish species.
- Improper erosion and sediment control.
- Unmanaged application of pesticides, animal waste or fertilizers.

Information Contacts

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

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U.S. Environmental Protection Agency

Water, Wetlands, and Pesticides Division
901 North 5th Street
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<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.