

Lake Sturgeon

Acipenser fulvescens

Best Management Practices

Missouri Department of Conservation

Common name ▪ Lake Sturgeon
Scientific name ▪ *Acipenser fulvescens*
State status ▪ Endangered
Federal status ▪ None

Ecology

The sturgeons are a small group of primitive fishes with a wide distribution in the Northern Hemisphere. Lake sturgeon are distributed in north central North America. In Missouri, they are found in the Mississippi and Missouri rivers, but have also been known to occur in the larger tributaries of those two rivers. These bottom-dwelling fish prefer strong current and areas having firm substrate. At certain times of the year, they can be found along sand and gravel bars or in deeply scoured holes. Lake sturgeon can live up to 150 years, reach eight feet in length and a weight of 300 pounds making them one of the largest fish of Missouri. Lake sturgeon, often called rubbernose sturgeon, have a short, rounded snout compared to the shovel-shaped snouts of the other two sturgeon species. Another key identifying characteristic of lake sturgeon is the barbels located in front of the mouth. It takes 15 to 20 years (25 - 40 lbs. in size) before a lake sturgeon can spawn for the first time. Spawning usually occurs in late spring in water temperatures between 55-64 F. A female lake sturgeon only spawns once

every 3 to 5 years. Because of this fact, lake sturgeon are very susceptible to over harvest. Eggs are deposited in gravel or along rocky shoals of lakes. Being long-lived, growth is slow and sexual maturity is not reached until 20 years of age. Males may live to be 55 years old and females may be 80 - 150 years old.



Photo Credit: Shedd Aquarium

Reasons for Decline

Many factors have contributed to the decline of this species including habitat alterations by humans to the Missouri and Mississippi rivers, over harvest, and pollution. For millions of years, sturgeon depended on the diverse habitat found in the Missouri and Mississippi rivers. Historically, our big rivers were wide and shallow consisting of braided channels, sand bars, gravel bars, sand shoals and numerous wetlands. Critical habitat necessary for lake sturgeon reproduction and subsequent survival was all but destroyed during the development of the big rivers for flood control and commercial navigation. In just the last 65 years, 28% of the Missouri and Mississippi rivers have been impounded by dams creating unsuitable habitat. In 1974 lake sturgeon were classified as endangered

in Missouri. Sport and commercial harvest is prohibited.

Recommendations

Although lake sturgeon populations have declined across much of their range, there is evidence that populations could become more abundant where there is adequate habitat. The lake sturgeon may serve as an indicator of ecosystem health because of its unique life history traits. Habitat restoration and improvement is an important key to the recovery of lake sturgeon. Projects are being designed and constructed which will increase the diversity of habitat for lake sturgeon. Another important key to restoration is the artificial propagation of lake sturgeon. MDC has stocked over 260,000 lake sturgeon into the Missouri and Mississippi rivers. The Missouri Department of Conservation has also recently started a long term, state-wide sturgeon monitoring project to track population trends for all Missouri's species.

Beneficial Practices

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

Adverse Practices

- Alteration or removal of shallow rock and gravel areas preferred by lake sturgeon.

- Overlooking erosion and ignoring sediment control.
- Constructing dams and other impoundment structures in large rivers and their tributaries.
- Channel alterations that will limit or eliminate shallow, sloping bank habitats.
- Removing or degrading the riparian corridor along streams.
- Application of pesticides, herbicides, insecticides, and inorganic fertilizers that alter aquatic vegetation and/or micro- or macroinvertebrates.
- Consider the balance between adverse and beneficial practices when determining the overall effect of a conservation practice.

Information Contacts

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

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 DeVillie Dr., Suite A
Columbia, MO 65203
Telephone: 573-234-2132
<http://www.fws.gov/midwest/partners/missouri.html>

Legal

These Best Management Practices were prepared by the Missouri Department of Conservation 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 Best Management Practices is not required by the Missouri wildlife and forestry law 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.