



U.S. Fish & Wildlife Service

Missouri River

Pallid Sturgeon *Status: Endangered*

Pallid sturgeon evolved within the diverse environments of the Missouri and Mississippi Rivers at a time when flood plains, backwaters, chutes, sloughs, islands, sandbars, and main channel waters formed the large-river ecosystem. They were well adapted to living in large rivers where fluctuating environmental conditions, such as river flows, exist. Those same characteristics that enabled the pallid to survive for thousands of years have also made them vulnerable to changes in the river that diminished spawning and nursery habitat.

In the biological opinion on Missouri River operations, the U.S. Fish and Wildlife recommends returning the river to more natural flows. Here is how the Service's recommendations will benefit pallid sturgeon:

The Service has recommended an increase of warm spring flows from Fort Peck Dam spillway to maximize the amount of warm water habitat available below the dam. Reproduction by warm water species such as the pallid sturgeon has been limited due to cold water coming from the dam. Warm water intentionally spilled over the spillway will act as a



Photo by Ken Bouc, Nebraska Game and Parks Commission

reproductive trigger for native fish - including the pallid sturgeon.

A modest increase of flows from Gavins Point dam in the spring will also provide biological cues to encourage pallid sturgeon to spawn.

Lower summer flows are expected to benefit pallid sturgeon in the lower 800 miles of the river by providing additional slow, shallow water to allow young-of-the-year fish to grow large enough to survive through the first winter.

Larval and fingerling pallids need to remain in shallow water areas containing high concentrations of

nutrients. Under present conditions, the Missouri River is simply too fast and deep throughout much of the lower basin to provide the shallow and slack water habitat where young fish can rest, feed, and grow until they are capable of negotiating main channel currents.

Flow modifications in conjunction with habitat restoration are critical to ensure the continued existence of this Missouri River resident.

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