

USACE Natural Resource Management

Fish



Pallid Sturgeon, Shortnose Sturgeon, & Green Sturgeon

Pallid Sturgeon (*Scaphirhynchus albus*): Pallid sturgeon have a flattened shovel-shaped snout; a long, slender, and completely armored caudal peduncle. They can reach lengths of 6 feet and weigh as much as 80 pounds. Coloration is grayish-white. Like other sturgeon, the mouth is toothless, protrusible, and ventrally positioned under the head. (USFWS)

Status: Endangered, listed 1990

Nature Serve: Imperiled

G2

Imperiled

Shortnose Sturgeon (*Acipenser brevirostrum*): The shortnose sturgeon grows up to 4.5 feet in length and may weigh as much as 50 pounds. The body is olive-yellow to gray or bluish with a milky white to dark yellow belly. This fish's scutes are lighter in color than the main body. It has a short, conical snout with four large, fleshy barbels. The mouth is wide, and its gape is approximately 65% of the distance between the eyes. (NOAA)

Status: Endangered, listed 1967

Nature Serve: Vulnerable

G3

Vulnerable

Green Sturgeon (*Acipenser medirostris*): This sturgeon species grows to between 4.5 and 6.5 feet in length and weighs as much as 350 pounds. The back of this species ranges from dark to olive green with dark stripes on the sides and belly. The scutes are found behind the vent which is between the pelvic fins. (NOAA)

Status: Threatened, listed 1994

Nature Serve: Vulnerable

G3

Vulnerable

Order: Acipenseriformes are bony fish, but most of their skeleton is cartilaginous. Tail fins are similar to those found in sharks. This order has weak jaws and barbels on their snouts. This is an order of freshwater fish, but some species are anadromous. Anadromous fish spend most of their life in salt water, but return to freshwater to spawn. (NHPBS)

Photos Left to Right:
Pallid Sturgeon (USFWS), Shortnose Sturgeon (USFWS) & Green Sturgeon (NOAA)

Management and Protection:

- Dredging to maintain navigation currently is not perceived as a threat to the sturgeon or its habitat.
- Further siltation and pollution of known habitat should be prevented. (NatureServe)
- Since the mid to late 1960's the pallid sturgeon has undergone a dramatic decline. The majority of this sturgeon's habitat has been modified by river channelization, construction of impoundments, and/or the resultant changes in water flow from these activities. These habitat modifications have blocked the movement of pallid sturgeons, destroyed or altered spawning habitat, reduced food sources or inhabited the species' ability to obtain food, and altered water temperatures and other environmental factors necessary for survival. (USFWS)
- The shortnose sturgeon is found in rivers and coastal waters from Canada to Florida. This sturgeon spends little time in marine waters, and when found in ocean is typically close to shore. In the spring, adults travel far upstream, away from the saltwater to spawn. After spawning adults quickly return to estuaries where most time is spent. (NOAA)
 - The green sturgeon's decline has likely been the result of harvest of adults in addition to the destruction of spawning and rearing habitat. The green sturgeon is anadromous and spends more time in marine waters than most sturgeon species. (NOAA)



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USACE ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$500 million on efforts related to the pallid, shortnose, and green sturgeons. These costs have been incurred by an array of business lines including Environmental Stewardship, Flood Risk Management, Navigation, Regulatory, and more. Expense types include Site Visits and Inspections, Research, Cooperative Study Contracts, as well as Inventory, Survey, and Monitoring efforts.



Pallid Sturgeon=
\$553,116,839 (2005)



Shortnose Sturgeon=
\$14,119,089 (2006)



Green Sturgeon=
\$15,730,754 (2005)

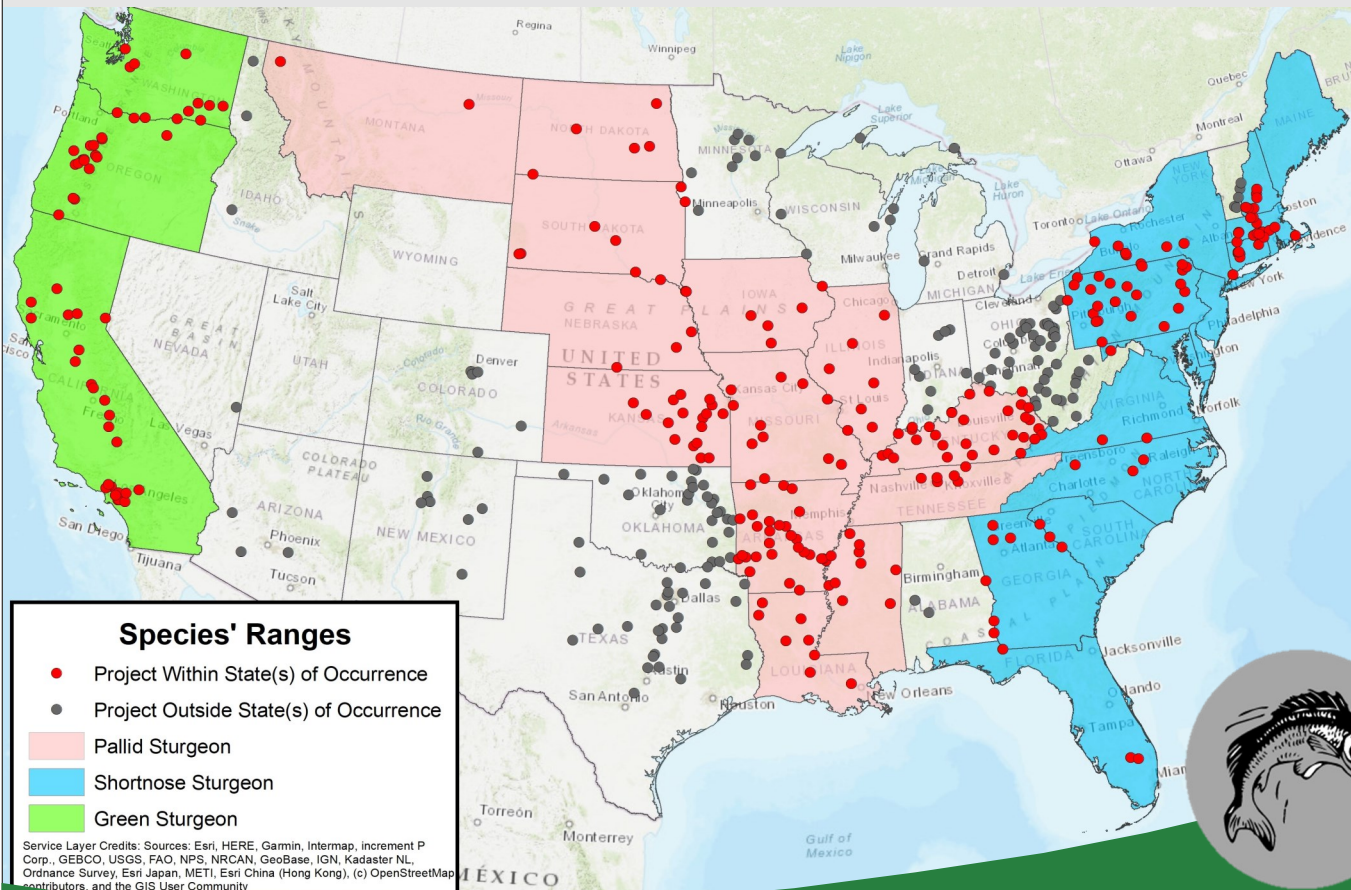
The USACE works with state and federal partners to execute the Missouri River Recovery Program (MRRP). The MRRP focuses on three federally listed species, including the pallid sturgeon. USACE funds federal and state partner agencies to raise pallid sturgeon in fish hatcheries and stock them into the Missouri River. Additionally, USACE and partner agencies also monitor the fish's numbers along the river.

The USACE partnered with South Carolina Department of Natural Resources in 2013 to catch shortnose sturgeon and tag them with sonic transmitters for monitoring efforts. This monitoring effort was a required pre-construction study for the Savannah Harbor Expansion Project (SHEP). To mitigate potential impacts of the SHEP, the USACE also constructed a large fish bypass around the first dam up the Savannah River, the New Savannah Bluff Lock and Dam. The fish bypass enables sturgeon and other species to access historical spawning grounds at the Augusta Shoals.



Photo: A small sonic transmitter is inserted inside a sturgeon to track its movements via a network of receivers.

This fact sheet has been prepared as an unofficial publication of the U.S. Army Corps of Engineers (USACE). This online publication is produced to provide its readers information about best management practices related to special status species. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.



Source: Map provided by Ashleigh Boss, ORISE Fellowship, Institute for Water Re-

Fish

