

# USACE Natural Resource Management

## Fish



### Alabama Sturgeon, Gulf Sturgeon, & Shovelnose Sturgeon

**Alabama Sturgeon (*Scaphirhynchus suttkusi*):** The Alabama sturgeon grows to be around 30 inches in length and weighs between 2-3 pounds. The back and most of the fins are brownish orange. The sides of the body near the lateral row of scutes are light tan to golden yellow. The belly, pelvic fin, and most of the anal fin are creamy white. (USFWS)

**Status:** Endangered, 2000

**Nature Serve:** Critically Imperiled

G1  
Critically  
Imperiled

**Gulf Sturgeon (*Acipenser oxyrinchus desotoi*):** This sturgeon can grow over 8 feet in length and can weigh more than 300 pounds. Coloration is typically dark brown along the upper portion of the body which fades to a creamy white-colored belly. This fish has barbels located on the underside of the snout, no teeth, rubbery lips, and a suctorial mouth. (USFWS)

**Status:** Threatened, listed 1991

**Nature Serve:** Imperiled Subspecies

T2  
Imperiled  
Subspecies

**Shovelnose Sturgeon (*Scaphirhynchus platorynchus*):** The back of a shovelnose sturgeon ranges in color from coppery to dark tan or light brown. The snout is long and flat while the head is shovel-shaped. The shovelnose averages about 24 inches in length, making it the smallest of North America's sturgeons. (USFWS)

**Status:** Threatened due to Similarity of Appearance, 2010

**Nature Serve:** Apparently Secure

G4  
Apparently  
Secure

**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:*  
Alabama Sturgeon (USFWS), Gulf Sturgeon (USFWS), & Shovelnose Sturgeon (USFWS)

#### 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)
- The USFWS decided to list the Alabama sturgeon in 2000 due to low population numbers and the species' inability to sustain itself via natural reproduction. (USFWS) The species historical range included the Mobile Bay Basin, Alabama, and Mississippi, but the species now occupies only 15% of its historical range. (NatureServe) Since 1997, efforts to establish a hatchery program based on capturing and propagating individuals and establishing a broodstock collection have been ongoing. (USFWS)
- The Gulf sturgeon can be found from Lake Pontchartrain and the Pearl River system in Louisiana and Mississippi to the Suwannee River in Florida. The species' population was greatly reduced or eliminated throughout much of its range as a result of overfishing, dam construction, and habitat degradation. (USFWS)
  - The shovelnose sturgeon inhabits open, flowing river channels over bottoms of sand or gravel depends on sandy or gravel beds for egg laying. Small crevices and hollows protect eggs and newly hatched fish. Dams can negatively impact this species as they may increase siltation, resulting in the filling of small crevices.



**USACE ROLE:** According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$2.5 million dollars on efforts related to the Alabama and Gulf Sturgeons. The shovelnose sturgeon is not tracked in the database. Tracked expenses for the former species have been incurred by multiple business lines. Expense types include Site Visits and Inspections, In-house Research, and Inventory, Survey, and Monitoring efforts.



**Alabama Sturgeon= \$198,243 (2007)**



**Gulf Sturgeon= \$2,329,855 (2006)**

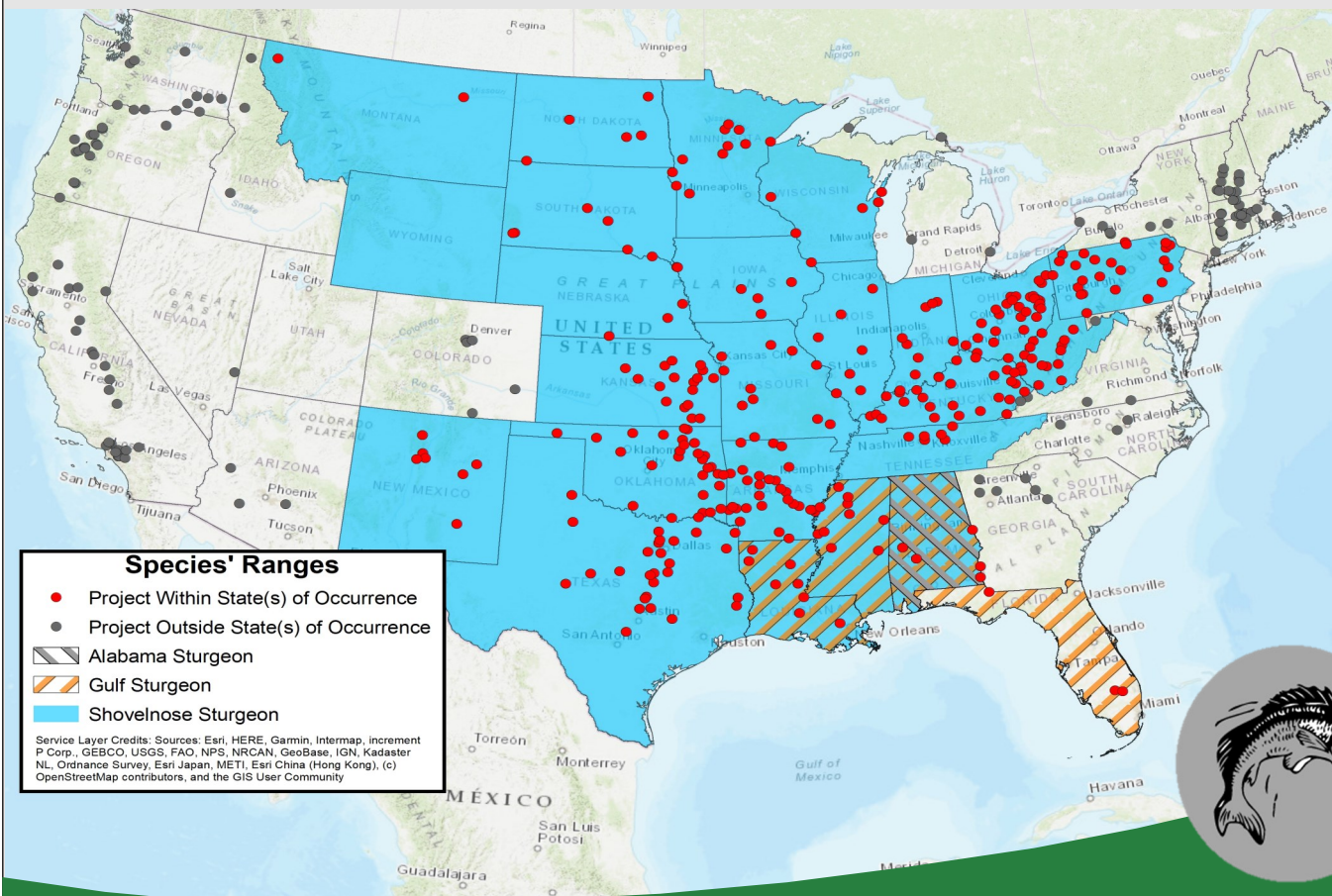
From March of 1997 through May of 2005, the USACE worked close with the Alabama Division of Wildlife and Freshwater Fisheries and the U.S. Fish and Wildlife Service in efforts to collect Alabama sturgeon broodstock in order to initiate a propagation program. Unfortunately, of the nearly 29,000 fish collected during this 8 year period, only five were Alabama sturgeon. Attempts to spawn and propagate these sturgeon were unsuccessful.



Photo: ERDC-EL staff carry an adult Gulf Sturgeon from the boat to a live well for processing.

In 2013, the U. S. Army Engineer Research and Development Center's (ERDC) Environmental Laboratory (EL) initiated a monitoring program for the Gulf Sturgeon in the Pearl and Pascagoula rivers and waters around the Mississippi Gulf's Ship Island. The sturgeon were acoustically tagged. Telemetry activity was then evaluated at a coarse scale to determine relative occurrence of the Gulf sturgeon and at a fine scale to ascertain what the sturgeon were doing within identified areas.

*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 Resources



**Fish**