



## NOAA FISHERIES SERVICE

### Atlantic Sturgeon Chesapeake Bay Distinct Population Segment: Endangered

Based on the best available science, we determined that the Chesapeake Bay distinct population segment of Atlantic sturgeon is endangered because it is currently in danger of extinction throughout its range due to:

- (1) precipitous declines in population sizes and the protracted period in which sturgeon populations have been depressed;
- (2) the limited amount of current spawning; and
- (3) the impacts and threats that have and will continue to prevent population recovery.

#### Population

Numbers of Atlantic sturgeon in the Chesapeake Bay distinct population segment are extremely low compared to historical levels and have remained so for the past 100 years.

- Prior to 1890, when a sturgeon fishery began, it was estimated that approximately 20,000 adult females inhabited the Chesapeake Bay and its tributaries.
- Currently, the existing spawning population in the James River is estimated to have less than 300 spawning adults per year.
- The spawning population of this distinct population segment is thought to be one to two orders of magnitude below historical levels.

#### Spawning

In addition to having fewer fish spawning, some spawning populations have been completely eliminated.

- There is only one known spawning population in the James River. Spawning may also occur in the York River as well.
- Historical evidence suggests the Potomac, Susquehanna, and Rappahannock Rivers were also Atlantic sturgeon spawning rivers. Current evidence of Atlantic sturgeon spawning in these other rivers of the Chesapeake Bay distinct population segment is lacking.



Atlantic sturgeon photos courtesy of Robert Michelson.



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### **Threats**

Threats to already depressed populations of Atlantic sturgeon from habitat degradation, vessel strikes and being accidentally caught and potentially injured or killed by fishermen are working in combination to put the distinct population segment in danger of extinction.

- Dredging, which occurs throughout in the Chesapeake Bay distinct population segment (e.g., the James River), can displace sturgeon while it is occurring and affect the quality of the habitat afterwards by changing the depth, sediment characteristics, and prey availability,
- Water quality has been degraded in areas throughout the range of the Chesapeake Bay distinct population segment. This has occurred as a result of runoff from agriculture, industrialization (e.g., paper mills), and the alteration of some river systems by dams.
- Vessel strikes occur in the James River. Eleven Atlantic sturgeon were reported to have been struck by vessels from 2005 through 2007. Several of these were mature individuals. Studies have shown that Atlantic sturgeon can only sustain low levels of mortality. The loss of even a few adult female Atlantic sturgeon could impact recovery of Atlantic sturgeon in the James River.
- Fisheries known to incidentally catch Atlantic sturgeon occur throughout the marine range of the species and in some riverine waters as well. Because Atlantic sturgeon mix extensively in marine waters and may use multiple river systems for spawning, foraging, and other life functions, they are subject to being caught in multiple fisheries throughout their range.

For more information on Atlantic sturgeon, visit:

[http://www.nero.noaa.gov/prot\\_res/atlsturgeon/](http://www.nero.noaa.gov/prot_res/atlsturgeon/)

<http://www.nmfs.noaa.gov/pr/species/fish/atlanticsturgeon.htm>