



## NOAA FISHERIES SERVICE

### Atlantic Sturgeon New York Bight Distinct Population Segment: Endangered

Based on the best available science, NOAA Fisheries determined that the New York Bight 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 New York Bight distinct population segment are extremely low compared to historical levels and have remained so for the past 100 years. For example:

- Prior to 1890, there were an estimated 180,000 adult female Atlantic sturgeon spawning in the Delaware River, and 6,000-6,800 females contributed to the Hudson River spawning stock each year during the late 1800s.
- Currently, the existing spawning population in the Hudson River is estimated to have 870 adults spawning each year (600 males and 270 females). Currently, there is no population estimate for the Delaware River, but it is believed 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.

- Known spawning populations exist in two rivers (the Hudson and Delaware Rivers) within the distinct population segment.
- Elimination of at least two historic spawning populations is believed to have occurred.



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 accidental capture and potential injury and mortality in fisheries are working in combination to put the distinct population segment in danger of extinction.

- Dredging, which occurs throughout the New York Bight distinct population segment (e.g., the Connecticut River and the Delaware 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. A deepening project for the Delaware River is currently occurring and may affect the hydrology of the river and therefore affect spawning habitat.
- Water quality has been degraded in areas throughout the range of the New York Bight distinct population segment as a result of runoff from agriculture, industrialization (e.g., paper and steel mills), and some rivers systems have been altered by dams.
- Vessel strikes occur in the Delaware River. Twenty-nine mortalities believed to be the result of vessel strikes were documented in the Delaware River from 2004 to 2008, and at least 13 of these fish were large adults. Given the time of year in which the fish were observed (predominantly May through July, with two in August), it is likely that many of the adults were migrating through the river to the spawning grounds. A recent study indicated that the loss of only a few adult female Atlantic sturgeon would impact recovery of Atlantic sturgeon in the Delaware 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>