



NOAA FISHERIES SERVICE

Atlantic Sturgeon Carolina Distinct Population Segment: Endangered

Based on the best available science, NOAA Fisheries determined that the Carolina 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 Carolina distinct population segment are extremely low compared to historic levels and have remained so for the past 100 years.

- The riverine spawning populations in the Carolina distinct population segment are estimated to be at less than 3 percent of their historic levels.
- Prior to 1890, there were an estimated 7,000 – 10,500 adult female Atlantic sturgeon in North Carolina and approximately 8,000 adult females in South Carolina.
- Currently, the existing spawning populations in each of the rivers in the Carolina distinct population segment have less than 300 adults spawning each year.

Spawning

In addition to having fewer numbers of fish spawning, at least one spawning population has been completely eliminated.

- The spawning population in the Sampit River has been completely eliminated, and the statuses of four additional spawning populations are uncertain at this time.
- There are believed to be only five of 7-10 historical spawning populations remaining in the Carolina distinct population segment.



Atlantic sturgeon photos courtesy of Robert Michelson.



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Threats

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

- The presence of dams has resulted in the loss of access to over 60% of the historical sturgeon habitat on the Cape Fear River and in the Santee-Cooper system. The less than 40% of historical habitat available for spawning is lower quality and not sufficient to allow recovery of the Carolina distinct populations segment.
- Dredging, which can displace sturgeon while it is occurring and affect the quality of the habitat afterwards by changing the depth, sediment characteristics, and prey availability, is occurring throughout the range of the Carolina distinct population segment (e.g., the lower Cape Fear River and the Cooper River).
- Water quality and quantity parameters (temperature, velocity, depth, dissolved oxygen, pollutants) have been degraded in areas throughout the range of the Carolina distinct population segment. This has occurred as a result of runoff from large animal farms, industrialization (e.g., paper and steel mills), and the alteration of river systems by dams and reservoirs.
- Climate change is expected to exacerbate existing water quality and quantity problems in the range of this distinct population segment.
- Fisheries known to incidentally catch Atlantic sturgeon occur throughout the marine range of the Carolina distinct population segment 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://sero.nmfs.noaa.gov/pr/sturgeon.htm>

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