



September 11, 2014

Mary Colligan
Assistant Regional Administrator, Protected Resources
Northeast Regional Office
NOAA Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930-2276

Dear Ms. Colligan,

It is time for the National Marine Fisheries Service to stop being a rubber stamp for the take and kill of Atlantic Sturgeon from the Delaware River. The Delaware River population of Atlantic Sturgeon is genetically unique and is less than 300 adults according to the listing document which cited the 2007 Atlantic sturgeon status review (ASSRT 2007).¹ With numbers this precariously low, an unknown population trend, and mortality from vessel strikes (which is currently not accounted for in a biological opinion) the responsibility for vigilant protection by the National Marine Fisheries Service could not be greater.

**Immediate Action Needed With Regards to Delaware River Deepening
and Atlantic Sturgeon Takes.**

And so it is with shock and dismay that we learned about the 3 Atlantic Sturgeon killed by the Army Corps of Engineers' Dredge McFarland during its work in the Delaware River, one of those kills apparently being in May of 2014 when, according to original approvals, I believe the Army Corps should not even have been dredging because of biological windows prohibiting it.

- In May the MacFarland took a juvenile Atlantic Sturgeon about 16" long while dredging in the area of Tincum Island.
- On August 31, 2014 an Atlantic Sturgeon 1.87 meters (6 feet) long was taken -- it was observed to have bruising over its body, a cracked gill plate and crushed pectoral fin spine.
- On September 1, 2014 a third Atlantic Sturgeon was taken by the MacFarland, this time the sturgeon was .47 meters along, again with bruising over its body.

¹ Status of Atlantic Sturgeon, Prepared for the National Marine Fisheries Service, Feb. 23, 2007, updated July 27, 2007. (ASSRT 2007.)

With regards to the main channel deepening project and the Biological Opinion issued in 2014, while the allowable take granted by NMFS provides a general take limit of 12 from the New York Bight DPS over 10 years, of which the Delaware River population is a part, there are several references in the Biological Opinion that make clear the take of adult on August 31, as well as the significant number of takes in such a short period of time, were not anticipated. As a result, NMFS should immediately issue a stop work order and mandate the Army Corps reengage in consultation before the deepening project is allowed to continue.

- Despite the Biological Opinion asserting that “...the proposed action is likely to result in the mortality of a total of six Atlantic Sturgeon from the Gulf of Maine, New York Bight, Chesapeake Bay and South Atlantic DPSs during the initial deepening, inclusive of the mortality of three Atlantic Sturgeon during blasting and subsequent debris removal with a mechanical dredge ...”,² in just 5 months (May-Sept 2014) the initial deepening has already killed 3 Atlantic Sturgeon.
- While the Biological Opinion states “We expect that there will be no more than one mortality per year, except during the winter when blasting occurs...”,³ in just 5 months this year we have had three.
- The Biological Opinion states as a basis for its findings that “We expect that the Atlantic sturgeon killed will be YOY, juveniles and subadults. No mortality of any adults is anticipated.”⁴ And yet the Atlantic Sturgeon killed on August 31 is clearly, by its size, an adult, thus already proving wrong your Biological Opinion assumptions/expectations/predictions and mandating reconsideration.
- Repeatedly the Biological Opinion minimizes the impacts of the deepening project on the Atlantic Sturgeon by asserting that the total take will be “no more than 12 individuals over a 14 year period”⁵ of the New York Bight DPS, and yet in just 5 months this year ¼ of that anticipated amount has already been taken.

Given that, according to recent scientific research, it has been suggested that there may be a fall spawn of Atlantic Sturgeon in the Delaware in addition to the spring spawn, it would not be an acceptable response for either the National Marine Fisheries Service or the Army Corps to minimize the most recent adult take by asserting they were not impacting spawning adults and therefore the most recent takes are not of significant concern. Genetics from this individual will be of interest in a determination of the degree of concern. However, since the genetic reference database for the Delaware is entirely made up of spring spawn YOY and adults, this potential fall spawn individual will likely assign to the next closest system geographically instead of its true origin, the Delaware. Just as recent James River spring spawn adult sturgeon assigned back to the Delaware River, instead of the James since the James reference database is made up of fall spawn James individuals. Thus, this individual will likely falsely assign as a Hudson sturgeon and a false assumption will likely be made in regards to severity of this take based on the strength of the Hudson population versus the weak Delaware population. .

² National Marine Fisheries Service Endangered Species Act Biological Opinion, Deepening of the Delaware River Federal Navigation Channel, NER-2013-10520, Jan. 31, 2014, P. 187. (Deepening Biop)

³ Deepening Biop. P 187

⁴ Deepening Biop. P. 187

⁵ Deepening Biop, P. 194.

Immediate Action Needed With Regards to Salem Nuclear Generating Station and Atlantic Sturgeon Takes

It is also with shock and dismay that we learned about the July 17, 2014 Biological Opinion issued for the Salem Nuclear Generating Station which totally disregarded the Atlantic Sturgeon takes found on the intakes of the Salem Nuclear Generating Station in the first four months of 2014.

From January through April of 2014 we have found reports on at least the following 15 takes of Atlantic Sturgeon at Salem:

Date: 4/18/2014
Size: 67.3 cm Length 1.20 kg Weight
Deceased presumed⁶ Juvenile
Expert reviewer concluded cause of death unknown

Date: 4/9/2014
Size: 69.3 cm Length 1.30 kg Weight
Deceased presumed Juvenile
Expert reviewer concluded cause of death impingement

Date: 4/7/2014
Size: 70.2 cm Length, 1.48 kg Weight
Deceased presumed Juvenile
Expert reviewer concluded cause of death unknown

Date: 4/7/2014
Size: 70.2 cm 1.69 kg Weight
Alive presumed Juvenile

Date: 4/7/2014
Size: 67.6 cm Length 1.37 kg Weight
Alive presumed Juvenile

Date: 4/3/2014
Size: 63.0 cm Length 1.14 kg Weight
Alive presumed Juvenile (Damaged)

⁶ According to the Atlantic States Marine Fisheries Commission an Atlantic Sturgeon's life cycle can be determined by using the length-at-age table cited from asmfc.org below.

Life Interval	Age Range (years)	Fork Length (mm)	Total Length (mm)
Larvae	<0.08 < 30		
Juvenile	0.08-11	~20-1340	~30-1490
Non-spawning adults	> 12	> 1350	> 1500
Female spawners	> 15	> 1800	> 2000
Male spawners	12-20	> 1350-1900	> 1500-2100

Table 8-1. Age and size range of Atlantic sturgeon throughout their life cycle

Date: 3/27/2014
Size: 67.2 cm Length 1.35 kg Weight
Alive presumed Juvenile

Date: 3/31/2014
Size: 77.0 cm Length
Alive presumed juvenile

Date: 2/19/2014
Size: 68.4 cm Length 1.37 kg Weight
Deceased presumed Juvenile
Expert reviewer concluded cause of death as impingement

Date: 2/20/2014
Size: 66.4 cm Length 1.31 kg Weight
Deceased presumed Juvenile
Expert reviewer concluded cause of death as impingement

Date: 2/12/2014
Size: 70.2 cm Length
Alive presumed Juvenile

Date: 1/27/2014
Size: 64.7 cm Length
Alive presumed Juvenile

Date: 1/27/2014
Size: 66.0 cm Length
Alive presumed Juvenile

Date: 1/8/2014
Size: 62.2 cm Length 1.2 kg Weight
Alive presumed Juvenile

Date: 1/6/2014
Size: 61.1 cm Length 0.927 kg Weight
Deceased presumed Juvenile
Expert review concluded cause of death by impingement

This high volume of takes was not given any consideration in the July 17, 2014 Endangered Species Act Section 7 Consultation Biological Opinion given to the Nuclear Regulatory Commission for Continued Operation of the Salem and Hope Creek Nuclear Generating Stations.

According to the July Biological Opinion, Salem units 1 and 2 are allowed to impinge or collect:

- a total of 192 juveniles from the NY Bight DPS (of which the Atlantic Sturgeon are a part) on their trash bars -- 59 of which can be dead, with 16 of those being dead due to impingement; as well as an additional 300 on the traveling screens with 26 killed or injured there.

- Of these figures, the Biological Opinion allows for a take of 6 subadult or adults from the New York Bight DPS with 2 allowed to be killed by impingement at Salem.⁷

While these figures are shockingly high for a population that is so very low, the discovery of 15 Atlantic sturgeon in only 4 months on the intakes of the Salem units is clearly exceptional and above expectations when compared with previous years. In response, the National Marine Fisheries Service should immediately issue an order shutting down Salem until they have reengaged in consultation, a new biological opinion is issued, and the allowable continuing operation of Salem because of its impact on the Atlantic Sturgeon population of the Delaware River, a population recently designated as endangered, can be earnestly and honestly evaluated. Renewed consultation should include considering potential changes to Salem operations resulting in this increased take, considering changes in the Delaware River system that could be contributing to increasing the level of take by Salem thereby making clear on a fundamental level that alternative technologies are needed to respond to the situation, considering other operations such as the deepening project that could be the reason for the increased take of Atlantic Sturgeon by Salem.

In addition, the Biological Opinion issued for Salem operates under the false premise that the Salem Facility cannot operate in a way that modifies their cooling water intake systems – this in fact is not the case, PSEG could install closed cycle cooling operations which, according to state technical experts, would reduce their overall fish kills by over 95%, most certainly benefitting Atlantic Sturgeon along with other species. And so a renewed Endangered Species Act Consultation should consider the benefits of installing closed cycle cooling technology in order to protect the species.

In the northeast multispecies biological opinion there is anticipated lethal take from gillnet gear of 79 adults and bottom trawl of 21 adults from the New York Bight DPS annually. A small portion of those NYB DPS fish are of Delaware origin. Genetic results from off-shore northeast fisheries typically assign around 10% of NYB DPS to Delaware. Thus indicating around 10 Delaware adults are anticipated to be lethal take in those fisheries. Now consider vessel strike adults, of which there is no biological opinion with an occurrence in the Delaware River of 12.3 annually (2011-2013). Annually 10 adults from the Northeast multispecies bi-op are anticipated while at least 12 adults from vessel strikes as it is unknown how many additionally go unreported are lethal takes. Include natural mortality and it's easy to see why the Delaware adult population is less than 300. The mortality is too high for the population to even be sustained let alone to recover.. There is no room for error here with additional unexpected mortalities from dredging operations or cooling water intake operations.

It is with a heavy heart I write this letter. I urge you to take immediate action in order to ensure you are doing your utmost to protect this majestic species for present and future generations of people and children.

Respectfully,

⁷ Endangered Species Act Section 7 Consultation Biological Opinion given to the Nuclear Regulatory Commission for Continued Operation of the Salem and Hope Creek Nuclear Generating Stations NER-2010-6581, July 17, 2014, p. 190

Maya K. van Rossum

Maya K. van Rossum
the Delaware Riverkeeper

cc:

Army Corps of Engineers
Nuclear Regulatory Commission