



ENVIRONMENTAL LAW *and* POLICY CLINIC

Ryke Longest, Director • Michelle Nowlin, Supervising Attorney

Box 90360 • Durham, NC 27708-0360

Telephone: (919) 613-7169 • Toll Free: (888) 600-7274 • Fax: (919) 613-7262

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VIA ELECTRONIC & CERTIFIED MAIL

The Hon. Wilbur Ross
Secretary of Commerce
1401 Constitution Ave., N.W. Rm. 5516
Washington DC 202030
WLRoss@doc.gov

Lieutenant General Todd T. Semonite
Chief of Engineers
U.S. Army Corps of Engineers
441 G Street N.W.
Washington, DC 20314
Todd.t.semonite@usace.army.mil

**Re: 60-Day Notice of Intent to Sue for Violations of the Endangered Species Act
In Connection with the Corps' and NMFS' Consultation on Skiffes Creek
Project Impacts to Atlantic & Shortnose Sturgeon**

Dear Secretary Ross & General Semonite:

We write on behalf of the National Parks Conservation Association (NPCA) to provide you notice, pursuant to 16 U.S.C. 1540(g), of our intent to sue your respective agencies for violations of the Endangered Species Act (ESA) stemming from the proposed Surry-Skiffes Creek-Whealton Transmission Line Project (Skiffes Creek Project). Specifically, we write to notify the U.S. Army Corps of Engineers (USACE) and the National Marine Fisheries Service (NMFS) of the deficiencies and omissions in the concurrence letters issued to the USACE by NMFS (hereafter, the Agencies) on April 16, 2014, January 28, 2016, and February 22, 2018. Pursuant to section 7(d) of the ESA, the Agencies must ensure that all construction activities related to the project are halted until these deficiencies can be remedied in order to prevent the irreversible or

irretrievable commitment of resources that would foreclose the implementation of alternatives during the re-initiated consultation process. *See* 16 U.S.C. § 1536(d).

The Agencies' prior consultations failed to analyze or mitigate several major environmental impacts and failed to accurately characterize the range of juvenile sturgeon or evaluate potential impacts to this age cohort of the species. The prior consultations also failed even to acknowledge the presence of Shortnose Sturgeon in the action area, which have been documented at river kilometer 48 of the James River, just two kilometers away.¹ The action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." 50 CFR 402.02. The action area in this instance "constitutes the 23,867 feet of transmission line across the James River, all subtidal areas where direct, permanent impacts from installation will occur and where effects from pile driving will be experienced in the James River."²

Significant new information sufficient to trigger the requirement for re-consultation has arisen since the 2016 concurrence correspondence on each of these topics, in addition to the designation of critical habitat in the action area. *See* 50 CFR 402.16(b). While the agencies did initiate re-consultation on the critical habitat designation,³ they have inexplicably failed to address the documentation of juveniles⁴ and Shortnose Sturgeon⁵ in the project area, and as a consequence they have arbitrarily and capriciously failed to analyze the project's impacts in the proper legal context.

These violations of the ESA require two immediate agency actions: 1) re-initiation of consultation; and 2) a halt to project construction until potential impacts to ESA-protected species can be fully assessed and avoided pursuant to the process set forth in section 7 of the ESA and its implementing regulations. If the Agencies fail to halt construction activities until the completion of a full analysis of the issues explained in more detail below, such a failure

¹ Balazik, Matthew, "First verified occurrence of the Shortnose Sturgeon (*Acipenser brevirostrum*) in the James River, Virginia," *Fishery Bulletin* 115:196–200 (2017). Available at <https://www.st.nmfs.noaa.gov/spo/FishBull/1152/balazik.pdf> (last visited May 20, 2018); provided as Attachment A.

² Letter from Kimberly Damon-Randall, NMFS, to Randy Steffey, USACE, Re: NAO-2012-00080 Dominion Surry-Skiffes Creek-Whealton Transmission Line Project, at page 4. Stamped Received Jan 28, 2016.

³ Letter from Julia Crocker, NMFS, to Randy Steffey, USACE, Re: NAO-2012-00080 Dominion Surry-Skiffes Creek-Whealton Aerial Transmission Line Project Re-initiation Determination. Stamped Received Feb 22, 2018.

⁴ Spells, Albert J., U.S. Fish & Wildlife Service, *Atlantic Sturgeon Population Evaluation Utilizing a Fishery Dependent Reward Program in Virginia's Major Western Shore Tributaries to the Chesapeake Bay: An Atlantic Coastal Fisheries Cooperative Management Act Report for the National Marine Fisheries Service* (1998). Provided as Attachment B.

⁵ *Supra*, note 1.

would constitute an irreversible or irretrievable commitment of resources foreclosing implementation of reasonable alternatives, in clear violation of the law.⁶

Background – Atlantic Sturgeon in the James River

A genetically distinct population of Atlantic Sturgeon have spawned in the James River since long before the arrival of humans on its banks. When European settlers first sailed up the James River in the early 17th century, the sturgeon spawning in the river each year would have numbered in the tens of thousands. This ancient species, with an estimated 120 million-year history, can grow up to 14 feet long and weigh as much as 800 pounds.⁷ So plentiful were these giant fish that Captain John Smith wrote, “We had more sturgeon than could be devoured by dog and man.”⁸ And devour them the new settlers did. The Atlantic Sturgeon were essential to the survival and economy of the Jamestowne colony, and proved a critical food source for the colonists during the “starving time” winter of 1609-1610.⁹ Between 1600 and 1900, a combination of habitat destruction, overfishing, and pollution reduced the Atlantic Sturgeon to the brink of extirpation, where it remained for most of the 20th century.¹⁰

While a viable sturgeon population – considered to be “a remnant of the colonial population” – has returned to the James River during the past fifteen years, the species’ recovery remains precarious.¹¹ In addition to the causes listed above, vessel strikes are a prominent concern raised by this and other comparable construction projects.¹² A fishing moratorium for the species has

⁶ See 16 U.S.C. § 1536(d) (“After initiation of consultation . . . the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.”)

⁷ NOAA Fisheries, “Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*.” Available at <http://www.nmfs.noaa.gov/pr/species/fish/atlantic-sturgeon.html> (last visited May 18, 2018).

⁸ Smith, John, “The generall historie of Virginia, New England & the Summer Isles: together with The true travels, adventures and observations, and A sea grammar.” Published in *Capital and the Bay: Narratives of Washington and the Chesapeake Bay Region, 1600 to 1925*.

The Library of Congress, 1907, McMillan New York, available at <https://www.loc.gov/resource/lhbc0262a/?sp=222>. (Last visited May 17, 2018.)

⁹ Historic Jamestown Website, “Sturgeon,” <https://historicjamestowne.org/selected-artifacts/sturgeon-2/>. (Last visited May 17, 2018.)

¹⁰ Pipkin, Whitney, “Endangered Sturgeon’s Return to James River could be hurdle for industry” (Nov. 16, 2017). Available at https://www.bayjournal.com/article/endangered_sturgeons_return_to_james_river_could_be_hurdle_for_industry. (Last visited May 17, 2018.)

¹¹ Balazik, *et al.*, Changes in age composition and growth characteristics of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) over 400 years. *Biol. Lett.* 6, 708–710 (2010) (noting that the extant population is considered to be “a remnant of the colonial population”); NOAA Fisheries Service, *supra*, note 7.

¹² NOAA Fisheries Service, *supra*, note 7.

been in effect since 1998, and it has been protected as an endangered species under the ESA since 2010.¹³

Currently, the Chesapeake Bay Distinct Population Segment (DPS) is estimated to be “one to two orders of magnitude below historical levels.”¹⁴ Today the adult spawning population numbers approximately 300, while historical records indicate that as many as 20,000 females inhabited the Chesapeake before 1900.¹⁵ The juvenile population in the James River, in particular, has been slow to recover.¹⁶ While other Chesapeake spawning populations show signs of recovery, scientists maintain that “[i]f sturgeon are to be restored to the Chesapeake Bay, it will happen on the backs of the James River population.”^{17,18}



Caption: Researcher Matt Balazik of Virginia Commonwealth University holds a juvenile Atlantic Sturgeon captured on the James River. Kane, Patrick, “Rice Rivers researchers locate two juvenile Atlantic sturgeon.” Virginia Commonwealth University News (Nov 18, 2016).

The low ratio of juveniles to adults is an ominous sign for the future of the Chesapeake Bay DPS. Sturgeon can live for up to sixty years, and so a population of hardy adults may persist for

¹³ NOAA Fisheries, “Atlantic Sturgeon.” Available at <http://www.nmfs.noaa.gov/pr/species/fish/atlantic-sturgeon.html> (last visited May 17, 2018).

¹⁴ NOAA Fisheries Service, *supra*, note 11.

¹⁵ *Id.*

¹⁶ Blankenship, Karl, “Biologists Alarmed over lack of young sturgeon in surveys,” August 15, 2016. Available at https://www.bayjournal.com/article/biologists_alarmed_over_lack_of_young_atlantic_sturgeon_in_surveys.

¹⁷ Kim Damon-Randall, Mary Colligan and Julie Crocker, NOAA NER Protected Resourced Division, COMPOSITION OF ATLANTIC STURGEON IN RIVERS, ESTUARIES AND IN MARINE WATERS (February 2013). Available at https://www.greateratlantic.fisheries.noaa.gov/mediacenter/2013/05/composition_of_atlantic_sturgeon_in_rivers_percentages_by_dps_revised_feb_2013_v2.pdf. (Last visited May 17, 2018.)

¹⁸ “Virginia Researcher Works to Save Atlantic Sturgeon,” available at <http://latimesblogs.latimes.com/unleashed/2010/11/virginia-researcher-works-to-save-atlantic-sturgeon.html> (Nov. 15, 2010). (Last visited May 17, 2018.)

decades even as the population struggles to reproduce. Without robust reproduction—evidenced by high numbers of juveniles in conditions appropriate for healthy growth and survival into adulthood—the Chesapeake Bay DPS remains in danger of extinction.

Given the failure of the juvenile Atlantic Sturgeon population to recover to date, the status quo of the management of the James River is not sufficient to achieve the recovery of the Chesapeake Bay DPS. As the U.S. Fish and Wildlife Service has noted, “[i]t will take more than a moratorium to bring Atlantic Sturgeon back to the Chesapeake Bay. Habitat quality is crucial to the survival of the species.”¹⁹ We outline below the Agencies’ failure to fully evaluate the impacts on juvenile Atlantic Sturgeon, and their failure even to acknowledge potential impacts to Shortnose Sturgeon. Until the substantial adverse impacts to these endangered species are acknowledged, evaluated, and avoided, the Agencies’ actions cannot satisfy the explicit mandates of the ESA and its implementing regulations.

Background - Critical Habitat

On June 3, 2016, NMFS proposed designating a portion of the James River, from Boshers’ Dam to the Chesapeake Bay, as critical habitat for the Atlantic Sturgeon.²⁰ In its final decision, issued August 17, 2017, NMFS formally designated the James River as critical habitat, finding that it contains the “physical features essential to the conservation of the species and that may require special management considerations or protection.”²¹ The James River is home to one of two confirmed spawning populations of Atlantic Sturgeon in the Chesapeake Bay,²² and the river’s population may constitute up to 92 percent of the entire Chesapeake DPS.²³

In the formal designation, NMFS stated that four Physical Biological Features (PBFs) for Atlantic Sturgeon are:

- 1) Hard-bottom substrate in low salinity waters for spawning areas,
- 2) Downstream salinity gradient of 0.5-30 ppt and soft substrate downriver of spawning sites for juvenile foraging,
- 3) Water depths greater than 1.2 m absent of physical barriers to passage, and

¹⁹ U.S. FWS, Chesapeake Bay Field Office, “Atlantic Sturgeon (*acipenser oxyrinchus*).” Available at <https://www.fws.gov/chesapeakebay/sturgeon.html>. (Last visited May 17, 2018.)

²⁰ NMFS, Proposed Designation of Critical Habitat for the Gulf of Maine, New York Bight, and Chesapeake Bay Distinct Population Segments of Atlantic Sturgeon, 81 Fed. Reg. 35,701 (June 3, 2016).

²¹ NMFS, Designation of Critical Habitat for the Endangered New York Bight, Chesapeake Bay, Carolina and South Atlantic Distinct Population Segments of Atlantic Sturgeon and the Threatened Gulf of Maine Distinct Population Segment of Atlantic Sturgeon, 82 Fed. Reg. 39,160 (August 17, 2017).

²² Id.

²³ Damon-Randall (2013), *supra*, note 17, at 2.

- 4) Appropriate combination of DO levels and temperature to support survival and growth. For juvenile habitat, DO levels should be greater than 6 mg/L, and temperatures should be between 13-26 degrees Celsius.²⁴

Each of the PBFs for juveniles—appropriate salinity gradient, soft substrate, water depths, temperature and dissolved oxygen levels—are present at the location where the Skiffes Creek Project is proposed to cross the James River. NMFS has noted this fact in designating this section as critical habitat. These PBFs must be maintained if the species is to survive in the James River. Current gaps in the Agencies’ ESA analysis to date ensure that mitigation, as proposed,²⁵ will fail to alleviate impacts to endangered populations, as described below.

I. NMFS’ & USACE’s Failure to Consider Impacts to Juvenile Atlantic Sturgeon in their 2018 Re-Consultation is Arbitrary and Capricious, and Contrary to the ESA.

In its 2016 concurrence letter, NMFS acknowledged new research demonstrating that adult Atlantic Sturgeon make a fall, in addition to spring, spawning run.²⁶ In response to this new information, NMFS imposed a corresponding seasonal Time of Year Restrictions for “all work performed in deep water habitat within the action area in order to avoid Atlantic Sturgeon staging prior to their fall spawning run.”²⁷

However, the Agencies failed to consider additional new information documenting the year-round presence of *juvenile* sturgeon in the action area. Just as the Agencies must avoid interfering with the species’ spawning runs, they must also act to ensure that the resulting offspring are protected so that the species has a chance at recovery – which is, of course, the entire point of listing pursuant to the ESA and designation and protection of critical habitat. *See* 16 U.S.C. 1532(3) (explaining that “conservation” under the ESA “mean[s] to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary”). The Agencies must evaluate and impose corresponding restrictions to provide the documented juvenile population in the project area with protections comparable to those they have extended to adult sturgeon. To date, the Agencies have failed to do so, despite the best available commercial and scientific evidence indicating that the action area is home to a year-round nursery for a population of juveniles: “For this critical habitat designation, we consider nursery habitat to be habitat within the natal estuary used by natal juveniles.”²⁸

In the same 2016 letter, NMFS asserted “[w]e expect only subadult²⁹ and adult sturgeon in the action area.” This assertion is directly contradicted by a study—funded by NMFS itself—that

²⁴ Designation of Critical Habitat, *supra*, note 21.

²⁵ Specifically, the Agencies’ 2016 and 2018 consultation correspondence.

²⁶ Letter from Damon-Randall to Steffey, *supra*, note 2.

²⁷ *Id.* at 2.

²⁸ Designation of Critical Habitat, *supra*, note 21 at 82 FR 39,176.

²⁹ “We use ‘juvenile’ in reference to immature fish that have not emigrated from the natal river estuary, and we use the term ‘subadult’ for immature Atlantic sturgeon that have emigrated from

documented the presence of juvenile sturgeon at the mouth of Skiffes Creek, i.e., within the action area, since at least 1997.³⁰ That study documented 83 juvenile sturgeon at the mouth of Skiffes Creek, a location indisputably within the action area, and another 72 at Burwell Bay, immediately downstream of the action area. The 83 juvenile Atlantic Sturgeon documented at the mouth of Skiffes Creek, inside the action area, were the single largest cohort from any catch point in the study, at 30% of the total.³¹ If we include the Burwell Bay—directly adjacent to the action area—the percentage caught jumps to over 50%.³²

In its February 2018 concurrence letter, NMFS—without explanation—reversed its 2016 statement that no juveniles would be present in the action area, instead conceding that the action area “is expected to be used for opportunistic foraging by juveniles.” The agencies then made two general statements regarding the project impacts to juveniles:

- 1) An “extremely small amount of potential forage that will be lost” and;
- 2) “the area is not known to be a juvenile aggregation area.”³³

These statements are contradicted by the best available information. They also are irrelevant to the actual legal standard that applies under the ESA.

First, limiting the assessment of adverse impacts to lost forage area is an arbitrary and capricious failure to analyze the “effects of the action” as required by the ESA and its implementing regulations. 50 CFR 402.16(b). Why do the Agencies limit their consideration of adverse impact for juveniles to lost forage, when they considered a variety of impacts such as noise, turbidity, and propeller strikes for adults? In their 2016 consultation, the Agencies acknowledge

the natal river estuary.” NMFS, Greater Atlantic Regional Fisheries Office, Designation of Critical Habitat for the Gulf of Maine, New York Bight, and Chesapeake Bay Distinct Population Segments of Atlantic Sturgeon: ESA Section 4(b)(2) Impact Analysis and Biological Source Document with the Economic Analysis and Final Regulatory Flexibility Analysis (June 3, 2017), at p. 5, note 4. Available at <https://www.greateratlantic.fisheries.noaa.gov/regs/2017/August/17criticalhabitatdpssatlanticsturgeonfria.pdf> (last visited May 18, 2018). Juveniles, by contrast, remain in the oligo and mesohaline zones of their natal rivers until they reach subadult size, usually denoted as approximately 28-26 inches. (Others use the descriptors “early juveniles” and “late “juveniles” to make a similar distinction. *See, e.g.*, Bain, M.B., “Atlantic and shortnose sturgeons of the Hudson River: common and divergent life history attributes,” 48 *Environmental Biology of Fisheries*, pp. 347–358 (March, 1997)). Agencies also determined that Early Life Stage (ELS) sturgeon, i.e., those less than a year old, would be affected by project construction, maintenance and ship traffic, among other factors. Early Life Stage sturgeon are most commonly found in freshwater streams.

³⁰ Spells, *supra*, note 4.

³¹ *Id.*

³² *Id.* *See also* Atlantic Sturgeon Capture Location Summary Data_USFWS_James_RI_1997-1998 (courtesy of Albert J. Spells). Provided as Attachment C.

³³ Letter from Crocker to Steffey, *supra*, note 3, at page 1.

that “smaller individuals are more susceptible to [noise] effects,”³⁴ yet fail to analyze the impacts of noise on those smaller individuals. Given this capricious disregard of their own criteria, the Agencies’ failure to evaluate noise impacts on juveniles is neither legally nor biologically defensible.

Moreover, the Agencies fail to analyze their own critical habitat factors for juveniles. These include not just availability of forage but, as listed in NMFS’ Critical Habitat description, soft substrate, a certain salinity gradient, a particular range of dissolved oxygen levels, and certain depths of water.³⁵ The Agencies fail to analyze impacts to any of these factors in either their 2016 or 2018 concurrence letters, the only records to date of their consultation on adverse impacts to Atlantic Sturgeon. Such cursory treatment violates the ESA’s requirement that during consultation a Federal agency must request information from the Secretary when any species listed or proposed to be listed “may be present in the area of [a] proposed action.”³⁶ After required consultation, the Secretary “shall provide to the Federal agency and the applicant, if any, a written statement setting forth the Secretary’s opinion, and *a summary of the information on which the opinion is based*, detailing how the agency action affects the species or its critical habitat.”³⁷

Second, the agencies impose a test for the presence of the endangered species that is without support in the Act, the implementing regulations, or the scientific literature. In their 2018 consultation letter, the Agencies state that the “area” is not known to be a juvenile aggregation area, but the correct legal standard is whether juvenile sturgeon “may be present”³⁸ in the action area, not whether there is an “aggregation.” The presence of juveniles in the area is, in fact, well documented and must be addressed by agencies in consultation. To make “aggregation” the standard by which potential adverse harm is to be measured is without any foundation in “the best scientific and commercial data available,” and thus in violation of the ESA.³⁹ The absence of such an aggregation in the project area is not a determining factor.

Compounding the Agencies’ erroneous statement is the fact that there is no scientific evidence that juvenile sturgeon form “aggregations” the way adult sturgeon do prior to and during spawning runs. To suggest otherwise is fundamentally misleading, especially in the absence of scientific evidence and data. The Agencies’ baseless assertion fails to meet the requirements of 16 U.S.C. §1536(3)(A) to provide a summary of the information on which the Agencies’ opinion is based.

³⁴ Letter from Damon-Randall to Steffey, *supra*, note 2, at page 7.

³⁵ See Critical Habitat Designation, *supra*, note 21.

³⁶ See, e.g., U.S. Fish & Wildlife Service and National Marine Fisheries Service, Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act, 4-1 (March 1998) (“If an agency determines a proposed action “may affect” listed species or designated critical habitat, formal consultation is required”). Available at https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf.

³⁷ 16 U.S.C. §1536(3)(A) (emphasis added).

³⁸ *Id.*

³⁹ *Id.* § 1536(c)(1).

Had the Agencies meaningfully engaged with the publicly available scientific literature and data on where juvenile sturgeon are most commonly found in the James River, they would have found that the action area is in fact the site of the *largest* documented population of juvenile Atlantic Sturgeon on the James River. Moreover, that well-established documentation of the presence of juvenile Atlantic Sturgeon in the action area goes back at least two decades.

Juveniles commonly spend the winter in the lower estuary and swim upstream in the spring as water temperatures increase, suggesting that to the degree that there is a seasonal “aggregation” of juveniles in the action area, it likely occurs during *both* the winter and summer.⁴⁰ This general behavioral prediction is supported by the fact that juvenile sturgeon were caught immediately downstream of the action area during the winter months in 1997.⁴¹ Modelling further indicates that the meso-oligohaline portion of the James River is a summer refuge area that deserves special consideration for restoration.⁴² NMFS also indicated in its habitat designation that “Atlantic Sturgeon move between estuarine environments in the spring through fall, and can occur in estuarine environments during the winter as well.”⁴³

The 1997-1998 sampling documenting juvenile Atlantic Sturgeon in and around the action area was further corroborated by a later study in which 174 subadult and juvenile sturgeon were caught in Burwell or Cobham Bays, which bracket the action area, during February through May sampling periods in 2006 and 2007 (see Figure 1 below).⁴⁴ This study reaffirmed that “juveniles spend several years in fresh/brackish water before returning to the ocean.”⁴⁵ The figure below is taken from that paper with the action area approximated by the red line:

⁴⁰ Musick, JA, Essential Fish Habitat of Atlantic Sturgeon *Acipenser oxyrinchus* in the Southern Chesapeake Bay. VIMS Special Scientific Report #145, Final Report to NOAA/NMFS (2005), pp. 11-12. Available at <http://web.vims.edu/GreyLit/VIMS/ssr145.pdf> (last visited May 18, 2018). Provided as Attachment D.

⁴¹ Secor, D, Niklitschek E., Stevenson J., Gunderson, T., Minkinen S, Richardson B, Florence B, Mangold M, Skjeveland J, and Henderson-Arzapalo, A., Dispersal and growth of yearling Atlantic sturgeon, *Acipenser oxyrinchus*, released into Chesapeake Bay. Fishery Bulletin 98(4), pp. 800-810 (2000). Provided as Attachment E.

⁴² Niklitschek, EJ and Secor, D. Modeling Spatial and Temporal variation of suitable nursery habitats for Atlantic Sturgeon in the Chesapeake Bay. 64 Estuarine Coastal and Shelf Science, pp. 135-148 (2005).

⁴³ Proposed Designation of Critical Habitat, *supra*, note 20.

⁴⁴ Balazik, *et al.*, Age and Growth of Atlantic Sturgeon in the James River, Virginia, 1997–2011. Transactions of the Am. Fisheries Soc., 141:4, 1074-1080 (2012). Provided as Attachment F.

⁴⁵ Balazik, *et al.*, Using energy dispersive x-ray fluorescence microchemistry to infer migratory life history of Atlantic sturgeon. Environmental Biology of Fishes 95(2) (2012). *See also*

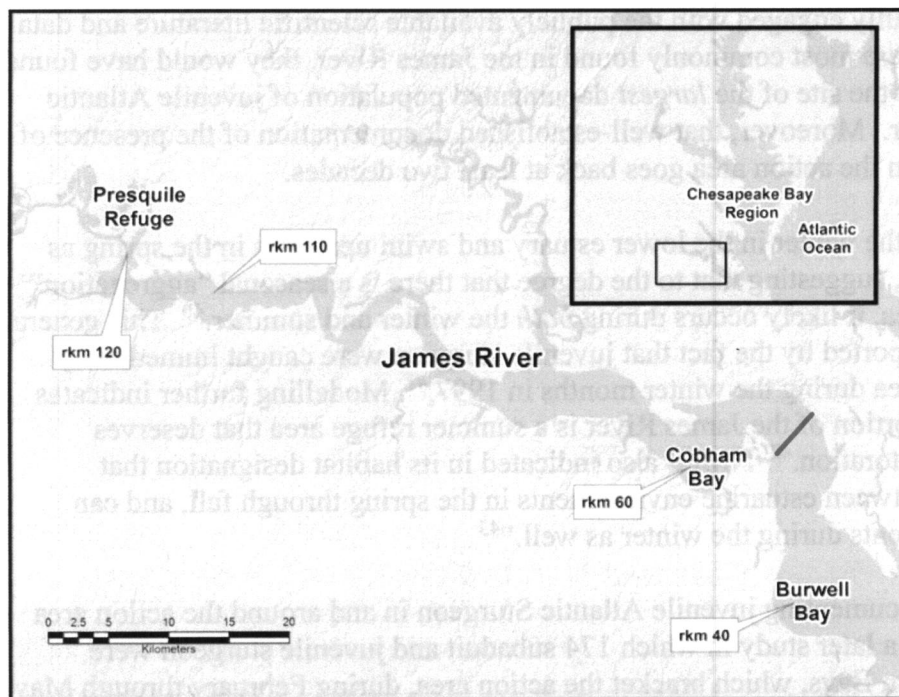


Figure 1.

Critical habitat descriptions indicate that the action area is well-suited for juvenile Atlantic Sturgeon, as the juvenile collection studies cited above prove. Research indicates that, as the juveniles mature, they move closer to the mouths of the estuaries into more saline environments. However, they do not enter marine waters until subadult stages, at which point they range widely up and down the Eastern seaboard.⁴⁶

For those crucial early years between Early Life Stage and subadult status, juvenile sturgeon do not pass primarily through the deep water channel of the James River used by adults for seasonal migration or out into the ocean, but live year-round in the salinity zone occupied by the project, which will be directly disturbed by the project's construction, operation, and maintenance.⁴⁷ Consultations to date between the Agencies fail to evaluate, much less attempt to mitigate, potential project impacts to juveniles living year-round in these shallow water areas on both sides of the main channel, where imminent summer construction activities (such as construction of the transmission towers) are scheduled to take place.

In short, both field sampling and literature review suggest that juveniles are most likely to be found in the action area during the summer and winter windows, a fact that NMFS acknowledged in designating critical habitat. The agency's failure to evaluate the project's impact in light of this critically important information is arbitrary, capricious, and in violation of the ESA.

⁴⁶ Musick, J.A., *supra*, note 40.

⁴⁷ NOAA's own James River depth charts demonstrate that congregation areas in Cobham and Burwell Bay average a depth of approximately 6 meters, compared to channel depths of 10-25 meters. http://www.charts.noaa.gov/BookletChart/12248_BookletChart.pdf.

NMFS emphasized that the critical habitat designation is intended to protect juvenile “rearing habitat.”⁴⁸ A primary objective of the final designation is to improve the ability of juveniles and subadults to find food for physical and reproductive growth. Construction and maintenance activities during the periods when juveniles are most likely to be present in the action area is incompatible with this stated goal. Moreover, the day-to-day impacts from the project’s operation – which include potential impacts from electromagnetic radiation, loud buzzing from the high-voltage wires, and disturbances from the night-time lighting of the towers – may also interfere and must be analyzed. These concerns are discussed in more detail in Section III, below.

The critical habitat designation highlights the overall need to prevent further destruction of bottom habitat and damage to water quality for juvenile survival. The designation proposal explicitly states that “in-water structures [...] can damage or destroy bottom habitat needed for spawning and rearing of juvenile[s]...and prevent juveniles from accessing the full range of salinity exposure in the natal estuary.”⁴⁹ It also highlights the threat that nutrient loading and sediment deposition from land development pose to the water quality essential to young sturgeon.⁵⁰

The Skiffes Creek transmission project will adversely alter critical habitat for juveniles and subadults—a fact that previous agency consultations regarding in-channel impacts to adult Atlantic Sturgeon do not capture or address in the manner required by the ESA. Along with potential environmental impacts for adult sturgeon, construction of the transmission line towers will also remove foraging habitat for juveniles. The fenders, which will extend 600 feet and stand the total depth of the river, may also block or hinder passage and destroy benthic habitat, especially if debris accumulates around the bottom of the fenders.

The time-of-year restrictions to protect the migrating adult sturgeon population from noise, vessel interactions, and sediment disturbance would not protect juveniles, which live in the area year-round.⁵¹ The Agencies must evaluate construction impacts specific to juvenile physiology and habitat to effectively mitigate these impacts from construction and maintenance year-round to prevent harm to this most threatened subset of the Atlantic Sturgeon population, which, as the most robust spawning population in the Chesapeake, constitutes the future of the entire distinct population segment, and which is crucial to this species’ prospects of recovering to the point of no longer needing ESA protections.

Finally, there is uncertainty regarding the abundance and range of the juvenile population of James River Atlantic Sturgeon. For the James River population, NMFS has stated that “fundamental knowledge gaps persist regarding population size and age structure, specific locations and extent of viable spawning habitat, sex ratios of spawning cohorts, natural mortality

⁴⁸ Designation of Critical Habitat, *supra*, note 21.

⁴⁹ Proposed Designation of Critical Habitat, *supra*, note 20.

⁵⁰ *Id.*

⁵¹ See Department of the Army Permit No. AO-2012-00080 / VMRC# 13-V0408. Available at http://www.nao.usace.army.mil/Portals/31/docs/regulatory/Skiffes/SIGNED_PERMIT_NAO-2012-00080_13-V0408.pdf.

and growth rates of early life stages, timing and pathways of larval and juvenile stage migrations, and habitat and environmental requirements.”⁵²

These “fundamental knowledge gaps” compel the Agencies to complete a more robust analysis and exercise more caution regarding the project’s impacts on juvenile sturgeon, especially under the ESA’s legal framework, which gives the benefit of the doubt to listed species facing the threat of extinction. In determining the significance of any impact, an agency should consider “the degree to which the possible effects on the human environment are highly uncertain[.]”⁵³ Indeed, courts have held that “uncertainty concerning the effects of important aspects of the proposed action on the [species] preclude[s] a ‘finding’ that the effects of the proposed action ... would not be significant[.]”⁵⁴ In light of the Congressional intent in the ESA to “afford endangered species the highest of priorities,” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 194 (1978), the appropriate response to a lack of evidence is an “institutionalization of caution,” not cavalier action by the Agencies of the kind taken here.

II. The Agencies Arbitrarily and Capriciously Failed to Analyze the Documented Presence of Shortnose Sturgeon During Consultation as Required by the ESA.

The 2018 consultation fails to address another intervening event in the James River that triggers the requirement for consultation: the first contemporary documentation of Shortnose Sturgeon in the James River in 2016.⁵⁵ NMFS’ failure to reinstate consultation at that time, or to address this significant new information in the 2018 consultation, was arbitrary and capricious and not in accordance with law.

On March 13, 2016, a Shortnose Sturgeon was found in the James River near kilometer 48, immediately upstream from Jamestown Island. It was the first ever verified in the river, and the first of its species documented in the Chesapeake Bay outside of the Potomac River.⁵⁶ On

⁵² NMFS, Draft Environmental Assessment of The Effects of Issuing an Incidental Take Permit (No. XXX) to Virginia Electric and Power Company, Doing Business as Dominion Virginia Power, for Incidental Take of Atlantic Sturgeon Distinct Population Segments in the Tidal Freshwater Portion of the James River from the Operation and Maintenance of Chesterfield Power Station (July 2017), available at <https://www.fisheries.noaa.gov/action/incidental-take-permit-virginia-electric-and-power-company-dba-dominion-virginia-power> (last visited May 18, 2018); *referenced in* NMFS, Notice of availability; request for public comments, 82 Fed. Reg. 37,849 (Aug. 14, 2017).

⁵³ 40 C.F.R. § 1508.27(b)(5).

⁵⁴ *Sierra Club v. Norton*, 207 F. Supp. 2d 1310, 1331, 1334 (S.D. Ala. 2002) (also noting that “it would seem that any alleged ‘finding’ that the project will not significantly affect the species is the purest sophistry”); see also *Nat’l Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, 731-32 (9th Cir. 2001) (finding that “[p]reparation of an EIS is mandated where uncertainty may be resolved by further collection of data” and that “[t]he purpose of an EIS is to obviate the need to speculation by insuring that available data are gathered and analyzed prior to implementation of the proposed action”) (internal quotations omitted).

⁵⁵ Balazik, *supra*, note 1.

⁵⁶ *Id.*

February 10, 2018, a gravid female Shortnose Sturgeon was caught, indicating a potential spawning population in the watershed.⁵⁷

Agency consultation to date does not acknowledge the presence of Shortnose Sturgeon in the James, much less analyze potential adverse impacts to this endangered species. The Shortnose Sturgeon has been protected under the ESA since 1967. While Shortnose Sturgeon have been previously reported in the Chesapeake Bay, scientific understanding of their behavior in the Bay is limited due to their small population size.⁵⁸ The presence of the Shortnose Sturgeon requires an analysis of the potential impacts on this exceptionally vulnerable and critically endangered population whose presence has been documented in close proximity to the action area. Because NMFS and the Corps have not consulted regarding the impacts of this project to Shortnose Sturgeon—nor has NMFS considered whether, and under what terms and conditions, to authorize incidental take of Shortnose Sturgeon in connection with this project—re-initiation of consultation is required to address these key issues.

III. NMFS Should Have Performed Consultation Pursuant to Section 7 Regarding Cumulative Impacts from the Proposed Skiffes Creek Project Construction and Maintenance on Atlantic Sturgeon.

The 2016 NMFS consultation briefly addressed several potential threats to the Atlantic Sturgeon from the Skiffes Creek Project, including damaging noise during construction, increased turbidity during construction, the obliteration of 2,712 square feet of foraging grounds for tower foundations and fender barriers, and the increase of boat traffic.⁵⁹ The 2018 re-consultation focused exclusively on the newly designated critical habitat and acknowledged the potential impacts to Physical Biological Features 2, 3, and 4 (the ideal salinity gradient, soft-bottom substrate for foraging, water depth, continuous water flow, temperature, and dissolved oxygen).

However, the re-consultations in 2016 and 2018 failed to consider a number of related impacts that would result in further habitat degradation. These include:

- 1) Impacts of removal of on-land vegetation to sediment and nutrient loading in the river, and the impacts of pesticide use for maintaining a “Right of Way” passage.⁶⁰ The method of non-wetland vegetation removal for the Skiffes Creek project remains undocumented,⁶¹ allowing for the likelihood of associated impacts to water quality.

⁵⁷ James River Sturgeon community page.

<https://www.facebook.com/JamesRiverSturgeon/photos/a.521106874619274.1073741826.457732000956762/1678024442260839/?type=3&theater>. (Last visited May 18, 2018.)

⁵⁸ Balazik, *supra*, note 1.

⁵⁹ Damon-Randall, *supra*, note 2.

⁶⁰ See International Finance Corporation, “Environmental, Health, and Safety Guidelines for Electric Power Transmission and Distribution.” 2007. Available at <https://www.ifc.org/wps/wcm/connect/66b56e00488657eeb36af36a6515bb18/Final+-+Electric+Transmission+and+Distribution.pdf?MOD=AJPERES>.

⁶¹ See Department of the Army Permit No. AO-2012-00080/VMRC# 13-V0408, *supra*, note 50.

- 2) Impacts to fish behavior from the electromagnetic fields emitted by high-voltage transmission lines.⁶² Sturgeon have electro-sensitive tissues that they use to seek prey,⁶³ but the agency has conducted no analysis to determine whether the induced electric current in the proposed transmission lines will be great enough to alter essential biological behaviors necessary for foraging success.
- 3) Increased predation and bycatch. Structural pilings have been found to attract a variety of fish,^{64, 65} which may increase fish predation, human fishing activity and, by extension, bycatch of Atlantic Sturgeon. Predation is a cause of mortality of particular concern for juvenile sturgeon.
- 4) Regular maintenance of transmission lines. Impacts from recurring boat and equipment passage associated with regular maintenance activities could be consequential.
- 5) Vessel strikes, which may increase as a result of construction, maintenance, and fishing activity. NMFS addressed this potential impact in its 2016 consultation, but its finding of no impact was supported by only one study, which estimated that very few sturgeon would be killed in association with the construction of the Tappan Zee bridge over the Hudson River. This study has since been contradicted by the evidence. Rather than the two sturgeon deaths per year the cited study predicted, 78 sturgeon deaths were documented during the first two years of Tappan Zee construction, many of which were killed by vessel propellers.⁶⁶ Accordingly, the impacts from vessel strikes were significantly underestimated in the one paper NMFS relied on for its no-impact conclusion. NMFS' reliance on these grossly inadequate projections rather than the actual results is an improper, misleading, and capricious disregard of the evidence, and an abuse of discretion. NMFS' conclusion is thus unsupported by the best available scientific evidence.

⁶² See International Finance Corporation, *supra*, note 59.

⁶³ See, e.g., Bevelhimer, M.S., G. F. Cada, A. M. Fortner, P. E. Schweizer, and K. Riemer, Behavioral Responses of Representative Freshwater Fish Species to Electromagnetic Fields. *Transactions of the American Fisheries Society* 142(3):802-813 (2013). Provided as Attachment G. While this paper focuses on Lake Sturgeon, as opposed to Atlantic Sturgeon, both species use electroreceptors, located on their heads, for feeding, mating and migration. Changes in local electromagnetic fields may affect those essential behaviors.

⁶⁴ Able, KW, Manderson, JP, and Studholme, AL, The Distribution of Shallow Water Juvenile Fishes in an Urban Estuary: The Effects of Manmade Structures in the Lower Hudson River. *Coastal and Estuarine Research Federation. Estuaries*, Vol. 21, No. 4, Part B (Dec., 1998), pp. 731-744. Available at <http://www.jstor.org/stable/1353277>.

⁶⁵ Madejczyk, JC, Mundahl ND, and Lehtinen RM. 1998. Fish Assemblages of Natural and Artificial Habitats within the Channel Border of the Upper Mississippi River. *The American Midland Naturalist*. <http://www.jstor.org/stable/2426687>

⁶⁶ Woods, L., Tappan Zee bridge build puts sturgeon under stress, *Hudson Valley One* (August 22, 2016). Available at <https://hudsonvalleyone.com/2016/08/22/tappan-zee-bridge-build-puts-sturgeon-under-stress/>. Included as Attachment H.

- 6) Deteriorating water quality. The current water quality in the action area is already poor and requires restoration. In the Virginia Department of Environmental Quality's 2016 305(b)/303(d) Water Quality Assessment, the James River Skiffes Creek Watershed, which flows into the action area, had 12 violations of water quality standards in the following indicators: PCB levels in fish tissue, concentrations of chlorophyll-a, estuarine bioassessments, and abundance of aquatic plants (macrophytes).⁶⁷ It is also in the same area as two Virginia Pollutant Discharge Elimination System permit sites, a solid waste permit site, and near a 300,000 sq-ft dredging site for water intake for the Surry nuclear power plant.^{68,69} The degraded nature of this habitat is such that any additional development in the area will add stress onto the species, further hindering its recovery.
- 7) Cumulative Impacts. The previous consultations have failed to address cumulative impacts, despite the fact that the first Project Design Criteria for developing projects in Atlantic Sturgeon critical habitat states that, "No work will individually *or cumulatively* have an adverse effect on ESA-listed species or designated critical habitat; no work will cause adverse modification or destruction to proposed critical habitat."⁷⁰ As described above, pesticide use, electromagnetic fields, bycatch & predation, maintenance activity and vessel strikes all fall under this criteria and require analysis and avoidance.

In sum, the agencies must address all of the factors enumerated above to avoid harm, consistent with the legal standards set forth in the ESA and its regulations.

REMEDY: The Agencies Must Halt Project Construction until Adverse Impacts Listed Above Can Be Addressed and, Where Necessary, Avoided, as the ESA Requires.

The best available scientific evidence demonstrates that juvenile Atlantic Sturgeon inhabit the action area, as well as areas immediately upstream and downstream of the action area. Consequently, the agencies must address this evidence and thoroughly evaluate potential impacts to ensure that vulnerable juvenile populations of Atlantic Sturgeon will be protected, consistent with the ESA and its implementing regulations.

Moreover, such evidence, like the evidence of an adult spawning run through the action area, mandates a ban on construction during the juvenile's known residence time in the action area—which as indicated above, is year-round and appears to be concentrated during the summer and winter periods. *See* 16 U.S.C. 1536(d) ("...Federal agency and the permit or license applicant

⁶⁷ Virginia Department of Environmental Quality, Draft 2016 305(b)/303(d) Water Quality Assessment Integrated Report, 2016.

⁶⁸ Map: "WIMBY." http://www.deq.virginia.gov/mapper_ext/?service=public/wimby.

⁶⁹ Army Corp of Engineers, NAO-2016-1202(DMMA) NAO-2008-01451 (Maintenance Dredging) (2018). Available at <http://www.nao.usace.army.mil/Media/Public-Notices/Article/1419494/nao-2016-1202dmma-nao-2008-01451-maintenance-dredging/>.


⁷⁰ U.S. Army Corps of Engineers Proposed Procedures and Criteria for Permitting Projects Under a Programmatic Determination of Not Likely to Adversely Affect Select Listed Species or Critical Habitat in the North Atlantic District (NAD) (2017 LNAA Program), p. 7. Available at https://www.greateratlantic.fisheries.noaa.gov/protected/section7/2017_nlaa_program_ba.pdf (last visited May 18, 2018).

shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation of any reasonable and prudent alternative measures...”). To allow construction to proceed at this time would be exactly the kind of commitment of resources which would foreclose the implementation of other alternatives, in express violation of the ESA.


The agencies must evaluate and mitigate the direct, indirect, and cumulative impacts of the project on Atlantic Sturgeon critical habitat, juvenile Atlantic Sturgeon, and Shortnose Sturgeon. Until this consultation process is completed, project construction must be halted to prevent potential harm to the two endangered sturgeon species present in the action area within the James River.

Thank you for your prompt attention to this matter. Please let us know if you would like to set up a conference call to discuss this matter by telephone.

Sincerely,



Michelle Nowlin, Clinical Professor of Law



Will Scott, Clinical Legal Fellow

cc:

Chris Oliver, NMFS, Chris.Oliver@noaa.gov

Chris Vaccaro, NMFS/PRD, Christine.Vaccaro@noaa.gov

Kimberly Damon-Randall, NMFS, Kimberly.Damon-Randall@noaa.gov

Christine Conrad, Stantec, Christine.conrad@stantec.com

Courtney Fisher, Stantec, Courtney.r.Fisher@dom.com

Randall Steffey, USACE, Randy.L.Steffey@usace.army.mil