

APPENDIX F: SECTION 7 COORDINATION LETTERS



United States Department of the Interior

NATIONAL PARK SERVICE

National Mall and Memorial Parks
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Washington, D.C. 20024-2000



February 23, 2023

Ms. Jennifer Anderson
Protected Resources Division
NOAA Fisheries
Greater Atlantic Region Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

Subject: NPS Section 7 Determination for Listed Sturgeon and Designated Critical Habitat in the Potomac River for Construction to Rehabilitate Tidal Basin and West Potomac Park Seawalls

Dear Ms. Anderson:

The National Park Service (NPS) is rehabilitating portions of the Tidal Basin seawall and the entire West Potomac Park seawall which includes approximately 6,800 linear feet of seawall that is administered by the NPS through National Mall and Memorial Parks (Park) and located in the District of Columbia (Attachments A & B).

NPS is initiating informal Section 7 Endangered Species Act (ESA), 1973, as amended, consultation for the proposed seawall rehabilitation project along the Potomac River (~4,600 linear feet) where two species of sturgeon may be present: federally endangered shortnose sturgeon (*Acipenser brevirostrum*) and the endangered Chesapeake Bay, New York Bight, Carolina, and South Atlantic distinct population segment, and threatened Gulf of Maine distinct population segment of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and designated critical habitat within the action area (Attachment C). This letter is to request Endangered Species Act (ESA) concurrence from your office with the NPS determination. We determined that the proposed activity may affect but is not likely to adversely affect the listed species or destroy or adversely modify designated critical habitat. Additional detail is provided below.

PROPOSED ACTION

The purpose of the proposed action is to restore the historic functional height of the seawalls, improve the historic cultural landscape and visitor experience along the shorelines, minimize soil erosion and safety hazards, and provide some flood protection. The proposed action is primarily needed because the existing structural deficiencies of the seawalls negatively impacts the experience and safety of park visitors and drowns and destroys vegetation, which affect the cultural landscapes.

In the years since their construction, the seawalls have significantly settled and in some areas, collapsed into the Potomac River, leading to overtopping of the seawalls in some sections twice daily during normal tidal conditions which erodes the shoreline and introduces sediments into the river. This leads to localized degradation of water quality and can modify existing benthic conditions. This has also led to reduced public access, damage to historic cultural landscapes and Park infrastructure, resulting in negative impacts

INTERIOR REGION 1 • NORTH ATLANTIC-APPALACHIAN

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS,
NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, VERMONT,
VIRGINIA, WEST VIRGINIA

to visitor use and experience. When the water does recede, the overtopped areas are littered with large woody debris and other trash from the river that often collides with and damages the seawalls, causing further failure. The failing seawalls, standing water, and debris are concerns for visitor safety. The Tidal Basin and West Potomac Park experience large numbers of visitors every day of the year with peak visitation during the spring with the blooming of the cherry blossoms in March or April. The current condition of the seawalls affect visitor use and experience since the pedestrian walkways in many areas have degraded creating trip and fall hazards, are inaccessible due to standing water and mud, and debris left behind from daily flooding. Significant cost is expended by the NPS staff to remove the debris load after overtopping flood events.

The NPS proposes to rebuild and elevate the seawalls to re-establish the historic functional height of the walls in such a way as to provide for a sustainable solution that expands the lifecycle of the seawalls and allow future extensions of the wall to respond to changing climate patterns, including storms of greater intensity and frequency. The proposed action would help keep these areas from flooding during normal tidal events, minor flood stage events, and would help prevent continued loss of wall material. The existing masonry seawall would be partially demolished, and a new wall would be constructed along the historic alignment. The stone from the historic wall would be salvaged and reused in construction of the new walls to the maximum extent practicable. Finally, the existing landscaping adjacent to each of the seawall systems would be rehabilitated. Repairs to the surrounding infrastructure may include grading, stormwater control, pedestrian/multi-use paths, curbing, and replacement in-kind of any construction damage to the landscape and trees.

To rehabilitate the seawall and replace the existing sidewalk, some required work may be staged from the Potomac River along West Potomac Park between Arlington Memorial Bridge and the Tidal Basin Inlet Bridge. A temporary cofferdam would be installed in the river, at a maximum of 25 feet from the existing seawall. The structure of the cofferdam consists of sheet piles vibrated into the river bottom using a vibratory crane rig. The cofferdam would be installed in sections, rather than along the entire length of the seawall, which would limit the occupation of the shallow edge of the river at any given time. Turbidity curtains would be used during the cofferdam installation/removal to contain disturbed river bottom sediments within the construction area.

Following the cofferdam installation, the area inside the cofferdam would be dewatered so that work on the seawall can occur in protected conditions. This also allows for the existing seawall and foundation to be partially removed in a controlled environmental setting without introducing additional sediment into the river. Water removed from inside the cofferdam would be treated in tanks, cofferdam cells, or passed through a filter bag to reduce sediment before discharging the water back to the river. Dewatering a small portion of the river adjacent to the seawall by installing the cofferdam in sections would minimize the potential for a large sediment release into the river should a section of wall fail during construction activities, or a large flood event.

Return water from the dewatering process would be filtered or decanted to remove sediments per DOE recommendations. All discharge, erosion, and sediment control practices would be reviewed and approved by DOE and the NPS prior to implementation. All necessary permits and authorizations would be obtained, including, but not limited to, DC Water Temporary Discharge Authorization, Section 401 of the Clean Water Act water quality certification, Section 404 of the Clean Water Act authorization for the discharge of dredged or fill material into waters of the United States, DOE stormwater management plan authorization, and NPDES permit coverage for stormwater discharges under the EPA Construction General permit.

The cofferdam and turbidity curtains would affect at a maximum 25 feet of Potomac River adjacent to seawall out of the entire 1,900 feet of the river width, or 1.3% of the river width. During the construction process, construction barges and support vessels would operate in an area approximately 200 feet riverward of the cofferdam to facilitate installation and removal of the cofferdam and turbidity curtains.

This area of the river already receives other vessel traffic, but the construction barges and support vessels would not impede current traffic patterns. Barges operating outside the cofferdam would be anchored or spudded down during construction activities. The localized increase in suspended sediments would be temporary and minor, and therefore insignificant.

Based on 2018-2022 DOEE survey data, no submerged aquatic vegetation (SAV) is anticipated to be present within the action area. The proposed action would not cause additional shading or increased sediment loads on top of potential SAV beds and would not result in increased boat traffic that could negatively affect water clarity or cause propeller scarring of potential SAV beds. No short- or long-term adverse effects to potential SAV are anticipated.

All other work involving the construction of the seawall and associated sidewalks would be done from land to the extent practicable and would remain in the existing footprint of the current seawall system.

Project Schedule

Construction is anticipated to start Q4 of 2024 and last for approximately 3 years. The contractor would be allowed to work 24 hours a day, 7 days a week.

Conservation Measures

To avoid or minimize potential issues from cofferdam installation and related noise, NPS would implement the following best management practices during the construction of the cofferdam:

- Deploy and maintain turbidity curtains outside of the cofferdam during installation/removal.
- Monitor the effectiveness of turbidity controls.
- Water removed from inside the cofferdam would be treated in tanks, cofferdam cells, or passed through a filter bag to reduce sediment before discharging the water back to the river. Use of vibratory hammer in lieu of an impact hammer to install and remove sheet piles.
- Soft start – During a soft start lower vibratory hammer energy levels would be used to start the pile driving process, and then the force of pile driving is gradually increased. This process allows endangered sturgeon (adults, subadults, and juveniles) in the area to be alerted that work is beginning and gives them an opportunity to clear the area.

DESCRIPTION OF THE ACTION AREA

The action area is defined under ESA 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 for the Rehabilitate Tidal Basin and West Potomac Park Seawalls project includes the project footprint along the shoreline of the Potomac River between Arlington Memorial Bridge and the Tidal Basin Inlet Bridge, and all underwater areas where ESA-listed species under the jurisdiction of National Marine Fisheries Service (NMFS) may be exposed to the effects of the action, such as installation of cofferdams, increased noise, increased turbidity, and all routes travelled by the project vessels (see Attachment B).

The installation of the cofferdams and the dewatering within would directly impact the critical habitat of these species. The cofferdam would be located at a maximum of 25 feet from the shore and may be built in sections along the length of the project. These sections would be determined by the contractor based on weather, schedule, production rates, and dewatering considerations. The total area of Potomac River bottom that would be contained within a cofferdam and dewatered during construction activities is 2.9 acres. If the cofferdam is installed in sections, only a portion of the area would be dewatered at one time, and the sectional cofferdam would be installed and removed as seawall rehabilitation progresses incrementally. Actions within the cofferdam would include removal of those stones that have fallen off the seawall, removal of overburden to expose the existing seawall, and repair/rehabilitation the existing seawall to current standards.

Habitat found immediately adjacent to the seawalls usually consists of soft bottom habitats include environments where the bottom consists of fine grain sediments, sand and mud, with occasional clusters of SAV. Per DOEE survey data, no SAV has been documented in the action area since 2017.

Atlantic sturgeon spawning may occur in the Potomac River. Kynard et al. 2007, 2009 found that shortnose sturgeon used the area between Little Falls dam and Chain Bridge for spawning. Endangered sturgeon adult, sub-adult, and juvenile stages in the action area may be migrating in the deep channel or foraging. Early life stages such as eggs and larvae and are expected in in a transient fashion during March and April (Kynard et al. 2007, 2009). While low salinity levels are suitable for spawning within the immediate project area, spawning occurs further upstream where substrate materials (i.e., fast-flowing portions of the river with rocky bottoms) are more suitable.

NMFS LISTED SPECIES (AND CRITICAL HABITAT) IN THE ACTION AREA

The federally listed endangered shortnose sturgeon and all five of the Distinct Population Segments (DPS) of the Atlantic sturgeon have been identified as potentially occurring in the Potomac River within the action area. Atlantic sturgeon originating from the New York Bight, Chesapeake Bay, South Atlantic, and Carolina DPSs are listed as endangered; the Gulf of Maine DPS is listed as threatened. Shortnose sturgeon are listed as endangered throughout their range. Critical habitat for shortnose sturgeon has not been designated. In addition, the life stages of shortnose and Atlantic sturgeon present in the Potomac River near the District of Columbia, include adults, sub-adults, and potentially juveniles.

In a final rule published in the Federal Register on August 17, 2017, NMFS designated this portion of the Potomac River as critical habitat for the Chesapeake Bay DPS of the Atlantic sturgeon under the ESA of 1973, as amended. Atlantic sturgeon critical habitat consists of four physical or biological features:

1. Hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters (i.e., 0.0-0.5 ppt range) for settlement of fertilized eggs, refuge, growth, and development of early life stages;
2. Aquatic habitat with a gradual downstream salinity gradient of 0.5 up to as high as 30 ppt and soft substrate (e.g., sand, mud) between the river mouth and spawning sites for juvenile foraging and physiological development;
3. Water of appropriate depth and absent physical barriers to passage (e.g., locks, dams, thermal plumes, turbidity, sound, reservoirs, gear, etc.) between the river mouth and spawning sites necessary to support: Unimpeded movements of adults to and from spawning sites; seasonal and physiologically dependent movement of juvenile sturgeon to appropriate salinity zones within the river estuary, and staging, resting, or holding of subadults or spawning condition adults. Water depths in main river channels must also be deep enough (e.g., at least 1.2 m) to ensure continuous flow in the main channel at all times when **any sturgeon life stage** would be in the river, and
4. Water, between the river mouth and spawning sites, especially in the bottom meter of the water column, with the temperature, salinity, and oxygen values that, combined, support: Spawning; annual and interannual adult, subadult, larval, and juvenile survival; and larval, juvenile, and subadult growth, development, and recruitment (e.g., 13 °C to 26 °C for spawning habitat and no more than 30 °C for juvenile rearing habitat, and 6 mg/L or greater DO for juvenile rearing habitat).

The first feature is not present in the action area because hard bottom substrates are not present. The second feature is present in the action area because although only freshwater (0 to <0.5 ppt) is present, soft substrates are present and could provide suitable foraging habitat. The third and fourth features are present within the action area with suitable salinities, depths, passage, temperatures, and oxygen values to support the survival and unimpeded passage of subadult and adult Atlantic sturgeon. The distribution of Atlantic sturgeon is strongly associated with prey availability in areas where suitable forage (e.g., benthic

invertebrates) and habitat conditions are present. Per DOEE survey data, no SAV has been present in last 5 years in the action area. While Atlantic sturgeon and shortnose sturgeon are bottom feeders, they use both deep water and shallow water habitats at various points throughout their life cycle, including tidally influenced mud and sandflats, as well as mixed cobble substrates which are present within the action area (NOAA 2022).

EFFECTS DETERMINATION

Potential effects of this project to Atlantic and shortnose sturgeon may include temporary effects to habitat from in-water construction, temporary shading from spud barges, temporary increases in suspended sediments, vessel interactions with construction barges and boats, and exposure to underwater noise. Each potential effect is described in further detail below.

In-Water Construction Effects on Sturgeon

Habitat Modification – The presence of cofferdams, turbidity curtains, and construction barges may affect availability of foraging habitat and migration patterns within a maximum 25-foot-wide section of the Potomac River (from the seawall) out of the entire 1,900 feet of the river width, or 1.3% of the river width (Attachment B). Existing adjacent unconsolidated soft bottom habitat in the Potomac River and the unrestricted passage for a majority of the Potomac River width, including the deeper more preferred channels mid-river, would provide available foraging and migration during construction.

SAV and shellfish beds are not present within the vicinity of the proposed action; however, the soft bottom within the action area may provide some limited opportunistic foraging habitat for benthic prey such as mollusks and crustaceans like amphipods.

Cofferdam installation and removal may temporarily disturb bottom sediments that sturgeon use to forage. Prey animals are expected to recolonize after the project ends. Installed cofferdam and turbidity curtains would block passage within 25 feet of the seawall temporarily during construction. Water depths in the work area range from 0 feet to approximately 5 feet depending on location.

Construction barge presence and movement may also deter sturgeon from accessing foraging areas and may temporarily create impediments to migration, although they typically move in deeper channels. The barges would temporarily increase shading of shallow water habitat while they are in place. This shading may temporarily impair foraging habitat for prey dependent on light, but sturgeon are benthic feeders and capture prey by touch. The area of shading is insignificant compared to available shallow water habitat available in the action area. Following the removal of the barges, natural lighting conditions would be restored, and benthic communities would quickly recolonize the affected seabed areas.

Sturgeon are highly mobile and could leave the area project site to find food resources throughout the action area. The area that would be temporarily impacted is expected to recover quickly as the benthic communities re-establish. Recolonization of the substrate by benthos is expected to be facilitated by the presence of adjacent undisturbed sediments, and thus, should occur within several months following project activities. Therefore, indirect impacts to the sturgeon would be minimal.

This temporary displacement of potential opportunistic foraging habitat in localized areas within the site represents an extremely small area when considering the extent of higher quality foraging habitat that is available within the action area. Therefore, the temporary effects of habitat modification would be too small to be meaningfully measured or detected and are, therefore, insignificant.

The use of barges may temporarily impact benthic habitat through the setting of spud anchors and through shading of the river bottom. Setting of spuds would directly impact small areas of river bottom and may temporarily impact water quality in the immediate area of the barges with briefly increased bursts of turbidity as the spuds are set or pulled (see analysis below). Given the width of the river compared to the dimensions of bottom impacted by spuds, the effect on benthic habitat would be insignificant. Because

there is no SAV within the action area, impacts due to shading of benthic habitat would be insignificant as well.

Turbidity - Using cofferdams and dewatering a small portion of the river adjacent to the seawall would minimize the potential for a large sediment release into the river should a section of wall fail during construction activities. Installing and removing the cofferdam may increase turbidity temporarily. In addition, a turbidity curtain would be installed during cofferdam installation and removal adjacent to each work area to minimize turbidity leaving the work zone. Spudding of barges may also increase turbidity, but there is no available study data specific to this increase in turbidity. An estimate for turbidity generated from spudding in connection with this project may be derived from studies on the increases in turbidity and suspended sediments associated with the installation of piles. Sturgeon are most sensitive to dropping levels of dissolved oxygen (Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region | NOAA Fisheries).

Using this comparison and available information, we expect sheet pile installation/removal and spudding to produce total suspended sediment (TSS) concentrations of approximately 5.0 to 10.0 mg/L within approximately 300 feet of the barge locations (FHWA 2012). The small resulting sediment plume is expected to settle out of the water column within a few hours. Studies of the effects of turbid water on fish suggest that concentrations of suspended sediment can reach thousands of milligrams per liter before an acute toxic reaction is expected (Burton 1993). The TSS levels expected for the project (5.0 to 10.0 mg/L) are well below those shown to have adverse effect on fish (580.0 mg/L for the most sensitive species, with 1,000.0 mg/L more typical; see summary of scientific literature in Burton 1993) and benthic communities (390.0 mg/L (EPA 1986)). As the TSS levels will not reach levels that are toxic to benthic communities, the proposed action is extremely unlikely to result in reductions in the quality or quantity of sturgeon prey currently available. TSS is most likely to affect sturgeon if a plume causes a barrier to normal behaviors. However, the increase in TSS levels expected for pile driving (5 to 10 mg/L above ambient or background conditions) is so minor that any effect of sediment plumes caused by the proposed action on sturgeon movements or behavior will be undetectable; we expect sturgeon to either swim through the plume or make small evasive movements to avoid it. Based on the best available information, the effects of re-suspended sediment on sturgeon resulting from pile installation when added to baseline conditions will be too small to be meaningfully measured or detected and are, therefore, insignificant.

Construction Vessel Traffic - The project is located in a developed portion of the Potomac River with a mix of commercial and recreational watercraft. No obstruction of shipping traffic would occur during construction. Construction barges along the shoreline pose a strike risk to sturgeon. However, the construction barges would follow existing vessel traffic patterns, travel at slow speeds (approximately 2-3 mph), and would be stationary for a majority of the construction period, allowing sturgeon the ability to avoid strikes by swimming around them. There is currently frequent existing vessel traffic in this portion of the Potomac River from water taxis, ferries, police vessels and personal watercraft.

Construction vessels would travel to the project area from their home ports. We have considered the likelihood that an increase in vessel traffic associated with the project increases the risk of interactions between listed species and vessels in the project area, compared to baseline conditions. In our analysis we considered three elements: (1) the existing baseline conditions, (2) the action and what it adds to existing baseline conditions, and (3) new baseline conditions (the existing baseline conditions and the action together). We have determined that vessel traffic added to baseline conditions as a result of the proposed project is not likely to adversely affect ESA-listed species for the following reasons.

The baseline risk of a vessel strike within the Potomac River is unknown. Adding project vessels to the existing baseline would not increase the risk that any vessel in the area would strike an individual or would increase risk to such a small extent that the effect of the action (i.e., any increase in risk of a strike caused by the project) cannot be meaningfully measured or detected. The increase in traffic associated with the proposed project is extremely small since active vessels may move elsewhere. During the project activities, a minimal number of project vessels would be added to the baseline, with the majority being

barges that would be stationary at the project site the majority of the time. The addition of project vessels would also be intermittent, temporary, and restricted to a small portion of the overall action area on any given day.

As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected. As a result, the effect of the action on the increased risk of a vessel strike in the action area is insignificant.

Noise from Cofferdam Installation - As part of cofferdam installation, steel sheet piles would be driven into the river bottom using a vibratory hammer versus an impact hammer that is more disruptive to sturgeon. Vibratory installation of steel sheet piles could result in in-water noise levels of up to 182 dB peak, 165 dBrms, and 165 dB SEL at 10 meters from the source (Caltrans 2009; 2012; 2015).

The NMFS Greater Atlantic Regional Fisheries Office (GARFO) Acoustics Tool was used to determine the potential effects to sturgeon from pile driving activities associated with the proposed seawall rehabilitation project. Pile driving produces underwater noise that can result in physiological (injury) or behavioral effects to sturgeon, depending on the loudness and duration of the noise, and the distance from the noise. Because sound (noise) consists of variations in pressure, the unit for measuring sound is referenced to a unit of pressure, the Pascal (Pa). A decibel (dB) is defined as the ratio between the measured sound pressure level (SPL) in microPascals (μ Pa) and a reference pressure. In water, the reference level is decibels relative to 1 microPascal (dB re 1 μ Pa). SPL units can be expressed in several ways depending on the measurement properties. Acoustic source levels and sound exposure levels (SELs) also are expressed in decibels. The GARFO thresholds for physiological (injury) harm and behavioral changes in sturgeon are summarized thresholds values and distances related to sturgeon in Table 1.

The Simplified Attenuation Formula (SAF) was used to determine the potential injurious and behavioral thresholds assuming a 24-inch pile size, AZ Steel Sheet pile type, and a vibratory hammer type. The peak exposure criterion ($SPL_{peak} = 206$ dB re 1 Pa) for sturgeon is related to the energy received from a single pile strike. The potential for injury also exists from multiple exposures to noise over a period of time, which is accounted for by the SELcum threshold ($SEL_{cum} = 187$ dB re 1 μ Pa2s). The SELcum is not an instantaneous maximum noise level but is a measure of the accumulated energy over a specific period of time (e.g., the period of time it takes to install a pile). The farther away a fish is from the pile being driven, the more strikes it must be exposed to for enough energy to accumulate to result in injury. For behavioral effects, the exposure criterion for sturgeon is expressed as a root-mean-square sound pressure level ($SPL_{rms} = 150$ dB re 1 μ Pa).

According to the GARFO Acoustics Tool, the 206 dB Peak injury thresholds would not be exceeded. However, based on the SELcum exposure criterion, injury to a sturgeon potentially could occur if the fish remained within 40 m while the pile was being driven. In order to be exposed to potentially injurious levels of noise during installation of the piles, a sturgeon would need to remain within 40 m of the pile during the time it is being driven in order to be exposed to this SELcum threshold. This is extremely unlikely to occur because sturgeon would be expected to modify their behavior and move away from the source upon exposure to underwater noise levels greater than the behavioral effects threshold ($SPL_{rms} = 150$ dB re 1 μ Pa). Sturgeon would be exposed to levels of noise that cause behavioral modification at 40 m according to the model estimate and would be expected to move away from the sound source before cumulative exposure could result in injury. If a sturgeon were within 40 m of the pile at the time pile-driving begins, it likely would leave the area quickly. Additionally, the use of a soft-start technique should also give any sturgeon in the area time to move out of the range of any potential injury from noise. Therefore, noise injury to sturgeon is not anticipated.

Behavioral effects, such as avoidance of the area or disruption of foraging activities, may occur in sturgeon exposed to noise above the behavioral threshold ($SPL_{rms} = 150$ dB re 1 μ Pa). Underwater noise levels are predicted to be below this threshold at distances beyond approximately 40 m from the pile being installed. The GARFO Acoustics Tool also suggests behavioral effects, such as avoidance or

disruption of foraging activities, may occur in sturgeon exposed to noise above 150 dBrms. Should a sturgeon migrate into the action area it is reasonable to assume that a sturgeon, upon detecting underwater noise levels of 150 dBrms would modify its behavior such that it redirects its course of movement safely away from the area and away from the action area (NMFS 2014b).

Table 1. GARFO Acoustic Tool Thresholds Compared to Distances

	Onset of Physical Injury			Behavioral Threshold
	Peak dB	Cumulative SEL dB*		dBrms
		Fish >2g	Fish <2g	
Threshold Value	206 dB Peak	187 dB cSEL	183 dB cSEL	150 dBrms
24-inch Sheet Pile Threshold Distance	0 meters	40 meters		40 meters
*When the distance to 187 dB cSEL cannot be calculated, the SAF model calculates the distance to the single strike 150 dB SEL.				

Note: The GARFO Acoustic Tool spreadsheet references Caltrans (2009; 2012; 2015) sheet pile sizing shown for example only

If any sturgeon move away from the ensonified area do occur, it is extremely unlikely that these movements would amount to substantial changes to essential sturgeon behaviors such as spawning, foraging, resting, and/or migration (NMFS 2014b). Given the distance from known spawning grounds at Little Falls Dam of 8 rkm from the action area and the no to low salinity present, no adults engaged in spawning and no eggs or larvae are likely to occur in the action area (NFMS 2014a).

The maximum extent of the 150 dB rms isopleth would be no greater than 40 m for any sheet pile installed. Since the extent of the noise-filled area does not expand the width of the river (approximately 1,900), the nature of the pile driving activities (intermittent to move vessels/equipment between piles and during set up) would not prevent a barrier to sturgeon movements during the life of the project.

As such, elevated levels of underwater noise produced by the proposed action are not expected to affect or preclude the continuation of essential sturgeon behaviors in any portion of the action area and sturgeon would not be prevented from accessing areas necessary to complete these essential life functions. The behavioral effects from pile driving are expected to be insignificant.

Effects to Critical Habitat - The Potomac River within the action area is designated critical habitat for Atlantic sturgeon. The Potomac River critical habitat unit contains all four of the above listed physical features (referred to as physical or biological features (PBF); however, the action area only contains three PBFs: PBF 2, 3, and 4, below.

PBF 1 - PBF 1 is not present because, although the salinity level present in the action area can fall within the range identified in PBF 1 (0-0.5 ppt), hard bottom substrate is not present. Because this feature is not present in the action area, the project would have no effect on this feature.

PBF 2 - The Potomac River is influenced by both fresh and saline waters which creates transitional salinity gradients between upstream and downstream areas, over 189 rkm. Fluctuations in these transitional areas are influenced by weather conditions. The proposed project action area is well above the upstream threshold of salinity intrusion in the Potomac River and considered freshwater. Salinity ranges are normally between 0.01 to 0.5 ppt.

The proposed project would have no influence on existing salinity gradients within the river. The proposed project action area is 179 rkm north of the mouth of the Potomac River.

The action area includes soft substrates meeting the critical habitat criteria of PBF 2; Effects of this project are expected to temporarily impact a portion of this habitat. Temporary disturbances to the area during installation and removal of cofferdams would not result in a permanent removal of PBF 2 in the project area. In addition, these temporary effects would be contained within turbidity curtains, which would be monitored and maintained to ensure protect sturgeon and critical habitat. However, the ability of this extremely small area of PBF 2 to provide meaningful conservation function to the future use of juvenile sturgeon in the area is minimal and the effects would be too small to be meaningfully measured or detected and, therefore, insignificant.

PBF 3 - Work in the project area would occur in the shoals along the shoreline and involve repair and replacement of sections of the bulkhead and seawall. No physical barriers such as locks, dams, or thermal plumes that would impede movement of sturgeon adults or juveniles are included as part of the proposed action. The project would not affect water depths in main river channels. Therefore, impacts to PBF 3 are extremely unlikely and, therefore, discountable.

PBF 4 - The project does not have the potential to cause permanent impacts to temperature and dissolved oxygen levels within the action area that lies between the river mouth and potential spawning sites. The action also does not have the potential to impact temperature, salinity, and dissolved oxygen levels that would affect annual and inter-annual adult, subadult, larval, and juvenile survival; and larval, juvenile, and subadult growth, development, and recruitment. No permanent impacts to salinity, dissolved oxygen, or temperature are anticipated to result from any aspect of the construction of the proposed action, or vessel traffic related to the project.

Dissolved Oxygen - For DO, the only pathway for the proposed pile driving to impact levels is through the temporary increased suspended sediments and turbidity. Sediments suspended during cofferdam installation and removal may have minor, temporary, localized effects on DO levels, but we expect sediment to settle out of the water column within a few hours before effects would impact the value of the feature for any life stage of the sturgeon. Because the effects of the action to water quality are sporadic and intermittent, the action would not affect the ability of the feature to develop over time. To summarize, we expect the effects of the action on the value of PBF 4 to the conservation of the species to be too small to be meaningfully measured or detected, and are therefore, insignificant.

Post-Rehabilitation Benefits - Currently, soil and sediment behind the seawalls erode into the Potomac River every time the seawall is overtopped, which is twice daily in some wall sections. Upon completion of the proposed action, the seawalls would be overtopped significantly less frequently, reducing the frequency and volume of sediment discharges from behind the seawalls. Long-term effects following seawall rehabilitation would be beneficial to water quality and sturgeon habitat.

EFFECTS DETERMINATION

In conclusion, NPS is proposing to rehabilitate portions of the Tidal Basin seawall and the entire West Potomac Park seawall. The proposed project activities would require disturbance to the Potomac River during construction that may have the potential to affect shortnose sturgeon and Atlantic sturgeon and designated Atlantic sturgeon critical habitat, so NPS is using conservation measures to protect the species and critical habitat.

On the shallow east bank of the river, only 1.3% of the river's width would be occupied by cofferdams and turbidity curtains leaving the remainder, 98.7%, of the Potomac River width, including deeper channels mid-river, not blocked and allow the passage and migration of spawning adult, subadult, juvenile sturgeon. NPS would use the described best management practices for sediment and erosion control and in-water noise control during construction to minimize effects to water quality and critical habitat.

The NPS requests concurrence with the determination that the Tidal Basin and West Potomac Park Seawalls project may affect but is not likely to adversely affect the federally endangered shortnose

sturgeon, all five of the Distinct Population Segments of the Atlantic sturgeon, and Atlantic sturgeon critical habitat. This NPS project does not destroy or adversely modify designated critical habitat.

Request for Waiver: in-water work to proceed through TOY Restriction during the project for 3 years

Given the sizeable scope of the seawall rehabilitation, this project would be constructed over 3 years. The ability to work throughout the year provides many benefits to the public and the natural resources of the area. With the safeguards and conservation measures put in place during the project, the NPS requests that the time-of-year (TOY) restriction be waived, and in-water construction associated with the proposed project be allowed to proceed from February 15 to July 1. Waiving the TOY restrictions would preclude the need for seasonal mobilizations and demobilizations which would add additional years to an already anticipated 3-year project. TOY restrictions would extend the amount of time and disturbance of in-water work. By working year-round, this would maximize construction efficiencies and reduce the overall duration of work in the river, further reducing impacts from construction activities on the sturgeon. Without TOY restrictions, it is anticipated that seawall rehabilitation construction would be implemented year-round and completed in smaller sections to minimize the occupied area within the river and ensure dewatering efforts are effective.

Based on the findings of this letter and the nature of the project, impacts to either the shortnose sturgeon or Atlantic sturgeon and the critical habitat would be insignificant regardless of the time of year the in-water work was conducted. A summary of why the impacts would be insignificant are listed below:

- NPS would implement the best management practices and conservation measures described above;
- The 200ft width designated for construction barges follows existing vessel traffic patterns;
- The 40-meter distance where exposure to noise from pile driving is above the behavioral threshold is contained within the 200ft buffer outside of the cofferdam and overlaps with existing vessel traffic patterns.
- At a peak of 182 dB, vibratory installation of sheet piles is below the threshold for harm for sturgeon; at 150 dB sturgeon make behavior adjustments;
- Three out of four physical or biological features of Atlantic sturgeon critical habitat are available in the action area. However, roughly only a 25-foot-wide section of the Potomac River (from the seawall) out of the entire 1,900 feet of the river width, or 1.3% of the river width, would be dewatered for construction. Existing adjacent unconsolidated soft bottom habitat in the Potomac River and the unrestricted passage for a majority of the Potomac River width, including deeper water channels mid-river, would provide migration and much more available forage areas during construction;
- It is expected that the various life stages of the sturgeon would be in the deeper part of the river. Therefore, there is less chance of interaction with the seawall rehabilitation construction activities.

CONCLUSIONS

Based on the analysis that all effects of the proposed action would be insignificant and/or discountable, NPS has determined that rehabilitation of the Tidal Basin and West Potomac Park Seawalls may affect but is not likely to adversely affect any listed species or destroy or adversely modify critical habitat under NOAA Fisheries' jurisdiction. We certify that we have used the best scientific and commercial data available to complete this analysis. We request concurrence with this determination.

In addition, based on the conservation measures put in place to protect the sturgeon and the analysis provided that shows that the impacts of this project would have insignificant or discountable impacts to

either the shortnose sturgeon or Atlantic sturgeon, a waiver to TOY restriction is requested for the duration of the project.

If you have any questions about this correspondence, please contact Catherine Dewey, Chief of Resource Management at 202-510-1117 or Catherine_Dewey@nps.gov.

Sincerely,

Jeffrey P. Reinbold
Superintendent
National Mall and Memorial Parks

Copy: Brian D. Hopper, NOAA Fisheries Protected Resources Division (via e-mail:
brian.d.hopper@noaa.gov)

References

Caltrans 2009; 2012; 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Report No. CTHWANP-RT-15-306.01.01. California Department of Transportation. Division of Environmental Analysis.

Caltrans 2020. Technical Guidance for the Assessment of Hydroacoustic Effects of Pile Driving on Fish. Report No. CTHWANP-RT-20-365.01.04. California Department of Transportation. Division of Environmental Analysis.

Moffatt & Nichol July 2022. National Oceanic and Atmospheric Administration – Office of Marine and Aviation Operations, Southeast Marine Operations HUB Project, Potential Noise Impacts to Protected Species Technical Report. Antha Environmental, Inc.

National Marine Fisheries Service, Greater Atlantic Regional Fisheries Office 2022. Section 7: Consultation Technical Guidance in the Greater Atlantic Region. Acoustic Tool. <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic>. Assessed: August 29, 2022.

NOAA Fisheries 2022. *Atlantic Sturgeon (Acipenser oxyrinchus oxyrinchus)*. Online: <https://www.fisheries.noaa.gov/species/atlantic-sturgeon>. Assessed: August 29, 2022.

NOAA Fisheries 2022. *Shortnose Sturgeon (Acipenser brevirostrum)*. Online: <https://www.fisheries.noaa.gov/species/shortnose-sturgeon>. Assessed: August 29, 2022.

Attachments:

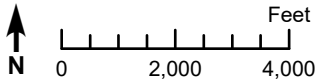
- Attachment A Project Vicinity Map
- Attachment B Action Area Map
- Attachment C NOAA ESA Section 7 Mapper Results



**Tidal Basin and
West Potomac Park
Overview Map**

Rehabilitate Tidal Basin and
West Potomac Park Seawalls

Washington, D.C.



August, 2022



Tidal Basin and West Potomac Park

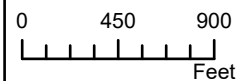
Action Area Map

Rehabilitate Tidal Basin and West Potomac Park Seawalls

Washington, D.C.

ACTION AREA

- 25 feet riverward of existing seawall
- 200 feet riverward of proposed cofferdam



 Biohabitats

September, 2022

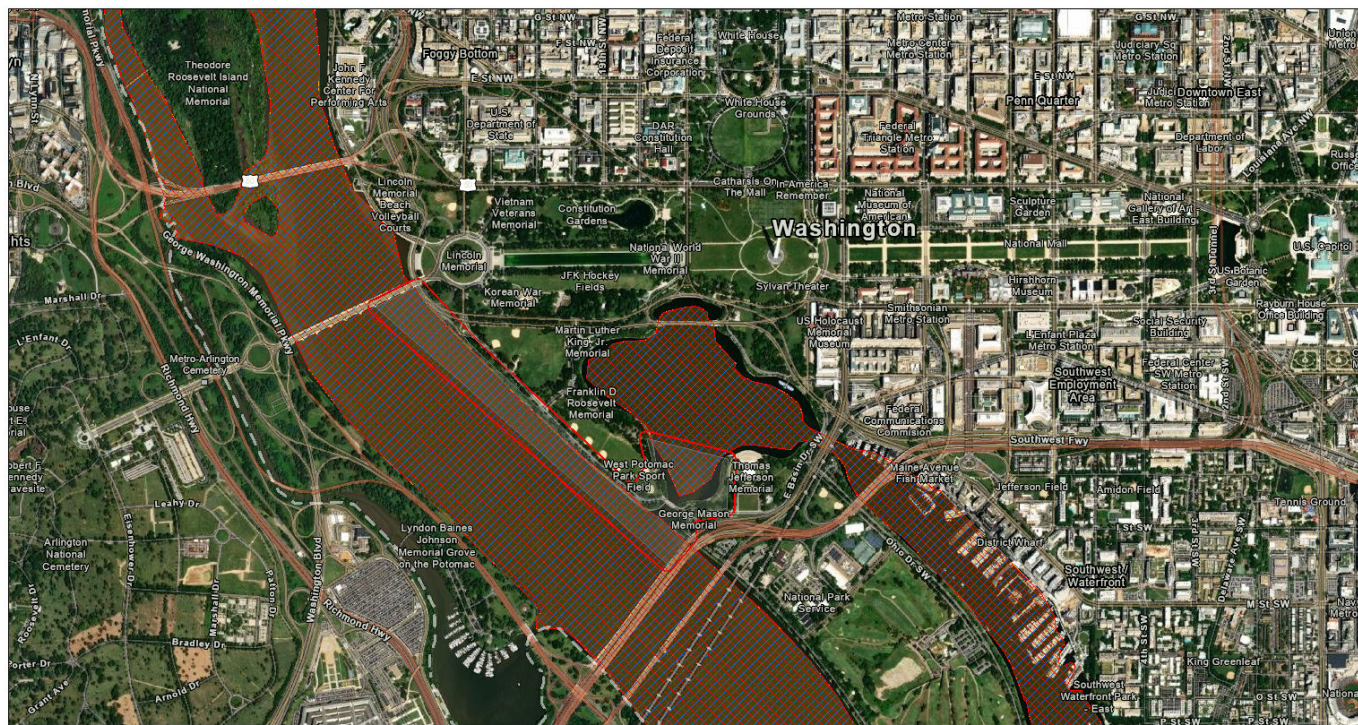





ATTACHMENT C - Drawn Action Area & Overlapping S7 Consultation Areas

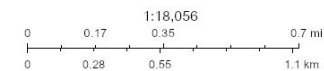
Area of Interest (AOI) Information

Area : 110.15 acres

Sep 1 2022 12:48:29 Eastern Daylight Time



-  Atlantic Sturgeon
-  Shortnose Sturgeon
-  In or Near Critical Habitat



Esri Community Maps Contributors, DCGIS, M-NCPPC,
VGIH, Esri, HERE, Garmin, SafeGraph,
GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS,
US Census Bureau, USDA, Maxar

Approximate Action Area with 100ft buffer for Rehabilitate Tidal Basin and West Potomac Park Seawalls Project.

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	7	507.84	N/A
Shortnose Sturgeon	4	290.19	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	1	72.55	N/A

Atlantic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_POT_JUV_MAF	Atlantic sturgeon	Juvenile	Migrating & Foraging	Potomac River	01/01	12/31	N/A	N/A	72.55
2	ANS_POT_PYL_MAF	Atlantic sturgeon	Post Yolk-sac Larvae	Migrating & Foraging	Potomac River	03/15	07/15	8/1	1/31	72.55
3	ANS_POT_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	Potomac River	03/15	11/30	N/A	N/A	72.55
4	ANS_POT_YOY_MAF	Atlantic sturgeon	Young of year	Migrating & Foraging	Potomac River	01/01	12/31	N/A	N/A	72.55
5	ANS_POT_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	Potomac River	03/15	11/30	N/A	N/A	72.55
6	ANS_POT_ADU_SPN	Atlantic sturgeon	Adult	Spawning	Potomac River	03/15	05/15	8/1	11/30	72.55
7	ANS_POT_EYL_NON	Atlantic sturgeon	Eggs and Yolk-sac Larvae	N/A	Potomac River	03/15	06/15	8/1	12/31	72.55

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	SNS_POT_YOY_MAF	Shortnose sturgeon	Young of year	Migrating & Foraging	Potomac River	01/01	12/31	N/A	N/A	72.55
2	SNS_POT_JUV_MAF	Shortnose sturgeon	Juvenile	Migrating & Foraging	Potomac River	01/01	12/31	N/A	N/A	72.55
3	SNS_POT_PYL_MAF	Shortnose sturgeon	Post Yolk-sac Larvae	Migrating & Foraging	Potomac River	03/15	6/30	N/A	N/A	72.55
4	SNS_POT_ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	Potomac River	01/01	12/31	N/A	N/A	72.55

In or Near Critical Habitat

#	Species	In or Near Critical Habitat	Area(acres)
1	Atlantic Sturgeon	Chesapeake Bay Unit 2: Potomac River	72.55



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

March 28, 2023

Jeffrey P. Reinbold
Superintendent
National Mall and Memorial Parks
National Park Service
1100 Ohio Drive SW
Washington, DC 20024-2000

Re: Construction to Rehabilitate Tidal Basin and West Potomac Park Seawalls

Dear Mr. Reinbold:

We have completed our consultation under section 7 of the Endangered Species Act (ESA) in response to your letter received on March 2, 2022, regarding the above-referenced proposed project. We reviewed your consultation request document and related materials. Based on our knowledge and your materials, we concur with your conclusion that the proposed action is not likely to adversely affect any ESA-listed species or designated critical habitat under our jurisdiction.

We offer the following clarifications to complement your incoming request for consultation. You indicate that early life stages such as eggs and larvae may be present as transients during March and April. We would like to clarify that, although eggs are not likely to be present because the substrate does not support spawning, early life stages such as post yolk-sac larvae may occur; however, this life stage is mobile with some ability to avoid the effects of the action and any effects would be too small to be detected and therefore insignificant. You state that the action area includes the area affected by in-water construction activities. You also mention that the spudding of a barge may temporarily impact water quality in the immediate area with briefly increased bursts of turbidity as the spuds are set or pulled. Therefore, the action area also includes the area of the barge and the 300 foot radius surrounding the barge to account for the suspended sediment caused by the setting and pulling of the spuds. With respect shading impacts from barges, while we agree that shading will not directly affect sturgeon because sturgeon use their mouths to detect prey, we would like to clarify that shading can change the ecological food chain by reducing the area available for aquatic plants to photosynthesize. That said, any impacts to the ecological food chain from the action are still expected to be too small to be detected and therefore, insignificant.

In your analysis of water quality impacts, you mention that a turbidity curtain will be installed at the site for the duration of construction to minimize transport of sediments. We would like to clarify that the turbidity curtain is also expected to prevent sturgeon from entering the project area, and thus, will prevent them from being exposed to the plumes. Based on this and your analysis, the effects on water quality are too small to be meaningfully measured or detected and are insignificant. Your description of the proposed action states that water removed from behind the cofferdam will be treated and discharged back into the river. We would like to clarify that



there would be no long-term change in effluent discharge to the Potomac River anticipated with the implementation of the proposed discharge. The discharge will not reduce the quality of existing stormwater effluent from the current baseline conditions because the proposed action would be required and permitted to meet current water quality management standards, and to alleviate localized flooding on nearby roadways. The effluent will continue to be rapidly diluted to within minimum water quality standards or to non-detectable levels. Thus, the effects of effluent discharge on water depth, water flow, dissolved oxygen levels, salinity, temperature, and the ability for sturgeon to migrate in the action area would be extremely unlikely to occur and are discountable.

In your critical habitat analysis, you make a no effect determination for Physical and Biological Feature (PBF) 1; therefore, the effects to PBF 1 will not be considered further. We would also like to offer some clarifications on your analysis of the action's effects on PBF 2 of critical habitat designated for Atlantic sturgeon. Based on the information you provided, the action area consists of soft substrate, which meets one of the criteria for PBF 2; however, due to the presence of freshwater within the action area, the second criteria for PBF 2 (aquatic habitat with a gradual downstream salinity gradient of 0.5 up to as high as 30 ppt) is not present. Therefore, PBF 2 is not present and effects to PBF 2 will not be considered further. With respect to PBF 3, we believe the analysis supports a conclusion of insignificant rather than discountable because sturgeon may need to modify behavior to avoid in-water construction activities; however, such movements would be too small to meaningfully measure or detect.

Finally, we would like to clarify that although your letter included a request for a waiver of the time-of-year-restriction (TOYR), we did not, nor can we, require a restriction and, therefore, the analysis of impacts did not include a TOYR as part of the proposed action. These clarifications do not alter your analysis or conclusion, and thus, no further consultation pursuant to section 7 of the ESA is required.

On July 5, 2022, the U.S. District Court for the Northern District of California issued an order vacating the 2019 regulations that were revised or added to 50 CFR part 402 in 2019 ("2019 Regulations," see 84 FR 44976, August 27, 2019) without making a finding on the merits. On September 21, 2022, the U.S. Court of Appeals for the Ninth Circuit granted a temporary stay of the district court's July 5 order. On November 14, 2022, the Northern District of California issued an order granting the government's request for voluntary remand without vacating the 2019 regulations. The District Court issued a slightly amended order two days later on November 16, 2022. As a result, the 2019 regulations remain in effect, and we are applying the 2019 regulations here. For purposes of this consultation and in an abundance of caution, we considered whether the substantive analysis and conclusions articulated in the letter of concurrence would be any different under the pre-2019 regulations. We have determined that our analysis and conclusions would not be any different.

Reinitiation of consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an

effect to the listed species or critical habitat that was not considered in this consultation or; (c) If a new species is listed or critical habitat designated that may be affected by the identified action. No take is anticipated or exempted. Should you have any questions about this correspondence please contact Brian Hopper at 240-628-5420 or by email at brian.d.hopper@noaa.gov. For questions related to Essential Fish Habitat, please contact Jonathan Watson with our Habitat and Ecosystem Services Division at 978-675-2180 or by email at jonathan.watson@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Murray Brown". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

For Jennifer Anderson
Assistant Regional Administrator
for Protected Resources

EC: Watson, F/NER 4, HESD; Stidham, NPS

ECO: GARFO-2023-00228

File Code: H:\Section 7 Team\Section 7\Non-Fisheries\NPS\Informals\2022\NPS_Park and Tidal Basin Seawall_Potomac River



United States Department of the Interior

NATIONAL PARK SERVICE
National Mall and Memorial Parks
900 Ohio Drive, S.W.
Washington, D.C. 20024-2000



December 5, 2022

Kristy Beard
NOAA Fisheries
Habitat Conservation Division
Annapolis Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

RE: Consult under the Fish & Wildlife Coordination Act for the Rehabilitation of the Tidal Basin and West Potomac Park Seawalls Project, Washington, D.C.

Dear Ms. Beard:

The National Park Service is initiating consultation under the Fish and Wildlife Coordination Act, 16 U.S.C. 661-667e, as amended, to give equal consideration to migratory anadromous fish and habitat during the planning of the rehabilitation of the Tidal Basin and West Potomac Park Seawalls Project in Washington, D.C. along the Potomac River (Attachments A & B). Endangered Species Act Section 7 consultation with NMFS on endangered sturgeon is separate from this correspondence. As the project design progresses, we will apply for a US Army Corps 404 permit.

The project is located on federal land administered by the National Mall and Memorial Parks, a unit of the National Park Service (NPS). The National Park Service exercises the Secretary of the Interior's narrow authority to permit certain uses of the bed of the Potomac River within the original boundaries of the District of Columbia. The project location within the Potomac River is 116 miles upstream of areas designated as Essential Fish Habitat (EFH) in the Chesapeake Bay. The primary purpose of this land management project is to rehabilitate the seawall to restore the historic functional height, improve the historic cultural landscape and visitor experience along the shorelines, minimize soil erosion and safety hazards, and provide some flood protection. The proposed action is needed because the existing structural deficiencies of the seawalls negatively impacts the experience and safety of park visitors which affect the cultural landscapes.

The NPS proposes to rebuild and elevate the seawalls to re-establish the historic functional height of the walls to provide a sustainable solution that expands the lifecycle of the seawalls and allow future extensions of the wall to respond to changing climate patterns, including storms of greater intensity and frequency. The proposed action would help keep these areas from flooding during normal tidal events, minor flood stage events, and would help prevent continued loss of wall material. The existing masonry

seawall would be removed, and a new wall would be constructed along the historic alignment. Whenever possible, the stone from the historic wall would be salvaged and reused in construction of the new walls. Finally, the existing upland landscaping adjacent to each of the seawall systems would be rehabilitated. Repairs to the surrounding infrastructure may include grading, stormwater control, pedestrian/multi-use paths, curbing, and replacement in-kind of any construction damage to the terrestrial landscaped turf and trees.

In the years since their construction, the seawalls have significantly settled and in some areas, collapsed into the Potomac River, leading to overtopping of the seawalls in some sections twice daily during normal tidal conditions which erodes the shoreline and introduces sediments into the river. This leads to localized degradation of water quality and can modify existing benthic conditions. This has also led to reduced public access, damage to historic cultural landscapes and Park infrastructure, resulting in negative impacts to visitor use and experience. When the water does recede, the overtopped areas are littered with large wood debris and other trash from the river that often collides with and damages the seawalls, causing further failure. The failing seawalls, standing water, and debris are concerns for visitor safety. The Tidal Basin and West Potomac Park experience large numbers of visitors every day of the year with peak visitation during the spring with the blooming of the cherry blossoms in March or April. The current condition of the seawalls affect visitor use and experience since the pedestrian walkways in many areas have degraded creating trip and fall hazards, are inaccessible due to standing water and mud, and debris left behind from daily flooding. Significant cost is expended by the NPS staff to remove the debris load after overtopping events.

A temporary cofferdam would be installed in the river, approximately 25 feet from the seawall. Following installation, the area inside the cofferdam would be dewatered so that work on the seawall can occur in reduced water conditions. This also allows for the existing seawall and foundation to be removed in a controlled environmental setting that would greatly reduce the introduction of additional sediment to the river. Water removed from inside the cofferdam would be treated in tanks, cofferdam cells or passed through a filter bag to reduce sediment before discharging the water back to the river.

The structure of the cofferdam consists of steel sheet piles vibrated into the river bottom using a vibratory crane rig. Turbidity curtains would be used during the cofferdam installation/removal to contain disturbed river bottom sediments within the construction area. River conditions would be monitored to assess the effectiveness of the turbidity controls. During the construction process, construction barges and support vessels would operate in an area approximately 200 feet riverward of the cofferdam to facilitate installation and removal of the cofferdam and turbidity curtains. The construction barges would be anchored or spudded down for the duration of waterside work in an area of the river that already receives other vessel traffic but would not impede current traffic patterns. All other work involving the construction of the seawall and associated sidewalks would be done from land to the extent practicable and would remain in the existing footprint of the current seawall system. The construction schedule for the project allows for up to 3 years of construction, with the areas within the Potomac River anticipated to require 2 years of construction.

This project may have an indirect effect on EFH. While 116 miles upstream of EFH, the project area includes several species of anadromous fish such as alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*) and less frequent American shad (*Alosa sapidissima*), that use the Potomac River as migratory, spawning, and juvenile rearing habitat (see attached figure). These species have been documented to be important prey (a component of EFH) to a variety of federally-managed species.

A review of the Department of Energy and Environment (DOEE) Aquatic Resource Map indicated areas of submerged aquatic vegetation (SAV), directly off the shoreline within the project area, were present in 2017 but absent from 2018 to 2021 (Attachment D). Per DOEE regulatory purposes, SAV beds are defined as areas of SAV identified and annually mapped during at least one of the previous five years. The NPS intends to request the present/absence of SAV be based on the 2018-2022 5-year timeframe since the proposed construction would occur beyond 2022. At the time of construction, the NPS will assess and document SAV present at the time of construction. Impacts to the SAV would be mitigated, if possible, but may be unavoidable. The loss of SAV, if present, is expected to be temporary and discountable due to the size of the project area compared to the Potomac River. SAV will likely recolonize once the project ends if not, the NPS commits to mitigation in the form of revegetation of the SAV.

Best Management Practices

To avoid, reduce, or offset potential impacts of cofferdam installation and related noise, the NPS will implement the following best management practices during the construction of the cofferdam:

- Deploy and maintain turbidity curtains outside of the cofferdam.
- Monitor the effectiveness of turbidity controls.
- Dewatering process would include the use of a filter bag before water is discharged back to the river.
- Use of vibratory hammer in lieu of an impact hammer to install sheet piles.
- Soft start – During a soft start lower vibratory hammer energy levels would be used to start the pile driving process, and then the force of pile driving is gradually increased. This process allows all endangered sturgeon in the area to be alerted that work is beginning and gives them an opportunity to clear the area.

The NPS requests a waiver for the time-of-year (TOY) restriction for anadromous fish such as river herring species from 15 February to 15 June each year for the proposed project. Given the sizeable scope of the seawall rehabilitation, this project would be constructed over multiple years.

Working year-round would maximize construction efficiencies and reduce the overall duration of work in the river, further reducing impacts from construction activities on anadromous river herring species. Without TOY restrictions, it is anticipated that seawall rehabilitation construction would be implemented year-round and completed in smaller sections to minimize the occupied area within the river and ensure dewatering efforts are effective. Additional justification for the waiver request is summarized below:

- The NPS would implement the best management practices described above;
- The 200ft width designated for construction barges follows existing vessel traffic patterns;
- The 40-meter distance where exposure to noise from pile driving is above the behavioral threshold is contained within the 200ft buffer outside of the cofferdam and overlaps with existing vessel traffic patterns.
- At a peak of 182 dB, vibratory installation of sheet piles is below the threshold for harm for fish like endangered sturgeon;
- Roughly only a 25-foot-wide section of the Potomac River (from the seawall) out of the entire 1,990 feet of the river width, or 1.3% of the river width, would be dewatered for construction. Existing adjacent unconsolidated soft bottom habitat in the Potomac River and the unrestricted passage for a majority of the Potomac River width, including deeper water channels mid-river, would provide available foraging and migration during construction.

The ability to work throughout the year provides many benefits to the public and the natural resources of the area. By waiving the TOY restrictions, it would preclude the need for seasonal mobilizations and demobilizations which would add additional years to an already anticipated multi-year project. TOY restrictions would impact visitors and extend the amount of time and disturbance of in-water work.

The National Park Service concludes that while the project is 116 miles upstream of EFH, the project area includes several species of anadromous fish that are prey for protected species and a component of the EFH that may be affected while working in the river during the time-of-year restriction. The work will follow conservation measures, so the NPS has determined that the activities associated with this project are not likely to adversely affect migratory anadromous river herring species or their habitat.

If you have any questions about this correspondence, please contact Catherine Dewey, Chief of Resource Management at 202-510-1117 or Catherine_Dewey@nps.gov.

Sincerely,

Jeffrey P. Reinbold
Superintendent
National Mall and Memorial Parks



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127



In Reply Refer To:

January 09, 2023

Project Code: 2022-0058491

Project Name: Rehabilitate Tidal Basin and West Potomac Park Seawalls

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office

177 Admiral Cochrane Drive

Annapolis, MD 21401-7307

(410) 573-4599

Project Summary

Project Code: 2022-0058491

Project Name: Rehabilitate Tidal Basin and West Potomac Park Seawalls

Project Type: Bulkhead - Maintenance/Modification

Project Description: The project is broken down into four locations: approximately 4,670 feet in West Potomac Park along the Potomac River, separated by wall type in the north and south, along with approximately 800 feet west of the Inlet Bridge on the Tidal Basin, and approximately 1,200 feet east of the Inlet Bridge on the Tidal Basin. The proposal is to rehabilitate and reconstruct the seawalls and adjacent infrastructure. The actual seawalls will be reconstructed to their historic functional height to protect West Potomac Park and the Tidal Basin between the Jefferson Memorial and FDR Memorial, while meeting the requirements of park visitation and addressing the estimated changes in future water levels. Repairs to the surrounding infrastructure may include grading, stormwater control, pedestrian/multi-use paths, curbing, and replacement in-kind of any construction damage to the landscape and trees.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.883667,-77.04697576749649,14z>



Counties: District of Columbia County, District of Columbia



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127



In Reply Refer To:

June 28, 2022

Project code: 2022-0058491

Project Name: Rehabilitate Tidal Basin and West Potomac Park Seawalls

Subject: Verification letter for the 'Rehabilitate Tidal Basin and West Potomac Park Seawalls' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Tanaira Cullens:

The U.S. Fish and Wildlife Service (Service) received on June 28, 2022 your effects determination for the 'Rehabilitate Tidal Basin and West Potomac Park Seawalls' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"^{[\[1\]](#)} prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Rehabilitate Tidal Basin and West Potomac Park Seawalls

2. Description

The following description was provided for the project 'Rehabilitate Tidal Basin and West Potomac Park Seawalls':

The project is broken down into four locations: approximately 4,670 feet in West Potomac Park along the Potomac River, separated by wall type in the north and south, along with approximately 800 feet west of the Inlet Bridge on the Tidal Basin, and approximately 1,200 feet east of the Inlet Bridge on the Tidal Basin. The proposal is to rehabilitate and reconstruct the seawalls and adjacent infrastructure. The actual seawalls will be reconstructed to their historic functional height to protect West Potomac Park and the Tidal Basin between the Jefferson Memorial and FDR Memorial, while meeting the requirements of park visitation and addressing the estimated changes in future water levels. Repairs to the surrounding infrastructure may include grading, stormwater control, pedestrian/multi-use paths, curbing, and replacement in-kind of any construction damage to the landscape and trees.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.883667,-77.04697576749649,14z>

**Determination Key Result**

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR

§17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")
No
3. Will your activity purposefully **Take** northern long-eared bats?
No
4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?
Automatically answered
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?
No
 7. Will the action involve Tree Removal?
Yes
-

8. Will the action only remove hazardous trees for the protection of human life or property?

No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: Biohabitats Inc.

Name: Tanaira Cullens

Address: 2081 Clipper Park Rd

City: Baltimore

State: MD

Zip: 21211

Email: tcullens@biohabitats.com

Phone: 4436350381

Lead Agency Contact Information

Lead Agency: Department of Interior



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

December 20, 2022

Jeffrey P. Reinbold, Superintendent
National Mall and Memorial Parks
900 Ohio Drive, S.W.
Washington, D.C. 20024-2000

RE: Consultation under the Fish & Wildlife Coordination Act for the rehabilitation of the Tidal Basin and West Potomac Park Seawalls Project, Washington, D.C.

Dear Mr. Reinbold:

We have reviewed your December 5, 2022, letter and supporting materials provided for the proposed rehabilitation and improvements to the Tidal Basin and West Potomac Park seawalls in the District of Columbia. The National Park Service (NPS) is proposing to construct a seawall along approximately 6,840 linear feet (1.3 miles) of existing shoreline to address degradation of the existing shoreline erosion control structures. The existing structures are currently deteriorated and certain portions are frequently affected by tidal flooding and elevated river discharge, which is negatively impacting park infrastructure and public accessibility. Several measures have been proposed to mitigate adverse effects on aquatic habitats in the project area. This includes installing a sheet pile cofferdam approximately 25 feet from the existing seawall using vibratory hammers, dewatering the enclosed area using filter substrates, and working in the dry for approximately two (2) years. During this time, the existing seawall structure will be removed and subsequently replaced in-kind. The new structure will be elevated to account for existing subsidence and recent relative sea level rise (RSLR). While details were not provided, the new structure is also proposed to be constructed in a manner that allows for further enhancements to account for anticipated RLSR. We appreciate that you intend to employ several best management practices (BMPs) to mitigate adverse impacts to aquatic habitats and we offer the following guidance to further avoid and minimize impacts to our trust resources.

Fish and Wildlife Coordination Act (FWCA)

The Fish and Wildlife Coordination Act (FWCA) requires that all federal agencies, such as NPS, consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider the effects that these projects would have on fish and wildlife and must also provide for the improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated essential fish habitat (EFH). The Potomac River serves as productive habitat for many aquatic species and their forage that we seek to conserve and enhance under the FWCA



including American shad (*Alosa sapidissima*), alewife (*A. pseudoharengus*), blueback herring (*A. aestivalis*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*), and other assorted baitfishes and invertebrates. Submerged aquatic vegetation (SAV) has also been documented in the project area in the last five (5) years. SAV provides important habitat for these species, especially juvenile life stages, in the Potomac River where vegetative cover and unarmored shorelines are rare. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, we provide the following comments and recommendations pursuant to the authority of the FWCA.

Aquatic Resources and Associated Impacts

Migratory Fish Spawning Habitat

The Potomac River in D.C. provides productive habitat for a variety of migratory fish, including American shad and river herring (alewife, and blueback herring, collectively) which use the river including areas in and around the proposed project site as migratory, spawning, nursery, resting, and foraging habitat. Lippson et al. (1979) and, more recently, Swann (2021) both describe the project area and areas upstream as providing spawning habitat for these species. American shad and river herring spend most of their lives at sea and migrate great distances to generally return to their natal freshwater rivers to spawn, though some straying does occur (Pess et al. 2014). They have also been documented to exhibit some degree of iteroparity (i.e., adults return to spawn multiple times throughout their life) in urbanized tributaries to the Chesapeake Bay (M. Ogburn, Smithsonian Environmental Research Center, pers. comm.).

Alosines, such as these, are important forage for several species managed by the New England Fishery Management Council and the Mid-Atlantic Fishery Management Council as they provide trophic linkages between freshwater/estuarine and marine food webs. Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish (*Pomatomus saltatrix*) include *Alosa* species. Additionally, juvenile *Alosa* species have all been identified as prey species for summer flounder (*Paralichthys dentatus*) and windowpane flounder (*Scophthalmus aquosus*) in Steimle et al. (2000). As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to their spawning habitat may adversely impact federally managed fisheries and their EFH.

American shad, blueback herring, and alewife formerly supported the largest and most important commercial and recreational fisheries throughout their range, with fishing activities spanning across rivers (both fresh and saltwater), tributaries, estuaries, and the ocean. Commercial landings for these species have declined dramatically from historic highs. The most recent American shad stock assessment report identified that American shad stocks are, in all likelihood, currently at all-time lows following a period of recent (i.e., within the past decade) coast-wide decline (ASMFC 2020). In the Potomac River the recent estimate of adult mortality was described as “unsustainable” indicating that, on average, there is a net loss of adults returning to the system to spawn each year.

The Atlantic States Marine Fisheries Commission's 2007 stock assessment determined that American shad stocks did not appear to be recovering and that new protection and restoration actions needed to be identified and applied. The subsequent Amendment 3 to the Interstate

Fishery Management Plan for Shad and River Herring (American Shad Management) identified significant threats to American shad, including spawning and nursery habitat degradation or blocked access to habitat, resulting from dam construction, increased erosion and sedimentation, and losses of wetland buffers. Protecting, restoring and enhancing American shad habitat, including spawning, nursery, rearing, production, and migration areas, are necessary for preventing further declines in American shad abundance, and restoring healthy, self-sustaining, robust, and productive American shad stocks to levels that will support the desired ecological, social, and economic functions and values of a restored Atlantic coast American shad population (ASMFC 2010).

In the Mid-Atlantic, landings of alewife and blueback herring, collectively known as river herring, have declined since the mid-1960's and have remained very low in recent years (ASMFC 2017). The 2012 river herring benchmark stock assessment found that of the 52 stocks of alewife and blueback herring assessed, 23 were depleted relative to historic levels, one was increasing, and the status of 28 stocks could not be determined due to a lack of long-term data (ASMFC 2012). The 2017 stock assessment update indicates that river herring remain depleted at near historic lows coast-wide. The "depleted" determination was used in 2012 and 2017 instead of "overfished" to indicate factors besides fishing have contributed to the decline of these species, including habitat loss, habitat degradation and modification, and climate change (ASMFC 2017). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960s, they have been designated as a Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation actions to these species.

We appreciate that NPS demonstrated an awareness of typical avoidance and minimization approaches for spawning migratory fish in your December 5, 2022, letter. The measures described included deploying/monitoring turbidity curtains, installing/dewatering cofferdams around the project area, and using a vibratory hammer and soft start during cofferdam installation/removal. While these measures do largely address our concerns and reflect the BMPs described by Johnson et al. (2008), we recommend that the installation and removal of cofferdam structures be restricted during the anadromous fish spawning period (March 1 - June 15) to avoid disturbing spawning behavior, which has been documented in the project area. Incorporating this measure in addition to the other protective measures described in your letter should sufficiently minimize adverse impacts to spawning anadromous fishes.

Tidal Wetlands

Intertidal marshes provide a suite of ecological functions including fish and wildlife habitat, primary productivity via plant/microalgae/fungal growth, nutrient transformation, sediment retention, and carbon sequestration. Fringing freshwater tidal wetlands serve as spawning, nursery, foraging, and resting habitats for a variety of species in the project area, including migratory alosines (Greene et al. 2009). Furthermore, a recent study completed by Young et al. (2021) indicates that increasing diversity in primary productivity, such as that provided by emergent tidal wetlands, increases aquatic community resilience to disturbances and fluctuations

in the availability of other food sources (e.g., SAV). Therefore, projects that enhance the overall diversity of primary producers should support a more diverse and resilient aquatic food web.

The entirety of the uplands to be protected by the project were created through the historical filling of tidal wetlands during the development of the District of Columbia, which commenced during the late nineteenth century (NPS 1985). This activity resulted in significant losses to fringing tidal wetlands in the freshwater tidal portions of the Potomac River. Furthermore, the low bearing capacity of the sediments in the project area has posed challenges for long-term stability of hardened shoreline structures (NPS 1985). RSLR is also anticipated to pose a significant challenge to the project location, based on 2022 projections described by Sweet et al. (2022; also see: <https://coast.noaa.gov/slr/#>). Natural and nature-based features (NNBF) can be an effective method to stabilize shorelines through the incorporation of both structural (e.g., sills, breakwaters) and non-structural (e.g., vegetated tidal wetlands) elements (Bridges et al. 2015). Due to the overall minor coverage of remaining wetland vegetation within the greater freshwater tidal reaches of the Potomac and Anacostia rivers, we support efforts to re-establish fringing tidal wetlands within their historical footprint. Such an approach would better align with recent guidance from the White House Council on Environmental Quality and others (2022). While we recognize that it may not be possible throughout the entirety of this project area, the potential to incorporate such habitat features along suitable reaches of shoreline should be evaluated during further project development.

Submerged Aquatic Vegetation (SAV)

As indicated in your letter, delineations completed by the District Department of Energy and Environment (DDOE) and the Virginia Institute of Marine Sciences (VIMS) indicate the presence of SAV beds within the Location of Disturbance (LOD) in 2017. VIMS characterize the density of these beds as “dense (70% - 100%)” in that year. While the Potomac River in the project area has not supported large areas of SAV in the recent past, wastewater management efforts are anticipated to improve water quality in the river (Miller et al., 2013) which may increase habitat suitability for SAV in the future. The U.S. Environmental Protection Agency (EPA) has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act because of its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

SAV and their associated epiphytes are highly productive, produce a structural matrix on which many other species depend, improve water quality, and stabilize sediments (Fonseca et al. 1998). Seagrasses are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions, which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreation as well as economically important organisms (Stephan and Bigford 1997). Ross et al. (1997) found that the only habitat with which juvenile American shad abundance was significantly correlated was SAV cover, indicating that this habitat provides crucial cover and foraging habitat for juvenile Alosines during their early life history stages. Furthermore, Odom (1997) indicated that juvenile American shad favored riffle/run habitat colonized by SAV because it provided flow-boundary feeding positions where juveniles could both feed on drifting macroinvertebrates and reduce energy costs. Ultimately, while preferred riverine habitat for pre-migration juvenile river herring has not been thoroughly evaluated (Greene et al., 2009), existing studies of other Alosine

species with similar life histories suggest that SAV is important habitat for juveniles prior to their outmigration.

In your December 5, 2022, letter, you suggested that due to the anticipated work schedule beginning beyond 2022, that the previous five (5) year period considered to describe SAV colonization would be from 2018 through 2022, thus eliminating the need for compensatory mitigation needs for SAV. We disagree with this approach. In order to demonstrate absence, we recommend that a SAV survey be conducted during the 2023 growing season to determine whether this resource will be impacted. Existing survey programs (e.g., those administered by DOEE) may have capacity to assist with such a survey and we encourage you to coordinate with them to determine how this might be best accomplished. Should SAV be documented in the project footprint, we recommend that you work with DOEE staff to develop a compensatory mitigation plan.

Fish and Wildlife Coordination Act Recommendations

As proposed, the project may prevent or reduce upstream passage of diadromous fish to important spawning habitat and will result in permanent elimination and degradation of riverine habitat, including mapped areas of SAV. To avoid and minimize these impacts, we recommend the following, pursuant to the Fish and Wildlife Coordination Act (FWCA):

- Evaluate alternatives to shoreline erosion control that incorporate NNBF to the maximum extent practicable.
- Restrict the installation and removal of cofferdam structures during the period in which anadromous fishes are documented to spawn in the project area (March 1 - June 15).
- Perform a survey for SAV during the 2023 growing season (July 15 - September 15) and, if SAV is observed, work with DOEE to develop a monitoring and compensatory mitigation plan to offset permanent and temporary losses.

Conclusion

We look forward to continued coordination with you on this project as it moves forward. If you have any questions or need additional information, please do not hesitate to contact Jonathan Watson in our Annapolis, MD field office at jonathan.watson@noaa.gov or (410) 295-3152.

Sincerely,

Karen Greene
Chief, Mid-Atlantic Branch
Habitat and Ecosystem Services Division

cc:

NPS – T. Stidham, C. Dewey, J. Gorder, D. Pavsek

NMFS – B. Hopper; K. Greene

USACE – M. Fullam

DOEE – J. Anderson

EPA – M. Fitzgerald

FWS – S. Deeley

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Young, M., E. Howe, T. O'Rear, K. Berridge, and P. Moyle. 2021. Food web fuel differs across habitats and seasons of a tidal freshwater estuary. Estuaries and Coasts 44: 286-301.

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html). Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

LAKE

- [L1UBH](#)

RIVERINE

- [R1UBV](#)
-

IPaC User Contact Information

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Lead Agency Contact Information

Lead Agency: Department of Interior

From: Cullen, Kathleen M <kathleen_cullen@fws.gov>
Sent: Friday, February 3, 2023 3:48 PM
To: Tanaira Cullens <tcullens@biohabitats.com>; Keller, Cherry <cherry_keller@fws.gov>
Subject: Re: [EXTERNAL] NLEB Distance from Hibernacula and Maternity Roost Trees

Hi Tanaira-

Thank you for sending this project for review. Recent survey work in this area has been negative for NLEB, and we would consider this to not be habitat for the species. Based on the scope of work and the project location, this project is expected to have "no effect" on the NLEB. No further Section 7 consultation is needed at this time unless project plans change. Please let me know if you have any questions.

Thank you,
Kathleen

Kathleen Cullen
U.S. Fish & Wildlife Service - Chesapeake Bay Field Office
177 Admiral Cochrane Dr., Annapolis MD, 21401
410-573-4579 - kathleen_cullen@fws.gov

From: Tanaira Cullens <tcullens@biohabitats.com>
Sent: Friday, February 3, 2023 8:21 AM
To: Keller, Cherry <cherry_keller@fws.gov>
Cc: Cullen, Kathleen M <kathleen_cullen@fws.gov>
Subject: [EXTERNAL] NLEB Distance from Hibernacula and Maternity Roost Trees

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good Morning Cherry,

Thanks so much for chatting with me about the NLEB hibernacula and maternity roost trees. Please see below for a map of the project area (also attached) and a project description.

The project is broken down into four locations: approximately 4,670 feet in West Potomac Park along the Potomac River, separated by wall type in the north and south, along with approximately 800 feet west of the Inlet Bridge on the Tidal Basin, and approximately 1,200 feet east of the Inlet Bridge on the Tidal Basin. The proposal is to rehabilitate and reconstruct the seawalls and adjacent infrastructure. The actual seawalls will be reconstructed to their historic functional height to protect West Potomac Park and the Tidal Basin between the Jefferson Memorial and FDR Memorial, while meeting the requirements of park visitation and addressing the estimated changes in future water levels. Repairs to the surrounding infrastructure may include grading, stormwater control, pedestrian/ multi-use paths, curbing, and replacement in-kind of any construction damage to the landscape and trees.



Tanaira S. Cullens
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