Brunswick Harbor Modifications Study
Glynn County, Georgia

Draft Integrated Feasibility Report and Environmental Assessment

NMFS ESA Biological Evaluation

DRAFT Appendix I

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NMFS ESA Biological Evaluation

The U.S. Army Corps of Engineers (Corps) is requesting informal consultation pursuant to Section 7 of the Endangered Species Act and the Marine Mammal Protection Act for the Brunswick Harbor Modification Study (BHMS). The project area is located within the lower Brunswick River, which includes the inner channels through St. Simon's Sound, Brunswick River, South Brunswick River, and Turtle River, in the City of Brunswick, Glynn County, Georgia. The BHMS evaluated 9 alternatives to increase efficiency of operation at Brunswick Harbor. The study focus is on vessels transiting to and from the Colonel's Island facility which is the second busiest "roll-on/roll-off" port in the United States. The recommended plan, Alternative 8, is a combination of the bend widener, turning basin expansion, and meeting area at St. Simon's Sound. Alternative 8 includes removal of 205,000 cubic yards of material at the bend widener and 346,000 cubic yards at the turning basin expansion. No dredging is needed at St. Simon's Sound as it is naturally deep and only requires realignment of the authorized channel dimensions. At this time the dredged material would be placed in the Andrews Island Dredged Material Containment Area. Beneficial use of a portion of material from the bend widener is being considered for placement on the existing Bird Island to address erosion concerns. A Public Notice was also sent to all the parties on the Corps' Regulatory mailing list in Georgia for the project area, available at: https://www.sas.usace.army.mil/Missions/Regulatory/Public-Notices/.

The Corps has determined that the proposed project may affect but is not likely to adversely affect (NLAA) federally-listed species and no adverse effects to their designated critical habitat (DCH), as described below, and is therefore requesting concurrence with our determinations pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1536), the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. § 1361-1407) and the consultation procedures at 50 C.F.R. Part 402.

Pursuant to our request for informal consultation, the Corps is providing, enclosing, or otherwise identifying the following information:

- A description of the action to be considered;
- A description of the action area;
- A description of any listed species or designated critical habitat DCH that may be affected by the action; and
- An analysis of the potential routes of effect on any listed species or DCH.

1. PROPOSED ACTION

a. Description of the proposed action:

Upon receipt of the Chiefs report (final milestone) scheduled for March 11, 2022, in cooperation with the Georgia Ports Authority, the Corps proposes to implement the proposed project activities described in the recommended plan that include the removal of material at the bend widener and turning basin, and an extension of the federal channel footprint at the meeting area at St. Simons Sound. A total of approximately 551,000 cubic yards of dredged material will be removed to construct the project. Upon project commencement, dredging activities are anticipated to continue for approximately 12 months. Once constructed,

maintenance dredging would be an ongoing process and is currently estimated every 12 months per section/run of river.

Specifically, the proposed dredging operation includes the exclusive use of a cutterhead dredge. The activities described in the recommended plan would expand the Cedar Hammock Range bend widener by a maximum width of 321 feet and a length of approximately 2,700 feet. Approximately 205,000 cubic yards of material would need to be dredged to expand the bend widener, as shown in Figure 1. In addition, the recommended plan would include expanding the existing turning basin at the Colonel's Island facility by a maximum width of 397 feet and a length totaling approximately 4,100 feet. The turning basin expansion would require approximately 346,000 cubic yards of dredge material, as shown in Figure 2. Since the meeting area at St. Simons Sound is a naturally deep channel, no dredge activity is anticipated, as shown in Figure 3. The meeting area would be expanded by a maximum width of 800 feet on the north side of the existing 400 foot-wide federal channel and at a length of approximately 2,700 feet. The total amount of material to be dredged will be approximately 551,000 cubic yards. For the Turning basin, the limits of disturbance are 18.7 acres and for the bend widener, limits of disturbance total 16.2 acres. Both of these numbers include a 3:1 tie-in side slope to the existing slope.

Figure 1. Bend Widener

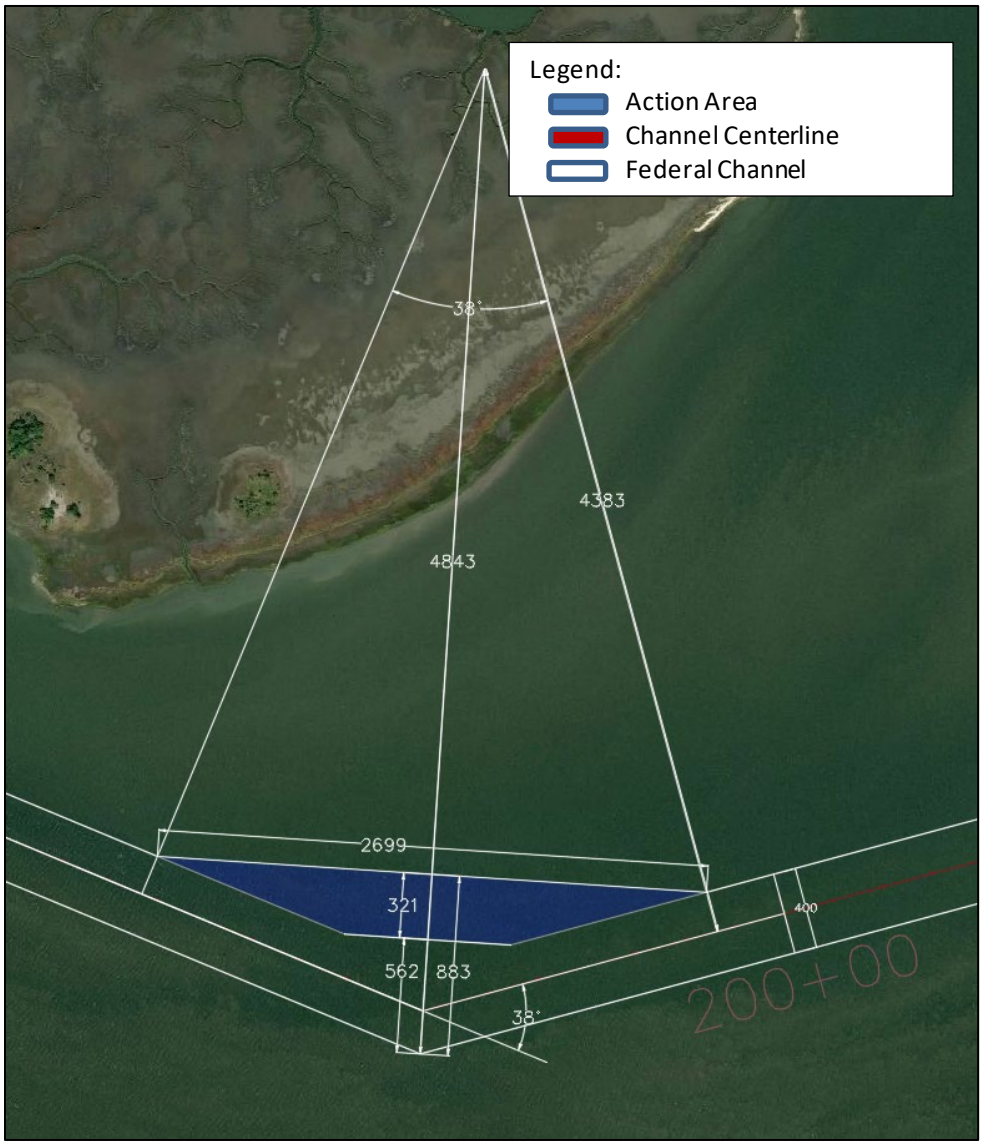


Figure 2. Turning Basin

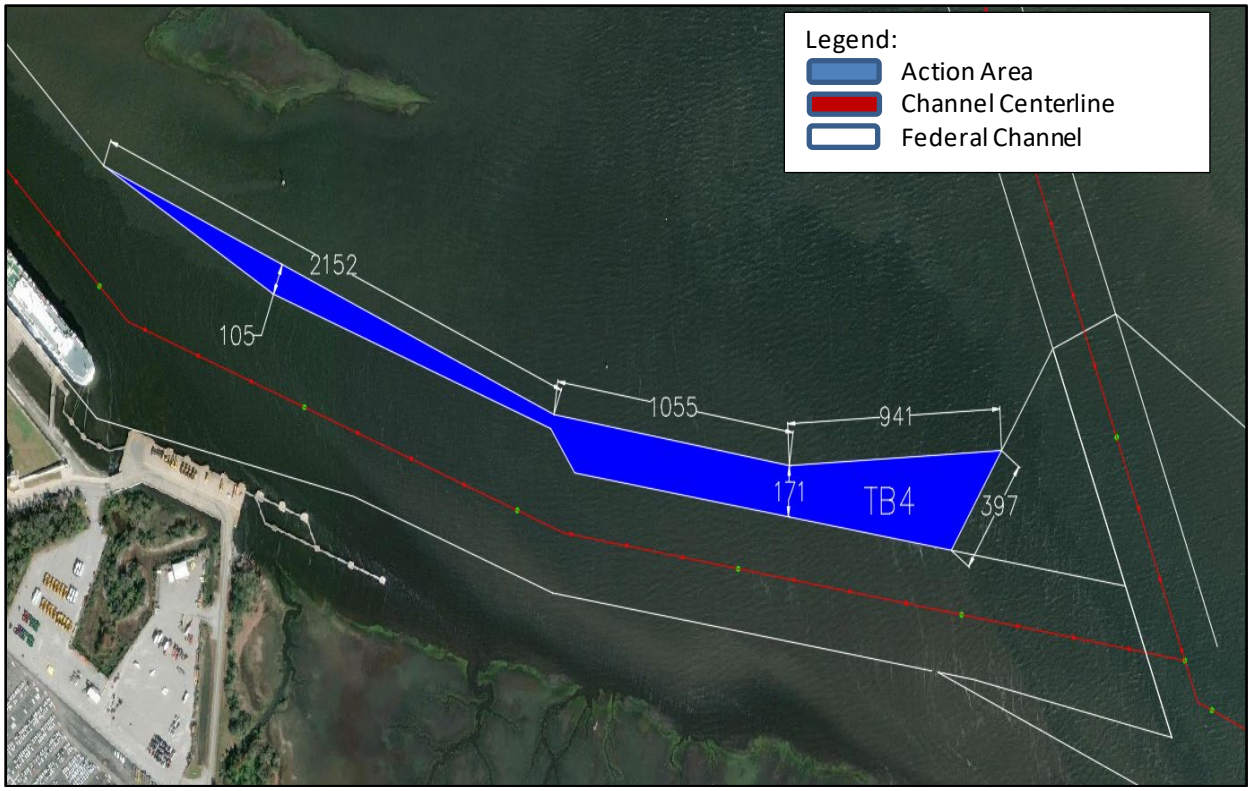
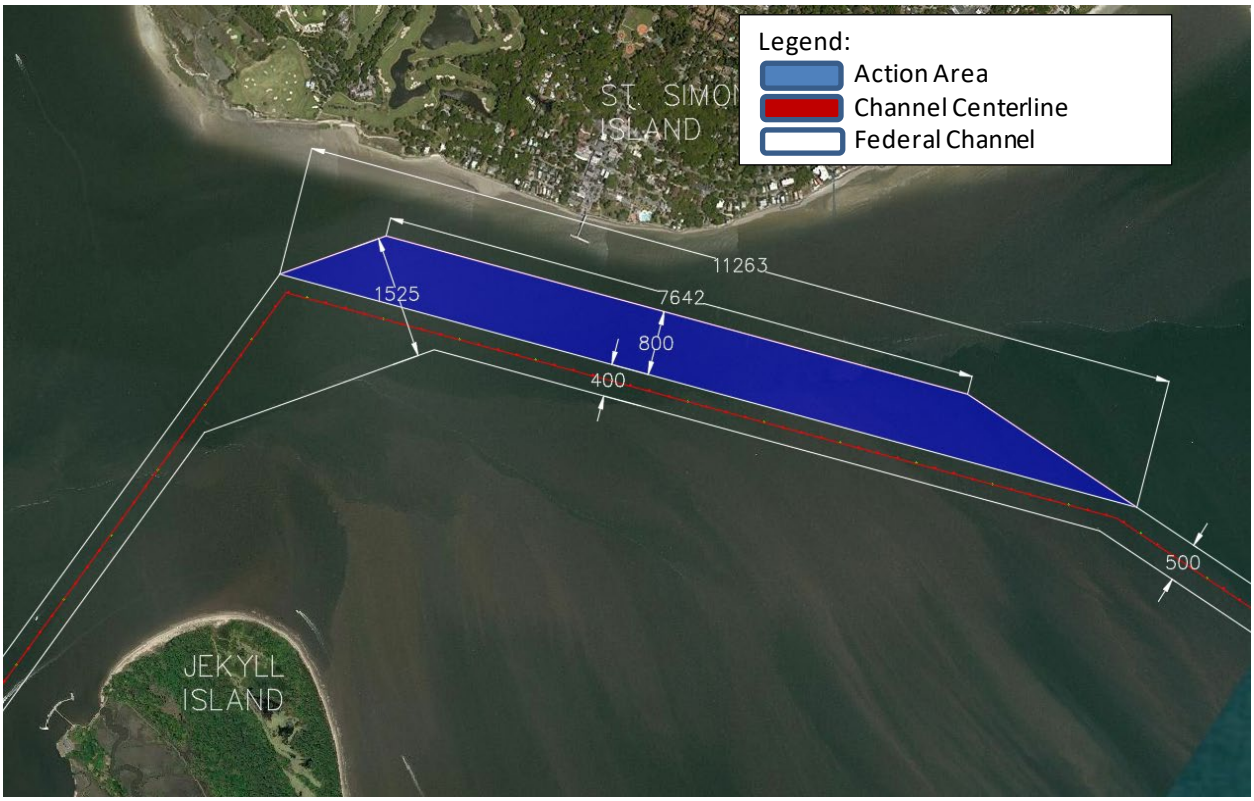


Figure 3. St. Simons Meeting Area



The dredge material at the bend widener consists of poorly graded sands, silty sands, and highly weathered limestone, and at the turning basin expansion, it consists of poorly graded sands, clayey sands, sandy clays, highly weathered limestone, and highly plastic clays. The proposed surface is to be dredged to the authorized depth of -36' + 2' Allowable Over Depth. The dredged material is to be disposed of at the Andrews Island Dredged Material Containment Area (DMCA). The Corps anticipates that project construction will last for approximately one year. Upon project commencement, dredging activities are anticipated to continue for approximately 12 months. Once constructed, maintenance dredging would be an ongoing process and is currently estimated every 12 months per section/run of river. There will be no time of year restrictions as the proposed dredging activity is exclusively being accomplished through cutterhead dredging and is not located in a sturgeon river as defined in the South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (SARBO 2020). All cutterhead PDCs mandated in the SARBO 2020 will be followed. As such, the Corps has made a May Affect Not Likely to Adversely Affect (MANLAA, or NLAA) for listed threatened or endangered species, or designated critical habitat, in the project area.

Cutterhead dredging typically occurs on a fixed boat/barge system and is used for new work and maintenance projects where suitable placement/disposal areas are available and operate in an almost continuous dredging cycle resulting in maximum production, economy, and efficiency. Pipeline dredges are rarely self-propelled, and typically must be transported to and

from the dredge site where they are secured in place by special anchor pilings, called spuds. They require an extensive array of support equipment including pipeline (floating, shore, and submerged), boats (crew, work, survey), barges, and pipe handling equipment (SARBA June 2017). For the proposed action, the barge will be positioned in a fixed location to where floating/submerged pipe goes from the barge and directly to an onshore location on the dredge disposal area. The barge and pipeline will be placed in this fashion for both locations that dredge activity will occur.

b. Description of the project purpose:

The purpose of the BHMS is to improve marine vessel transport efficiency, maintain vessel and pilot/crew safety and contribute to National Economic Development in an environmentally acceptable and sustainable manner. The Corps will continue to follow the SARBO 2020 for long term operation and maintenance of Brunswick Harbor.

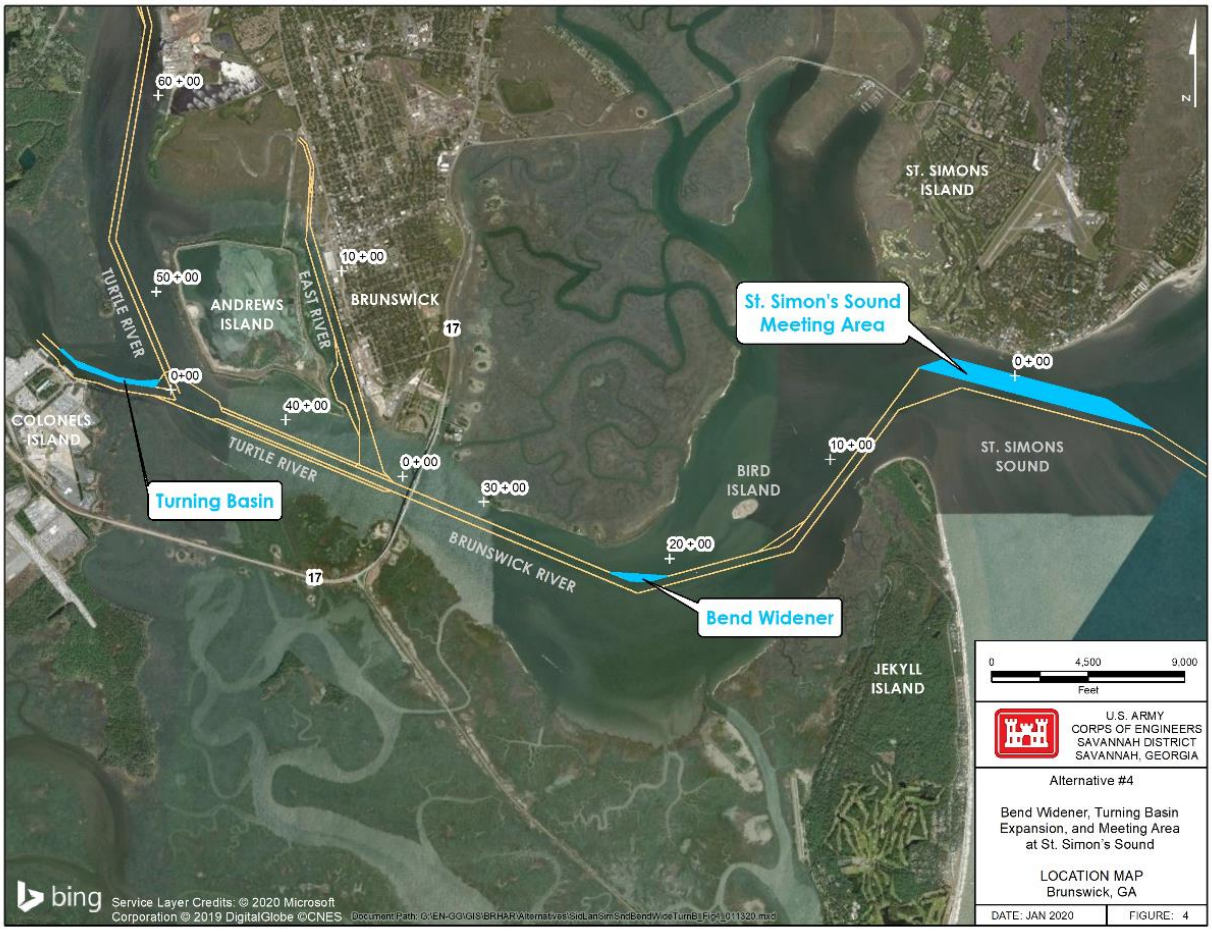
c. Description of minimization measures:

In order to minimize impacts to T&E species, critical habitats, and marine mammals, project design, implementation, and maintenance will include all relevant PDCs from the SARBO 2020. Additionally, the BHMS proposes to use the cutterhead dredge method, minimizing turbidity by piping away the sediments without having to bring them up through the water column in a bucket or transport them to an offshore location. Cutterhead dredges are known to have less direct impacts to listed species than other dredge types. Other dredge methods were analyzed and would be too costly to endangered species such as sea turtles and sturgeon, which would require additional monitoring and higher cost for the work.

2. ACTION AREA

For the purposes of this consultation, the Corps has defined the action area within the lower Brunswick River, which includes the inner channels through St. Simon's Sound, Brunswick River, South Brunswick River, and Turtle River, as shown in Figure 4. The action area starts before 0 river miles from St. Simons Sound.

Figure 4. Proposed Selected Plan- Alternative 8



3. AFFECTED SPECIES/HABITAT

Habitats within and adjacent to the project site consist of submerged unconsolidated estuarine bottom, intertidal flats, and estuarine emergent marsh. Most of the project area is open water that receives semi-diurnal tidal flushing from St. Simon's Sound. As a result, the salinity levels tend to be approximately 25 parts per thousand (ppt), depending on tide stage. The St. Simon's Sound tide range is approximately 6.5 feet, and the water in the harbor is well-mixed with a relatively uniform salinity. There is no designated critical habitat for listed species in the project footprint.

Project activities have the potential to affect the listed species as shown in Table 1 below. Table 2 provides the species use of the action area.

Table 1: Species in the action area

Species	ESA Listing Status	Listing Rule/Date	Most Recent recovery plan date	USACE Effect Determination (Species)
Kemp's ridley sea turtle	E	35 FR 18319/ December 2, 1970	September 2011	NLAA
Hawksbill sea turtle	E	35 FR 8491/ June 2, 1970	December 1993	NLAA
Green sea turtle	T	43 FR 3280/July 28, 1978	October 1991	NLAA
Loggerhead sea turtle	T	43 FR 3280/July 28, 1978	December 26, 1991	NLAA
Leatherback sea turtle	E	35 FR 5961/ June 2, 1970	1992	NLAA
Shortnose sturgeon	E	32 FR 4001/ March 11, 1967	December 1998	NLAA
Atlantic sturgeon (All DPSs)[1]	T/E	77 FR 5914/ February 6, 2012	N/A	NLAA
Giant Manta Ray	T	83 FR 2916 January 22, 2018	December 4, 2019	NLAA
Oceanic White Tip Shark	T	83 FR 4153 January 30, 2018	September 6, 2018	NE
North Atlantic right whale	E	35 FR 18319/ December 2, 1970	June 2005	NE
Blue whale	E	35 FR 18319/ December 2,	July 1998	NE

		1970		
Fin whale	E	35 FR 18319/ December 2, 1970	August 2010	NE
Sei whale	E	35 FR 18319/ December 2, 1970	December 2011	NE
Sperm whale	E	35 FR 18319/ December 2, 1970	December 2010	NE

Table 2: Species use of the Action Area

Species	Species Use of the Action Area and/or DCH Description
Green sea turtle	Very few adult green sea turtles are found in Georgia, however, when they do occur in the action area, they can occur in proximity to the St. Simons Island and Jekyll Island beach areas and in and around St. Simons Sound. Juveniles are common throughout the estuaries that are adjacent to the action area year-round but are more abundant March through November. It is presumed that adults may occur in this area primarily for nesting, dispersal, or migration and it is presumed that the presence of juveniles in the project area may be for foraging, dispersal, or migration.
Loggerhead sea turtle	Loggerheads are the most common nesting species during the season along coastal Georgia. Adult loggerheads are common in and around the ship channel from Cedar Hammock Reach to the ocean and can commonly occur in proximity to the St. Simons Island and Jekyll Island beach areas during the nesting season. Juvenile loggerheads are common throughout the estuaries that are adjacent to the action area year-round but are more abundant in March through November. The abundance of juveniles is much higher than adults and occur primarily for foraging.
Leatherback sea turtle	Leatherback sea turtles occur in the Caribbean, Atlantic, and Gulf of Mexico. The Atlantic coast of Florida is one of the main nesting areas in the continental United States. They spend most of their lives in the ocean, but females leave the water to lay eggs. Leatherbacks are not anticipated to be found within the action area but may occur offshore from the action area while in route to nesting beaches in Florida and the Caribbean.
Kemp's ridley sea turtle	Kemp's ridley sea turtles are the least common turtle species found in Georgia, however, when they do occur in the action

	area, they can occur in proximity to the St. Simons Island and Jekyll Island beach areas and in and around St. Simons Sound. Juveniles can occur throughout the estuaries that are adjacent to the action area year-round but are more abundant March through November. It is presumed that adults may occur in this area primarily for nesting, dispersal, or migration and it is presumed that the presence of juveniles in the project area may be for foraging, dispersal, or migration.
Hawksbill sea turtle	Hawksbill sea turtles typically inhabit inshore reef and hard bottom areas where they forage primarily on encrusting sponges. Due to the project sites proximity to the ocean and hard bottom areas, it is possible hawksbill sea turtles may be in or near the action area however, due to their rare distribution, encounters with Hawksbill sea turtle near the project area Is not anticipated.
Shortnose and Atlantic sturgeon	Shortnose and Atlantic sturgeon typically inhabit hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters; waters with a gradual downstream salinity gradient and soft substrate (*e.g.,* sand, mud); (3) water of appropriate depth and absent physical barriers to passage; and (4) water quality conditions in the bottom meter of the water column, with acceptable temperature and oxygen values. The project area does not reliably consist of rock, cobble, gravel, limestone, boulder but overall consists of poorly graded sands, clayey sands, sandy clays, highly weathered limestone and highly plastic clays sand. Life stages present may include both Juvenile and Adult stages. Both species may be present year-round at various developmental stages and may be present when the dredging occurs. Since this area is not considered critical habitat, it is also not considered preferred habitat for successful reproduction and recruitment. It is presumed that their presence in the project area is for either foraging, dispersal, or migration to and from critical habitat.
North Atlantic right whale	Northern right whales typically inhabit offshore waters along coastal Georgia each winter during the calving season. This offshore location near the project area is considered critical habitat for calving (NOAA). Although critical habitat is near the project area, there are no known confirmed sightings of a right whale in St. Simons Sound. From an environmental review perspective, the Georgia Department of Natural Resources-Coastal Resource Division (GADNR CRD) considers the right whale habitat as stopping at the shoreline and/or the COLREGS lines (which are the lines on charts that delineate where the ocean starts and inshore waters end) (Clay George-

	GADNR CRD). Therefore, sounds and any other waters west of the COLREGS lines in Georgia are free of right whales.
Blue whale	In the Atlantic Ocean, their range extends from the subtropics to the Greenland Sea and are typically an offshore, deep water species. The project action area, which is limited to areas in the South Brunswick River and Turtle River and St. Simons Sound, does not include blue whale habitat.
Fin whale	Fin whales are found in deep, offshore waters of all major oceans, primarily in temperate to polar latitudes. They are less common in the tropics (NOAA FW). The project action area, which is limited to areas in the South Brunswick River and Turtle River and St. Simons Sound, does not include fin whale habitat.
Sei whale	Sei whales have a wide distribution and live in subtropical, temperate and subpolar waters around the world and are typically an offshore, deep water species. The project action area, which is limited to areas in the South Brunswick River and Turtle River and St. Simons Sound, does not include sei whale habitat.
Sperm whale	Sperm whales inhabit all of the world's oceans. Their distribution is dependent on their food source and suitable conditions for breeding and varies with the sex and age composition of the group. Sperm whale are typically an offshore, deep water species. The project action area, which is limited to areas in the South Brunswick River and Turtle River and St. Simons Sound, does not include sperm whale habitat.
Oceanic Whitetip Shark	The oceanic whitetip shark is found throughout the world in tropical and sub-tropical waters. Oceanic whitetip sharks are also not discussed in detail in this assessment as they are unlikely to be within the vicinity of the coastal action area since they are typically offshore species, residing in deep water, and the activities proposed by the Corps are coastal in nature.
Giant Manta Ray	The Giant Manta Ray is found throughout the world in tropical and sub-tropical waters. Giant manta rays are also not discussed in detail in this assessment as they are unlikely to be within the vicinity of the coastal action area since they are typically offshore species, residing in deep water, and only occasionally frequent productive coastlines to feed, as the activities proposed by the Corps are coastal in nature.

4. ROUTE(S) OF EFFECT TO SPECIES:

The project is anticipated to commence on November 1, 2024, and continue for approximately 12 months. The following effects are being considered for this project:

- Inadvertent vessel strikes - Vessel strikes can injure several whale species. The BHMS project dredge activity will remain landward of the COLREGS line. The proposed project will not increase cargo vessel traffic, and therefore, the project action area does not include shipping lanes or the federal navigation project extending offshore in the Atlantic Ocean. As a result, the proposed project will have no effect on whales or Oceanic Whitetip Shark. Therefore, impacts to listed species from vessel strikes are considered discountable and insignificant.

- Dredging - The following federally listed species may occur in the project area: loggerhead sea turtle (Caretta caretta), green sea turtle (Chelonia mydas), Leatherback sea turtle (Dermochelys coriacea), Kemp's ridley sea turtle (Lepidochelys kempii), hawksbill sea turtle (Eretmochelys imbricate), shortnose sturgeon (Acipenser brevirostrum), and Atlantic sturgeon (Acipenser oxyrinchus) and Giant Manta Ray (Manta birostris). The following federally listed species are not expected to be present in the project area: North Atlantic right whale (Eubalaena glacialis), blue whale (Balaenoptera musculus), fin whale (Balaenoptera physalus) and sei whale (Balaenoptera borealis), sperm whale (Physeter macrocephalus) and Oceanic white tip shark (Carcharhinus longimanus). However, with implementation of the Project Design Criteria in the National Marine Fisheries Service SARBO 2020, including the use of cutterhead dredges which are known to have less direct impacts to listed species than other dredge types, the Corps has determined that the proposed actions may affect but is not likely to adversely affect listed species that may occur in the project area and a no effect determination for listed species not expected to be present in the project area.

- Water Quality - The project proposes to use the cutterhead dredge, minimizing turbidity by piping away the sediments without having to bring them up through the water column in a bucket or transport them to an offshore location. In addition, most of the project area is open water that receives semi-diurnal tidal flushing from St. Simons Sound. As a result, the water in the harbor is well-mixed with a relatively uniform salinity, DO, and other important water quality parameters. This tidal flush in turn enables the water quality to return to normal levels relatively quick. Any limited impacts to Water Quality would be temporary and minimal, and project impacts are considered discountable and insignificant.

- Noise - noise impacts from the proposed activity will be insignificant and aside from occasional horn alerts from passing ships at the meeting area at St. Simons, the typical maritime activities from large vessels will remain as they are. The above Alternatives also assumes O&M dredging would occur within the Federal navigation channel at authorized depths (-36 MLLW + 2' Allowable Over Depth) as normally scheduled on an annual maintenance basis to continue to accommodate open channels for vessel navigation.

5. ROUTES OF EFFECT TO CRITICAL HABITAT

The project is not located in designated critical habitat, and there are no potential routes of effect to any designated critical habitat.

6. DETERMINATION:

The Corps has reviewed the proposed project for its impacts to federally listed species and DCH. The Corps has determined that the proposed actions may affect but is not likely to adversely affect the following federally listed species: loggerhead sea turtle (Caretta caretta), green sea turtle (Chelonia mydas), Leatherback sea turtle (Dermochelys coriacea), Kemp's ridley sea turtle (Lepidochelys kempii), hawksbill sea turtle (Eretmochelys imbricate), Giant Manta ray (Manta birostris), shortnose sturgeon (Acipenser brevirostrum) and Atlantic sturgeon (Acipenser oxyrinchus).

The Corps has also determined that the proposed actions will have no effect the following federally listed species: North Atlantic right whale (Eubalaena glacialis), blue whale (Balaenoptera musculus), fin whale (Balaenoptera physalus) and sei whale (Balaenoptera borealis), sperm whale (Physeter macrocephalus) and Oceanic white tip shark (Carcharhinus longimanus). Additionally, the Corps has concluded the project will not affect any DCH. This analysis was prepared based on the best scientific and commercial data available.

The Corps is requesting National Marine Fisheries Service's (NMFS) written concurrence with the NLAA determinations. The Corps appreciates your cooperation in completing this informal Section 7 consultation by concurring with the Corps' effect determination(s) in a timely manner.

Literature Cited

SARBA June 2017. Endangered Species Act – Section 7 Consultation- South Atlantic Regional Biological Assessment- Joint Consultation- 2017

NOAA 2017. DEPARTMENT OF COMMERCE, National Oceanic and Atmospheric Administration, 50 CFR Part 226, [Docket No. 150818735-7452-02]-Federal Register 08/17/2017

NOAA RW. https://www.fisheries.noaa.gov/species/north-atlantic-right-whale

NOAA SS. https://www.fisheries.noaa.gov/species/shortnose-sturgeon

NOAA BW. https://www.fisheries.noaa.gov/species/blue-whale

NOAA FW. https://www.fisheries.noaa.gov/species/fin-whale

NOAA HW. https://www.fisheries.noaa.gov/species/humpback-whale

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NOAA Sp W. https://www.fisheries.noaa.gov/species/sperm-whale

NOAA Shark. https://www.fisheries.noaa.gov/species/oceanic-whitetip-shark

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