US Army Corps of Engineers®

Tybee Island Shoreline Protection Project (TISPP) Periodic and Emergency Nourishments Draft Environmental Assessment and Finding of No Significant Impact Tybee Island, Chatham County, GA

Appendix B
Coastal Zone Management Act (CZMA)

January 2026

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US Army Corps of Engineers®

Tybee Island Shoreline Protection Project (TISPP) Periodic and Emergency Nourishments Draft Environmental Assessment and Finding of No Significant Impact

Tybee Island, Chatham County, GA

Appendix B.2 Federal Consistency Determination Coastal Zone Management Act (CZMA)

January 2026

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
100 W. OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3604

November 2025

Planning Branch

Mr. Doug Haymans
Georgia Department of Natural Resources
Coastal Resources Division
One Conservation Way, Suite 300
Brunswick, Georgia 31520-8687

Dear Mr. Haymans:

The U.S. Army Corps of Engineers, Savannah District (USACE) has prepared the enclosed **consistency determination addendum in accordance with the section 307 of the Coastal Zone Management Act (CZMA**) for the Tybee Island Shoreline Project Protection (TISPP).

USACE is requesting a consistency review under the Georgia Coastal Management Program for periodic and emergency beach nourishments for the TISPP on Tybee Island, Georgia through 2036.

In accordance with Section 307 (c)(1) of the Federal Coastal Zone Management Act of 1972, as amended, USACE has determined that the periodic and emergency beach nourishments for the remainder of the lifetime of TISPP are fully consistent with Georgia's Coastal Management Program. The proposed activities comply with the enforceable policies of Georgia's approved Coastal Management Program and will be conducted in a manner that is fully consistent with the program and any received authorizations. We are seeking your concurrence on our consistency determination addendum. Please contact Dr. Kaitlyn Murphy-Wefel by telephone at (912) 710-8885, or by email at Kaitlyn.M.Murphy-Wefel@usace.army.mil if you should have any questions or requests for further information.

Encl

Suzanne Hill
Chief, Environmental Section

Federal Consistency Determination
Tybee Island Shoreline Protection Project Periodic and Emergency Nourishments
Draft Environmental Assessment and Finding of No Significant Impact
Tybee Island, Chatham County, GA

Section 1. INTRODUCTION

The Federal Coastal Zone Management Act (CZMA), 16 U.S.C. 1451 et seq., as amended, requires each Federal agency activity performed within or outside the coastal zone (including development projects) that affects land or water use, or natural resources of the coastal zone to be carried out in a manner which is fully consistent with the enforceable policies of approved state management programs. A direct Federal activity is defined as any function, including the planning and/or construction of facilities, which is performed by or on behalf of a Federal agency in the exercise of its statutory responsibilities. A Federal development project is a Federal activity involving the planning, construction, modification or removal of public works, facilities or other structures, and the acquisition, use or disposal of land or water resources.

To implement the CZMA and to establish procedures for compliance with its Federal consistency provisions, the US Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), has promulgated regulations which are contained in 15 C.F.R. Part 930. This Consistency Determination is being submitted in compliance with Part 930.30 through 930.44 of those regulations.

The U.S. Army Corps of Engineers, Savannah District (USACE), has prepared this Federal Consistency Determination to determine if the proposed periodic and emergency beach nourishments on Tybee Island, as authorized by the Tybee Island Shoreline Protection Project, are fully consistent with the Georgia Coastal Management Program (GCMP).

For purposes of the CZMA, the enforceable policies of the Georgia Coastal Management Plan constitute the approved state program. In accordance with the CZMA, USACE has determined that the proposed action would be carried out in a manner which is fully consistent with the enforceable policies of the GCMP.

Section 2. BACKGROUND

The purpose of the proposed action is to conduct periodic and emergency beach nourishments through 2036 to (1) provide storm risk reduction benefits to infrastructure; (2) mitigate for erosional impacts through sand replenishment; and (3) provide recreational and economic benefits to Tybee Island. The authorized project includes renourishment of 13,200 linear feet of beach along the Oceanfront, the 1,100 linear feet along the South Tip, and the 1,800 linear feet of the eastern bank of Tybee Creek to the city fishing pier (referred to as Back River Beach) (Figure 1).

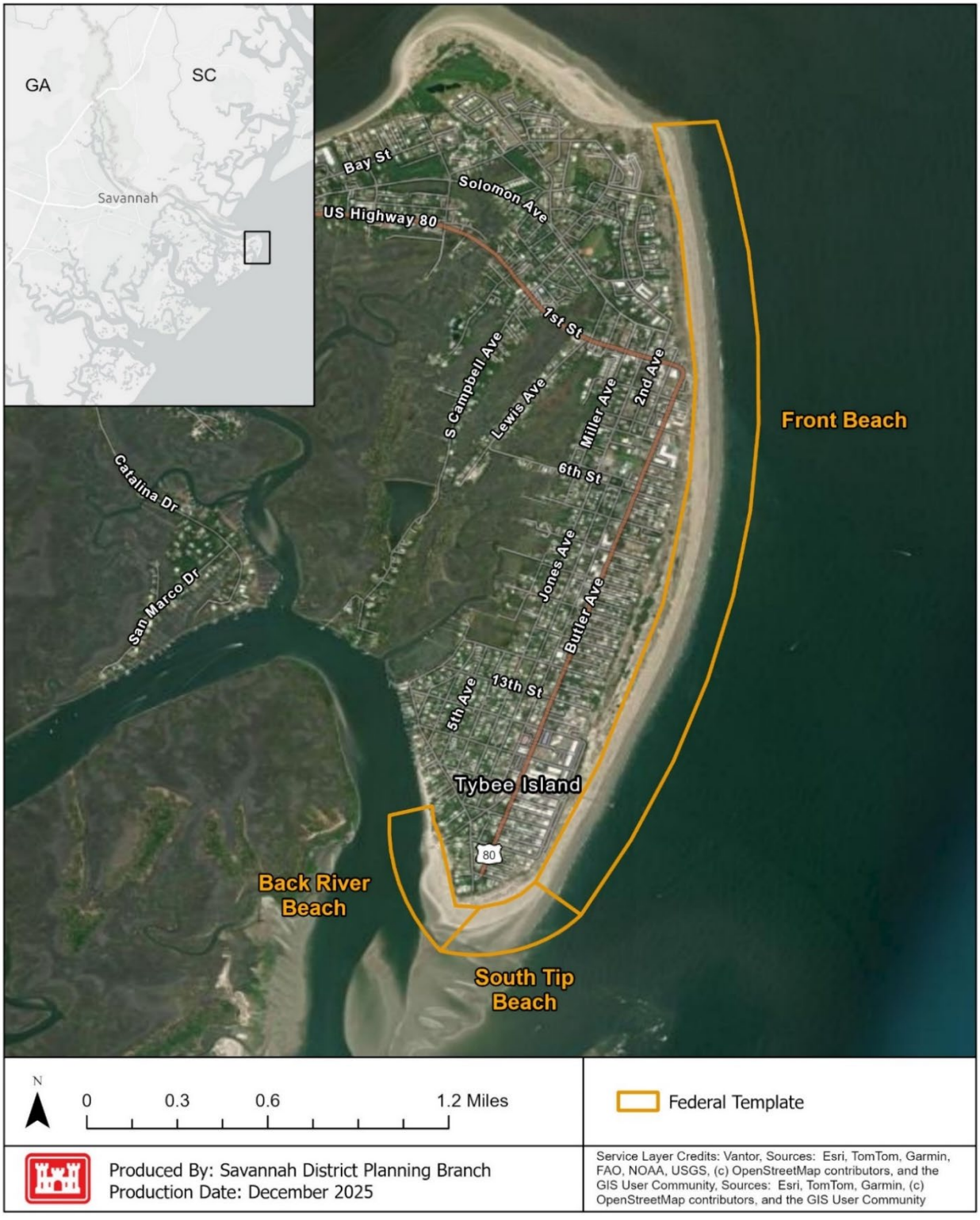

Figure 1. Tybee Island Shoreline Protection Project. The orange polygon demonstrates the Federal template.

The need for the proposed action is due to the high erosion in areas known as “hot spots” (Figure 2). Since the last emergency renourishment completed in January 2020, Tybee Island has experienced increasing erosion from storm surge and wave attack as a result of tropical storm systems. Based on survey data collected from July 2020 to April 2025, there is an annualized loss of 178,432 cy from the Federal template. The data from July 2020 to April 2025 indicate an increase in shoreline loss (Table 1). According to the 2025 shoreline change analysis the Skidaway Institute of Oceanography (SKiO) conducted, there is a mean erosion rate of -6.51 m/year along the Front Beach of Tybee Island (Figure 2).

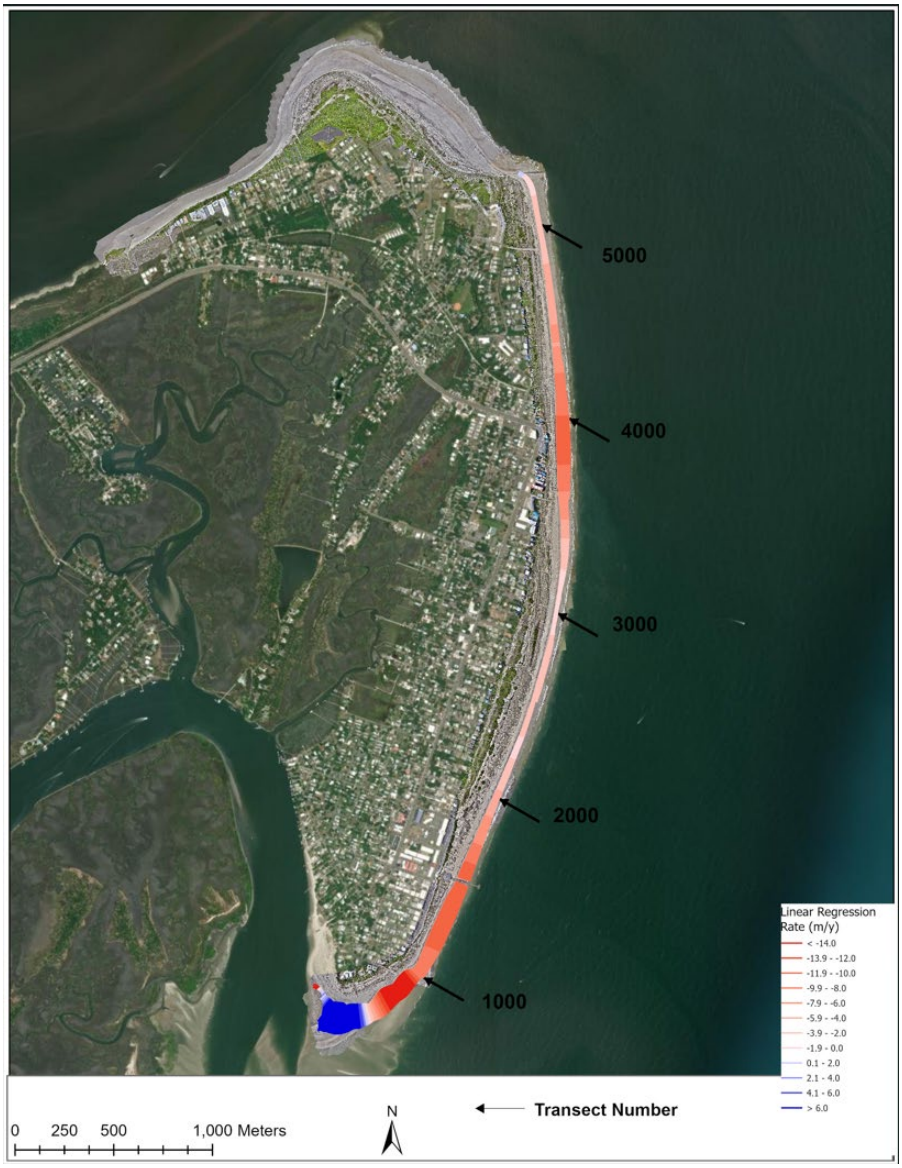

Figure 2. Skidaway Institute of Oceanography (SKiO) conducts annual shoreline change monitoring of the Tybee Island Federal template. Red is indicative of erosional hot spots and blue is indicative of accretionary areas.

Table 1. Shoreline erosion rate calculated from USACE surveys from 2020 – 2025.

Year	Time between Surveys [Months (Yrs)]	Erosion Rate (CY/Yr)
July 2020 to June 2022	23 (1.96)	125,500
June 2022 to June 2023	12 (1.00)	220,500
June 2023 to March 2024	9 (0.75)	149,300
***March 2024 to September 2024 (Post-Helene)**	*8 (0.67)	*56,716
***September 2024 to April 2025**	*6 (0.50)	
March 2024 to April 2025	14 (1.17)	171,450
Average:		**178,432**

* The September 2024 (Post-Helene) survey includes Sta 0+00 to 120+00. These erosion rates were not included in the average erosion rate calculation because surveys only covered about half the beach. The total loss for 2024 was calculated using the April 2025 survey.

The original Federal TISPP was authorized by Senate and House Resolutions dated June 22 and June 23, 1971, respectively, pursuant to Section 201 of the Flood Control Act of 1965 (Public Law 89-298), as presented in House Document No. 92-105, for a life of 10 years. Section 201 provided a procedure for authorization of projects with, at that time, an estimated Federal first cost of construction of less than $10 million. The authorizing language in the Senate Resolution reads as follows:

“RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, That pursuant to the provisions of Section 201 of Public Law 298, Eighty-ninth Congress, (79 Stat. 1073; 42 U.S.C. 1962d-5) the project providing for beach erosion control on Tybee Island, Georgia, is hereby approved substantially in accordance with the recommendations of the Secretary of the Army and the Chief of Engineers in House Document Numbered 105, Ninety-second Congress, at an estimated cost of $404,000.”

The authority for Federal participation in periodic renourishment of beach projects was increased from 10 years to 15 years by Section 156 Water Resources Development Act (WRDA) 1976 (P.L. 94-587, as amended (42 U.S.C. 1962d-5f)), which reads as follows:

"The Secretary of the Army, acting through the Chief of Engineers, is authorized to provide periodic beach nourishment in the case of each water resources development project where such nourishment has been authorized for a limited period for such additional periods as he determines necessary but in no event shall such additional period extend beyond the fifteenth year which begins after the date of initiation of construction of such project."

Section 934 of WRDA 1986 (P.L. 99-662) modified Section 156 WRDA 1976 by extending the authority for Federal participation in periodic renourishment from 15 years to 50 years and reads as follows:

"Section 156 of the Water Resources Development Act of 1976 (42 U.S.C. 1962d-5f) is amended by striking out "fifteenth" and inserting in lieu thereof "fiftieth."

Following the passage of WRDA 1986, the “Section 934” report was completed in March 1994 and revised in October 1994, which concluded that the authorized Federal project for Tybee Island was economically feasible under then current policy and economic guidelines, and the project should be extended for the remaining life of 30 years (from 1994). The study was initiated in 1990, completed in October 1994 and approved in June 1995. Accordingly, the project life of the TISPP was established in September 1974, with initiation of construction of the North Terminal Groin, through September 2024.

The TISPP was further modified by Section 301 of WRDA 1996 (P.L. 104-303), which amended the authorized project as follows:
“The project for beach erosion control, Tybee Island, Georgia, authorized pursuant to section 201 of the Flood Control Act of 1968 (42 U.S.C. 1962d-5; 79 Stat. 1073-1074) is modified to include as an integral part of the project the portion of Tybee Island located south of the existing south terminal groin between 18th and 19th Streets, including the east bank of Tybee Creek up to Horse Pen Creek.”

In 1997, USACE began to work on a study to determine if the South Tip Beach and Tybee Creek up to Horse Pen Creek should be added to the authorized TISSP. The “Special Report on South Tip Beach/Tybee Creek” was completed in May 1998 in response to this authority and was approved by HQUSACE in August 1998. The report recommended extending the southern limits of the authorized project for an additional 1,100 feet to provide protection for structures along the South Tip and another 1,800 feet to provide protection to the eastern bank of the Tybee Creek (also known as Back River).

Section 8129(a)(2)(B) of WRDA 2022 (P.L. 117-263) amended subsection (e) of Section 156 of WRDA 1976, (42 U.S.C. 1962d-5f), and provides that for any existing authorized water resources development project which the maximum period for nourishment described in subsection (a) of WRDA 1976 will expire within the 16-year period beginning on June 10, 2014, that project shall remain eligible for nourishment for an additional 12 years after the expiration of such period. The Tybee Island Storm Risk Management Act, part of WRDA 2022, extends federal participation in the TISPP by 12 years. The expected expiration of the TISPP was September of 2024; however, through this Act, federal participation was extended to 2036.

Section 3. GCMP JURISDICTION

The proposed federal action is located within the Coastal Zone of Chatham County, Georgia.

Section 4. PROJECT DESCRIPTION

Beach nourishments within the Federal template will occur periodically and as needed under emergency conditions (i.e., post-tropical system) for the remaining duration of the TISPP (through 2036). The first renourishment under this action is expected to occur in 2026-2027, with subsequent periodic renourishments every 7 years (funding dependent). Emergency nourishments will occur as supplemental funding and authorizations are provided. The authorized project for Tybee Island consists of nourishment of 13,200 linear feet of beach between two terminal groins, referred to as the Front Beach). Areas include the North Beach (North End Groin to Oceanview Court), Second Street area (Oceanview Court to Center Street), Middle Beach (Center Street to 11th Street), South Beach (11th Street to South End Groin), and Back River/Tybee Creek (South Tip Groin Field to Inlet Avenue). Fill will be placed within these areas to provide a more stable beach profile.

The authorized design for the Front Beach is shown below (Figure 3). The design includes a berm at elevation 11.2 ft mean lower low water (MLLW) with a tolerance of +0.5 ft and a slope of 1:25 (vertical: horizontal). The tolerance allows the contractor to place material up to +0.5 ft above the lines and grades shown on the plans. The tolerance is included due to the large equipment required for this project and the dynamic shoreline conditions (Figure 4).

After fill placement is complete, the upper 18 inches of the beach fill (from the elevation of 7.13 ft MHW and above) must be tilled and sand compaction testing is required after filling due to potentially influencing sea turtle nesting success, per the 2016 GADNR Guidelines for Beach Nourishment Projects.

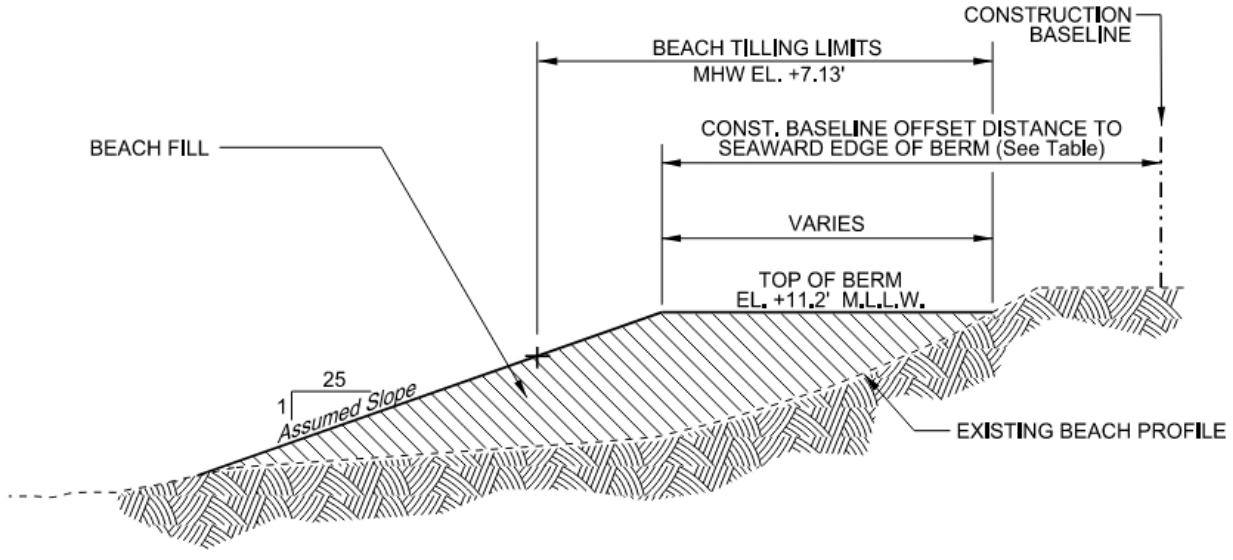

Figure 3. Front Beach and South Tip Beach design cross-profile.

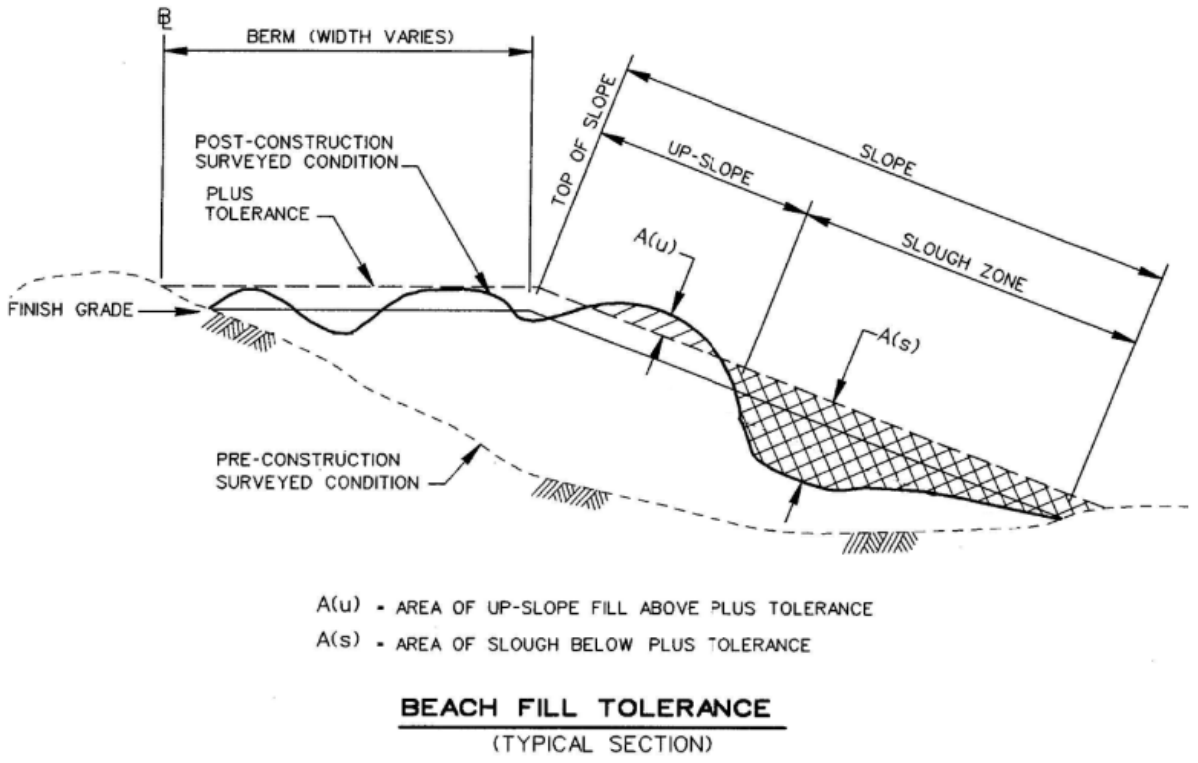

Figure 4. Typical tolerance for beach design includes compensating slopes.

Back River Beach

The authorized design for Back River and South Tip Beach is shown below (Figure 5). The design includes a berm at elevation 11.2 ft MLLW with a tolerance of +0.5 ft and a slope of 1:15 (vertical: horizontal). Beach tilling is required upon completion of fill placement.

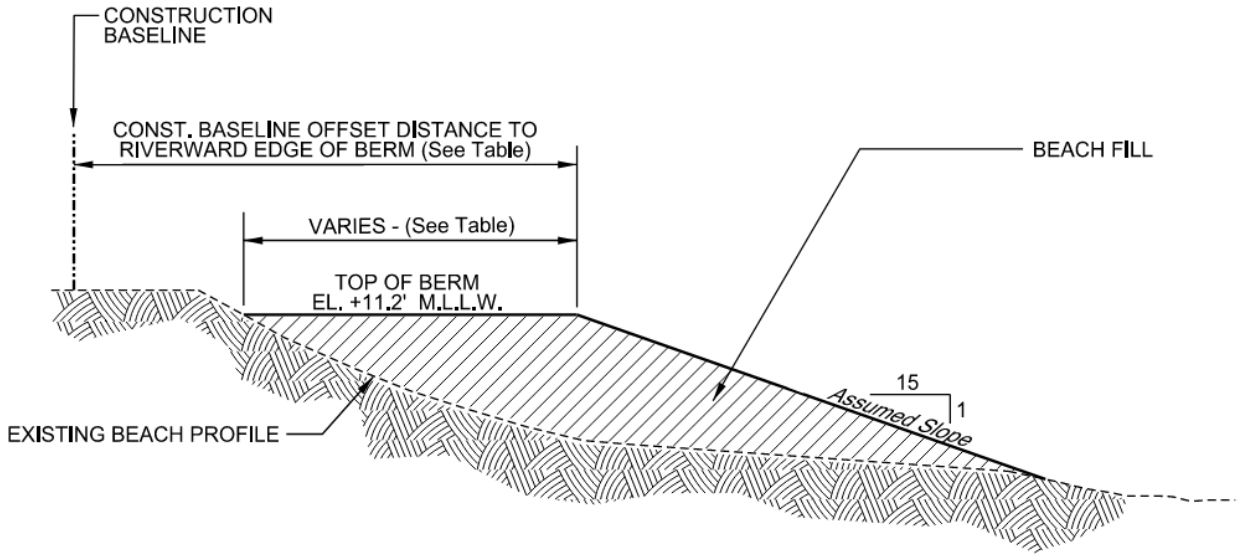

Figure 5. Back River design cross-profile.

Offshore Borrow Area

The proposed sand source for beach renourishments is the Tybee Island Borrow Area (Figure 6). The original borrow area is located approximately 4,000 feet southeast of the southernmost Federal terminal groin. The Borrow Area was expanded in 2019 (USACE 2019) with four zones and a Target Depth of -16 ft Mean Lower Low Water (MLLW). During the 2019 expansion, ~625 more acres were added; thus, the total acreage of Tybee Island Borrow Area is ~1,340 acres.

A volume analysis was completed in June 2025, using the 2020 after dredge (AD) survey following the Hurricane Harvey, Irma, and Maria (HIM) Supplemental beach renourishment event. The 2020 AD survey showed that the FY20 beach renourishment used most of the volume in Zone 4 (approximately 300,000 CY remains above -16 feet MLLW; Figure 7). The three remaining zones have approximately 0.7, 1.0, and 1.7 MCY remaining. At the time of each beach renourishment, borrow area locations may be assessed for use. There is enough material to support additional beach renourishments, but if another borrow site is needed, a separate expansion may occur separate from the proposed action.

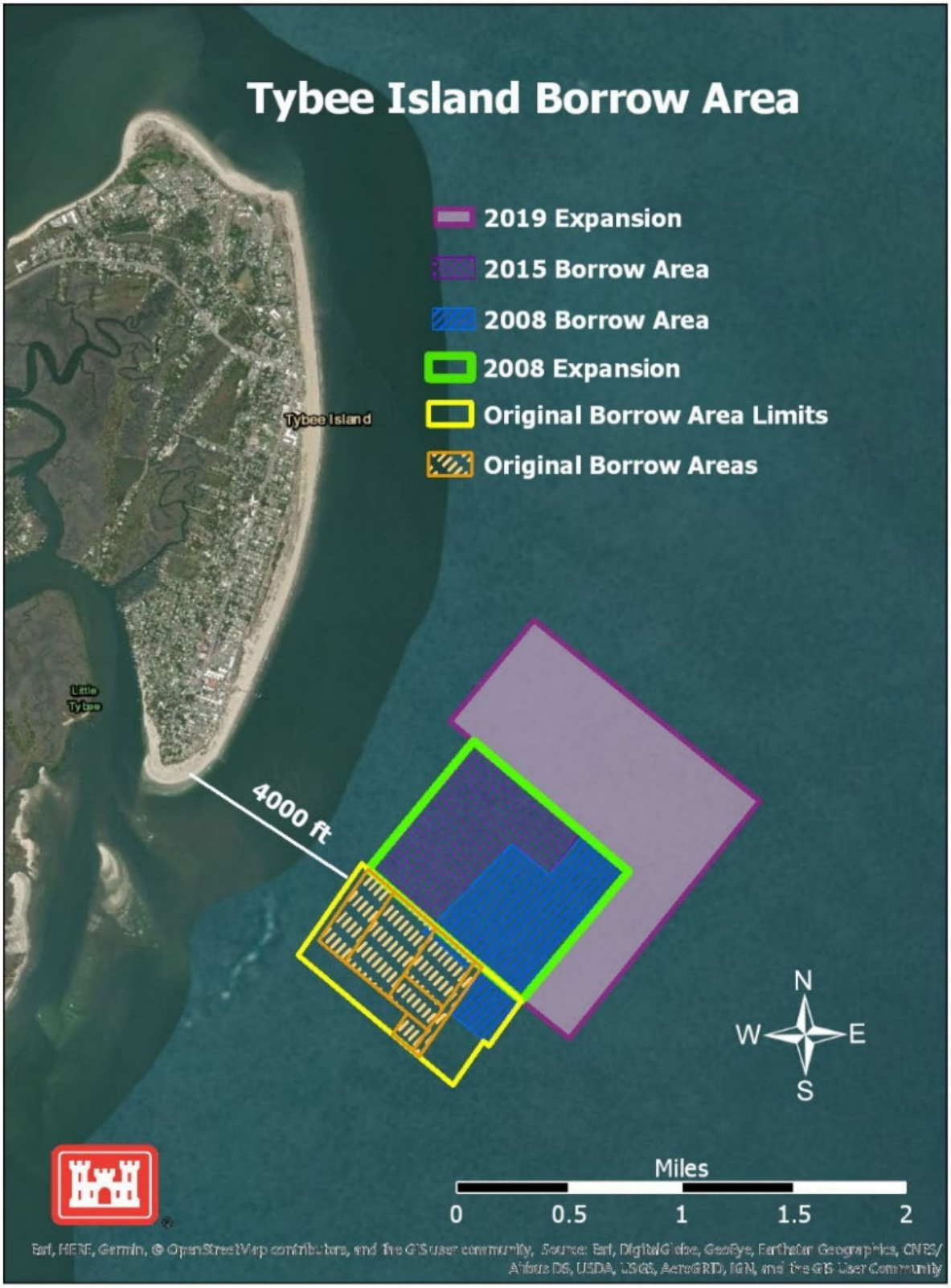

Figure 6. Tybee Island Borrow Area History.

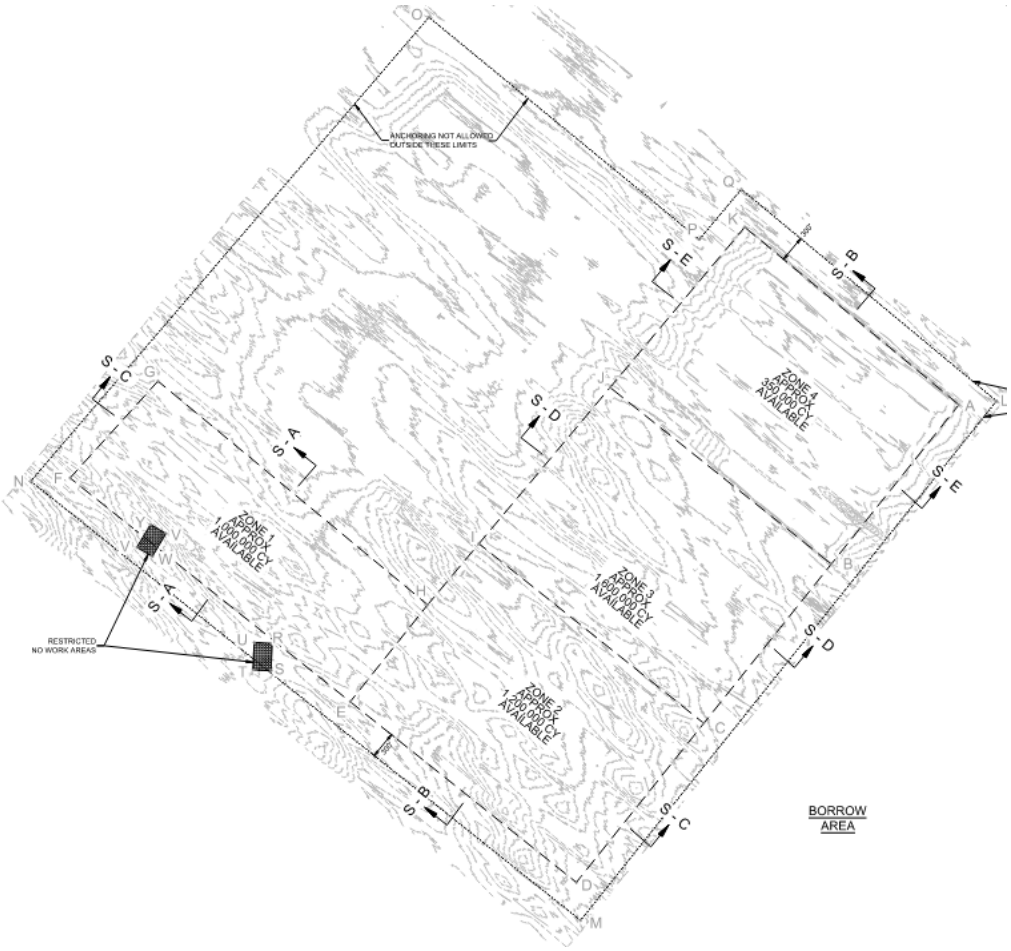

Figure 7. FY20 survey of the Tybee Island Borrow Area.

Additional Beach Fill

In addition to renourishing the Federal template as defined above , USACE will also place additional fill material in areas along the Federal template that will be graded and shaped into dunes through a separate non-Federal action conducted and funded by the City of Tybee. The City of Tybee will be responsible for obtaining all compliance required for dune construction, and the dune locations will be decided each renourishment event based on need. USACE will place the additional material on the beach up to elevation 13.2 ft MLLW and the City of Tybee will be responsible for moving the material into the dune system prior to sea turtle nesting season."

Construction Considerations

Construction will take place outside the loggerhead sea turtle nesting and hatching season (May 1-October 31). The project will be constructed using a hydraulic cutterhead pipeline dredge and support equipment. A submerged pipeline will extend from the borrow site to the southerly tip of Tybee Island. Shore pipe will be progressively added to perform fill placement along the shorefront or creekfront areas to be renourished. Temporary toe dikes will be utilized in a shore parallel direction to control the hydraulic effluent and reduce turbidity. The sand will be placed in the form of

varying design templates based upon longshore volumetric fill requirements which reflect beach conditions at the time of construction. Additional beach fill will be strategically placed in areas of documented highest erosional stress.
All lands needed for construction of the TISPP are sponsor owned. The State of Georgia granted a perpetual easement to the City of Tybee Island for the planning, construction, installation, operation, maintenance, repair and renourishment of beachfront lands claimed by the State of Georgia.

Material placement will follow the GADNR guidelines:

- Material shall be free of construction debris, rocks, or other foreign matter.
- Sand grains shall be approximately between 0.15 and 0.3 mm.
- Material shall not contain, on average, greater than 10% fines (i.e., silt and clay; passing through a #200 sieve; approximately 0.075 mm).
- Shall not contain, on average, greater than 5% coarse gravel or cobbles (retained by #4 sieve; approximately 4.5 mm)
- Shell content should remain below 15% of total weight.
- Sediment color should be between 10YR 6.5/1 and 10YR 7.0/1 on the Munsell soil color chart.

Section 5. EFFECTS OF PROPOSED PROJECT

Relevant Enforceable Policies:

Shore Protection Act (O.C.G.A. 2-5-230)

USACE recognizes that “the coastal sand dunes, beaches, sandbars, and shoals comprise a vital natural resource system, known as the sand-sharing system,” and recognizes the vital need to protect the sand-sharing system.

Beach nourishment will ultimately be beneficial to the sand-sharing system of Tybee Island. USACE will not pursue a permit under the Shore Protection Act (SPA) for placement activities before construction begins. Under CMPA 12-5-295(3), material placement by Federal agencies is exempt from the permit requirement.

The River and Harbor Development Act (O.C.G.A. 52-9-1 et seq)

The River and Harbor Development Act states that:

"there shall be no net loss of sand from the state's coastal barrier beaches resulting from dredging activities to deepen or maintain navigation channels within tidal inlets, as well as the entrances to harbors and rivers."

The proposed action is not expected to result in a net loss of sand from the states coastal barrier beaches. The proposed action along Tybee Island will result in sediment being placed on the beach and within the littoral system. Therefore, recurring beach renourishment efforts within the study area will not result in a loss of sand to the barrier

beaches as a result of the construction efforts. In addition to the beneficial effect to the Tybee Island barrier beach, the proposed action does not include dredging activities of the navigation channel.

Coastal Marshlands Protection Act– O.C.G.A. 12-5-280, 12-5-282(3), 12-5-286(a) & 12-5-295(3)

This law does not apply to USACE due to our "responsibility of keeping the rivers and harbors of this state open for navigation… including areas for utilization for spoilage designated by such agencies" [O.C.G.A. 12-5-295(3)]. Furthermore, there will be no placement of dredged material in marshes.

Georgia Endangered Wildlife Act (GEWA) – O.C.G.A. 27-3-130

The implementing rule for the GEWA, Rule 391-4-10 protection of endangered, threatened, rare, or unusual species is applicable to this project, and the federal action is fully consistent. Specifically, there are four Prohibited Acts detailed in Rule 391-4-10.06. These acts are:

1. Any activities which are intended to harass, capture, kill, or otherwise directly cause death of any protected animal species are prohibited, except as specifically authorized by law or by regulation as adopted by the Board of Natural Resources.
2. The sale or purchase of any protected animal species or parts thereof is prohibited and the possession of any such species or parts thereof is prohibited unless the possession is authorized by a scientific collecting, wildlife exhibition, or other permit or license issued by the Department.
3. The destruction of the habitat of any protected animal species on public lands is prohibited.
4. The authorization to take certain nongame animal species set forth in O.C.G.A. Section 27-1-28 shall not apply to any protected species whether on public or private land.

Regarding Prohibited Act 1, the proposed action is not "intended" to harass, capture, kill, or otherwise directly cause death of any protected animal species. The Endangered Species Act (ESA) is incorporated by reference in this GA Rule.

For ESA-listed species under the National Marine Fisheries Service (NMFS) jurisdiction, beach nourishment activities under the TISPP are covered by the 2020 South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (2020 SARBO). USACE will comply with all applicable dredging and beach placement Project Design Criteria (PDCs) described in the 2020 SARBO.

For ESA-listed species under the U.S. Fish and Wildlife Service (USFWS) jurisdiction, USACE is currently conducting coordination with the USFWS. USACE has made a may

affect, not likely to adversely affect (MANLAA) for the following species: West Indian Manatee, leatherback sea turtle, Kemp's Ridley sea turtle, piping plover and its critical habitat, and the rufa red knot and its critical habitat. USACE has made a may affect, likely to adversely affect (MALAA) for the following species: loggerhead sea turtle and the green sea turtle. For reference of the consultation and coordination, see Appendix C of the draft 2025 TISPP Periodic and Emergency Nourishments Environmental Assessment and Finding of No Significant Impact.

USACE has made a no effect determination for the following species: Eastern indigo snake, hawksbill sea turtle, Eastern black rail, tricolored bat, pondberry, and the Monarch butterfly.

USACE will also be adhering to all standard manatee conditions, sea turtle conditions, and shorebird conditions put forth by the USFWS.

Prohibited Act 2 does not apply to this project.

Prohibited Act 3 also does not apply as there is no "destruction" of habitat proposed. There may be temporary impacts to benthic habitat but is expected to recover within 1-2 years due to the placement being unconfined (SCDNR 2014). Rapid recovery would be expected from recolonization from the migration of benthic organisms from adjacent areas and by larval transport.

Prohibited Act 4 references TITLE 27 - GAME AND FISH, CHAPTER 1 – GENERAL PROVISIONS, § 27-1-28 - Taking of nongame species indicates that "(a) Except as otherwise provided by law, rule, or regulation, it shall be unlawful to hunt, trap, fish, take, possess, or transport any nongame species of wildlife, except that the following species may be taken by any method except those specifically prohibited by law or regulation:"

USACE activities are specifically authorized by the ESA. The ESA is incorporated by reference in this GA Rule. Therefore, the proposed activity is fully consistent with this part because restricted activities have been authorized by law and in accordance with completed Section 7 ESA consultation.

<u>Georgia Environmental Policy Act – O.C.G.A. 12-16-1</u>

"The Georgia Environmental Policy Act (GEPA) requires that all State agencies and activities prepare an Environmental Impact Report as part of the decision-making process."

USACE is currently drafting the EA in accordance with the National Environmental Policy Act (NEPA) for the proposed action, which will include a public comment period. USACE will review and respond to substantive public comments received.

<u>Georgia Erosion and Sedimentation Act – O.C.G.A. 12-7-1</u>

“One provision of the Erosion and Sedimentation Act requires that land-disturbing activities shall not be conducted within 25 feet of the banks of any State waters unless a variance is granted (O.C.G.A 12-7-6-(15)).”

The proposed action does not require placement within 25 feet of any banks; therefore, USACE is fully consistent with this Act.

Georgia Water Quality Control Act – O.C.G.A. 12-5-20

“This Act makes it unlawful for any person to dispose of sewage, industrial wastes, or other wastes, or to withdraw, divert, or impound any surface waters of the State without a permit.”

A Spill Pollution Prevention Plan would be developed and implemented prior to the start of any placement activities. Therefore, the proposed action is consistent with the Georgia Water Quality Control Act. USACE is currently coordinating a new 401 WQC request with the GADNR Environmental Protection Division (GADNR-EPD) for the proposed action.

Georgia Administrative Procedures Act – O.C.G.A. 50-16-61

This Act establishes permit requirements for use of state-owned tidal water bottoms. GADNR-CRD is responsible for issuing revocable licenses.

The proposed actions will not include the construction or addition of any permanent stabilization measures, such as rock. Therefore, revocable licenses will not be needed for the proposed action and the action is consistent with the Georgia Administrative Procedures Act.

Conclusion

The proposed project will have localized, minor adverse impacts on coastal resources. These impacts are primarily associated with temporary turbidity plumes that may occur during placement and immediately following the placement activities. It is anticipated that these turbidity plumes will quickly disperse in the coastal environment. The proposed action will have beneficial impacts to coastal uses by improving beach width and height for shoreline restoration and protection purposes. In accordance with Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972, as amended, USACE has determined that the proposed action is fully consistent with the enforceable policies of Georgia’s approved coastal management program. This determination is based on the review of the proposed project’s conformance with the enforceable policies of the state’s coastal program.

Conformity

This application is submitted to ensure conformity with NOAA's Federal Consistency provisions (15 CFR 930), under which federal agencies must determine if their proposed project directly affects Georgia's coastal zone. Georgia's coastal zone includes Chatham County.

Section 6. ACTIONS TO REDUCE IMPACTS

6.1 SEDIMENT QUALITY

6.1.1 OFFSHORE BORROW AREA

Per the 2016 Revised Georgia Department of Natural Resources Guidelines for Beach Nourishment, the fill material must be greater than 90% sand. The 2019 expanded borrow area consists of light gray to light brownish gray, well graded (poorly sorted) sand with a shell content of approximately 8% by volume (see Figure 8 for location of sampling). A small portion of the moist samples tested (approximately 18%) were outside of the desired Munsell color range of 10YR6.5/1 to 10YRR7/1, with color values as low as 5 (e.g. 10YR5/1). No contaminants were found that exceed sediment ecological screening values set forth in the USEPA Region 4 Ecological Risk Assessment Supplemental Guidance (USEPA, 2015). A summary of results from previous sediment sampling events in show in Table 3 below.

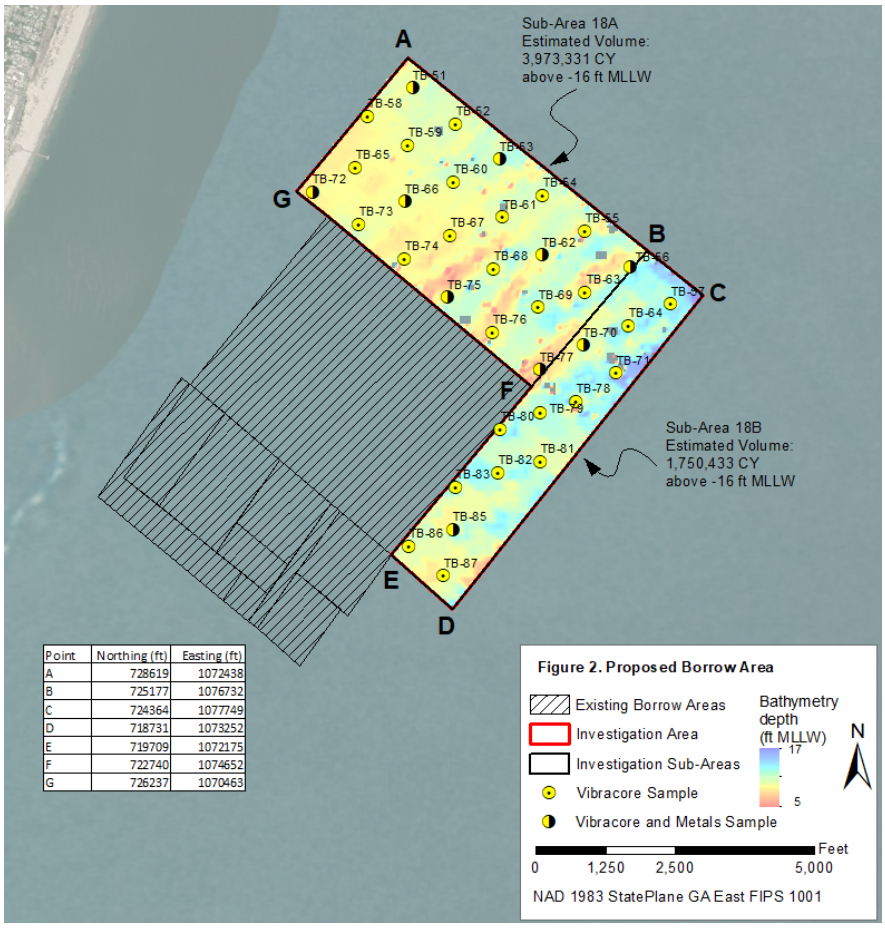

Figure 8. Sampling locations of the 2019 expanded offshore borrow area

Table 2: Sediment Characteristics for composite profiles of the offshore borrow area and native beach material.

Area	Median (phi)	Median (mm)	Percent Fines	Percent Shell	Mean (phi)	Sorting Coefficient (phi)	Overfill Factor	
							SPM[a]	Dean (1974)[b]
2019 Borrow Area Material (Area 18A)	2.28	0.21	3.70[c]	8.23	2.05	1.19	1.40	1.20
2019 Borrow Area Material (Area 18B)	2.31	0.20	2.51[c]	8.09	2.14	1.05	1.60	1.30
Entire Study Area	2.29	0.20	3.27[c]	8.18	2.09	1.13	1.45	1.25
2018 Native Beach Material	1.83	0.28	0.49[c]	4.54	1.75	0.87	--	--
2008 Borrow Area Material	2.13	0.23	0.23[d]	9.0	1.71	1.39	1.14	1.06
2007 Native Beach Material	2.02	0.25	0.05[d]	12.6	1.53	1.31	--	--

[a] Overfill factor was calculated according to the method described in the Short Protection Manual and USACE (2008)
[b] Overfill factor was calculated according to the method described in Dean (1974)
[c] Percent passing the #200 sieve
[d] Percent passing the #230 sieve

Testing of the offshore borrow area was again conducted in October 2025. On October 14, 2025, five sediment samples in Zone 4 were collected using a Ponar grab sampler. Zone 4 was selected for sampling because of the silty composition in this area identified in the 2018 sampling. The grab sampler was dropped from the edge of a boat and allowed to sink to the ocean bottom where a trigger pin was released to close the sampler and collect a representative sediment sample. The sampler was then pulled up through the water column, and the collected sediment was placed into sample containers for laboratory analysis.

Sediment samples were sent to the USACE Material Testing Laboratory located in Marietta, Georgia. The samples were subject to grain size analysis as well as visual classification. Laboratory analysis confirmed that Zone 4 of the borrow area mostly consisted of poorly graded sands (SP) with some silt. In comparison to the native beach samples, this zone is siltier, in some areas characterizing of poorly graded silty sand (SP-SM). Because of these areas of greater silt content, it is recommended that the contractor does not use Zone 4 for beach renourishment.

The results of the grain size analysis for Zone 4 of the borrow area are summarized below in Table 3.

- GS-1: Poorly Graded Sand (SP), with a trace of gravel size shell fragments.
- GS-2: Poorly Graded Silty Sand (SP-SM).
- GS-3: Poorly Graded Sand (SP).
- GS-4: Poorly Graded Sand (SP), with a trace of gravel size shell fragments.
- GS-5: Poorly Graded Silty Sand (SP-SM).

Table 3. Zone 4 Grab samples Mean Grain Size.

Sample No.	Mean Grain Size (mm)
GS-1	0.55
GS-2	0.12
GS-3	0.46
GS-4	1.17
GS-5	0.13

6.1.2 EXISTING BEACH SEDIMENT

In August 2025, 14 samples of the native beach sediment were collected from the same locations used during previous nourishments in 1998, 2008, and 2018 (see Table 2 above and Figure 9 below). It is important to note that although the existing beach sediment is referred to as “native”, it is actually the result of several previous renourishment projects from different borrow areas. One sample each was collected from the beach berm and the intertidal beach. Samples were collected from the upper 18 inches of sand with a clean 2.5-inch diameter hand auger and placed into a new 16oz screw-top plastic jar. Samples were transported to the USACE Environmental Materials Unit in Marietta, Georgia for laboratory testing. Samples were washed and

sieved according to ASTM Method D422. In addition, the Munsell color was determined by ASTM Method 1535.

In general, the native beach sediment consisted of light gray (10YR7/1) to very pale brown (10YR7/4), moderately to poorly graded, fine to medium sized sand. Mean grain size ranged from 0.19 to 1.11 mm, with an average value of 0.57 mm. In 2018, the average shell content was slightly greater for the intertidal beach (5.8%) than for the berm (3.3%). Sorting coefficients ranged from 1.22 to 2.45 phi, with an average value of 1.81 phi. The percentage of fines (i.e. sediment passing the No. 200 sieve) was less than or equal to 1.4% for all samples.

Sediment characteristics varied significantly along the beach. In general, the mean grain size, sorting coefficient, and percentage shell content were greater on the north-beach than on the south-beach, however these values were greatest at the mid-beach sample location (6^{th} street). The trend of coarser, well graded sand at the north beach, and finer, poorly graded sand at the south-beach was also observed in the 2018 study and likely reflects greater erosion at the north-beach. Mean grain size and sorting were fairly consistent between the berm and the intertidal beach.

Native beach material from the 2025 study was coarser (mean grain size of 0.57 mm) than native beach material from the 2018 study (mean grain size of 0.30 mm). The 2025 native beach material was also less poorly graded (well sorted) than the 2018 study, with an average sorting coefficient of 1.81 phi compared to 0.87 phi.

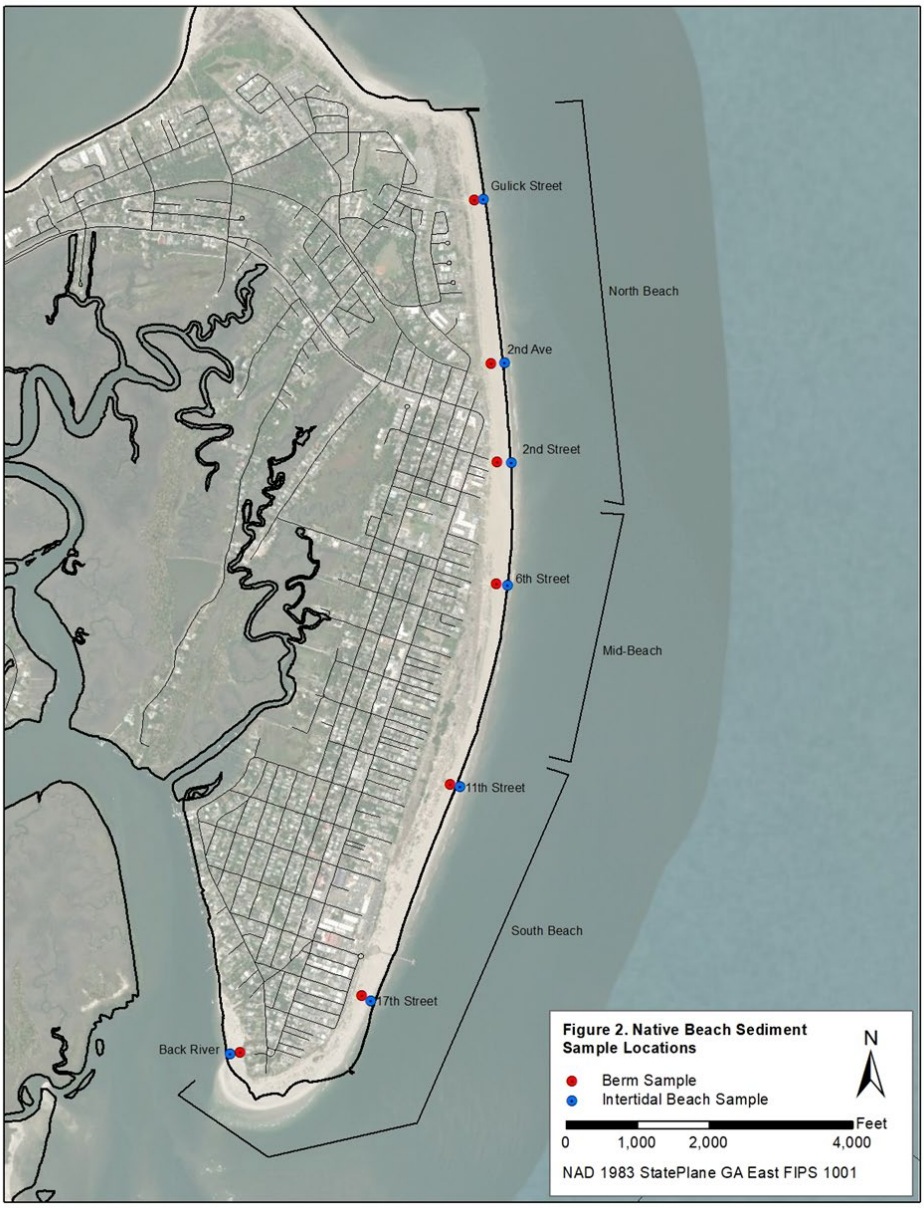

Figure 9. Native beach sediment sampling locations.

6.2 BEACH EROSION

The proposed action, situated along the coastline of Tybee Island, is not expected to result in a net loss of sand from the states coastal barrier beaches. Activities associated with the proposed action will not cause erosion to occur on the beaches. Therefore, the proposed periodic and emergency renourishment actions will not result in a loss of sand to barrier beaches as a result of the construction efforts but is expected to result in beneficial restoration effects over the duration of the project to 2036.

6.3 GROUNDWATER

Placement activities will not impact the groundwater aquifer.

Section 7. CONCLUSIONS

USACE is requesting concurrence on our consistency determination from the GADNR-CRD for periodic and emergency beach nourishments (as supplemental funding and authorizations are provided) on Tybee Island under the TISPP through 2036. In accordance with the CZMA, USACE has determined that the proposed activities would be carried out in a manner which is fully consistent with the enforceable policies of the GCMP. This determination applies to the proposed action and the effects of the proposed action on the land or water uses or natural resources of the coastal zone.

Section 8. REFERENCES

GADNR. 2016. Georgia Department of Natural Resources Guidelines for Beach Nourishment Projects.

NMFS. 2020. South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (SARBO). https://media.fisheries.noaa.gov/dam-migration/sarbo_acoustic_revision_6-2020-opinion_final.pdf. Website accessed August 18, 2022.

SCDNR. 2014. 2014 Tybee Island Shore Protection Project: Survey of Changes in Sediment and Benthic Communities on Tybee Island's Beach Before and After Nourishment Final Report.

USACE. 2019. Tybee Island Shoreline Protection Project 2019 Hurricane Harvey, Irma, and Maria Emergency Supplemental Renourishment Final Environmental Assessment and Finding of No Significant Impact.