

JOINT APPLICATION
FOR
A DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS PERMIT,
STATE OF GEORGIA MARSHLAND PROTECTION PERMIT,
REVOCABLE LICENSE AGREEMENT
AND REQUEST FOR
WATER QUALITY CERTIFICATION
AS APPLICABLE

INSTRUCTIONS FOR SUBMITTING APPLICATION:

Every Applicant is Responsible to Complete The Permit Application and Submit as Follows: One copy each of application, location map, drawings, copy of deed and any other supporting information to addresses 1, 2, and 3 below. If water quality certification is required, send only application, location map and drawing to address No. 4.

1. For Department of the Army Permit, mail to: Commander, Savannah District, US Army Corps of Engineers, ATTN: CESAS-RD, 100 W. Oglethorpe Avenue, Savannah, Georgia 31401-3640. Phone (912) 652-5347 and/or toll free, Nationwide 1-800-448-2402.

2. For State Permit - State of Georgia (six coastal counties only) mail to: Habitat Management Program, Coastal Resources Division, Georgia Department of Natural Resources, 1 Conservation Way, Brunswick, Georgia 31523. Phone (912) 264-7218.

3. For Revocable License - State of Georgia (six coastal counties plus Effingham, Long, Wayne, Brantley and Charlton counties only) - Request must have State of Georgia's assent or a waiver authorizing the use of State owned lands. All applications for dock permits in the coastal counties or for docks located in tidally influenced waters in the counties listed above need to be submitted to Real Estate Unit. In addition to instructions above, you must send two signed form letters regarding revocable license agreement to: Ecological Services Coastal Resources Division, Georgia Department of Natural Resources, 1 Conservation Way, Brunswick, Georgia 31523. Phone (912) 264-7218.

4. For Water Quality Certification State of Georgia, mail to: Water Protection Branch, Environmental Protection Division, Georgia Department of Natural Resources, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354 (404) 675-1631.

The application must be signed by the person authorized to undertake the proposed activity. The applicant must be the owner of the property or be the lessee or have the authority to perform the activity requested. Evidence of the above may be furnished by copy of the deed or other instrument as may be appropriate. The application may be signed by a duly authorized agent if accompanied by a statement from the applicant designating the agent. See item 6, page 2.

1. Application No. _____

2. Date 08/20/18

3. For Official Use Only _____

4. Name and address of applicant. Jekyll Island Authority, 100 James Road, Jekyll Island, GA 31527

5. Location where the proposed activity exists or will occur.

Lat. 31d 05' 18.2" Long. 81d 24' 07.2"

<u>Glynn</u>	<u>Jekyll Island</u>	<u>Jekyll Island</u>
County	Military District	In City or Town
Near City or Town	Subdivision	Lot No.
		<u>Georgia</u>
Lot Size	Approximate Elevation of Lo	State
	<u>Atlantic Ocean</u>	
Name of Waterway	Name of Nearest Creek, River, Sound,	Bay or Hammock

6. Name, address and title of applicant's authorized agent for permit application coordination.

Applied Technology and Management, 411 Pablo Ave. Jacksonville Beach
FL 32250 (Heath Hansell GA NO.: PE042340)

Statement of Authorization: I hereby designate and authorize the above named person to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of this application.



Signature of Applicant

8/21/18

Date

7. Describe the proposed activity, its purpose and intended use, including a description of the type of structures, if any to be erected on fills, piles, of float-supported platforms, and the type, composition and quantity of materials to be discharged or dumped and means of conveyance. If more space is needed, use remarks section on page 4 or add a supplemental sheet. (See Part III of the Guide for additional information required for certain activities.)

See Attached Project Description

8. Proposed use: Private Public Commercial Other (Explain)

See Attached Project Description

9. Names and addresses of adjoining property owners whose property also adjoins the waterway.

See Attached Adjacent Property Owners List

10. Date activity is proposed to commence. December 2018 (once permits received and contractor selected)

Date activity is expected to be completed. June 2019 (assumed ~6 month construction period)

11. Is any portion of the activity for which authorization is sought now complete Y N

a. If answer is "Yes", give reasons in the remarks in the remarks section.
Indicate the existing work on the drawings.

b. If the fill or work is existing, indicate date of commencement and completion.
N/A

c. If not completed, indicate percentage completed.
N/A

12. List of approvals or certifications required by other Federal, State or local agencies for any structures, construction discharges, deposits or other activities described in this application. Please show zoning approval or status of zoning for this project.

Issuing Agency Type Approval Identification No. Date/Application Date/Approval

13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?
 Yes NO (If "yes", explain).

Note: Items 14 and 15 are to be completed if you want to bulkhead, dredge or fill.

14. Description of operation: (If feasible, this information should be shown on the drawing).

a. Purpose of excavation or fill See Attached Project Description.

1. Access channel length _____ depth _____ width _____

2. Boat basin length _____ depth _____ width _____

3. Fill area length 16,000' depth varies width varies

4. Other _____ length _____ depth _____ width _____

(Note: If channel, give reasons for need of dimensions listed above.)

b. If bulkhead, give dimensions N/A

-- Type of bulkhead construction (material) N/A

1. Backfill required: Yes N/A No _____ Cubic yards _____

2. Where obtained N/A

c. Excavated material

1. Cubic yards N/A

2. Type of material N/A

15. Type of construction equipment to be used Typical earth moving. See Attached Project Description

a. Does the area to be excavated include any wetland? Yes No

b. Does the disposal area contain any wetland? Yes No

c. Location of disposal area N/A

d. Maintenance dredging, estimated amounts, frequency, and disposal sites to be utilized: N/A

e. Will dredged material be entrapped or encased? N/A

f. Will wetlands be crossed in transporting equipment to project site? no

g. Present rate of shoreline erosion (if known) -2.7 to -5.7 ft/yr

16. Description of Avoidance, Minimization and Compensation: Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also, provide a brief description of how impacts to waters of the United States will be compensated for, or a brief statement explaining why compensatory mitigation should not be required for those impacts.

See Attached Project Description

17. Water Quality Certification: In some cases, Federal law requires that a Water Quality Certification from the State of Georgia be obtained prior to issuance of a Federal license or permit. Applicability of this requirement to any specific project is determined by the permitting Federal agency. The information requested below is generally sufficient for the Georgia Environmental Protection Division to issue such a certification if required. Any item, which is not applicable to a specific project, should be so marked. Additional information will be requested if needed.

a. Please submit the following:

1. A plan showing the location and size of any facility, existing or proposed, for handling any sanitary or industrial waste waters generally on your property. N/A
2. A plan of the existing or proposed project and your adjacent property for which permits are being requested. See design drawings
3. A plan showing the location of all points where petro-chemical products (gasoline, oils, cleaners) used and stored. Any aboveground storage areas must be diked, and there should be no storm drain catch basins within the dike areas. All valving arrangements on any petro-chemical transfer lines should be shown. N/A
4. A contingency plan delineating action to be taken by you in the event of spillage of petro-chemical products or other materials from your operation. N/A
5. Plan and profile drawings showing limits of areas to be dredged, areas to be used for placement of spoil, locations of any dikes to be constructed showing locations of any weir(s), and typical cross sections of the dikes. N/A

b. Please provide the following statements:

1. A statement that all activities will be performed in a manner to minimize turbidity in the stream. See Attached
2. A statement that there will be no oils or other pollutants released from the proposed activities which will reach the stream. See Attached
3. A statement that all work performed during construction will be done in a manner to prevent interference with any legitimate water uses. See Attached

18. Application is hereby made for a permit or permits to authorize the activities described herein; Water Quality Certification from the Georgia Environmental Protection Division is also requested if needed. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities.



Signature of Applicant

19. U.S.C. Section 1001 provides that: Whoever, in any matter within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations, or makes or uses false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined no more than \$10,000 or imprisoned not more than 5 years or both.

PRIVACY ACT NOTICE

The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fills material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

SUPPORTING REMARKS:

Jekyll Island Phase 2 Shoreline Rehabilitation

Joint Application: Department of The Army, Corps of Engineers Permit, State of Georgia Marshland Protection Permit, Revocable License Agreement and Request for Water Quality Certification

Project Description

1. Project Description

The Jekyll Island Authority (JIA) is proposing to complete the second phase of its ongoing shoreline rehabilitation program. In general, the Phase 2 project includes placement of beach compatible fill, geotextile filter material, native vegetation, and sand fencing in areas landward of a rehabilitated oceanfront rock revetment along Jekyll Island, GA. Additionally, a small rock revetment transition section, sand filled geotextile tube (for upland erosional scarp reinforcement) and limited transitional beach fill placement is proposed at the northern terminus of the project area. Dune paths and timber crossover structures will also be included at specified public access locations.

1.1 Purpose: The primary purpose of the project is to provide coastal storm protection to eroding and threatened upland areas. These include public and private properties, and both developed areas (buildings and infrastructure) and natural undeveloped (protected via conservation) habitats. Added benefits of the proposed project include:

- restoration and protection of eroded upland sandy “terrace berm” and dune habitats;
- improved resiliency of the JIA Phase 1 rehabilitated oceanfront revetment;
- restoration and creation of limited public recreational high tide beach areas (terrace berm) that are accessible during all normal water levels;
- provide public access to terrace berm recreational beaches and lower level beaches (waterward of the oceanfront revetment);
- provide a “soft” transition between the hardened oceanfront rock revetment structure and the natural shoreline north of the project area;
- protection of a known archeological site (the “Weber Site”); and
- provide limited beach habitat suitable for turtle nesting.

1.2 Background: Phase 1 of JIA’s shoreline rehabilitation efforts includes the emergency maintenance and rehabilitation of the existing oceanfront rock revetment. This effort is currently under construction and previously authorized by the GA DNR LOP dated 11/30/17 and NWP 3(a) via USACE verification SAS-2017-00911 dated 2/5/18. Anticipated completion of the Phase 1 work is December 2018. The historic revetment (originally constructed in the 1960s and 1970s), has undergone deterioration over its ~50-year lifespan, with significant damage occurring in 2016 and 2017 due to the passage of Hurricanes Matthew and Irma. The rock revetment is being rehabilitated within its existing footprint by the restacking and addition of new armor stones to raise the trapezoidal structure’s crest elevation back to its original design height of +14.5 ft MLW, or approximately +10.5 ft NAVD88 when adjusted to the current datum and tidal epoch.

Due to revetment deterioration and extreme storm conditions, the “terrace berm” and dune area landward of the revetment has undergone severe erosional losses, especially during 2016 and 2017

hurricane seasons. Large areas of vegetated dunes, as well as significant quantities of sandy berm material were lost. The existing erosional scarp line comes within concerning proximity to many oceanfront structures, and several portions of the project area required emergency sandbag protection/repairs following Hurricane Irma. These erosional losses not only threaten the upland infrastructure and habitats, but also reduce the resiliency of the restored Phase 1 revetment structure.

Additional information on historical erosion and sediment transport at Jekyll Island is included in Appendix A.

1.3 Project Area: The proposed Phase 2 project stretches approximately 16,000 ft along the Jekyll Island oceanfront shoreline. The southern project limit is approximately 2,000 ft south of Captain Wyllly Rd (~southern limit of Oceanview Beach Park). The northern project limit is the Driftwood Beach Access Trail and Authorized Traffic Service Road (as indicated on the Drawings).

The southern ~15,000 ft of the project length is located landward of the existing rock revetment (~10,000 ft of which is currently being rehabilitated). The southernmost ~5,000 ft of the Phase 2 project extends approximately 5,000 ft south of the Phase 1 project limit (just south of King Ave) to ~2,000 ft south of Captain Wyllly Rd, where limited placement of beach fill and revegetation is required in discrete locations.

The northern ~1,000 ft of the proposed Phase 2 project extends north of the Phase 1 revetment rehabilitation, along an undeveloped shoreline where the historic revetment terminates and exhibits a very low, scattered profile, consisting of smaller scattered rocks along the beach just above and within the intertidal zone. This project section is a small “transitional area” between the large rehabilitated rock revetment shoreline to the south and the natural Driftwood Beach shoreline area extending over 1 mile to the north. The project area described herein is located south of an existing public pedestrian and service vehicle access route (used to access the very southern end of Driftwood Beach). No modifications are proposed to the natural shoreline of Driftwood Beach north of this route, where it has not been directly affected by shoreline engineering. The low scattered rock in this project area do provide some shoreline protection by creating a minor perch of sand in its lee, thus this rock material will be left in its current state. The proposed project includes limited sand fill placement and scarp protection only for this transitional area that is already partially strewn with small granite rock which is believed to have originated during the original (circa 1970s) armoring.

1.4 Basic Project Elements: The proposed Phase 2 project generally consists of:

1.4.1 Limited removal and disposal of debris (downed/dead tree limbs, vegetation, debris, or similar), generally along the existing scarp line (and dispersed in the berm area), will be conducted to ensure adequate and efficient placement of sand fill material. This will be focused on the areas landward of the rehabilitated rock revetment. The large dead trees along the transitional shoreline are considered important to public recreation, local culture, and JIA history. The large “driftwood” trees in this area are proposed to be left in place, to the extent practical. A representative of the JIA conservation office will guide and observe this effort. Debris removal will utilize typical earthmoving equipment capable of selectively removing limited debris.

1.4.2 *Geotextile filter material* (geogrid composite, woven or unwoven fabric, or similar) will be required on the landward side of the existing/rehabilitated revetment to help contain the beach compatible fill placed landward of the revetment. If these filter materials are not placed, the newly placed beach fill sand landward of the revetment could easily “leak out” between the revetment armor stones and be lost. The filter materials will allow upland runoff/groundwater and overtopping during extreme events to flow through it while retaining the sand materials landward of the revetment. Refer to the Drawings for a cross section of the filter placement. The filter material will extend down the landward slope of the rehabilitated revetment from +8.5 ft NAVD to the base of the existing rock and then extend approx. 5 ft landward on existing grade (not above approx. elev. +5 ft NAVD except in the southernmost portions of the project) and then be buried by beach compatible sand as described below. Filter material will be brought to the project area via truck and placed by hand or small equipment.

1.4.3 *Beach compatible sand*, taken only from GA DNR and USACE approved source(s) will be placed within the project footprint. The proposed sand source site(s) and transport methods are discussed in subsequent sections.

- Along the southern ~15,000 ft of the project, the material will be placed to restore the terrace berm and dune areas that have been lost to erosion. The terrace berm will be constructed with a mild crest slope to mimic typical existing profiles, with elevations up to +9.5 ft NAVD88 at the landward end of the revetment and sloping up to approximately +10.0 ft NAVD88 at the landward limit to tie into the upland topography along the existing scarp line. Any slopes necessary to meet adjacent interface grades will be at 1V:3H or flatter. The temporary/emergency sand bags placed at Villas By The Sea and The Cottages in response to significant scarping which occurred from Hurricanes Matthew and Irma are proposed to remain in place and be buried under the beach fill as a “backstop” level of protection for extreme storm events in the future. Hauling, moving, dumping, and shaping of beach compatible sand within the project footprint will be completed using typical earthmoving equipment. Sand will be placed as fill from trucks or conveyors as opposed to offshore borrow source and dredge placement operations where sand is pumped as a mixture of water and sand slurry from a dredge pipe and requires dewatering.
- Along the northern ~1,000 ft of the project, in the transitional shoreline area (outside of the protection of the rehabilitated revetment), a limited scale sand placement is proposed to restore eroded upper berm material, help offset the historical erosion along the shoreline, and provide a more appropriate transition from the large rehabilitated rock revetment shoreline to the south and the natural Driftwood Beach shoreline area extending over 1 mile to the north. The fill will generally be placed landward and directly on top of the existing scattered rocks in the area, with a 1V:10H foreshore slope to mimic typical profiles. The berm crest elevation will match the existing upland topography of approximately +7.0 ft NAVD88. The berm and fill toe will extend across the existing rock to a point near MLLW, this being the practical limit for land-based beach fill projects.

Hauling, moving, dumping, and shaping of beach compatible sand within the project footprint will be completed using typical earthmoving equipment. Sand will be placed as fill from trucks or conveyors as opposed to offshore borrow source and dredge placement operations where sand is pumped as a mixture of water and sand slurry from a dredge pipe and requires dewatering.

- The placement of this sand will, at least temporarily (pending project performance and meteorological conditions following project completion) provide a traditional beach habitat significantly more suitable for turtle nesting than the existing shoreline made up of scattered granite rocks. Additional discussion of the benefits, monitoring, and potential maintenance of this transitional shoreline are discussed in subsequent sections.

Along the length of the restored terrace berm, areas that have undergone extensive erosion and vegetation losses will also include dunes, dune vegetation, post-rope railing, and sand fencing (elements 1.4.4-1.4.7). These areas are indicated in the drawings.

1.4.4 *Dunes* will be constructed (as project beach compatible material quantities allow) to add approximately a 2 ft tall dune (above the constructed terrace berm), with a typical 10 ft crest width and maximum side slopes of 1V:2H to provide additional storm protection and dune habitat.

1.4.5 *Dune Vegetation* - The dune (and approximately 50% of the width of the terrace berm north of Albright Ln and up to approximately 90-100% of the width of the terrace berm south of Albright Ln) will be planted with approved early succession dune vegetation to mimic natural, existing vegetation in the area. Initial planting of the new dune area would likely include: Sea oats (*Uniola paniculata*), Bitter panicum (*Panicum amarum*), Salt meadow cordgrass (*Spartina patens*), and Spanish bayonet (*Yucca aloifolia*). After these plants become fully established, JIA may plant additional larger species in future growing seasons, including, but not limited to, Silverleaf croton (*Croton punctatus*), Yaupon holly (*Ilex vomitoria*), Saw palmetto (*Serenoa repens*), Tough bully (*Bumelia tenax*) and Sand Live Oak (*Quercus geminata*). JIA conservation staff indicate that these plants are common along the dune/backdune areas of Jekyll Island. Specific planting types and spacing will be coordinated closely with JIA's conservation staff and GA DNR.

1.4.6 *Post-rope railing* (in approved configurations) will be installed to delineate the vegetated areas and discourage foot traffic into the revegetated berm/dune system.

1.4.7 *Sand fencing* will be installed (in an approved configuration) along the landward limit of the fill/vegetated area to help minimize sand loss to landward areas of residential properties and help contain sand in the beach zone. JIA has requested a variance to the standard guidelines for these fencing systems from GA DNR due to the unique nature of ongoing issues and the overall project.

- Planting, post-rope railing, and sand fencing will be planted/installed according to approved methods and with approved materials.

1.4.8 *Rock revetment return section* - At the northern portion of the project, where the Phase 1 rehabilitated revetment section terminates, the Phase 2 project proposes a small return section (of similar armor stone construction as the Phase 1 revetment) to “tie-in” the rehabilitated revetment to the existing upland. Return sections of coastal structures are a critical component to ensure the integrity of the structure is not compromised due to flanking (water and wave energy coming around the back of the structure, causing erosion, scour and instability). This is especially important since the rehabilitated revetment terminates seaward of the existing eroded upland topography. The return section will also prevent turtles from becoming trapped behind the rehabilitated revetment at its north limit (acting as a physical barrier to entrapment) and help maintain the proposed restored terrace berm and vegetated dune, especially where concerns for the historically significant Weber Site (detailed in a subsequent section) have been raised in the Phase 1 permit. Maximizing protection of the Weber Site from additional erosion and exposure was discussed with USACE and GA DNR representatives during a May 27, 2018 site visit with Mr. Isham of the Historic Preservation Office of the Seminole Nation of Oklahoma.

- The proposed armor stone return structure is designed in accordance with governing design guidelines (e.g., USACE’s Coastal Engineering Manual) to provide protection under a range of extreme storm conditions. The portion of the return section not lying over existing rock will be underlain with a geotextile composite or similar marine foundation to reduce potential for settlement over time as well as limit ground disturbing activities near the Weber Site. The return section will be similar to the approved revetment rehabilitation design (refer to Drawings) and will be constructed with typical earth moving equipment.
- The revetment return section was not included in the Phase 1 portion of the project since it did not fit entirely within the original design template of the historic revetment. Nationwide Permit 3(a) conditions limit maintenance and rehabilitation projects to generally being within the original design footprint.

1.4.9 *Geotextile tube* – Along the northern ~1,000 ft transitional shoreline, a sand filled geotextile tube product (22.5 ft in circumference or smaller) will be placed along the existing erosional scarp line and buried by beach compatible sand to provide a last line of defense for this vulnerable section of shoreline. This “geotube” will begin approximately where the rock revetment return section meets the upland/scarp line and extend north to the approximate terminus of the project. This “soft” protection measure (not a typical engineered “hard” rock, concrete, or similar structure) will provide additional erosion protection for the end of the return section (a vulnerable part of any coastal structure) as well the upland undeveloped/vegetated areas. The geotube will be located at the landward limit of the beach (at the base of the erosional scarp) and buried by the sand placement in this transitional shoreline area.

- Typically, geotextile tubes are required to be filled with a wet sand slurry. This will be accomplished as follows: upland imported beach fill material will be mixed with

seawater in a small hopper (e.g., open top, watertight dump truck box) with a small water pump placed offshore. The small pump will include a float to ensure it remains off the sea bottom, and guards/grills to ensure no marine life is affected by the pump. As the tube is filled, the clear excess water exits the tube through the geotextile perforations and drains into the beach and back to the ocean.

1.4.10 Public access dune paths/crossovers - At available locations, dune paths and/or timber dune crossovers (in approved configurations) are proposed to provide public access to both the upper terrace berm area as well as the low water beach seaward of the revetment. Access to both areas is important for public use of all beach areas during a range of water levels, and desired by JIA.

- Due to the unique nature of the oceanfront revetment and inaccessible low water beach seaward of the structure, safe public access requires the crossover structures to extend beyond and below the ordinary high water. Therefore, JIA requests a variance to the standard guidelines for these structures, some of which existed prior to Hurricane Matthew along the project shoreline. Construction will be per approved methods. Locations of new proposed dune crossovers (14 total) and their dimensions are indicated on the Drawings. Existing crossovers will remain.

1.5 Summary of Project Quantities:

- Landward of Limits of Existing Revetment - Project Summary Details:
 - Project Length ~ 15,000 linear feet
 - Project Footprint ~19.7 acres
 - Vegetation Footprint ~12.9 acres
 - Baseline Terrace Berm Fill Volume ~100,000 cubic yards
 - Additional Dune Fill Volume up to ~17,800 cubic yards
 - Up to 10 New Public Dune/Revetment Crossover Structures at residential/public street ends
- Transitional Shoreline Area - Project Summary Details:
 - Project Length ~ 1,000 linear feet
 - Project Footprint ~6.4 acres
 - Vegetation Footprint ~1.3 acres
 - Revetment Return Section - 150 linear feet
 - Geotube Scarp Reinforcement ~900 linear feet
 - Beach Fill Volume ~35,000 cubic yards
 - 1 new Public Dune/Revetment Crossover Structure from upper terrace berm to transitional shoreline

- In total, 9.8 acres of the project area (out of the total 26.1 acres) are included in USACE jurisdiction. Approximately 65,500 cubic yards of fill will be placed within that footprint. It is noted that a significant portion of this is landward of the existing oceanfront rock revetment.

1.6 Additional Project Details

1.6.1 Sand Source(s) – The primary preferred sand source for the proposed project is a USACE confined disposal facility (CDF) called the Jones-Oysterbed Island Disposal Area (herein referred to as Jones Island). The Jones Island sand source is located on the northern bank of the Savannah River, approximately 8.5 miles downriver of the city of Savannah. The Jones Island site has historically been used as a dredge disposal site for maintenance dredging of the federal channel along the Savannah River. Due to the proximity of the area to the inlet and open ocean/sand sharing system, significant amounts of sandy beach quality material have been disposed of at the site during historic and recent dredging events. The sediment is recommended as quality compatible material for the proposed project.

Supplementary information on the Jones Island sand source, including sediment testing results, sediment quality and compatibility details, borrow site volumes, and other details are included as Appendix B to this application.

1.6.2 Physical Monitoring and Potential Maintenance Activities

The proposed physical monitoring plan and potential maintenance activities are included as Appendix C to this application.

1.6.3 Construction Logistics

Project Schedule

All work landward of the rock revetment is proposed to be completed in the timeliest manner possible. Work landward of the rock revetment indicates that no equipment, materials, access, or any construction activity, temporary or otherwise, will be seaward of the oceanfront rock revetment where there is a possibility of turtle nesting. Turtles crawling and/or nesting landward of the rock revetment is a very low probability of occurrence, per discussions with JIA Conservation staff and ongoing monitoring. Work landward of the rock revetment encompasses most of the project length from the revetment return section south to Tyler Ln (Baseline Sta 12+50) and is proposed to occur at any time during the year.

All work seaward of the rock revetment is proposed to be completed outside of turtle nesting season. Work seaward/outside of the rock revetment indicates that equipment, materials, access, or construction activity, temporary or otherwise, may be seaward/outside of the oceanfront rock revetment where there is a possibility of turtle nesting. This includes limited areas requiring sand placement and vegetation in the southern portion of the project (south of Tyler Ln, Baseline Sta 12+50), where some access and activity may be required seaward of the rock revetment due to extensive existing vegetation on the landward side of the existing revetment. This also includes the transitional shoreline area along the north end of the project. Work seaward/outside of the rock revetment is considered to include any and all other activities occurring seaward/outside of the oceanfront rock revetment where there is a possibility of turtle nesting.

Sea Turtle Nesting Season - The Jekyll Island Authority operates the Georgia Sea Turtle Center, which is an active partner in the Georgia Sea Turtle Cooperative, coordinated by the Georgia Department of Natural Resources, Wildlife Resources Division, Nongame Conservation Section. The Jekyll beaches are intensively monitored for sea turtle nesting activity annually, but there is no viable nesting habitat in the project area due to the presence of the revetment. If any portion of the project occurs between May 1st and October 31st, turtle nesting season, an individual with a DNR Sea Turtle Cooperators Permit shall survey the active project site and beach access prior to commencement of daily work activities at the revetment. All sea turtle nests will be relocated and/or avoided, and no heavy equipment may be used within 20 ft of a nest area.

Project Staging and Access

The proposed access points and staging areas are indicated on the drawings are shown on the Drawings. The access points are the same as those previously approved by the LOP and NWP 3(a) for the Phase 1 work (oceanfront revetment rehabilitation) but adding the following: (1) from the Staging Area parking lot at Oceanview Beach Park, just south of Captain Wylly Rd and (2) the Driftwood Beach Access Trail and Authorized Traffic Service Road. These are added due to additional length of project work area.

In order to facilitate construction and placement of sand, especially in areas south of Tyler Ln where access is limited or very narrow, the JIA contractor may implement portable conveyor belts to move sand from Beach View Drive out to the required fill areas (landward of the existing revetment) and/or to move sand along the terrace berm. Conveyors are used for land-based beach construction where access is very limited or too narrow for operation of standard trucks and have been very successful in projects in South Florida where access between buildings, etc. is very restricted. They also reduce the amount of access site restoration.

Access for construction along the beach (i.e., waterward of the existing revetment) will be limited to the extent possible and is only envisioned for the area at Driftwood Beach (where beach fill construction necessarily will occur seaward of the existing scattered revetment) and south of Tyler Ln where the existing vegetation precludes vehicular and equipment access along the area just landward of the revetment. Any access for these areas waterward of the revetment would be conducted (1) outside marine turtle nesting season and (2) during daylight hours during times of mid to low tide due to lack of available dry beach at high tide. Access to the intertidal beach would be accomplished via temporary chinking of the revetment with smaller stone to allow equipment access, to be repaired/restored after project work is complete. Any disturbance of existing dune and/or vegetation would be restored to pre-project conditions following construction.

Access and staging for construction of the project will be along the access routes and staging areas identified on the Drawings, and as described above. Access waterward of the GA DNR SPA jurisdictional line will be improved with timber crane mats (or similar approved material) and beach quality material as needed to provide proper grades and support for typical construction equipment. Accesses will be restored to pre-project conditions following completion of construction.

Weber Archeological site

A known archeological site (nicknamed the "Weber Site") is located in the project vicinity. The ongoing Phase 1 revetment rehabilitation project will provide temporary erosion control and a 25 ft construction buffer along the ~ 925 ft long site. The Phase 2 project proposes to cover the site (which is generally

already buried within the upland and scarp areas) with beach compatible material, restoring it to the condition it was prior to the recent 2016 and 2017 hurricane seasons, when the natural buffer fronting the site was severely eroded. The proposed project will provide significantly increased protection of the site from further erosion that will occur if left in its existing condition. JIA, USACE, and GA DNR officials have conducted ongoing coordination with interested Tribal Nations and the JIA Phase 1 and Phase 2 shoreline rehabilitation. During a recent visit coordinated by JIA, a representative of the Historic Preservation Office of the Seminole Nation of Oklahoma (Mr. Isham) toured the ongoing shoreline rehabilitation work and expressed support for the JIA efforts and the protection that would be provided to the archeological site.

Proposed project efforts in the vicinity of the Weber Site will be closely monitored and limited to smaller equipment required to place and grade compatible sand over existing grades. No excavation in the vicinity of the Weber Site is proposed to occur; only placement of compatible material over existing grade. This includes construction of the revetment return section. Placement of filter materials and revetment foundation stone is anticipated to occur over existing grades.

2. Description of Alternatives Considered

The project as requested meets the JIA's goal to provide coastal storm protection to eroding and threatened upland areas. It also provides the additional benefits mentioned previously.

Essentially, the historic construction (and ongoing rehabilitation) of the existing oceanfront revetment define a narrow range of project alternatives to meet the proposed goal. The preferred project alternative is that which is proposed for the current application. Due to site conditions and the nature of the purpose, the proposed project is considered water dependent.

A no-action alternative will result in further degradation of the terrace berm and dune area, loss of upland sand material through the revetment structure, and increased frequency of erosion and scarping (loss) of the upland habitat, with increased threat of damage to upland infrastructure and the historical resources at the Weber Site during storm events. No additional sand would be added to supplement the sand-sharing system, which is clearly in deficit along the north-central portion of the island.

Other structural alternatives such as vertical bulkheads and additional scarp protection via sand-filled geotextile tubes or rock revetments were considered as a "backstop" measure at the current scarp line, but the restoration of existing/natural conditions with similar materials to provide protection to habitat, resources, and infrastructure, and to enhance recreation, is the preferred solution to meet JIA's requirements and minimize future adverse impacts.

The temporary sand bags placed at Villas by The Sea and The Cottages in response to significant scarping which occurred from Hurricanes Matthew and Irma are proposed to remain in place and be buried under the beach fill as a "backstop" level of protection for extreme storm events in the future. Such buried structures will not cause adverse impacts to the sand sharing system and should remain serviceable to the extent they remain buried and are only exposed to UV and wave action during extreme future events.

The project will have negligible impact on the local and regional sand-sharing system. The presence of the rock revetment and its effect on the sand-sharing system has been in effect since the 1960s. The

landward limit of the sand-sharing system is generally restricted to the seaward side of the existing (or rehabilitated) rock revetment, outside the Phase 2 project area, under normal tidal conditions. Only under extreme conditions could there be significant exchange of material from the project site to the area waterward of the revetment. The proposed project serves to provide more available beach compatible material for the system in these circumstances, when overtopping and runoff at the revetment may transport some of the terrace berm and dune sand out to the intertidal beach.

The more traditional beach fill placement along the transitional shoreline is generally sacrificial and will provide additional beach compatible material to the sand-sharing system, via the erosion processes which have been occurring since before the revetment was originally constructed more than 50 years ago. The sand filled geotextile tube reinforced scarp proposed along the scarp protects the upland areas that are generally composed of less beach compatible material such as vegetation and organics (maritime forest). The proposed scarp protection is located landward of existing scattered rock which is proposed to be left in place as a perch for the existing beach. A rock revetment was considered as an alternative to the sand filled geotube protection but is not preferred for both environmental and cost perspectives. With a geotube in this area, should any adverse impacts be realized, the tube can be removed, and the sand released to the beach. Monitoring will be conducted to determine when additional maintenance sand fill may be considered in this area.

Sand source alternatives are extremely limited due to desired sediment compatibility as well as required project volumes. Given the limited quantity of beach compatible material required (less than ~ 200,000 cy), and the location of the majority of the fill to be placed (landward of the existing coastal revetment structure), transport to the site and placement is anticipated via land-based methods. Offshore sand sources were considered but the project volume requirements are considered on the low end of typical volumes that make offshore borrow sources feasible from a technical and cost perspective. Traditional pumping of dredge water/sand slurry mix into the project area could also compromise the integrity of the rehabilitated revetment structure and existing resources due to scour from high water outflow common in dredging operations.

3. Public Interest Statement and Avoidance/Minimization of Impacts

The proposed project will not create unreasonably harmful, increased alteration of the dynamic dune field or submerged lands, or function of the sand-sharing system. As discussed in the project description and alternatives sections, the project will restore lost habits and provide additional, beach compatible material for the sand-sharing system. It is noted that all beach fill projects are temporary, and thus future maintenance – either in the long term or due to significant storm events – may be implemented. This may include remedial grading/shaping of materials landward of the revetment, or periodic renourishment of sand and additional vegetative plantings.

The project as proposed is not anticipated to increase erosion effects beyond those which have been occurring due to the historic erosion and presence of the existing rock revetment. All proposed structures (rock and/or geotextile tubes) are located landward of existing rock structures which generally define the existing MHW line and the bulk of the daily transport of material in the sand sharing system. In the transitional shoreline area, the sand fill will temporarily bury the existing rock until the natural erosional processes transport the material toward the north end of the island.

The proposed project will not unreasonably interfere with the conservation of marine life, wildlife, or other resources. As discussed in the project description section, the project will restore lost habits and aid in the prevention of turtle trappings behind the rehabilitated revetment.

The proposed project will not unreasonably interfere with access by and recreational use and enjoyment of public properties. As discussed in the project description section, the project will restore and provide additional access and recreation opportunities for the public.

The proposed project will be scheduled so all work in viable turtle nesting areas (seaward of the existing revetment, as outlined in previous sections) occurs outside of turtle nesting season. All other/upland work (landward of the existing revetment) will occur in the timeliest manner possible and may occur at any time of year.

As described in previous sections, the proposed project will avoid and minimize impacts to waters of the United States. No mitigation is proposed.

WQC Statements: All activities will be performed in a manner to minimize turbidity. No oils or other pollutants released from the proposed activities. All work performed during construction will be done in a manner to prevent interference with any legitimate water uses.