



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

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**CONSOLIDATED JOINT COASTAL PERMIT AND INTENT TO GRANT
SOVEREIGN SUBMERGED LANDS AUTHORIZATION**

PERMITTEE:

U.S. Army Corps of Engineers
c/o Eric P. Summa, Chief
P.O. Box 4970
Jacksonville, FL 32232-0018

PERMIT INFORMATION:

Permit Numbers: 0264288-004-JC
Project Name: Nassau County Beach Nourishment
County: Nassau
Issuance Date: May 28, 2015
Expiration Date: **May 28, 2030**

REGULATORY AUTHORIZATION:

This permit is issued under the authority of Chapter 161 and Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). Pursuant to Operating Agreements executed between the Department of Environmental Protection (Department) and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

PROJECT DESCRIPTION:

The project is the periodic nourishment of approximately 3.6 miles of previously restored beach along the Nassau County shoreline. The design template for the federally authorized project has a flat back-berm at an elevation of +9.6 feet North American Vertical Datum of 1988 (NAVD88), which ties into the existing topography at the landward end of the berm, and extends up to 75 feet seaward from the established Construction Base Line (CBL), as shown in the permit drawings. The berm will then have a gradual slope of 1:20 (vertical: horizontal) until it ties into the existing sea floor. A construction staging area and a construction access point have been established. The offshore borrow area is approximately 943.56 acres in size, with a variable maximum dredge depth, as shown in the permit drawings. The maximum allowable dredge depth does not include the indicated 2-foot buffer, dredging into which should be avoided.

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The variance from the antidegradation provisions in Rule 62-4.242(2)(a)2.b., F.A.C., would establish a maximum allowable turbidity level of 29 NTUs above background for dredging activities within the Fort Clinch Aquatic Preserve (Preserve), Outstanding Florida Waters (OFW).

PROJECT LOCATION:

The nourishment site is located on Amelia Island, between Department Range Monuments R-12 and R-34, in the City of Fernandina Beach, Nassau County, Sections 8, 9, 12, 13 and 20, Township 3 North, Range 29 East. The borrow area is located approximately 3 miles offshore of the center of the nourishment area, at Latitude 30° 39' 54" N, Longitude 81° 25' 52" W. Both sites are in the Atlantic Ocean, Class III Waters, and include portions of the Fort Clinch Aquatic Preserve, OFW.

A construction staging area will be located landward of the beach at R-20.5, at the corner of N. Fletcher Avenue and Dolphin Avenue. Access between the staging area and the beach will be located just east of the staging area, where Dolphin Avenue intersects with Ocean Avenue.

PROPRIETARY AUTHORIZATION:

This activity also requires a proprietary authorization, as the activity is located on sovereign submerged lands held in trust by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), pursuant to Article X, Section 11 of the Florida Constitution, and Sections 253.002 and 253.77, F.S. The activity is not exempt from the need to obtain a proprietary authorization. The Board of Trustees delegated, to the Department, the responsibility to review and take final action on this request for proprietary authorization in accordance with Section 18-21.0051, F.A.C., and the Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C. This proprietary authorization has been reviewed in accordance with Chapter 253 and Chapter 258 F.S., Chapter 18-20, Chapter 18-21 and Section 62-330.075, F.A.C., and the policies of the Board of Trustees.

As staff to the Board of Trustees, the Department has reviewed the project described above, and has determined that the nourishment activity qualifies for a Letter of Consent to use sovereign, submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and conditions herein. Therefore, consent is hereby granted to The City of Fernandina Beach, the project's local sponsor, pursuant to Chapter 253.77, F.S., to perform the activity on the specified sovereign submerged lands.

As staff to the Board of Trustees, the Department has also determined that the dredging of the offshore borrow site requires a public easement for the use of those lands, pursuant to Chapter 253.77, F.S. The Department intends to issue the public easement to The City of Fernandina Beach, the project's local sponsor, subject to the conditions outlined in the previously issued *Consolidated Intent to Issue* and in the Recommended Proprietary Action (entitled *Delegation of Authority*).

The final documents required to execute the easement are being sent to the Department's Division of State Lands. The Department intends to issue the easement upon satisfactory execution of those documents. **You may not begin construction of this activity on state-owned, sovereign submerged lands until the easement has been executed to the satisfaction of the Department.**

COASTAL ZONE MANAGEMENT:

This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

WATER QUALITY CERTIFICATION:

Granting the associated variance to the antidegradation provisions in Rule 62-4.242(2)(a)2.b., F.A.C., authorizes the Permittee to exceed state water quality standards. Therefore, the Department hereby waives water quality certification pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341.

LOCAL SPONSOR AGREEMENT:

The Department will enter into a contractual agreement with the local project sponsor, City of Fernandina Beach, under which the City will be responsible for conducting post construction monitoring and beach maintenance activities for the protection of nesting marine turtles, their hatchlings and their habitat. The agreement is enforceable against The City of Fernandina Beach and is independent of this permit.

AGENCY ACTION:

The above named Permittee is hereby authorized to construct the work that is outlined in the project description and project location of this permit and as shown on the approved permit drawings, plans and other documents attached hereto. This agency action is based on the information submitted to the Department as part of the permit application, and adherence with the final details of that proposal shall be a requirement of the permit. **This permit and authorization to use sovereign submerged lands are subject to the General Conditions, General Consent Conditions and Specific Conditions, which are a binding part of this permit and authorization.** Both the Permittee and their Contractor are responsible for reading and understanding this permit (including the permit conditions and the approved permit drawings) prior to commencing the authorized activities, and for ensuring that the work is conducted in conformance with all the terms, conditions and drawings.

GENERAL CONDITIONS:

1. This permit, including its general and specific conditions, must be construed in light of the February 28, 2006 Interagency Coordination Agreement for Civil Works Projects (ICA) between the Department and the U.S. Army Corps of Engineers (Corps). As recognized in the ICA, the Department has the authority to include reasonable conditions in this permit. All of the conditions in this permit, both general and specific, are enforceable to the extent sovereign immunity has been waived under 33 U.S.C. §§ 1323 and 1344(t). The ICA is incorporated herein by reference.
2. All activities approved shall be implemented as set forth in the drawings incorporated by reference and in compliance with the conditions and requirements of this document. The Corps shall notify the Department in writing of any anticipated changes in:
 - a) operational plans;
 - b) project dimensions, size or location;
 - c) ability to adhere to permit conditions;
 - d) project description included in the permit;
 - e) monitoring plans.

If the Department determines that a modification to the permit is required then the Corps shall apply for and obtain the modification. Department approval of the modification shall be obtained prior to implementing the change, unless the change is determined by the Department to reduce the scope of work from that authorized under the original permit, and will not affect compliance with permit conditions or monitoring requirements.

3. If, for any reason, the Corps does not comply with any condition or limitation specified herein, the Corps shall immediately provide the Department with a written report containing the following information:
 - a) a description of and cause of noncompliance;
 - b) the period of noncompliance, including dates and times;
 - c) impacts resulting or likely to result from the non-compliance;
 - d) steps being taken to correct the non-compliance; and
 - e) the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

Compliance with the provisions of this condition shall not preclude the Department from taking any enforcement action allowed under state law with respect to any non-compliance.

4. The Corps shall obtain any applicable licenses, permits, or other authorizations which may be required by federal, state, local or special district laws and regulations. Nothing herein constitutes a waiver or approval of other Department permits or authorizations that may be required for other aspects of the total project.

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5. Nothing herein conveys to the Corps or creates in the Corps any property right, any interest in real property, any title to land or water, constitutes State recognition or acknowledgment of title, or constitutes authority for the use of Florida's sovereign submerged lands seaward of the mean high-water line or an established erosion control line, unless herein provided, and the necessary title, lease, easement, or other form of consent authorizing the proposed use has been obtained from the State.
6. Any delineation of the extent of a wetland or other surface water submitted as part of the application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this authorization or a formal determination under section 373.421(2), F.S., provides otherwise.
7. Nothing herein authorizes any entrance upon or activities on property which is not owned or controlled by the Corps or local sponsor, or conveys any vested rights or any exclusive privileges.
8. This document or a copy thereof, complete with all conditions, attachments, modifications, and time extensions shall be kept at the work site of the authorized activity. The Corps shall require the contractor to review this document prior to commencement of the authorized activity.
9. The Corps specifically agrees to allow Department personnel with proper identification, at reasonable times and in compliance with Corps specified safety standards access to the premises where the authorized activity is located or conducted for the purpose of ascertaining compliance with the terms of this document and with the rules of the Department and to have access to and copy any records that must be kept; to inspect the facility, equipment, practices, or operations regulated or required; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance. Reasonable time may depend on the nature of the concern being investigated.
10. At least forty-eight (48) hours prior to the commencement of authorized activity, the Corps shall submit to the Department a written notice of commencement of activities indicating the anticipated start date and the anticipated completion date.
11. If historic or archaeological artifacts such as, but not limited to, Indian canoes, arrow heads, pottery or physical remains, are discovered at any time on the project site, the Corps shall immediately stop all activities in the immediate area which disturb the soil and notify the Department and the State Historic Preservation Officer. In the event that unmarked human remains are encountered during permitted activities, all work shall stop in the immediate area and the proper authorities notified in accordance with Section 872.05, F.S.
12. Within a reasonable time after completion of construction activities authorized by this permit, the Corps shall submit to the Department a written statement of completion. This

statement shall notify the Department that the work has been completed as authorized and shall include a description of the actual work completed. The Department shall be provided, if requested, a copy of any as-built drawings required of the contractor or survey performed by the Corps

GENERAL CONSENT CONDITIONS:

1. Authorizations are valid only for the specified activity or use. Any unauthorized deviation from the specified activity or use and the conditions for undertaking that activity or use shall constitute a violation. Violation of the authorization shall result in suspension or revocation of the grantee's use of the sovereignty submerged land unless cured to the satisfaction of the Board.
2. Authorizations convey no title to sovereignty submerged land or water column, nor do they constitute recognition or acknowledgment of any other person's title to such land or water.
3. Authorizations may be modified, suspended or revoked in accordance with their terms or the remedies provided in Sections 253.04 and 258.46, F.S., or Chapter 18-14, F.A.C.
4. Structures or activities shall be constructed and used to avoid or minimize adverse impacts to sovereignty submerged lands and resources.
5. Construction, use or operation of the structure or activity shall not adversely affect any species that is endangered, threatened or of special concern, as listed in Rules 68A-27.003, 68A-27.004 and 68A-27.005, F.A.C.
6. Structures or activities shall not unreasonably interfere with riparian rights. When a court of competent jurisdiction determines that riparian rights have been unlawfully affected, the structure or activity shall be modified in accordance with the court's decision.
7. Structures or activities shall not create a navigational hazard.
8. Structures shall be maintained in a functional condition and shall be repaired or removed if they become dilapidated to such an extent that they are no longer functional. This shall not be construed to prohibit the repair or replacement subject to the provisions of Rule 18-21.005, F.A.C., within one year, of a structure damaged in a discrete event such as a storm, flood, accident or fire.
9. Structures or activities shall be constructed, operated and maintained solely for water dependent purposes, or for non-water dependent activities authorized under paragraph 18-21.004(1)(f), F.A.C., or any other applicable law.

SPECIFIC CONDITIONS:

1. The terms, conditions and provisions of the required easement shall be met. No work shall be conducted under this permit on sovereign submerged lands, title to which is held by the Board of Trustees, until all easement documents have been executed to the satisfaction of the Department. Confirmation shall be sent to the JCP Compliance Officer prior to commencement of construction on sovereign submerged lands.
2. No work shall be conducted under this permit until the Department issues a Final Order of Variance (File No. 0264288-005-BV) from Rules 62-4.242(2)(a)2.b., and 62-302.700(1), F.A.C., to establish a maximum allowable turbidity level above background for work within OFW for this project.
3. No work shall be conducted until a local sponsor agreement for this project has been fully executed between the City of Fernandina Beach and the Department. Confirmation shall be sent to the JCP Compliance Officer prior to commencement of construction.
4. All reports or notices relating to this permit shall be electronically submitted to the Department's JCP Compliance Officer (e-mail address: JCPCCompliance@dep.state.fl.us) unless otherwise specified in the specific conditions of this permit.
5. The Permittee shall not store or stockpile tools, equipment, materials, etc., within littoral zones or elsewhere within surface waters of the state without prior written approval from the Department. Storage, stockpiling or access of equipment on, in, over or through beds of submerged aquatic vegetation, wetlands or hardbottom is prohibited unless it occurs within a work area or ingress/egress corridor that is specifically approved by this permit. Anchoring or spudding of vessels and barges within beds of aquatic vegetation or hardbottom is also prohibited.
6. The Permittee shall not conduct project operations or store project-related equipment in, on or over dunes, or otherwise impact dune vegetation, outside the approved staging, beach access and dune restoration areas designated in the permit drawings.
7. **Pre-Construction Conference.** The Permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with Permittee's contractors, the engineer of record, those responsible for turbidity monitoring and the JCP Compliance Officer (or designated alternate) prior to each construction event. In order to ensure that appropriate representatives are available, at least fourteen (14) days prior to the intended commencement date for the permitted construction, the Permittee is advised to contact the Department, and the other agency representatives listed below:

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JCP Compliance Officer
e-mail: JCPCompliance@dep.state.fl.us

Imperiled Species Management Section
Florida Fish & Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, Florida 32399-1600
phone: (850) 922-4330
fax: (850) 921-4369 or email: marineturtle@myfwc.com

The Permittee is also advised to schedule the pre-construction conference at least a week prior to the intended commencement date. At least seven (7) days in advance of the pre-construction conference, the Permittee shall provide written notification, advising the participants of the agreed-upon date, time and location of the meeting, and also provide a meeting agenda and a teleconference number. If necessary, an environmental compliance pre-construction conference may be held separately from the pre-construction conference.

8. **Pre-Construction Submittals.** At least seven (7) days prior to the date of the pre-construction conference (as required above), the Permittee shall submit the following:
 - a. Final plans and specifications, which must be consistent with the activity description of this permit and the approved permit drawings. The Permittee shall point out any deviations from the activity description or the approved permit drawings, and any significant changes would require a permit modification. Submittal shall include one (1) electronic copy of the final plans and specifications. The plans and specifications for each event shall be accompanied by a letter indicating the project name, the permit number, the type of construction activity, the specific type of equipment to be used, the anticipated volume of material to be moved for the event and the anticipated schedule. Further, the Permittee shall specify any anticipated sites that will be used (such as a disposal or re-use location, staging areas, access corridors, etc.) and appropriate contact information for those facilities. The final plans and specifications submitted under this condition must comply with all conditions set forth in this permit;
 - b. Documentation that the Public Easement has been executed and recorded to the satisfaction of the Department;
 - c. A detailed physical monitoring plan (as outlined in Specific Condition 34, below);
 - d. A Scope of Work for the turbidity monitoring to ensure that the right equipment is available to conduct the monitoring correctly at any location, and under any conditions; and

- e. Prior to the second nourishment event authorized under this permit, and each subsequent event, the results of the intermediate turbidity monitoring shall be evaluated and provided to the Department. If the results indicate that the project can be built using a smaller mixing zone, this adjustment shall be made through an administrative modification to the permit prior to commencement of construction.
9. In the event that the City of Fernandina Beach, the local sponsor for this project, does not conduct all necessary marine turtle protection and monitoring requirements, the Permittee is still responsible for those marine turtle protection measures specified by the applicable U. S. Fish and Wildlife Service (FWS) Biological Opinion and the local sponsor agreement for this project.
10. The Permittee and the Department, within their respective authorities and funding, shall ensure that beach compatible dredged material is placed on Florida's beaches, consistent with Florida's beach management plan adopted pursuant to Chapter 161, F.S. and other beneficial uses criteria as may be specified by the Department and applicable federal standards.
11. When discharging slurried sand onto the beach from a pipeline, the Permittee shall employ best management practices (BMPs) to reduce turbidity. At a minimum, these BMPs shall include the following:
 - a. Use of shore-parallel sand dike to promote settlement of suspended sediment on the beach before return water from the dredged discharge reenters the Atlantic Ocean; and
 - b. A minimum set-back of 50 feet from open water, or at the landward end of the beach berm (without disturbing the dune), whichever is less, for the pipeline discharge location.
12. Sediment quality shall be assessed as outlined in the Sediment QA/QC Plan dated May, 2015. Any occurrences of placement of material not in compliance with the Plan shall be handled according to the protocols set forth in the Sediment QA/QC Plan. The sediment testing result shall be submitted to the JCP Compliance Officer within 90 days following the completion of beach construction. The Sediment QA/QC Plan includes the following:
 - c. If during construction, the Permittee determines that the beach fill material does not comply with the sediment compliance specifications, measures shall be taken to avoid further placement of noncompliant fill, and the sediment inspection results shall be immediately reported to the JCP Compliance Officer.
 - d. The Permittee shall submit post-construction sediment testing results and an analysis report as outlined in the Sediment QA/QC Plan to the JCP Compliance Officer within 90 days following beach construction. The sediment testing results shall be certified

by a P.E. or P.G. from the testing laboratory. A summary table of the sediment samples and test results for the sediment compliance parameters, as outlined in Table 1 of the Sediment QA/QC Plan, shall accompany the complete set of laboratory testing results. A statement of how the placed fill material compares to the sediment analysis and volume calculations from the geotechnical investigation shall be included in the sediment testing results report.

- e. A post-remediation report containing the site map, sediment analysis, and volume of noncompliant fill material removed and replaced shall be submitted to the JCP Compliance Officer within 14 days following completion of remediation activities.

13. Wildlife Pre-Construction Conference.

- a. The pre-construction conference held between the contractors, the engineer and staff representative of the Department (see Specific Condition 7 above) shall also include the Marine Turtle Monitor/permit holder, Bird Monitors, and staff representatives of the Florida Fish and Conservation Commission (FWC). The purpose of this portion of the meeting is to ensure that the Permittee/Contractor fully understands the wildlife protection measures and site-specific measures that need to be taken before, during, and after construction.
- b. The Permittee/Contractor's Environmental Protection Plan (EPP) shall include details of monitoring for nesting marine turtles and nesting seabirds and shorebirds (shorebirds) onsite during construction. The EPP shall be submitted for review and comment to the FWC prior to the pre-construction conference.
- c. The notification of the pre-construction conference shall be sent at least 10 business days before the date of that meeting to the FWC Regional Species Conservation Biologist (**contact information available at: <http://www.myfwc.com/shorebirds>**), MarineTurtle@myfwc.com, and to the JCP Compliance Officer. The contractor's draft EPP shall be submitted for review and comment to FWC, and a copy emailed to the JCP Compliance Officer, a minimum of five (5) business days prior to the pre-construction conference. This plan shall include details of monitoring for nesting marine turtles and migratory birds onsite during construction. The final EPP shall be submitted prior to construction.

14. In-water Activity. The following conditions shall be followed for all in-water activity:

- a. All personnel associated with the project shall be instructed about the presence of marine turtles and manatees, and the need to avoid collisions with (and injury to) these protected marine species. The Permittee/Contractor shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees or marine turtles, which are protected under the

- Endangered Species Act, the Marine Mammal Protection Act, the Marine Turtle Protection Act and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels shall follow routes of deep water whenever possible.
 - c. Siltation or turbidity barriers (if used) shall be made of material in which manatees and marine turtles cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers shall not impede manatee or marine turtle movement.
 - d. All on-site project personnel are responsible for observing water-related activities for the presence of marine turtles and manatees. All in-water operations, including vessels, shall be shut down if a marine turtle or manatee comes within 50 feet of the operation. Activities shall not resume until the animal(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the animal(s) has not reappeared within 50 feet of the operation. Animals shall not be herded away or harassed into leaving.
 - e. Any collision with or injury to a marine turtle or manatee shall be reported immediately to the FWC Hotline at 1-888-404-3922, and to FWC at ImperiledSpecies@myFWC.com. Any collision with and/or injury to a marine turtle shall also be reported immediately to the Sea Turtle Stranding and Salvage Network (STSSN) at SeaTurtleStranding@myfwc.com.
 - f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs shall be removed by the Permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC shall be used. One sign which reads "Caution Boaters – Watch for Manatees" shall be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shutdown of in-water operations shall be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to ImperiledSpecies@myFWC.com.
15. **Hopper Dredging.** In the event a hopper dredge is utilized, the following requirements shall be met:
- a. Handling of captured marine turtles shall be conducted only by persons with prior experience and training in these activities as a NMFS-approved sea turtle observer or have submitted documentation to the Corps of meeting the FWC Marine Turtle Conservation Guidelines specific to stranding activities. The Corps shall forward

- documentation to FWC for review, concurrent with the submission of the contractor Environmental Protection Plan. Corps staff or their designee that transport live or dead marine turtles or marine turtle parts into, out of, or within, the state of Florida shall notify FWC in writing specifying the number, species of turtle, type of specimen, and the destination after transport is complete. Before transport, if the turtle is believed to be alive, Corps staff or their designee shall coordinate with FWC to determine the appropriate facility to receive live sea turtles for rehabilitation. Corps staff or their designee shall abide by the State of Florida's FWC Marine Turtle Conservation Guidelines (<http://www.myfwc.com/wildlifehabitats/managed/sea-turtles/conservation-guidelines/>) specific to transport of live stranded turtles.
- b. In order to minimize impingement or entrainment of marine turtles within the water column, dredging pumps shall be disengaged by the operator, or the draghead bypass valve shall be open and in use when the dragheads are not firmly on the bottom. This precaution is especially important during the cleanup phase of dredging operations.
 - c. A state-of-the-art rigid deflector draghead shall be used on all hopper dredges at all times of the year.
 - d. The STSSN Coordinator shall be notified at 1-904-573-3930 or via e-mail at Allen.Foley@myfwc.com of the start-up and completion of hopper dredging operations. In the event of capturing or recovering marine turtles or marine turtle parts, the STSSN shall be contacted at seaturtlestranding@myfwc.com.
16. **Trawling.** If relocation trawling or non-capture trawling is required as per applicable National Marine Fisheries Service Biological Opinions and Incidental Take authorizations, the following is required:
- a. Any activity involving the use of nets to harass and/or to capture and handle marine turtles in Florida waters shall require a Marine Turtle Permit from FWC prior to construction.
 - b. The Permittee or their contractor shall e-mail (MTP@MyFWC.com) weekly reports to the Imperiled Species Management Section on Friday of each week that trawling is conducted in Florida waters. These weekly reports shall include the species and number of turtles captured in Florida waters, general health, and release information. A summary (using FWC provided Excel spreadsheet) of all trawling activity (including non-capture trawling), all turtles captured in Florida waters (including all measurements), the latitude and longitude (in decimal degrees) of captures and tow start-stop points, and times for the start-stop points of the tows (including those tows on which no turtles are captured) shall be submitted to MTP@myfwc.com by January 15 of the following year, or at the end of the project.

17. Beach Related Activities.

- a. *Beach Driving.* All vehicles shall be operated in accordance with the FWC's Best Management Practices for Operating Vehicles on the Beach (<http://myfwc.com/conservation/you- conserve/wildlife/beach-driving/>). Specifically, the vehicle shall be operated at a speed <6 mph and run at or below the high-tide line. All personnel associated with the project shall be instructed about the potential presence of shorebirds and marine turtles and the need to avoid take of (including disturbance to) these protected species.
- b. *Beach Maintenance.* All debris, including derelict concrete, metal and coastal armoring material, shall be removed from the beach prior to any material placement to the maximum extent practicable. If debris removal activities will take place during shorebird or marine turtle nesting seasons, the work shall be conducted during daylight hours only and shall not commence until completion of daily shorebird or marine turtle surveys each day.
- c. *Equipment Storage and Placement.* Staging areas for construction equipment shall be located off the beach, if off-beach staging areas are available. Nighttime storage of construction equipment that is not in use shall be off the beach to minimize disturbance to shorebird and marine turtle nesting and hatching activities. In addition, all construction pipes that are placed on the beach shall be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system. Pipes placed parallel to the dune shall be 5 to 10 feet away from the toe of the dune. Temporary storage of pipes shall be off the beach to the maximum extent possible. If it will be necessary to extend construction pipes past a known shorebird nesting site or over-wintering area for piping plovers, then whenever possible, those pipes shall be placed landward of the site before birds are active in that area. No pipe or sand shall be placed seaward of a shorebird nesting site during the shorebird nesting season.

18. Shorebird Protection Conditions. Shorebird surveys shall be conducted by trained, dedicated individuals (Bird Monitor) with proven shorebird identification skills and avian survey experience.

- a. *Selection of Bird Monitors.* A list of Bird Monitors with their contact information, summary of qualifications including bird identification skills, and avian survey experience shall be provided to the FWC. This information shall be submitted to the FWC Regional Biologist (contact information available at: <http://www.myfwc.com/shorebirds>) prior to any construction or shorebird surveys for review and consultation. Bird Monitors shall meet the following minimum qualifications.

- i. Ability to identify all species of beach-nesting birds that nest in the project area by sight and sound.
 - ii. Ability to identify breeding/territorial behaviors, and find nests of shorebirds and seabirds that occur in the project area.
 - iii. Ability to identify habitats preferred by shorebirds and seabirds nesting in the project area.
 - iv. Completed full introductory course training (online or webinar) on the *Breeding Bird Protocol for Florida's Seabirds and Shorebirds*, including training in data entry.
 - v. Familiar with FWC beach driving guidelines:
www.myfwc.com/conservation/you- conserve/wildlife/beach-driving .
 - vi. Annually completes refresher course training (online or webinar) for the *Breeding Bird Protocol for Florida's Seabirds and Shorebirds*, including training in data entry.
 - vii. Previously participated in beach-nesting bird surveys associated with FWC, Audubon, or FWS in Florida (please provide references).
 - viii. Experience posting beach-nesting bird sites, consistent with Florida Shorebird Alliance (FSD) Guidelines
(<http://flshorebirdalliance.org/resources/instructions-manuals.aspx>).
 - ix. Registered contributor to the Florida Shorebird Database.
- b. The Bird Monitor(s) shall review and become familiar with the general information on the FWC's Florida Shorebird Database (FSD) website (www.FLShorebirdDatabase.org). They shall use the data-collection protocol and implement data-entry procedures as outlined in that website. An outline of data to be collected, including downloadable field data sheets, is available on the website.
- c. Breeding season varies by species. Most species have completed the breeding cycle by September 1, but flightless young may be present through September. The following dates are based on the best available information regarding ranges and habitat use by species for this project: March 15 – September 1.
- d. Surveys during the breeding season shall begin on the first day of the breeding season or 10 days before any site work begins, whichever is later. Surveys shall be conducted through August 31 or until all breeding activity has concluded, whichever is later.

- e. During the breeding season, the Bird Monitor(s) shall survey all potential beach-nesting bird habitats that may be affected by construction or pre-construction activities. The Bird Monitor(s) shall establish one or more shorebird survey routes in the FSD website to cover these areas.
 - f. During the pre-construction and construction phases of the project, the Bird Monitor(s) shall complete surveys on a daily basis to detect breeding activity and the presence of flightless chicks before (1) equipment is moved to the area, (2) vehicles are operated in the area, or (3) any other activities occur that have the potential to disrupt breeding behavior or cause harm to the birds or their eggs or young. Once construction is completed and all personnel and equipment have been removed from the beach, surveys may be conducted at weekly intervals through the final acceptance of beach construction by the Corps. After final acceptance, the weekly surveys shall be conducted by the local sponsor through the end of the nesting season.
 - g. The Bird Monitor(s) shall survey the project area by walking and looking for evidence of (1) shorebirds exhibiting breeding behavior, (2) shorebird chicks, or (3) shorebird juveniles, as outlined in the FSD's Breeding Bird Protocol for Shorebirds and Seabirds. The Bird Monitor(s) shall use binoculars for these surveys.
 - h. If an ATV or other vehicle is needed to cover large project areas, operators shall adhere to the FWC's Best Management Practices for Operating Vehicles on the Beach (<http://myfwc.com/conservation/you-serve/wildlife/beach-driving/>). Specifically, the vehicle shall be operated at a speed under 6 mph and only on beaches at or below the high-tide line. The Bird Monitor(s) shall stop at no greater than 200-meter intervals to look for breeding activity.
 - i. Once the Bird Monitor(s) confirms that birds are breeding, as evidenced by the presence of a scrape, eggs, or young, the Bird Monitor(s) shall notify the FWC Regional Species Conservation Biologist (contact information available at: <http://www.myfwc.com/shorebirds>) within 24 hours. The Bird Monitor(s) shall report all breeding activity to the FSD website within one week of data collection.
19. **Shorebird Buffer Zones and Travel Corridors.** The Bird Monitor(s) shall establish a disturbance-free buffer zone around any location within the project area where shorebirds have been engaged in breeding behavior, including territory defense. The FWC considers a 300-foot-wide buffer to be adequate based on published studies; however, a smaller, site-specific buffer may be established if approved by the FWC Regional Species Conservation Biologist (contact information available at: <http://www.myfwc.com/shorebirds>). All sources of human disturbance (including pedestrians, pets and vehicles) shall be prohibited in the buffer zone.

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- a. The Bird Monitor(s) shall keep breeding sites under sufficient surveillance to determine if birds appear agitated or disturbed by construction or other activities in adjacent areas. If birds appear to be agitated or disturbed by these activities, then the Bird Monitor(s) shall widen the buffer zone immediately to a sufficient size to protect breeding birds.
- b. The Bird Monitor(s) shall ensure that reasonable and traditional pedestrian access is not blocked in situations where breeding birds will tolerate pedestrian traffic. This is generally the case with lateral movement of beach-goers walking parallel to the beach at or below the highest tide line. Pedestrian traffic may also be tolerated when breeding was initiated within 300 feet of an established beach access pathway. The Bird Monitor(s) shall work with the FWC Regional Species Conservation Biologist to determine if pedestrian access can be accommodated without compromising nesting success.
- c. The Bird Monitor(s) shall ensure that the perimeters of designated buffer zones are marked with posts, twine, and signs stating “Do Not Enter, Important Nesting Area” or similar language. The signs shall include the name and a phone number of the entity responsible for posting. Posts shall not be higher than 3 feet once installed. “Symbolic fencing” (i.e., twine, string or rope) shall be placed between all posts and be clearly visible to pedestrians. In areas where marine turtles nest, the ropes shall be at least 2.5 feet above the ground. If pedestrian pathways are approved by the FWC Regional Biologist within the 300-foot buffer zone, these shall be clearly marked. The Bird Monitor(s) shall ensure that the posting is maintained in good repair until breeding is completed or terminated. Although solitary nesters may leave the buffer zone with their chicks, the posted area continues to provide a potential refuge for the family until breeding is complete. Breeding is not considered to be completed until all chicks have fledged.
- d. The Bird Monitor(s) shall ensure that no construction activities, pedestrians, moving vehicles, or stockpiled equipment are allowed within the buffer area. The Bird Monitor(s) shall designate and mark travel corridors outside the buffer areas so as not to cause disturbance to breeding birds. Heavy equipment, other vehicles, or pedestrians may go past breeding areas in these corridors. However, other activities such as stopping or turning heavy equipment and vehicles shall be prohibited within the designated travel corridors adjacent to the breeding site.
- e. When flightless chicks are present within or adjacent to travel corridors, the contractor shall ensure that no chicks are in the path of the moving vehicles, that chicks are not separated from the family unit, and that the vehicles leave no tracks capable of trapping flightless chicks. The Bird Monitor shall keep moving vehicles under adequate surveillance at those times to ensure that these requirements are being met. The Bird Monitor shall also conduct a shorebird education and identification program with the Contractor to ensure protection of precocial (mobile) chicks.

- f. The FWC recommends that some activity in the travel corridor is maintained on a daily basis in order to discourage birds from nesting within the travel corridor. These activities shall not be allowed to disturb shorebirds nesting on site or interfere with marine turtle nesting, especially if the corridors are established before construction has started.
- g. *Notification.* If the Bird Monitor(s) find that shorebirds are breeding within the project area, he or she shall ensure that an informational bulletin board is placed and maintained in the construction staging area. This bulletin board shall display the location map of the construction site, depict the location(s) of the bird breeding areas, and include a clearly visible warning stating: “NESTING BIRDS ARE PROTECTED BY LAW INCLUDING THE FLORIDA ENDANGERED AND THREATENED SPECIES ACT AND THE STATE AND FEDERAL MIGRATORY BIRD ACTS”.

20. Marine Turtle Nest Surveys and Relocation.

- a. For sand placement during marine turtle nesting season (April 15 - November 30), daily early morning (before 9 a.m.) surveys shall be conducted, and eggs shall be relocated per the requirements below until completion of sand placement. **Note: marine turtle monitors shall not enter posted shorebird buffer areas to conduct monitoring or to relocate nests.** Monitoring and reporting shall continue throughout the nesting season and shall be conducted according to Post-construction Monitoring and Reporting Marine Turtle Protection Conditions that are included in this document.
- b. Marine Turtle Monitors: Nesting surveys and egg relocations shall only be conducted by persons with prior experience and training in these activities and who are duly authorized to conduct such activities through a valid permit issued by FWC, pursuant to Chapter 68E-1, F.A.C. Please contact FWC’s Marine Turtle Management Program in Tequesta at MTP@myfwc.com for information on the permit holder in the project area. It is the responsibility of the Permittee to ensure that nesting surveys are completed by the authorized Marine Turtle Permit Holder. Nesting surveys shall be conducted daily between sunrise and 9 a.m. (in all time zones).
- c. Nesting surveys shall be initiated 65 days prior to sand placement activities, or by the beginning of marine turtle nesting season (April 15 - October 24), whichever is later. Nesting surveys shall continue daily through the end of the project, or October 24, or until seven days without a nest in the project area, whichever is earlier. If nests are laid in areas where they may be affected by sand placement activities, eggs shall be relocated per the requirements listed in these conditions. Monitoring shall resume for the following nesting seasons according to Post-construction Monitoring and Reporting Marine Turtle Protection Conditions that are included in this document.

- d. Only those nests in the area where sand placement will occur shall be relocated. Nest relocation shall not occur upon completion of sand placement. Nests requiring relocation shall be moved no later than 9:00 a.m., the morning following deposition, to a nearby self-release beach site in a secure setting, where artificial lighting would not interfere with hatchling orientation. Relocated nests shall not be placed in organized groupings. Relocated nests shall be randomly staggered along the length and width of the beach in settings that are not expected to experience daily inundation by high tides or known to routinely experience severe erosion and egg loss, or that are subject to artificial lighting. Nest relocations in association with construction activities shall cease when sand placement activities no longer threaten nests.
 - e. Nests deposited within areas where construction activities have ceased, or will not occur for 65 days, or nests laid in the nourished berm prior to tilling shall be marked and left in place. The turtle permit holder shall install an on-beach marker at the nest site and/or a secondary marker at a point as far landward as possible to assure that future location of the nest will be possible should the on-beach marker be lost. No activity shall occur within this area, nor shall any activities occur that could result in impacts to the nest. Nest sites shall be inspected daily to assure nest markers remain in place and the nest has not been disturbed by the project activity.
21. **Project Lighting.** Direct lighting of the beach and nearshore waters during the marine turtle nesting season (May 1 - October 31) shall be limited to the immediate construction area and shall comply with safety requirements. Lighting on offshore or onshore equipment shall be minimized through reduction, shielding, lowering and appropriate placement to avoid excessive illumination of the water's surface and nesting beach while meeting all Coast Guard, EM 385-1-1, and OSHA requirements. Light intensity of lighting equipment shall be reduced to the minimum standard required by OSHA for General Construction areas, in order not to misdirect marine turtles. Shields shall be affixed to the light housing and be large enough to block light from all lamps from being transmitted outside the construction area (Figure 1 below).

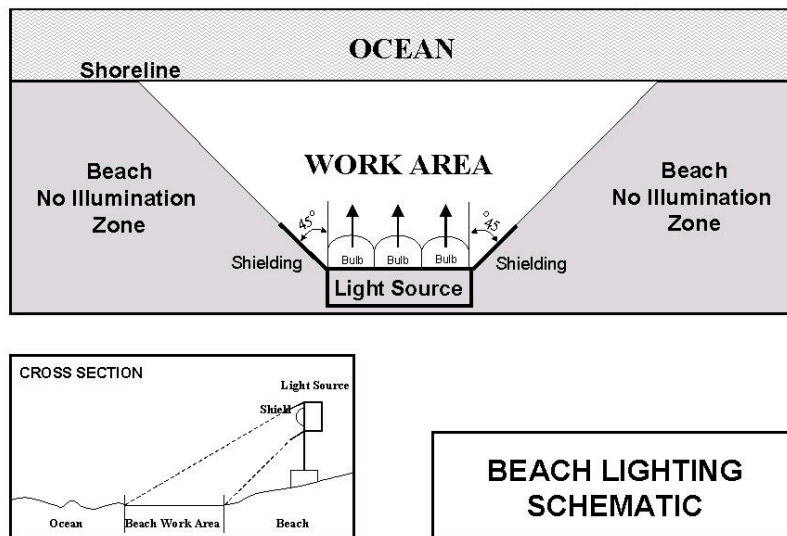


Figure. 1

22. **Marine Turtle or Nest Encounters.** Upon locating a dead or injured marine turtle adult, hatchling or egg that may have been harmed or destroyed as a direct or indirect result of the project, the Permittee shall ensure that the FWC will be notified at FWC Wildlife Alert at 1-888-404-FWCC (3922). Care shall be taken in handling injured marine turtles or eggs to ensure effective treatment or disposition, and in handling dead specimens to preserve biological materials in the best possible state for later analysis. In the event a marine turtle nest is excavated during construction activities, but not as part of the authorized nest relocation process outlined in these specific conditions, the permitted person responsible for egg relocation for the project shall be notified immediately so the eggs can be moved to a suitable relocation site.
23. **Fill Restrictions.** During the marine turtle nesting season (May 1 - October 31), the contractor shall not extend the beach fill more than 500 feet along the shoreline between dusk and the following day until the daily nesting survey has been completed and the beach cleared for fill advancement. An exception to this may occur if there is permitted marine turtle monitor present on-site to ensure no nesting and hatching marine turtles are present within the extended work area. If the 500-foot distance is not feasible for the project, an agreed upon distance shall be established during the preconstruction meeting. Once the beach has been cleared, and the necessary nest relocations have been completed, the contractor shall be allowed to proceed with the placement of fill during daylight hours until dusk, at which time the 500-foot length limitation shall apply.
24. **Compaction Sampling.** Sand compaction shall be monitored in the area of sand placement immediately after completion of the nourishment event and prior to April 15th for three (3) subsequent years and shall be monitored in accordance with a protocol

agreed to by the FWC and the Permittee. The requirement for compaction monitoring can be eliminated if the decision is made to till regardless of post-construction compaction levels. Out-year compaction monitoring and remediation are not required if placed material no longer remains on the beach. At a minimum, the protocol provided under a. and b. below shall be followed. If the average value for any depth exceeds 500 pounds per square inch (psi) for any two or more adjacent stations, then that area shall be tilled immediately prior to the following date listed above. If values exceeding 500 psi are distributed throughout the project area, but in no case do those values exist at two adjacent stations at the same depth, then the Permittee shall consult with the FWC to determine if tilling is required. If a few values exceeding 500 psi are present randomly within the project area, tilling shall not be required.

- a. Compaction sampling stations shall be located at 500-foot intervals along the project area. One station shall be at the seaward edge of the dune/bulkhead line (when material is placed in this area), and one station shall be midway between the dune line and the high water line (normal wrack line).
 - b. At each station, the cone penetrometer shall be pushed to depths of 6, 12 and 18 inches three times (i.e., three replicates at each depth). Material may be removed from the hole if necessary to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lie over less compact layers. Replicates shall be located as close to each other as possible, without interacting with the previous hole and/or disturbed sediments. The three replicate compaction values for each depth shall be averaged to produce final values for each depth at each station. Reports shall include all 18 values for each transect line, and the final 6 averaged compaction values.
 - c. No compaction sampling shall occur within 300 feet of any shorebird nest.
 - d. Any vehicles operated on the beach in association with compaction surveys shall operate in accordance with the FWC's Best Management Practices for Operating Vehicles on the Beach (<http://myfwc.com/conservation/you-protect/wildlife/beach-driving/>).
25. **Tilling Requirements.** If tilling is required, as specified above, the area shall be tilled to a depth of 36 inches. All tilling activity shall be completed prior to the marine turtle nesting season. If tilling occurs during shorebird nesting season, shorebird surveys prior to tilling shall be required per the Shorebird Conditions included within this document. It is the responsibility of the contractors (and ultimately the Permittee) to avoid tilling, scarp removal, or dune vegetation planting in areas where nesting birds are present. Each pass of the tilling equipment shall be overlapped to allow thorough and even tilling. If the project is completed during the marine turtle nesting season, tilling shall not be performed in areas where nests have been left in place or relocated. If compaction

measurements are taken, a report on the results of the compaction monitoring shall be submitted electronically to FWC at marineturtle@myfwc.com prior to any tilling actions being taken.

- a. No tilling shall occur within 300 feet of any shorebird nest.
 - b. When flightless chicks are present within or adjacent to travel corridors, the contractor shall ensure that no chicks are in the path of the moving vehicles, that chicks are not separated from the family unit, and that the vehicles leave no tracks capable of trapping flightless chicks. The Bird Monitor shall keep moving vehicles under adequate surveillance at those times to ensure that these requirements are being met. The Bird Monitor shall also conduct a shorebird education and identification program with the Contractor to ensure protection of precocial (mobile) chicks.
 - c. A relatively even surface, with no deep ruts or furrows, shall be created during tilling. To do this, chain-linked fencing or other material shall be dragged over those areas as necessary after tilling.
 - d. Tilling shall occur landward of the wrack line and avoid all naturally vegetated areas or planting areas that have been authorized by the Department when those areas are at least 3 square feet in size. A 3-foot No-Tilling buffer shall be observed around the vegetated areas. The slope between the mean high water line and the mean low water line shall be maintained in such a manner as to approximate natural slopes.
 - e. Any vehicles operated on the beach in association with tilling shall operate in accordance with the FWC's Best Management Practices for Operating Vehicles on the Beach (<http://myfwc.com/conservation/you-serve/wildlife/beach-driving/>).
26. **Escarpment Surveys.** Visual surveys for escarpments along the project area shall be made immediately after completion of sand placement and during March 15 to April 15 for three (3) subsequent years if placed sand still remains on the beach. Escarpments that interfere with marine turtle nesting or that exceed 18 inches in height for a distance of at least 100 feet shall be leveled and the beach profile shall be reconfigured to minimize scarp formation by April 15. Any escarpment removal shall be reported by location to FWC, with a copy sent to the JCP Compliance Officer. If the project is completed during the marine turtle nesting and hatching season, escarpments may be required to be leveled immediately, while protecting nests that have been relocated or left in place. The Permittee shall contact FWC immediately if subsequent reformation of escarpments occurs during the nesting and hatching season, and the escarpments interfere with marine turtle nesting or exceed 18 inches in height for a distance of 100 feet. The FWC would then determine the appropriate action to be taken. If it is determined that escarpment leveling is required during the nesting or hatching season, the FWC shall provide a brief written authorization that describes methods to be used to reduce the likelihood of impacting existing nests. An annual summary of escarpment surveys and actions taken

shall be submitted electronically to marineturtle@myfwc.com along with the annual summary as described below. If escarpment removal occurs during shorebird breeding season, shorebirds surveys shall be required per the Shorebird Conditions included within this document prior to removal. (NOTE: Out-year escarpment monitoring and remediation are not required if placed material no longer remains on the dry beach).

- a. No heavy equipment shall operate within 300 feet of any shorebird nest.
- b. When flightless chicks are present within or adjacent to travel corridors, the contractor shall ensure that no chicks are in the path of the moving vehicles, that chicks are not separated from the family unit, and that the vehicles leave no tracks capable of trapping flightless chicks. The Bird Monitor shall keep moving vehicles under adequate surveillance at those times to ensure that these requirements are being met. The Bird Monitor shall also conduct a shorebird education and identification program with the Contractor to ensure protection of precocial (mobile) chicks.
- c. Any vehicles operated on the beach in association with escarpment surveys or removal shall operate in accordance with the FWC's Best Management Practices for Operating Vehicles on the Beach (<http://myfwc.com/conservation/you-protect/wildlife/beach-driving/>).

Post-construction Shorebird Protection Conditions:

27. If beach cleaning will occur on the nourished beach, a minimum of 30% of the biotic material within the wrack line shall be left on the beach post-cleaning at the strand line in a natural configuration to ensure that the nourished beach re-establishes its function as foraging habitat for shorebirds. This shall occur for as long as the placed sand remains on the beach.

Post-construction Monitoring, Reporting and Marine Turtle Protection Conditions:

28. Reports on all marine turtle nesting activity shall be provided for the initial marine turtle nesting season (May 1 - September 30) and for up to two additional nesting seasons as follows:
 - a. For the remainder of the nesting season immediately following construction, and the following year, the number and type of emergences (nests or false crawls) shall be reported per species in accordance with **Table 1 below**. An additional year of nesting surveys may be required if nesting success for any species on the nourished beach is less than 40%.
 - b. For the remainder of the nesting season immediately following construction, reproductive success shall be reported per species in accordance with Table 1 below. Reproductive success shall be reported for all loggerhead, Kemp's ridley, green and

- leatherback nests.
- c. In the event that the reproductive success documented by species meets or exceeds required criteria (outlined in Table 1 below) for each species, monitoring for reproductive success shall be recommended, but not required for the second year post-construction.
 - d. Monitoring of nesting activity in the seasons following construction shall include daily surveys and any additional measures authorized by the FWC. Summaries shall include all crawl activity, nesting success rates, hatching success of all relocated nests, hatching success of a representative sampling of nests left in place (if any) by species, project name, permit numbers and dates of construction.
 - e. *Lighting Surveys.* Two lighting surveys shall be conducted of all artificial lighting visible from the nourished berm. The first survey shall be conducted between May 1 and May 15 the first nesting season following construction or immediately after placement if construction is not completed until after May 15, and a second survey between July 15 and August 1. The survey shall be conducted by the Permittee or local sponsor and should be conducted to include a landward view from the seaward-most extent of the new beach profile. The survey shall follow standard techniques for such a survey and include number and type of visible lights, location of lights and photo documentation. For each visible light source, the Permittee or local sponsor shall document that the property owner(s) have been notified of the problem light with recommendations for correcting the light. Recommendations shall be in accordance with local lighting ordinances, and a report summarizing all visible lights shall be forwarded to local code enforcement, or if no lighting ordinances exist, the recommendation shall be that no lights, or light sources or glow shall be visible from the newly elevated beach. A report summarizing all lights visible shall be submitted to FWC Imperiled Species Management Section at marineturtle@myfwc.com and **copied to** JCPCCompliance@dep.state.fl.us by the 1st of the month following survey. A summary report documenting what corrective actions or local enforcement actions have been taken shall also be submitted by December 15 of that year. After the annual report is completed, a meeting shall be set up with the Permittee or local sponsor, county or municipality, and FWC to discuss the survey report as well as any documented marine turtle disorientations in or adjacent to the project area.
29. Data shall be reported for the nourished areas in accordance with the Table 1 below and shall include number of nests lost to erosion or washed out. Summaries of nesting activity shall be submitted in electronic format (Excel spreadsheets) to the FWC Imperiled Species Management Section at marineturtle@myfwc.com and **copied to** JCPCCompliance@dep.state.fl.us. All summaries shall be submitted by January 15th of the following year. The FWC Excel spreadsheet is available upon request from marineturtle@myfwc.com.

Table 1. Sea Turtle Monitoring Following Sand Placement Activity

Date	Duration	Variable	Criterion
Nesting Success	Year of in season construction, two years post construction if placed sand remains on beach and variable does not meet criterion based on previous year	Number of nests and non-nesting events	40 percent or greater
Hatching success	Year of in season construction and one year post construction if placed sand remains on beach and variable does not meet success criterion based on previous year	Number of hatchlings by species to hatch from egg	60 percent or greater (a statistically valid number of loggerhead and green nests, and all leatherback nests)
Emergence Success	Year of in season construction and one year post construction if placed sand remains on beach and variable does not meet success criterion based on previous year	Number of hatchlings by species to emerge from nest onto beach	80 percent or greater (a statistically valid number of loggerhead and green nests, and all leatherback nests)
Disorientations	Year of in season construction and two years post construction if placed sand remains on the beach	Number of nests and individuals that misorient or disorient	http://myfwc.com/media/418153/Seaturtle_Guidelines_A_LDIR_Directions.pdf
Lighting Surveys	Two surveys the year following construction, one survey between May 1 and May 15 and second survey between July 15 and August 1	Number, location and photographs of lights visible from nourished berm, corrective actions and notifications made	Lighting survey and meeting resulting with plan for reduction in lights visible from nourished berm within one to two month period
Compaction	Three seasons following construction. Not required if the beach is tilled prior to nesting season each year placed sand remains on beach	Shear resistance	Less than 500 psi
Escarpment Surveys	Weekly during nesting season for three years each year placed sand remains on the beach	Number of scarps 18 inches or greater extending for more than 100 feet that persist for more than 2 weeks	Successful remediation of all persistent scarps as needed

MONITORING REQUIRED:

Water Quality

30. **Turbidity** shall be monitored follows:

Units: Nephelometric Turbidity Units (NTUs).

Frequency: 3 times daily, at least 4 hours apart, during all dredging and sand placement operations. Sampling shall be conducted **while the highest project-related turbidity levels are crossing the edge of the mixing zone**. Since turbidity levels can be related to pumping rates, the dredge pumping rates shall be recorded, and provided to the Department upon request. The compliance samples and the corresponding background samples shall be collected at approximately the same time, i.e., one shall immediately follow the other.

Location: Background: At surface, mid-depth and (for sites with depths greater than 25 feet) 2 meters above the bottom, clearly outside the influence of any artificially generated turbidity plume or the influence of an outgoing inlet plume.

Borrow Site: Samples shall be collected at least 300 meters up-current from the source of turbidity at the dredge site.

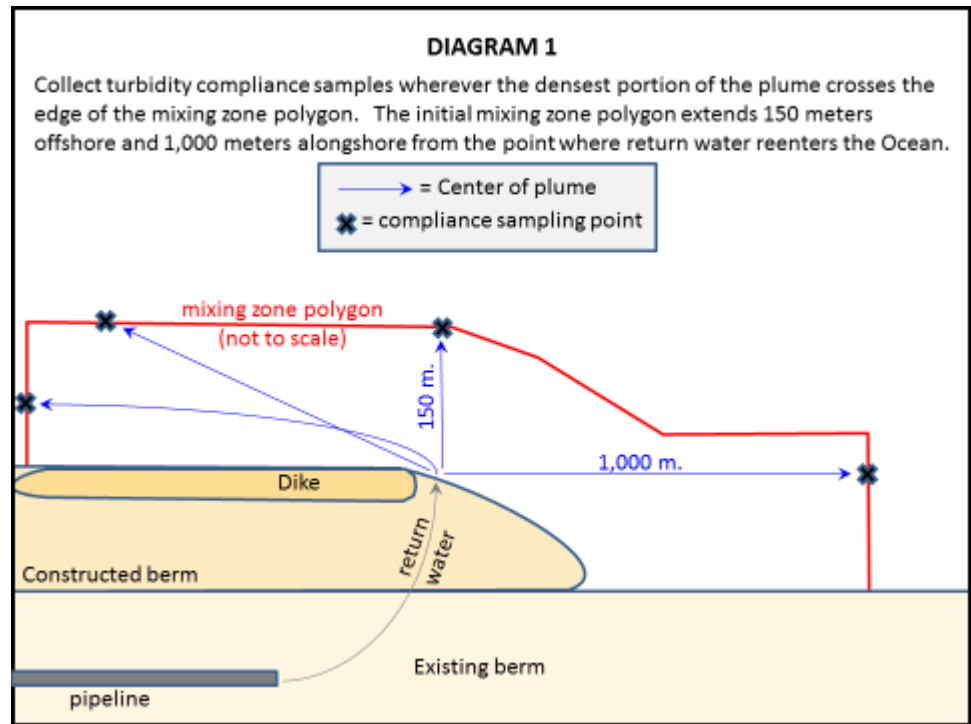
Beach Site: Samples shall be collected at least 300 meters up-current from any portion of the beach that has been, or is being, filled during the current construction event, at the same distances offshore as the associated compliance samples.

Compliance: At surface, mid-depth and (for sites with depths greater than 25 feet) 2 meters above the bottom.

Borrow Site: Samples shall be collected no more than 1000 meters down-current from the dredge head, **and** from any other source of turbidity generated by the dredge, in the densest portion of any visible turbidity plume. If no plume is visible, follow the likely direction of flow.

Beach Site: Samples shall be collected where the densest portion of the turbidity plume crosses the edge of the mixing zone polygon, which measures up to 150 meters offshore and up to 1,000 meters alongshore from the point where the return water from the dredged discharge reenters the Atlantic Ocean. *Note: If the plume flows parallel to the shoreline, the densest portion of the plume may be close*

to shore, in shallow water. In that case, it may be necessary to access the sampling location from the shore, in water that is too shallow for a boat. See Diagram 1.



Intermediate Monitoring (required when using a mixing zone that exceeds 150 meters in size; beach site only): At surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above bottom. At points approximately 150, 500, and 750 meters downcurrent from the point where the return water from the dredged discharge reenters the Atlantic Ocean (if those points are located inside the mixing zone), within the densest portion of any visible turbidity plume generated by this project. These measurements will be used to calibrate the size of the mixing zone for future events.

Calibration: The instruments used to measure turbidity shall be fully calibrated with primary standards within one month of the commencement of the project, and at least once a month throughout the project. Calibration with secondary standards shall be verified each morning prior to use, after each time the instrument is turned on, and after field sampling using two secondary turbidity “standards” that bracket the anticipated turbidity samples. If the post-sampling calibration value deviates more than 8% from the

previous calibration value, results shall be reported as estimated and a description of the problem shall be included in the field notes.

Analysis of turbidity samples shall be performed in compliance with DEP-SOP-001/01 FT 1600 Field Measurement of Turbidity:

<http://publicfiles.dep.state.fl.us/dear/sas/sopdoc/2008sops/ft1600.pdf>

If the turbidity monitoring protocol specified above prevents the collection of accurate data, the person in charge of the turbidity monitoring shall contact the JCP Compliance Officer to establish a more appropriate protocol. Once approved in writing by the Department, the new protocol shall be implemented through an administrative permit modification.

31. The **compliance** locations given above shall be considered the limits of the temporary mixing zone for turbidity allowed during construction. If monitoring reveals turbidity levels at the **compliance** sites that are greater than 29 NTUs above the corresponding background turbidity levels, construction activities shall **cease immediately** and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. Any such occurrence shall also be immediately reported to the JCP Compliance Officer via email at JCPCCompliance@dep.state.fl.us and include in the subject line, "TURBIDITY EXCEEDANCE", and the Project Name and Permit Number. Also notify the Department's Northeast District office.

Any project-associated turbidity source other than dredging or fill placement for beach nourishment (e.g., scow or pipeline leakage) shall be monitored as close to the source as possible. If the turbidity level exceeds 29 NTUs above background, the construction activities related to the exceedance shall **cease immediately** and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. This turbidity monitoring shall continue every hour until background turbidity levels are restored or until otherwise directed by the Department. The Permittee shall notify the Department, by separate email to the JCP Compliance Officer, of such an event within 24 hours of the time the Permittee first becomes aware of the discharge. The subject line of the email shall state "OTHER PROJECT-ASSOCIATED DISCHARGE, TURBIDITY EXCEEDANCE".

When reporting a turbidity exceedance, the following information shall also be included:

- a. the Project Name;
- b. the Permit Number;
- c. location and level (NTUs above background) of the turbidity exceedance;
- d. the time and date that the exceedance occurred; and

- e. the time and date that construction ceased.

Prior to re-commencing the construction, a report shall be emailed to the Department with the same information that was included in the “Exceedance Report”, plus the following information:

- a. turbidity monitoring data collected during the shutdown documenting the decline in turbidity levels and achievement of acceptable levels;
- b. corrective measures that were taken; and
- c. cause of the exceedance.

32. **Turbidity Reports:** All turbidity monitoring data shall be submitted within one week of analysis. The data shall be presented in tabular format, indicating the measured turbidity levels at the compliance sites for each depth, the corresponding background levels at each depth and the number of NTUs over background at each depth. Any exceedances of the turbidity standard (29 NTUs above background) shall be highlighted in the table. In addition to the raw and processed data, the reports shall also contain the following information:

- a. time of day samples were taken;
- b. dates of sampling and analysis;
- c. GPS location of sample;
- d. depth of water body;
- e. depth of each sample;
- f. antecedent weather conditions, including wind direction and velocity;
- g. tidal stage and direction of flow;
- h. water temperature;
- i. a map, overlaid on an aerial photograph, indicating the sampling locations, dredging and discharge locations, and direction of flow. A sample map shall reviewed and approved by the Department prior to construction;
- j. a statement describing the methods used in collection, handling, storage and analysis of the samples;

- k. a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, calibration of the meter, accuracy of the data and precision of the GPS measurements;
 - l. When samples cannot be collected, include an explanation in the report. If unable to collect samples due to severe weather conditions, include a copy of a current report from a reliable, independent source, such as an online weather service.
33. Turbidity levels in OFW have been adjusted from 0 NTUs to 29 NTUs above background for this project through an allowance under Rule 62-4.242(2)(a)2.b., F.A.C., for the beach placement site, and through a variance to that rule for the borrow area. Following each event, the Permittee shall compile the turbidity monitoring data to determine if 29 NTUs above background was actually needed at each site, or if a lower level could be achieved. Within 90 days following each event, the Permittee shall submit a summary report of this analysis to the JCP Compliance Officer. If a lower turbidity level can be achieved without significantly increasing time and costs of construction, the Department will modify the permit to reflect the lower antidegradation standard(s) for this project.

Physical Monitoring Required:

34. **Prior to construction, the Permittee shall submit a detailed Physical Monitoring Plan subject to review and approval by the Department.** As guidance for obtaining Department approval, the plan shall generally contain the following items:
- a. Topographic and bathymetric profile surveys of the beach and offshore shall be conducted prior to commencement of construction, immediately following completion of construction, and biennially thereafter beginning not more two years following completion of construction. A pre-construction survey of the project area to receive beach fill may use surveys conducted for purposes of construction bidding, contracting or construction management. The post-construction survey of the beach fill may use surveys and other information collected periodically during construction for purposes of construction management and payment. Alternatively, the post-construction survey may consist of a single beach-offshore profile survey event of the project monitoring area conducted within 60 days after completion of beach fill placement.

Thereafter, monitoring surveys shall be conducted biennially beginning approximately one year following completion of construction until the next beach nourishment event or the expiration of the project design life, whichever occurs first. The monitoring surveys shall be conducted during a spring or summer month and repeated as close as practicable during that same month of the year. If the time period between the post-construction survey and the first biennial monitoring survey is less

than six months, then the Permittee may, at their discretion, postpone the first monitoring survey until the following spring/summer.

The monitoring area shall include profile surveys at each of the Department's reference monuments within the bounds of the beach fill area and along at least 5,000 feet of the adjacent shoreline on both sides of the beach fill area. All work activities and deliverables for the biennial monitoring surveys shall be conducted in accordance with the latest update of the Department's *Monitoring Standards for Beach Erosion Control Projects, Sections 01000 and 01100*.

- b. Bathymetric surveys of the borrow area(s) shall be conducted within 60 days following completion of construction of the project concurrently with the beach and offshore survey required above. Alternatively, the post-construction survey of the borrow area may consist of surveys and other information collected during construction for purposes of construction management.

Survey grid lines across the borrow area(s) shall be spaced to provide sufficient detail for accurate volumetric calculations but spaced not more than a maximum of 500 feet apart, and shall extend a minimum of 500 feet beyond the boundaries of the borrow site. In all other aspects, work activities and deliverables shall be consistent with the Department's *Monitoring Standards for Beach Erosion Control Projects, Section 01200*.

- c. The Permittee shall submit an engineering report and the monitoring data to the JCP Compliance Officer within 90 days following completion of the construction and each biennial monitoring survey.

The report shall summarize and discuss the data, the performance of the beach fill project, and identify erosion and accretion patterns within the monitored area. Results shall be analyzed for patterns, trends, or changes between annual surveys and cumulatively since project construction. In addition, the report shall include a comparative review of project performance to performance expectations and identification of adverse effects attributable to the project. The report shall specifically include:

- A record of the volume and location of all beach fill or inlet sand bypassing material placed within the project area.
- The volume and percentage of advance nourishment lost since the last beach nourishment project as measured landward of the mean high water line (MHWL) of the most recent survey;

- The most recent mean high water (MHW) shoreline positions (in feet) in comparison with the design profile at each individual monument location;
- The MHW shoreline position changes (in feet) relative to the pre-construction survey at each individual monument location for all the monitoring periods;
- The total measured remaining volume (in cubic yards) in comparison with the total predicted remaining volume (in cubic yards) above the MHWL and above the Depth of Closure for the entire project area over the successive monitoring periods; and,
- Other shoreline position and volumetric analysis the Permittee or engineer deem useful in assessing, with quantitative measurements, the performance of the project.

The report shall include computations, tables and graphic illustrations of volumetric and shoreline position changes for the monitoring area. An appendix shall include superimposed plots of the two most recent beach profile surveys, the design profile, and pre- and post-construction beach profile at each individual monument location.

- d. A digital copy of the monitoring report and a digital file of the survey data shall be submitted to the JCP Compliance Officer. Failure to submit reports and data in a timely manner constitutes grounds for revocation of the permit. When submitting any monitoring information to the Department, please include a transmittal cover letter clearly labeled with the following at the top of each page: "This monitoring information is submitted in accordance with the approved Monitoring Plan for Permit No. 0264288-004-JC for the monitoring period [XX]."
35. The approved Monitoring Plan can be revised at any later time by written request of the Permittee and with the written approval of the Department. If subsequent to approval of the Monitoring Plan there is a request for modification of the permit, the Department may require revised or additional monitoring requirements as a condition of approval of the permit modification.
 36. The allowable dredge depth does not include the indicated 2-foot buffer. Dredging into the 2-foot buffer should be avoided and shall be reported to the JCP Compliance Officer within 24 hours.
 37. If the Permittee is unable to complete two maintenance events within the 15-year life of the permit, the Permittee may request (prior to the expiration date of the permit), and the Department shall grant, an extension of the permit expiration date in order to allow completion of the second maintenance event. The extension would be documented through an administrative modification.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Martin K. Seeling, Administrator
Beaches, Inlets and Ports Program

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F.S., with the designated Department Clerk,
receipt of which is hereby acknowledged.



05/29/15

Deputy Clerk

Date

Prepared by Tom Jacobs.

Attachments: Approved Permit Drawings (23 pages)