



# Florida Department of Environmental Protection

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Carlos Lopez-Cantera  
Lt. Governor

Jonathan P. Steverson  
Secretary

## CONSOLIDATED JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

### PERMITTEE:

City of Jacksonville  
c/o Thomas Heal, P.E.  
214 N Hogan St., 10<sup>th</sup> Floor  
Jacksonville, FL 32202

### AGENT:

Olsen-Associates, Inc.  
c/o Steven C. Howard, P.E.  
2618 Herschel St.  
Jacksonville, FL 32204

### PERMIT INFORMATION:

Permit Number: 0228528-005-JC

Project Name: Duval County Nourishment

County: Duval

Issuance Date: September 18, 2015

Expiration Date: September 18, 2030

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### REGULATORY AUTHORIZATION:

This 15-year Joint Coastal Permit (JCP) 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 to conduct periodic nourishment and dune reconstruction over approximately 10 miles of shoreline. Fill material will be excavated from four offshore borrow areas that are located in federal waters. The dune will have a maximum crest elevation of approximately +16.5 feet North American Vertical Datum (NAVD), with a seaward slope of approximately 1:2 to 1:3 (vertical:horizontal). The berm elevation will be approximately +8.2 feet NAVD, and the foreshore face of the berm will have a 1:20 (vertical:horizontal) slope.

### PROJECT LOCATION:

The nourishment site is located from the Naval Station Mayport south jetty to the Duval/St. Johns County line, between Department Range Monuments R-31 to R-80, in the City of Jacksonville, Duval County, Sections 9, 16, 21, 28, 33, 37 and 38, Township 2 South, Range 29 East and Sections 3, 4 and 10, Township 3 South, Range 29 East.

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 2 of 32**

The offshore borrow areas are located in federal waters and not considered in this permit.

**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, F.S., Chapter 18-21 and Section 62-330.075, F.A.C., and the policies of the Board of Trustees.

The Department has also determined that the beach 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, pursuant to Chapter 253.77, F.S., to perform the activity on the specified sovereign submerged lands.

**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:**

This permit constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341.

**OTHER PERMITS:**

Authorization from the Department does not relieve you from the responsibility of obtaining other permits (Federal, State, or local) that may be required for the project. When the Department received your permit application, a copy was sent to the U.S. Army Corps of Engineers (Corps) for review. The Corps will issue their authorization directly to you, or contact you if additional information is needed. If you have not heard from the Corps within 30 days from the date that your application was received by the Department, contact the nearest Corps regulatory office for status and further information. Failure to obtain Corps authorization prior to construction could subject you to federal enforcement action by that agency.

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 3 of 32**

**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.

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**GENERAL CONDITIONS:**

1. All activities authorized by this permit shall be implemented as set forth in the plans and specifications approved as a part of this permit, and all conditions and requirements of this permit. The permittee shall notify the Department in writing of any anticipated deviation from the permit prior to implementation so that the Department can determine whether a modification of the permit is required pursuant to section 62B-49.008, Florida Administrative Code.
2. If, for any reason, the permittee does not comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Bureau of Beaches and Coastal Systems and the appropriate District office of the Department with a written report containing the following information: a description of and cause of noncompliance; and the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.
3. This permit does not eliminate the necessity to obtain any other applicable licenses or permits that may be required by federal, state, local, special district laws and regulations. This permit is not a waiver or approval of any other Department permit or authorization that may be required for other aspects of the total project that are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of sovereignty land of Florida seaward of the mean high-water line, or, if established, the 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. The permittee is

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 4 of 32**

responsible for obtaining any necessary authorizations from the Board of Trustees of the Internal Improvement Trust Fund prior to commencing activity on sovereign lands or other state-owned lands.

5. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
6. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee. The issuance of this permit does not convey any vested rights or any exclusive privileges.
7. This permit or a copy thereof, complete with all conditions, attachments, plans and specifications, modifications, and time extensions shall be kept at the work site of the permitted activity. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
8. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel with proper identification and at reasonable times, access to the premises where the permitted activity is located or conducted for the purpose of ascertaining compliance with the terms of the permit and with the rules of the Department and to have access to and copy any records that must be kept under conditions of the permit; to inspect the facility, equipment, practices, or operations regulated or required under this permit; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
9. At least forty-eight (48) hours prior to commencement of activity authorized by this permit, the permittee shall submit to the Bureau of Beaches and Coastal Systems (JCP Compliance Officer) and the appropriate District office of the Department a written notice of commencement of construction indicating the actual start date and the expected completion date and an affirmative statement that the permittee and the contractor, if one is to be used, have read the general and specific conditions of the permit and understand them.
10. 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 permittee shall immediately stop all activities in the immediate area that disturb the soil in the immediate locale and notify the State Historic Preservation Officer and the Bureau

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 5 of 32**

of Beaches and Coastal Systems (JCP Compliance 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 872.02, F.S.

11. Within 30 days after completion of construction or completion of a subsequent maintenance event authorized by this permit, the permittee shall submit to the Bureau of Beaches and Coastal Systems (JCP Compliance Office) and the appropriate District office of the Department a written statement of completion and certification by a registered professional engineer. This certification shall state that all locations and elevations specified by the permit have been verified; the activities authorized by the permit have been performed in compliance with the plans and specifications approved as a part of the permit, and all conditions of the permit; or shall describe any deviations from the plans and specifications, and all conditions of the permit. When the completed activity differs substantially from the permitted plans, any substantial deviations shall be noted and explained on two paper copies and one electronic copy of as-built drawings submitted to the Bureau of Beaches and Coastal Systems.

**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.

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 6 of 32**

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. 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](mailto:JCPCCompliance@dep.state.fl.us)) unless otherwise specified in the specific conditions of this permit.
2. 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.
3. 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.
4. No work shall be conducted under this permit until the Permittee has received a written notice to proceed from the Department for each event. At least 30 days prior to the requested date of issuance of the notice to proceed, the Permittee shall submit a written request for a Notice to Proceed along with the following items for review and approval by the Department:
  - a. An electronic copy of detailed *final construction plans and specifications* for all authorized activities. The plans and specifications must be consistent with the project

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 7 of 32**

description of this permit and the attached permit drawings, and shall be certified by a professional engineer (P.E.), who is registered in the State of Florida. In the event a nourishment event is performed by the U.S. Army Corps of Engineers (Corps), certification by a registered P.E. is not required for construction Plans and Specifications. The Permittee shall point out any deviations from the Project Description of this permit (as stated above) or the approved permit drawings (attached to this permit), and any significant changes would require a permit modification. The plans and specifications shall include a description of the dredging and construction methods to be utilized and drawings and surveys that show all biological resources and work spaces (e.g., anchoring areas, pipeline corridors, staging areas, boat access corridors, etc.) to be used for this project;

- b. ***Turbidity monitoring qualifications.*** Documentation that the person(s) who will be conducting the turbidity monitoring meets the following requirements:
    - i. Is independent of the construction contractor(s);
    - ii. Has formal training in water quality monitoring; and
    - iii. Has professional experience in monitoring turbidity for coastal construction projects.
  - c. 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;
5. **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. At least 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:

JCP Compliance Officer  
E-mail: [JCPCCompliance@dep.state.fl.us](mailto:JCPCCompliance@dep.state.fl.us)

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 8 of 32**

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](mailto:marineturtle@myfwc.com)

In order to allow maximum participation, the Permittee shall provide a minimum seven (7) day notice 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.

6. 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.

**Marine Imperiled Species Protection**

**7. Pre-Construction Conference.**

- a. The pre-construction conference shall be held between the contractors, the engineer, the Marine Turtle Monitor/permit holder, Bird Monitors, and staff representatives of the Florida Fish and Conservation Commission (FWC). This Pre-Construction Conference may be held in conjunction with the Pre-Construction Conference required in Specific Condition 5 above. 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 Plan (EPP) shall be submitted for review to FWC, and a copy emailed to the JCP Compliance Officer, a minimum of seven (7) business days prior to the pre-construction conference. This plan shall include details of monitoring for nesting marine turtles and shorebirds onsite during construction. A



**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 9 of 32**

- draft EPP shall be submitted for review and comments to the FWC prior to the pre-construction conference while the final EPP shall be submitted to FWC prior to construction.
- c. The notification of the pre-construction conference shall be sent at least seven (7) 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](mailto:MarineTurtle@myfwc.com), and the JCP Compliance Officer.
8. **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 will 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 must 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 shutdown 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 Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922, and to FWC at [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com). Any

- collision with, and/or injury to, a marine turtle should also be reported immediately to the Sea Turtle Stranding and Salvage Network (STSSN) at [SeaTurtleStranding@myfwc.com](mailto:SeaTurtleStranding@myfwc.com).
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the Permittee upon completion of the project. 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](http://MyFWC.com/manatee). Questions concerning these signs can be sent to [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com).
9. **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, such as a NMFS-approved sea turtle observer, or by persons whom have submitted documentation to the Permittee of meeting the FWC Marine Turtle Conservation Guidelines specific to stranding activities. The Permittee or their designee shall forward documentation to FWC for review, concurrent with the submission of the contractor Environmental Protection Plan. The Permittee 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, the Permittee or their designee shall coordinate with FWC to determine the appropriate facility to receive live sea turtles for rehabilitation. When transporting marine turtles, the Permittee or their designee shall abide by the State of Florida's FWC Marine Turtle Conservation Guidelines located at:
- <http://www.myfwc.com/wildlifehabitats/managed/sea-turtles/conservation-guidelines>.
- 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.

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 11 of 32**

- c. A state-of-the-art rigid deflector draghead shall be used on all hopper dredges at all times of the year.
  - d. The Sea Turtle Stranding and Salvage Network (STSSN) Coordinator shall be notified at 1-904-573-3930 or via e-mail at [Allen.Foley@myfwc.com](mailto: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](mailto:seaturtlestranding@myfwc.com).
10. **Trawling.** If relocation trawling or non-capture trawling is required as per applicable NMFS 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 requires a Marine Turtle Permit from FWC prior to construction.
  - b. The Permittee or their contractor shall e-mail ([MTP@MyFWC.com](mailto: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, their general health, and the 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](mailto:MTP@myfwc.com) by January 15 of the following year or at the end of the project.
11. **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/>). The vehicle shall be operated at a speed less than 10 mph and ideally <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. Night time storage of construction equipment 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. If the pipes placed parallel to the dune cannot be placed between 5 to 10 feet away from the toe of the dune during nesting and hatching season, the Permittee or designee must reinitiate consultation with the FWC as this represents adverse effects not addressed in the Statewide Programmatic Biological Opinion (SPBO). 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.

12. **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. If properly trained, a Marine Turtle Permit Holder may serve concurrently as the Shorebird Monitor. 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.

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 13 of 32**

- 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-serve/wildlife/beach-driving](http://www.myfwc.com/conservation/you-serve/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 (please provide references).
  - viii. Familiar and/or experienced with Florida Shorebird Alliance (FSD) Guidelines for posting beach-nesting sites.  
<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](http://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.
  - 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- conserve/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 (see the attached FWC contact information exhibit) within 24 hours. The Bird Monitor(s) shall report all breeding activity to the FSD website within one week of data collection.
13. **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 construction activities shall be prohibited in the buffer zone.

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 15 of 32**

- 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 do 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 access is not blocked in situations where breeding birds will tolerate pedestrian or vehicle traffic. This is generally the case with lateral movement of beach-goers walking parallel to the beach at or below the highest tide line. 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 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 Species Conservation 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, 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 shorebird chicks are present within or adjacent to equipment travel corridors, the Bird Monitor shall ensure that no chicks are in the path of the moving vehicles, that chicks are not separated from the family unit, and that vehicles leave no tracks capable of trapping flightless chicks. The Bird Monitor shall 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”.

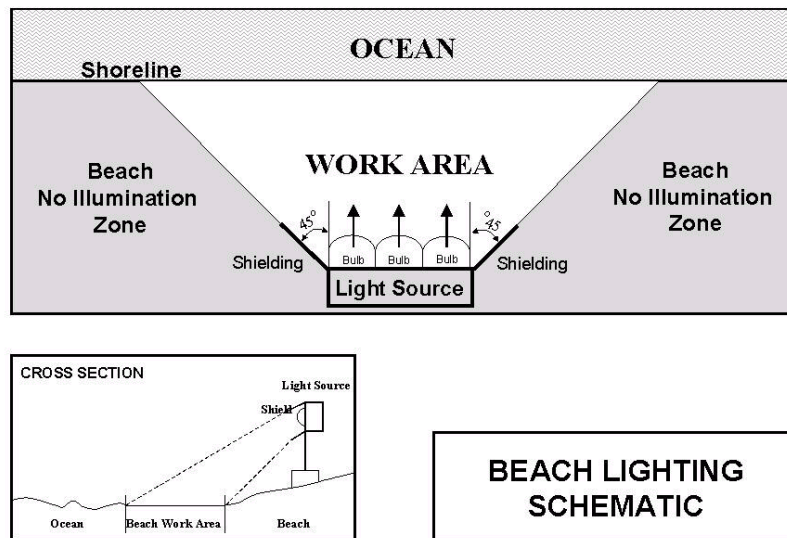
**14. Marine Turtle Nest Surveys and Relocation.**

- a. For sand placement during the period of peak marine turtle egg laying and egg hatching, 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 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](mailto: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 April 15 whichever is later. Nesting surveys shall continue daily through the end of the project, or until two weeks after the last crawl 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 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.
15. **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.

16. **Project Lighting.** Direct lighting of the beach and nearshore waters during the period of peak marine turtle egg laying and egg hatching (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**

17. **Fill Restrictions.** During the period of peak marine turtle egg laying and egg hatching (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 feet 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.

18. **Compaction Sampling.** Sand compaction shall be monitored in the area of sand placement immediately after completion of the nourishment event and prior to April 15 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 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- conserve/wildlife/beach-driving/>).

19. **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 April 15. 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](mailto: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, movement of vehicles shall be adequately monitored by the Bird Monitor, who shall advise the contractor whose responsibility it is to ensure no chicks are in the path of the moving vehicles, that chicks are not separated from the family unit, and that vehicles leave no tracks capable of trapping flightless chicks. The Bird Monitor shall 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 vegetated areas 3-square feet or greater with a 3-foot buffer 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/>).
20. **Escarpment Surveys.** Visual surveys for escarpments along the project area shall be made immediately after completion of sand placement, and during the period from 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 FWC determines that escarpment leveling is required during the nesting or hatching season, the FWC will 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](mailto:marineturtle@myfwc.com) along with the annual summary as described below. If escarpment removal occurs during shorebird breeding season, shorebird 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; 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>.
- b. When flightless chicks are present within or adjacent to travel corridors, movement of vehicles shall be adequately monitored by the Bird Monitor, who shall advise the contractor whose responsibility it is to ensure no chicks are in the path of the moving vehicles, that chicks are not separated from the family unit, and that vehicles leave no tracks capable of trapping flightless chicks. The Bird Monitor shall 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/](http://myfwc.com/conservation/you-protect/you-protect/wildlife/beach-driving/).

**21. Post-construction Wildlife Conditions, Monitoring and Reporting.**

- a. Shorebirds: 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-

**Joint Coastal Permit**  
**Duval County Beach Nourishment**  
**Permit No. 0228528-005-JC**  
**Page 22 of 32**

establishes its function as foraging habitat for shorebirds. This shall occur for as long as the placed sand remains on the beach.

- b. Marine Turtles: Reports on all marine turtle nesting activity shall be provided for the initial period of peak marine turtle egg laying and egg hatching (May 1 - October 31) and for up to two additional nesting seasons as follows:
  - i. 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%.
  - ii. 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.
  - iii. 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.
  - iv. 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 and applicable project permit numbers and dates of construction.
  - v. 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 of the first nesting season following construction or immediately after placement if construction is not completed until after May 15, and a second survey shall be conducted between July 15 and August 1. The survey shall be conducted by the Permittee 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 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](mailto:marineturtle@myfwc.com) and **copied to [JCPCCompliance@dep.state.fl.us](mailto: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.

22. 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](mailto:marineturtle@myfwc.com) and **copied to [JCPCCompliance@dep.state.fl.us](mailto:JCPCCompliance@dep.state.fl.us)**. All summaries shall be submitted by January 15 of the following year. The FWC Excel spreadsheet is available upon request from [marineturtle@myfwc.com](mailto:marineturtle@myfwc.com).

Table 1. Marine Turtle Monitoring for Beach Placement of Material

Metric	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. <sup>1 and 2</sup>	Number of nests and non-nesting events.	40% 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. <sup>1 and 2</sup>	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).

**Joint Coastal Permit  
 Duval County Beach Nourishment  
 Permit No. 0228528-005-JC  
 Page 24 of 32**

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. <sup>1 and 2</sup>	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).
Disorientation	Year of in season construction and two years post construction if placed sand remains on the beach. <sup>1 and 2</sup>	Number of nests and individuals that misorient or disorient.	<a href="http://myfwc.com/media/418153/Seaturtle_Guidelines_A_LDIR_Directions.pdf">http://myfwc.com/media/418153/Seaturtle_Guidelines_A_LDIR_Directions.pdf</a>
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. <sup>1 and 2</sup>	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 up to three years each year placed sand remains on the beach. <sup>2</sup>	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.

Notes: <sup>1</sup> Not required for maintenance dredging.  
<sup>2</sup> Not required if dredged sand is placed in the nearshore swash or littoral zones only.

26. **Dune Vegetation Planting.** Planting of dune vegetation is authorized to occur during the period of peak marine turtle egg laying and egg hatching (May 1 - October 31) under the following conditions:

- a. The Permittee shall ensure that the project area and access sites are surveyed for marine turtle nesting activity. All nest surveys, nest relocations, screening or caging activities shall be conducted only by persons with prior experience and training in these activities and is duly authorized to conduct such activities through a valid permit issued by the FWC pursuant to Chapter 68E-1, F.A.C.
- b. Marine turtle nest surveys shall be initiated at the beginning of the nesting season, or 65 days prior to installation of plants, whichever is later. Surveys shall continue until



completion of the project, or through October 31, whichever is earlier. Surveys shall be conducted throughout the project area and all beach access sites.

- c. Any nests deposited in an area not requiring relocation for conservation purposes (as determined by the FWC-authorized marine turtle permit holder) shall be left in situ. The marine turtle permit holder shall install an on-beach marker at any nest site, and a secondary marker shall be installed at a point as far landward as possible to ensure that future location of the nest will be possible should the on-beach marker be lost. A series of stakes and survey ribbon or string shall be installed to establish an area of 3 feet radius surrounding the nest. No planting or other activity shall occur within this area, nor shall any activity occur that might cause indirect impacts within this area. Nest sites shall be inspected daily to ensure nest markers have not been removed.
- d. The use of heavy equipment (including trucks) is prohibited seaward of the dune crest or armoring structure. A lightweight (ATV style) vehicle, with tire pressures of 10 pounds per square inch (p.s.i.) or less may operate on the beach.
- e. Any vegetation planting and removal or placement of irrigation materials shall be conducted with hand labor and tools.
- f. Irrigation (if proposed) shall be entrenched 1 to 3 inches below grade so as not to pose a barrier to marine turtle hatchlings and to allow for easy removal. Irrigation piping shall avoid all marked nests by a minimum of ten (10) feet. The irrigation system shall be designed and maintained so that watering of the unplanted sandy beach does not occur. In the event that a marine turtle nest is deposited within the newly established dune planting area, the Permittee shall modify the irrigation system so that watering within 10 feet of the nest does not occur. Daily inspection of the irrigation system shall be conducted by the Permittee to ensure compliance with this condition. The irrigation system shall be completely removed once watering is no longer needed, or before May of the next year.
- g. All activity shall be confined to daylight hours and shall not occur prior to the completion of all necessary marine turtle surveys and conservation activities within the project area. Nighttime storage of equipment or materials shall be off the beach (i.e., landward of the dune crest, existing seawalls or bulkheads).
- h. In the event a nest is disturbed or uncovered during planting activity, the Permittee shall cease all work and immediately contact the person(s) responsible for marine turtle conservation measures within the project area. If a nest(s) cannot be safely avoided during construction, all activity within the affected project area shall be delayed until complete hatching and emergence of the nest.

Existing native dune vegetation shall be disturbed only to the minimum extent necessary. Only native salt tolerant plant species are authorized to be installed.

**MONITORING REQUIRED:**

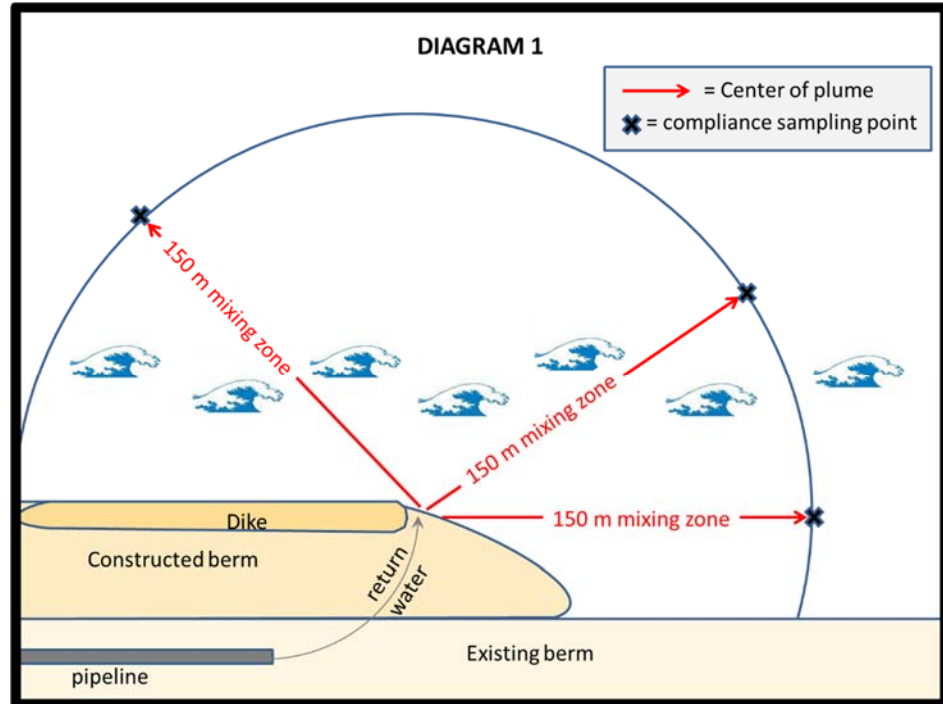
27. Water Quality - Turbidity shall be monitored follows:

Units: Nephelometric Turbidity Units (NTUs).

Frequency: 3 times daily, at least 4 hours apart, during all 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 and mid-depth, clearly outside the influence of any artificially generated turbidity plume or the influence of an outgoing inlet plume. 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 and mid-depth. Samples shall be collected where the densest portion of the turbidity plume crosses the edge of the mixing zone, which measures 150 meters downcurrent 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.



**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.

28. 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](mailto: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 Southeast District office.

Any project-associated turbidity source other than 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;

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 29 of 32**

- b. corrective measures that were taken; and
  - c. cause of the exceedance.
29. **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;

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 30 of 32**

- 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.
30. The **physical monitoring** and associated reporting shall be conducted in accordance with the approved Physical Monitoring Plan dated March 23, 2015, and include the following additional information:
- a. a record of the volume and location of all beach fill or inlet sand bypassing material placed within the project area;
  - b. The volume and percentage of advance nourishment lost since the last beach nourishment project, as measured landward of the MHW line of the most recent survey;
  - c. The most recent MHW shoreline positions feet (feet) in comparison with the design profile at each individual monument location;
  - d. The MHW shoreline position changes (feet) relative to the pre-construction survey at each individual monument location for all the monitoring periods;
  - e. The total measured remaining volume cubic yards (cy) in comparison with the total predicted remaining volume (cy) above the MHW line and above the Depth of Closure for the entire project area over the successive monitoring periods; and,
  - f. Other shoreline position and volumetric analysis the Permittee or engineer deem useful in assessing, with quantitative measurements, the performance of the project.

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.

One electronic copy of the monitoring report and one electronic copy 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 JCP Compliance Officer, 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. 0228528-005-JC."

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 31 of 32**

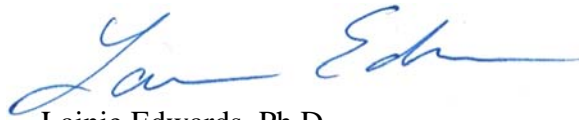
31. Sediment quality shall be assessed as outlined in the Sediment QA/QC Plan dated July 20, 2015. Any occurrences of placement of material not in compliance with the Plan shall be handled according to the protocols set forth in the Sediment QA/QC Plan. The sediment testing result shall be submitted to the JCP Compliance Officer within 90 days following the completion of beach construction. The Sediment QA/QC Plan includes the following:
  - a. If during construction, the Permittee or Engineer 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 reported to the JCP Compliance Officer.
  - b. The Permittee shall submit post-construction sediment testing results and an analysis report as outlined in the Sediment QA/QC Plan to the Department 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.
  - c. 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 7 days following completion of remediation activities.
32. 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

**Joint Coastal Permit  
Duval County Beach Nourishment  
Permit No. 0228528-005-JC  
Page 32 of 32**

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



Lainie Edwards, Ph.D.  
Program Administrator  
Beaches, Inlets and Ports Program

**FILING AND ACKNOWLEDGMENT**

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



Deputy Clerk

September 18, 2015

Date

Attachments: Approved Permit Drawings (29 pages)  
Sediment QA/QC Monitoring Plan (dated July 20, 2015)  
Physical Monitoring Plan (dated March 23, 2015)