



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING
3900 COMMONWEALTH BOULEVARD
TALLAHASSEE, FLORIDA 32399-3000

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

CONSOLIDATED JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

PERMITTEE:

Daniel Bates, Deputy Director
Palm Beach County, DERM
2300 North Jog Road, 4th Floor
West Palm Beach, FL 33411

AGENT:

Steven C. Howard, P.E.
Olsen Associates, Inc.
2618 Herschel Street
Jacksonville, FL 32204

PERMIT INFORMATION:

Permit Number: 0311339-001-JC

Project Name: Ocean Ridge Shore Protection Project

County: Palm Beach

Issuance Date: June 24, 2013

Expiration Date: June 24, 2023

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. **This permit supersedes Permit 0244200-001-JC and all modifications.**

PROJECT DESCRIPTION:

The project is to nourish approximately 1.1 miles of beach with approximately 550,000 cubic yards of beach compatible sand. The berm construction design widths vary from 28 feet to 168 feet, with a berm height of +7.45 feet NAVD and a foreshore slope of 1 (vertical) to 15 (horizontal). The two offshore borrow areas have varying maximum dredge depths. The maximum dredge depths for the northern borrow area are -44.6 feet to 51.6 feet NAVD. The maximum dredge depths for the southern borrow area are -44.6 feet to 50.6 feet NAVD. The project is also to adjust the 5 southernmost groins in the project area by removing the top layer of armor stone to an elevation of +2.45 feet NAVD.

PROJECT LOCATION:

The nourishment site extends from approximately 165 feet south of DEP Range Monument R-153 to R-159, and is located in Ocean Ridge, Palm Beach County, Section 27, Township 45 South, Range 43 East, Atlantic Ocean, Class III Waters.

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The two borrow areas are located approximately 2,100 feet offshore. The northern borrow area is centered off of R-152 and the southern borrow areas is centered off of R-158, in Palm Beach County, Section 22, Township 45 South, Range 43 East, Atlantic Ocean, Class III Waters.

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 Chapter 18-21, 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 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.

The Department has also determined that the activity requires a public easement for the use of the borrow areas, pursuant to Chapter 253.77, F.S. The groin adjustments are within the existing public easement for the groins, and need no further proprietary authorization. The Department intends to issue the public easement for the borrow areas, 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 have been sent to the 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:

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.

AGENCY ACTION:

The above named Permittee is hereby authorized to construct the work outlined in the activity description and activity location of this permit and 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 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. 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.

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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 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

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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 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 Officer) 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 (JCP Compliance Officer).

SPECIFIC CONDITIONS:

1. The terms, conditions and provisions of the required easement shall be met. The Notice to Proceed shall not be issued and construction of this activity shall not commence 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.
2. No work shall be conducted until and unless the Department issues a Final Order of Variance (File No. 0311339-002-BV) from Rule 62-4.244(5)(c), F.A.C. to establish an expanded mixing zone for this project.
3. All reports or notices relating to this permit shall be sent to the Department's JCP Compliance Officer (e-mail address: JCP.Compliance@dep.state.fl.us) unless otherwise directed by one of the Specific Conditions.
4. Prior to the initial event, and each subsequent event, the Permittee shall not commence work under this permit until the Permittee has received a written **Notice to Proceed** from the Department. At least 30 days prior to the requested date of issuance of the notice to

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proceed, the Permittee shall submit a written request for a Notice to Proceed and 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 activity description of this permit and the attached permit drawings, and shall also be certified by a P.E., who is registered in the State of Florida. If electronic certification is not available, a hard copy of the plans and specifications would also be required. 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 area, pipeline corridors, staging areas, boat access corridors, etc.) to be used for this project.
 - b. ***Turbidity monitoring qualifications.*** Construction at the project site shall be monitored closely by individual with professional experience in monitoring turbidity for beach nourishment projects. Also, an individual familiar with beach construction techniques and turbidity monitoring shall be present on site at all times during construction. This individual shall have authority to alter construction techniques or shut down the dredging or beach construction operations if turbidity levels exceed the compliance standards established in this permit. The names and documented qualifications of those individuals performing these functions, along with 24-hour contact information, shall be submitted. In order to be qualified, the person(s) conducting the turbidity monitoring shall have had formal training in water quality monitoring, with professional experience monitoring turbidity for beach nourishment projects, and experience using the Department's protocol for Field Measurement of Turbidity:
<http://publicfiles.dep.state.fl.us/dear/sas/sopdoc/2008sops/ft1600.pdf>
 - c. A ***Scope of Work*** for turbidity monitoring to ensure that the right equipment is available to accurately measure turbidity and access the appropriate sampling locations (including sites that may be in or landward of the surf).
 - d. ***Rock Removal Plan.*** A Rock Removal and Disposal Plan that describes the means and methods the CONTRACTOR will implement to monitor for the presence of rock in the fill material and the removal and disposal methods that will be implemented in the event non-compliant material is discharged on to the beach.
5. The available geotechnical data suggests that there could be trace amounts of rock rubble, shell, and/or coral fragments larger than three-fourths (3/4) inch within the defined sand borrow area limits.

The beach fill shall not contain coarse gravel, cobbles or material retained on the 3/4 inch sieve in a percentage or size greater than found on the native beach, nor shall the material contain rock on the surface of the beach fill in excess of 50% of background in any

10,000 square foot area (per 62B-41.007(2)(j) F.A.C.). Any such material discharged onto the beach by the dredging operations shall be removed from the beach fill.

The Rock Removal and Disposal Plan, required in the notice to proceed condition, above, shall include as a minimum the following conditions.

- a. The discharged fill material shall continuously monitored for the presence of rock, rubble, or any other debris larger than three-fourths (3/4) inch in diameter. The Permittee shall perform daily random checks of fill conditions.
 - b. In the event non-compliant material is discharged onto the beach, the Permittee shall notify the Department immediately. The Permittee shall work with the Department to determine if remedial action is required and the scope of the action. Material determined to be non-compliant shall be removed to the satisfaction of Department.
6. **Pre-Construction Conference.** The Permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with the Permittee's contractors, the engineer of record, the turbidity monitoring personnel and the JCP Compliance Officer (or designated alternate). In order to ensure that appropriate representatives are available, at least twenty-one (21) 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
phone: (850) 414-7716
e-mail: JCP.Compliance@dep.state.fl.us

DEP Southeast District Office
Submerged Lands & Environmental Resources
400 North Congress Avenue, Suite 200
West Palm Beach, FL 33401-2913
(561) 681-6600

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 (listed above) of the **agreed-upon** date, time and location of the meeting, and also provide a meeting agenda and a teleconference number.

7. 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 dikes on the beach berm, seaward of the pipeline discharge point, to maximize settlement of suspended sediment on the beach before return water from the dredged discharge reenters the Atlantic Ocean; and
 - b. A pipeline discharge point that is located at least 50 feet from open water or at the landward edge of the beach berm (if the berm width is less than 50 feet).
8. Sediment quality shall be assessed as outlined in the Sediment QA/QC plan (attached). 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 QC/QA 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 Department.
 - b. The Permittee shall submit post-construction sediment testing results and an analysis report as outlined in the Sediment QC/QA 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 QC/QA 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 Department within 7 days following completion of remediation activities.

Fish and Wildlife Protection Conditions for Dredging Activities:

9. The Permittee shall e-mail (MTP@MyFWC.com) weekly reports to the Imperiled Species Management section on Friday 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 (FWC provided Excel spreadsheet) of all trawling activity shall be submitted to the ISM by January 15 of the following year. The summary shall include non-capture trawling, all turtles captured in Florida waters, 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.
10. **Hopper Dredging.** In the event a hopper dredge is utilized, the following requirements shall be met in addition to the Terms and Conditions of the applicable NMFS Regional Biological Opinion for Hopper Dredging (South Atlantic):
 - a. Handling of sea turtles captured during hopper dredging projects shall be conducted only by persons with prior experience and training in these activities and who is duly authorized to conduct such activities through a valid permit issued by the Florida Fish and Wildlife Conservation Commission (FWC), pursuant to Florida Administrative Code 68E-1.
 - b. *Dredging Pumps:* Standard operating procedure shall be that dredging pumps shall be disengaged by the operator when the dragheads are not firmly on the bottom, to prevent impingement or entrainment of sea turtles within the water column. This precaution is especially important during the cleanup phase of dredging operations.
 - c. *Sea Turtle Deflecting Draghead:* A state-of-the-art rigid deflector draghead must be used on all hopper dredges in all channels at all times of the year.
 - d. The Sea Turtle Stranding and Salvage Network (STSSN) Coordinator, Dr. Allen Foley, shall be notified at allen.foley@myfwc.com or at (904) 573-3930 of the start-up and completion of hopper dredging operations.
 - e. Relocation trawling or non-capture trawling shall be implemented in accordance with the applicable NMFS Biological Opinion and Incidental Take authorization. Any activity involving use of nets in Florida waters shall require a gear exemption authorization and Marine Turtle Permit from FWC.

Fish and Wildlife Protection Conditions for Beach Placement of Material:

11. A meeting between representatives of the contractor, the U.S. Fish and Wildlife Service (FWS), the FWC, the permitted sea turtle surveyor and other species surveyors as appropriate, shall be held prior to commencement of work on projects. At least 10-business days advance notice must be provided prior to conducting this meeting. The meeting will provide an opportunity for explanation and/or clarification of the protection

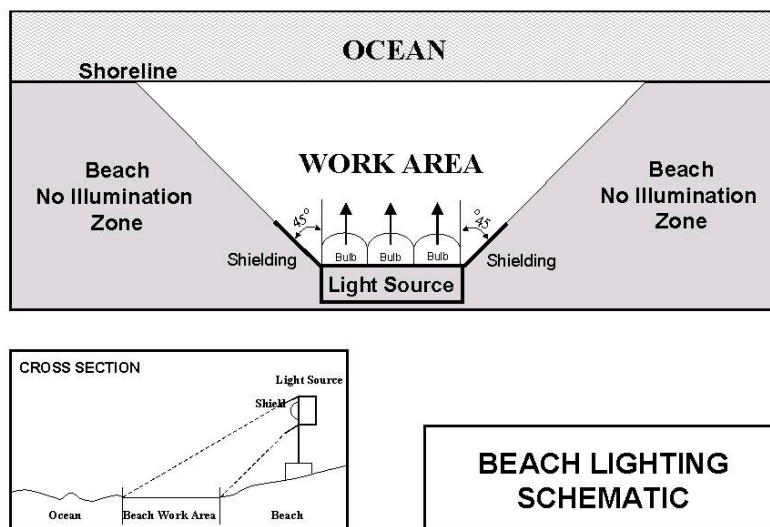
measures as well as additional guidelines when construction occurs during nesting season, such as staging equipment and reporting within the work area as well as follow up meetings during construction.

12. In the event a sea turtle nest is excavated during construction activities, 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.
13. Upon locating a dead or injured sea turtle adult, hatchling, or egg that may have been harmed or destroyed as a direct or indirect result of the project, the Permittee shall be responsible for notifying FWC Wildlife Alert at 1-888-404-FWCC (3922). Care shall be taken in handling injured sea 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.
14. All derelict concrete, metal, and coastal armoring material and other debris shall be removed from the beach to the maximum extent practicable prior to any fill placement. If debris removal activities will take place during shorebird or sea turtle nesting seasons, the work shall be conducted during daylight hours only and shall not commence until completion of daily seabird, shorebird or sea turtle surveys each day. All excavations and temporary alterations of the beach topography shall be filled or leveled to the natural beach profile prior to 9 p.m. each day.
15. **Beach Maintenance.** Beach nourishment shall be started after October 31 and be completed before May 1. For sand placement projects that occur during the period from March 1 through April 30, daily early morning surveys (before 9 a.m.) shall be conducted for sea turtle nests starting March 1 and eggs shall be relocated per the following requirements. For sand placement projects that occur during the period from November 1 through November 30, daily early morning sea turtle nesting surveys (before 9 am) shall be conducted 65 days prior to project initiation, and eggs shall be relocated per the following requirements.
 - a. It is the responsibility of the Permittee to ensure that the project area and access sites are surveyed for marine turtle nesting activity. 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 FAC 68E-1. Please contact FWC's Marine Turtle Management Program in Tequesta at (561) 575-5408 for information on the permit holder in the project area. Nesting surveys shall be conducted daily between sunrise and 9 a.m.
 - b. Only those nests that may be affected by sand placement activities shall be relocated. Nest relocation shall not occur upon completion of the project. Nests requiring relocation shall be moved no later than 9 a.m. the morning following

deposition to a nearby self-release beach site in a secure setting where artificial lighting will 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 to be subject to artificial lighting. Nest relocations in association with construction activities shall cease when construction activities no longer threaten nests.

- c. 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 situ unless other factors threaten the success of the nest. 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.
 - d. For sand placement conducted during the period from March 1 through April 30, daytime surveys shall be conducted for leatherback sea turtle nests beginning March 1. Nighttime surveys for leatherback sea turtles shall begin when the first leatherback crawl is recorded within the project or adjacent beach area through April 30 or until completion of the project (whichever is earliest). Nightly nesting surveys shall be conducted from 9 p.m. until 6 a.m. The project area shall be surveyed at 1-hour intervals (since leatherbacks require at least 1.5 hours to complete nesting, this will ensure all nesting leatherbacks are encountered) and eggs shall be relocated per the preceding requirements.
16. All sea turtle nests deposited in the beach where the shore-parallel t-head groins are located shall be caged in accordance with FWC Marine Turtle Conservation Guidelines so that hatchlings can be retrieved and released outside the groin area unless otherwise authorized by FWC.

17. **Project Lighting.** Direct lighting of the beach and nearshore waters shall be limited to the immediate construction area during the sea turtle nesting season 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 sea 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 below**).



18. **Fill Restrictions.** During the sea turtle nesting season, the beach fill shall not extend more than 500 feet along the shoreline between dusk and sunrise of 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 a permitted sea turtle surveyor present on-site to ensure no nesting and hatching sea turtles are present within the extended work area. If the 500-foot limit is not feasible for the project, the FWC may establish an alternative distance during the preconstruction meeting. Once the beach has been cleared, and the necessary nest relocations have been completed, the contractor will be allowed to proceed with the placement of fill during daylight hours until dusk, at which time the 500-foot length limitation shall apply.
19. **Compaction Sampling.** Sand compaction shall be monitored in the area of sand placement immediately after completion of the project and prior to March 1 for 3 subsequent years in accordance with a protocol agreed to by FWC and the Permittee. At

a minimum, the protocol provided below shall be followed. If tilling is needed, the area shall be tilled to a depth of 36 inches. Each pass of the tilling equipment shall be overlapped to allow more thorough and even tilling. All tilling activity shall be completed at least once prior to nesting season. A report on the results of the compaction monitoring shall be submitted to FWC prior to any tilling actions being taken. *NOTE: The requirement for compaction monitoring can be eliminated if the decision is made to till regardless of post-construction compaction levels. Additionally, compaction monitoring and remediation are not required in subsequent years if placed material no longer remains on the dry beach.*

- 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 a depth of 6, 12, and 18 inches, three times for each depth (three replicates). 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. If the average value for any depth exceeds 500 psi for any two or more adjacent stations, then that area shall be tilled immediately prior to the dates listed above.
 - d. 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 FWC to determine if tilling is required. If a few values exceeding 500 psi are present randomly within the project area, tilling will not be required.
 - e. 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.
20. Visual surveys for escarpments along the project area shall be made immediately after completion of the dredged material placement and during the 30 days prior to March 1, for 3 subsequent years, if placed sand remains in the project area. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet shall be leveled and the beach profile shall be reconfigured to minimize scarp formation by March 1. Any escarpment removal shall be reported (by location) to the

FWC. If the project is completed during the early part of the sea turtle nesting and hatching season (March 1 through April 30), escarpments may be required to be leveled immediately, while protecting nests that have been relocated or left in place. Weekly surveys for escarpments shall be conducted during the three nesting seasons following completion of the project. If escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet occur during the nesting and hatching season, the Permittee shall contact the FWC immediately to determine the appropriate action to be taken. If FWC determines that escarpment leveling is required during the nesting or hatching season, a brief written authorization that describes methods to be used to reduce the likelihood of impacting existing nests will be provided. An annual summary of escarpment surveys and actions taken shall be submitted as part of the annual report. *NOTE: Out-year escarpment monitoring and remediation are not required if placed material no longer remains on the dry beach.*

Post-construction Monitoring and Reporting Marine Turtle Protection Conditions:

21. Two surveys shall be conducted of all lighting visible from the beach placement area in the year following construction. The first survey shall be conducted between May 1 and May 15, and the Permittee shall provide a brief summary to FWC. The second survey shall be conducted between July 15 and August 1. A summary report of the surveys, including any actions taken, shall be submitted to FWC by December 1 of the year in which surveys are conducted. After the annual report is completed, the Permittee shall set up a meeting with the FWC to discuss the survey report, as well as any documented sea turtle disorientations in or adjacent to the project area. If the project is completed during the nesting season and prior to May 1, the lighting survey may be conducted during the year of construction.
22. Reports on all nesting activity shall be provided to the FWC for the initial nesting season and for up to three additional nesting seasons as follows:
 - a. For the initial nesting season and the following year, the number and type of emergences (nests or false crawls) shall be reported per species in accordance with the attached table. An additional year of nesting surveys may be required if nesting success on the nourished beach is less than 40%, based on two previous year's survey data.
 - b. For the initial nesting season, reproductive success shall be reported per species in accordance with the attached table. Reproductive success shall be reported for a statistically valid number of loggerhead nests and all green and leatherback nests.
 - c. In the event that the reproductive success meets or exceeds required criteria (e.g., 60% or greater for hatch success and 80% or greater for emergence success) for all 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. Reports submitted shall include daily report sheets noting 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), dates of construction and names of all personnel involved in nest surveys and relocation activities.

- e. Data should be reported separately for the nourished areas and for an equal length of adjacent beach that is not nourished in accordance with the attached Table. Summaries of nesting activity shall be submitted in electronic format (Excel spreadsheets). All reports should be submitted by January 15 of the following year.

Table. Marine Turtle Monitoring for Beach Placement of Material

Metric	Duration	Variable	Criterion
Nesting Success	Year of construction, one year to two or three years postconstruction if placed sand remains on beach and variable does not meet criterion based on previous year	Number of nests and non-nesting emergences by day by species	40% or greater
Hatching Success	Year of construction and one to three years postconstruction if placed sand remains on beach and variable does not meet criterion based on previous year	Number of hatchlings by species to completely escape egg	Average of 60% or greater (data must include washed out nests)
Emergence Success	Year of construction and one to three years postconstruction 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	Average must not be significantly different than the average hatching success
Disorientation	Year of construction and one to three years postconstruction if placed sand remains on beach	Number of nests and individuals that misorient or disorient	
Lighting Surveys	Two surveys the year following construction ,	Number, location and photographs	100% reduction in

	one survey between May 1 and May 15 and second survey between July 15 and August 1	of lights visible from nourished berm, corrective actions and notifications made	lights visible from nourished berm within one to two month period
Compaction	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	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

Manatee Protection Conditions

23. The Permittee shall comply with the following conditions intended to protect manatees from direct project effects:
- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The Permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species 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. If siltation or turbidity barriers are used, they shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
 - d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities shall not resume until the manatee(s) has moved beyond the 50-foot radius of the project

operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

- e. Any collision with or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the FWS in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@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. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters - Watch for Manatees* must 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 must 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 the email address listed above.

MONITORING REQUIRED:

- 24. The physical monitoring and associated reporting shall be conducted in accordance with the attached approved physical monitoring plan dated **April 9, 2013**.
- 25. One electronic copy of the monitoring report and one electronic copy of the survey data shall be submitted to the JCP Compliance Officer. When submitting any monitoring information, 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 Item No. [XX] of the approved Monitoring Plan for Permit No. 0311339-001-JC for the monitoring period [XX]**."
- 26. Each placement event shall be designed to maintain at least a 600-foot buffer between the offshore borrow areas and adjacent hardbottom. The design details shall be submitted to the Department, as part of the final plans and specification for each nourishment event (see Notice to Proceed requirement in Specific Condition 4), in order to confirm the avoidance of hardbottom impacts.
- 27. The Permittee shall adhere to the attached Biological Monitoring Plan, which is a binding part of this permit. The Permittee shall acquire written approval from the Department prior to implementing any substantial revisions to the approved Plan. As part of the Plan, the Permittee shall monitor the artificial reef and the downdrift hardbottom with annual coastal aerial photography, and conduct in-water ground-truthing within 72 hours of the date that the aerials are taken. In addition, the Permittee shall verify the location of the landward edge of the down drift reef at previously established transect locations (from

the 2005 project). This verification of aerial photos shall occur once before the construction (2013) and once after (2014).

As long as the artificial reef continues to function as an ephemeral hardbottom, i.e., is not persistently buried between nourishment intervals, the previous hardbottom impacts identified in Permit No. 0244200-001-JC will remain offset.

TURBIDITY

28. Water Quality - Turbidity shall be monitored as follows:

Units: Nephelometric Turbidity Units (NTUs).

Frequency: The first sampling event shall occur within one hour of dredging commencement and continue approximately every four hours thereafter during dredging. 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 bottom, clearly outside the influence of any artificially generated turbidity plume.

Nourishment Site: approximately 500 meters upcurrent from any portion of the beach that has been, or is being, filled during the current construction event, at the same distance offshore as the associated compliance or intermediate sample.

Borrow Site: At least 500 meters upcurrent from the source of turbidity at the dredge site.

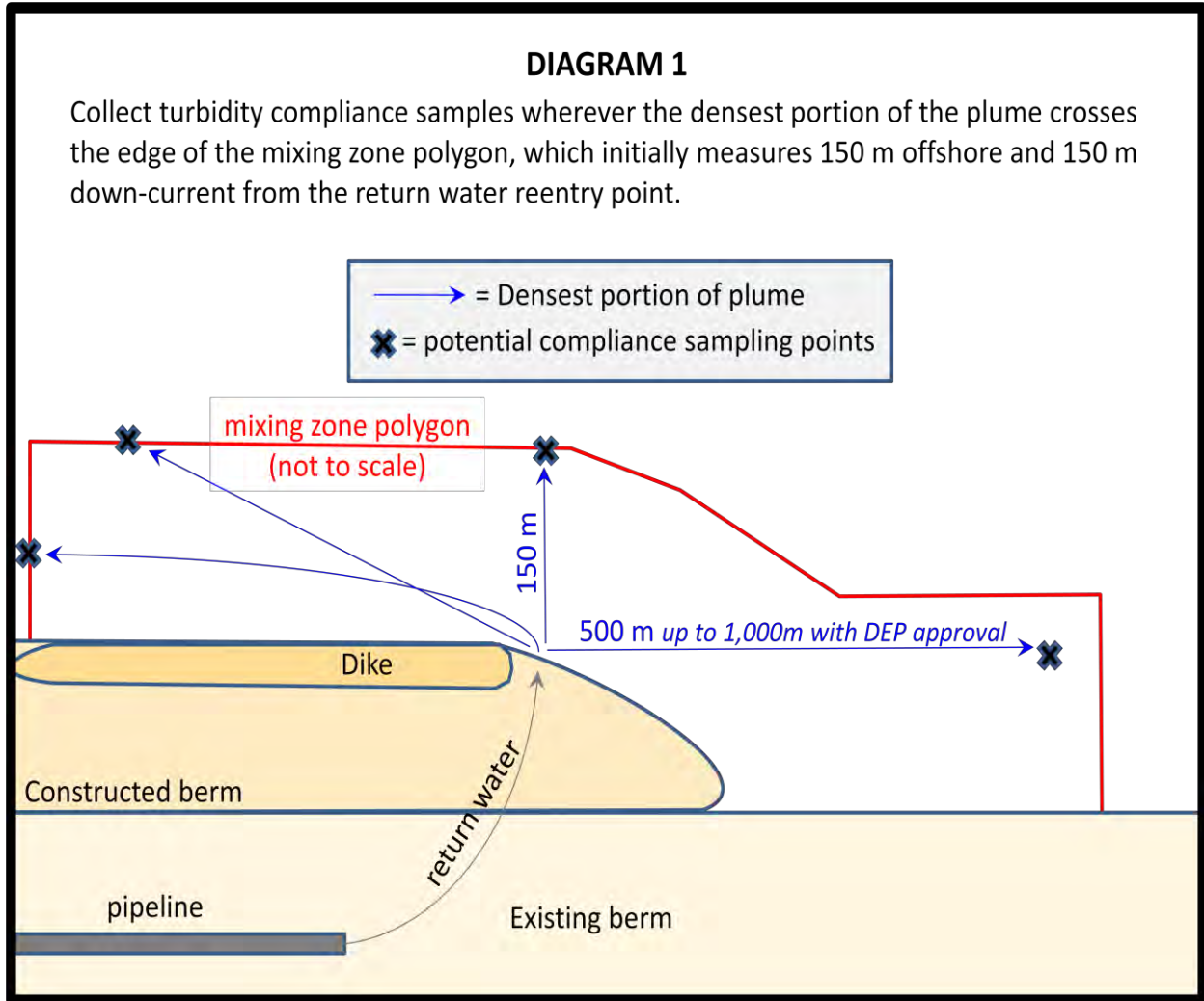
Compliance: At surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above bottom, within the densest portion of any visible turbidity plume generated by this project.

Nourishment 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 500 meters downcurrent from the point where the return water from the dredged discharge reenters the Atlantic Ocean. For each sampling

event, compliance samples shall be collected within the area of highest turbidity at both the rip current location and the longshore drift location. *Note: If the plume flows parallel to the shoreline, the densest portion of the plume may cross the mixing zone polygon at a distance less than less than the maximum offshore dimension of the mixing zone. In that case, it may be necessary to access the sampling location from the shore, in water that is too shallow for a boat. If the plume flows offshore, it may cross the mixing zone polygon at a distance less than the maximum alongshore dimension of the mixing zone, and the sample would be collected at that point. See Diagram 1.*

If the 500-meter alongshore dimension of the mixing zone is insufficient to adequately contain project-related turbidity levels, i.e., if turbidity levels require cessation of construction (as required in Specific Condition 30) more than twice a week, the Permittee may submit a request to the Department to increase the alongshore dimension of the mixing zone to 1,000 meters. Upon confirmation that turbidity levels require cessation of construction more than twice a week, the Department will provide written confirmation that the alongshore dimension of the nourishment site mixing zone is increased to 1,000 meters for the remainder of that nourishment event.

Borrow Site: Samples shall be collected 150 meters downcurrent from the cutterhead, **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.



Intermediate Monitoring (required when using a mixing zone that exceeds 150 meters in size): At surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above bottom, within the densest portion of any visible turbidity plume generated by this project. At points approximately 150 meters and 250 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. These measurements will be used to calibrate the size of the mixing zone for future events. In the event that a 1,000 meter mixing zone is necessary and has been approved by Department staff, the required intermediate monitoring points shall be extended to 250 meters, 500 meters, and 750 meters.

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>

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, and 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.

29. 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 attached to the permit and shall be implemented without the need for a permit modification.
30. The compliance locations given above shall be considered the limits of the temporary mixing zone for turbidity allowed during construction. If monitoring reveals compliance turbidity levels greater than 29 NTUs above the associated background at the dredge site or at the beach nourishment site 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 Department via email at JCP.Compliance@dep.state.fl.us. The subject line of the email shall state “TURBIDITY EXCEEDANCE”.

Any project-associated discharge other than dredging or fill placement (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 achieved 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 “PROJECT-ASSOCIATED DISCHARGE-OTHER”.

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.

31. **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;

- 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 and accuracy of the turbidity and GPS data;
- 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.

Monitoring reports shall be submitted by email to the JCP Compliance Officer. In the subject line of the reports, on the cover page to the submittal and at the top of each page, include the Project Name, Permit Number and the dates of the monitoring interval. Failure to submit reports in a timely manner constitutes grounds for revocation of the permit.

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, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



6/24/13

Deputy Clerk

Date

**Joint Coastal Permit
Ocean Ridge Shore Protection Project
Permit No. 0311339-001-JC
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Attachments: Approved Permit Drawings (15 pages)
Biological Monitoring Plan (approved August 2012)
Physical Monitoring Plan (dated April 9, 2013)
QA/QC Plan (dated August 2012)