



Florida Department of Environmental Protection

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3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard, Jr.
Secretary

CONSOLIDATED JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

PERMITTEE:

City of Delray Beach
Attn: Paul Dorling
100 N.W. First Ave
Delray Beach, FL 33444

AGENT:

Coastal Planning and Engineering, Inc
c/o Richard Spadoni
2481 N.W. Boca Raton Blvd.
Boca Raton, FL 33431

PERMIT INFORMATION:

Permit Number: 0303553-001-JC

Project Name: Delray Beach Nourishment

County: Palm Beach

Issuance Date: January 27, 2012

Expiration Date of Construction Phase:
January 27, 2022

REGULATORY AUTHORIZATION:

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

PROJECT DESCRIPTION:

The project is to nourish 1.9 miles of beach fronting the City of Delray Beach, Florida, using two offshore borrow areas that run parallel to the beach and varying in width from 1,000 feet to 425 feet. The design template calls for an average construction berm width of approximately 100 feet, at an elevation of +7.5 NAVD, and a slope of 1:10 (vertical : horizontal) on the seaward face of the berm.

PROJECT LOCATION:

The beach nourishment site is located between R-179 and R-188A, in Palm Beach County, Sections 16, 21 and 28, Township 46 South, Range 43 East, in the Atlantic Ocean, Class III Waters. The two offshore borrow areas extend parallel to the beach, about 2000 feet offshore of R-175 through R-191.

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, F.A.C., Section 62-343.075, F.A.C., and the policies of the Board of Trustees.

As staff to the Board of Trustees, the Department has reviewed the project described above, and has determined that the beach placement 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 borrow areas require a public easement for the use of those lands, pursuant to Section 253.77, F.S. The Department intends to issue the public easement, 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. 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,

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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 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. 0303553-002-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 of Environmental Protection, Bureau of Beaches and Coastal Systems, JCP Compliance Officer, 3900 Commonwealth Boulevard, Mail Station 300, Tallahassee, Florida 32399-3000 (e-mail address: JCP.Compliance@dep.state.fl.us).
4. 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 seagrass (or other aquatic vegetation) beds, or wetlands is prohibited unless within a work area or ingress/egress corridor specifically approved by this permit. Anchoring or spudding of vessels and barges within beds of aquatic vegetation or over hardbottom areas is also prohibited.

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5. 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.
6. No work shall be conducted under this permit until the Permittee has received a written Notice to Proceed from the Department for each nourishment 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 and the following items for review and approval by the Department:
 - a. Two hard copies and an electronic copy of detailed *final construction plans and specifications* for all authorized activities that are consistent with the project description, conditions and drawings of this permit. These documents shall be signed and sealed by the design engineer who must be registered in the State of Florida, and shall bear the certifications specified in Rule 62B-41.007(4), F.A.C. The plans and specifications shall include a description of the dredging and beach construction methods to be utilized and drawings and surveys that show all biological resources and work spaces (e.g., staging areas, etc.) to be used for this project.
 - b. *Turbidity monitoring qualifications.* Construction at the project site shall be monitored closely by person(s) with professional experience in monitoring turbidity for beach restoration or nourishment projects from an independent third party to assure that turbidity levels do not exceed the compliance standards established in this permit. Also, an individual familiar with beach construction techniques and turbidity monitoring shall be present at all times when fill material is discharged on the beach. This individual shall have authority to alter construction techniques or shut down the beach construction operations if turbidity levels exceed the compliance standards established in this permit. The names and qualifications of those individuals performing these functions along with 24-hour contact information shall be submitted for approval.
 - c. A *Physical Monitoring Plan*, as described in Specific Condition No. 31, indicating the performance of the beach fill project, identifying erosion and accretion patterns within the monitored area. In addition, post-construction reports shall include a comparative review of project performance to expectations and identification of adverse impacts attributable to the project.
 - d. Documentation that the Public Easement has been executed and recorded to the satisfaction of the Department;
7. **Pre-Construction Conference.** The Permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with Permittee's contractors, the engineer of record and the JCP Compliance Officer (or designated alternate) prior to each construction event. In order to ensure that appropriate

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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:

DEP, Bureau of Beaches & Coastal Systems
JCP Compliance Officer
Mail Station 300
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
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
Phone: (561) 681-6642

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.

8. To avoid cultural resources, seven buffer areas were established in and around the project area (A-G). Project activity shall avoid these buffer areas at all times.
9. Sediment quality shall be assessed as outlined in the Sediment QA/QC plan (dated October 27, 2010 (attached). Any occurrences of unacceptable material shall be handled according to the protocols set forth in the Sediment QA/QC plan. The sediment testing result will be submitted to the Department within 90 days following the completion of beach construction.

The Sediment QC/QA plan includes the following:

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.

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.

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.

Marine Turtle Protection Conditions

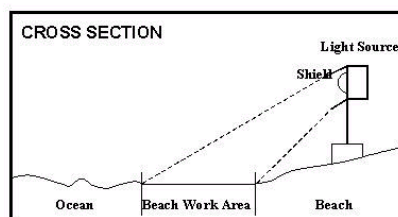
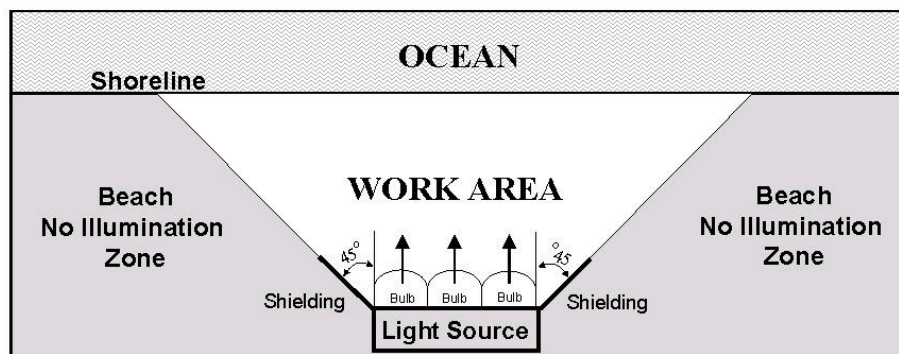
10. Beach nourishment shall be started after October 31 and be completed before May 1.
11. For dredge material placement projects that occur during the period from March 1 through April 30, daily early morning surveys (before 9 a.m.) shall be conducted for sea turtle nests and eggs shall be relocated 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 9am) shall be conducted 65 days prior to project initiation and continue through September 30, and eggs shall be relocated per the following requirements.
12. 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 the Florida Fish & Wildlife Conservation Commission (FWC), pursuant to F.A.C. 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. (for all time zones). The contractor shall not extend the beach fill more than 500 feet along the shoreline between dusk and dawn the following day until a daily nesting survey has been completed and the beach cleared for fill advancement.

13. Only those nests that may be affected by sand placement activities will 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 subject to artificial lighting. Nest relocations in association with construction activities shall cease when construction activities no longer threaten nests.
14. 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 will occur within this area nor will any activities occur which 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. For dredged material placement conducted in Brevard, Indian River, St. Lucie, St. Martin, and/or Palm Beach Counties 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. 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 the U.S. Fish & Wildlife Service (FWS), FWC, and the applicant or local sponsor. At a minimum, the protocol provided under 10a and 10b (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 the FWS's field office prior to any tilling actions being taken. (NOTE: The requirement for compaction monitoring may be eliminated if the decision is made to till regardless of post-construction compaction levels. Additionally, out-year compaction monitoring and remediation are not required 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 (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 will 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 consultation with the FWS will be required 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 square foot buffer around the vegetated areas.
17. Visual surveys for escarpments along the project area shall be made immediately after completion of the dredged material placement and during 30 days prior to March 1 for 3 subsequent years if sand in the project area still remains on the beach. 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. 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. Surveys for escarpments shall be conducted weekly during the three nesting seasons following completion of the project. The FWC shall be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet occurs during the nesting and hatching season to determine the appropriate action to be taken. If it is determined 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).

18. Staging areas for construction equipment shall be located off the beach from March 1 through April 30 and November 1 through November 30, if off-beach staging areas are available. Nighttime storage of construction equipment not in use shall be off the beach to minimize disturbance to sea turtle nesting and hatching activities. In addition, all construction pipes that are placed on the beach shall be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system. Pipes placed parallel to the dune shall be 5 to 10 feet away from the toe of the dune. Temporary storage of pipes shall be off the beach to the maximum extent possible. If the pipes shall be on the beach, they shall be placed in a manner that will minimize the impact to nesting habitat and shall not compromise the integrity of the dune systems.
19. Direct lighting of the beach and nearshore waters shall be limited to the immediate construction area from March 1 through April 30 and November 1 through November 30, 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 (see **Figure below**).



**BEACH LIGHTING
SCHEMATIC**

20. During the period from March 1 through April 30 and November 1 through November 30, 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 sea turtle surveyor present on-site to ensure no nesting and hatching sea turtles are present within the extended work area. If the 500 feet is not feasible for the project, an agreed upon distance will be decided on 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.
21. A lighting survey shall be conducted from the nourished berm prior to April 1 of the first nesting season following nourishment and action taken to ensure that no lights or light sources are visible from the newly elevated beach. A report summarizing all lights visible, using standard survey techniques for such surveys, shall be submitted to FWC by April 15 and documenting all compliance and enforcement action. Additional lighting surveys shall be conducted monthly through August and results reported by the 15th of each month.
22. **Reporting:** Reports on all nesting activity shall be provided 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 for marine turtles:

METRIC	DURATION	VARIABLE	CRITERION
NESTING SUCCESS	YEAR OF CONSTRUCTION, ONE YEAR TO TWO OR THREE YEARS POSTCONSTRUCTION IF PLACED SAND REMAINS ON THE BEACH AND VARIABLE DOES NOT MEET CRITERION BASED ON THE PREVIOUS YEAR MONITORING	NUMBER OF NESTS AND NON-NESTING EMERGENCES BY DAY	40 TO 60% OR GREATER
HATCH SUCCESS	YEAR OF CONSTRUCTION AND ONE TO THREE YEARS POSTCONSTRUCTION IF PLACED SAND REMAINS ON THE BEACH AND VARIABLE DOES NOT MEET CRITERION BASED ON THE PREVIOUS YEAR MONITORING	NUMBER OF HATCHLINGS TO COMPLETELY ESCAPE EGG	AVERAGE OF 60 TO 80% OR GREATER (DATA MUST INCLUDE WASHED OUT NESTS)
EMERGENCE SUCCESS	YEAR OF CONSTRUCTION AND ONE TO THREE YEARS POSTCONSTRUCTION IF PLACED SAND REMAINS ON THE BEACH AND VARIABLE DOES NOT MEET SUCCESS CRITERION BASED ON THE PREVIOUS YEAR MONITORING	NUMBER OF HATCHLINGS TO EMERGE FROM NEST ONTO BEACH NATURALLY	AVERAGE OF 80% OR GREATER (DATA MUST INCLUDE WASHED OUT NESTS)
DISORIENTATION	YEAR OF CONSTRUCTION AND ONE TO THREE YEARS POSTCONSTRUCTION IF PLACED SAND REMAINS ON THE BEACH	NUMBER OF NESTS AND INDIVIDUALS THAT MIS OR DISORIENT	
LIGHTING SURVEYS	YEAR OF CONSTRUCTION, MONTHLY DURING NESTING SEASON	NUMBER OF LIGHTS VISIBLE FROM ELEVATED BERM	100% REDUCTION IN LIGHT SOURCES DIRECTLY 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 THE 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 (CAN BE DONE AS PART OF MARINE TURTLE PERMIT HOLDER NESTING SURVEYS)	NUMBER OF SCARPS 18 INCHES OR GREATER EXTENDING FOR MORE THAN 100 FEET THAT PERSIST FOR MORE THAN TWO WEEKS	SUCCESSFUL REMEDIATION OF ALL PERSISTENT SCARPS WITHIN THREE WEEKS OF DOCUMENTATION

23. 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.

24. 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 Corps, applicant, and/or local sponsor 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.
25. In the event a hopper dredge is utilized, the following requirements shall be met in addition to the Terms and Conditions of the NMFS Regional Biological Opinion for Hopper Dredging:
 - 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 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 (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.
26. The Permittee shall e-mail (MTP@MyFWC.com) weekly reports to the Imperiled Species Management (ISM) section on Friday of each week that trawling is conducted in Florida waters. These weekly reports shall include: the species and number of turtles captured in Florida waters, general health, and release information. A summary (FWC provided Excel spreadsheet) of all trawling activity, including non-capture trawling, and 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 the ISM by January 15 of the following year.

Manatee Protection Conditions

27. 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 will follow routes of deep water whenever possible.
 - c. Siltation or turbidity barriers 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 will 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* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down 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:

28. Water Quality - Turbidity shall be monitored follows:

Units: Nephelometric Turbidity Units (NTUs).

Frequency: 2 times daily at least 4 hours apart during all dredging and sand placement, operations.

Location: Background: At mid-depth clearly outside the influence of any artificially generated turbidity plume.

Dredge Site: approximately 300 meters in the opposite direction of the prevailing current flow.

Beach Site: approximately 300 meters upcurrent of the limits of this nourishment project, and the same distance offshore as the associated compliance sample.

Compliance: At mid-depth, within the densest portion of any visible turbidity plume generated by this project.

Dredge Site: Samples shall be collected 150 meters downcurrent from the dredge head, in the densest portion of any visible turbidity plume.

Beach Site: Samples shall be collected where the densest portion of the turbidity plume crosses the edge of the mixing zone polygon, which measures 300 meters offshore and 1000 meters downcurrent from the point where the return water from the dredged discharge reenters the Atlantic Ocean. **Note, if the plume runs parallel to the shore, it may cross the edge of the mixing zone polygon at a distance less than 150 meters offshore.**

Intermediate Monitoring: Mid-depth, at points where the densest portion of the turbidity plume crosses 3 polygons with the following dimensions:

- (1) 250 meters downcurrent from the discharge location and 150 meters offshore,
- (2) 500 meters downcurrent from the discharge location and 150 meters offshore, and
- (3) 750 meters downcurrent from the discharge location and 150 meters offshore.

These intermediate measurements will be used to calibrate the size of the mixing zone for future events, but will NOT be used to determine if this project is in compliance with the water quality standard for turbidity.

29. 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 Department's Bureau of Beaches and Coastal Systems (BBCS) in Tallahassee via email at [JCP Compliance@dep.state.fl.us](mailto:JCPCompliance@dep.state.fl.us) and include in the subject line, "TURBIDITY EXCEEDANCE", "Delray Beach Nourishment" and "Permit No. 0303553-001-JC". Also notify the Department's Southeast District office.
30. Turbidity Reports. All turbidity monitoring data shall be submitted within one week of analysis, along with documents containing the following information:
- a. time of day samples were taken;
 - b. dates of sampling and analysis;
 - c. depth of water body;
 - d. depth of each sample;
 - e. antecedent weather conditions, including wind direction and velocity;
 - f. tidal stage and direction of flow;
 - g. water temperature;
 - h. a map indicating the sampling locations, dredging and discharge locations, and direction of flow;
 - i. a statement describing the methods used in collection, handling, storage and analysis of the samples;
 - j. 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 data;
 - k. 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 BBCS in Tallahassee (attn: JCP Compliance Officer) and to the Department's Southeast District office. In the subject line of the reports, 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. When submitting this information to the Department, on the cover page to the submittal and at the top of each page, please state: "This information is provided in partial fulfillment of the monitoring requirements in Permit No. 0303553-001-JC, for the Delray Beach Nourishment Project."

31. **Physical Monitoring: Prior to issuance of the Notice to Proceed, the permittee shall submit a detailed Monitoring Plan subject to review and approval by the Department.** The Monitoring Plan shall indicate the project's predicted design life.

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.

As guidance for obtaining Department approval, the plan shall generally contain the following items:

- a. Topographic and bathymetric profile surveys of the beach and offshore shall be conducted within 90 days prior to commencement of construction, and within 60 days following completion of construction of the project. Thereafter, monitoring surveys shall be conducted annually for a period of three (3) years, then biennially until the next beach nourishment event or the expiration of the project design life, whichever occurs first. The monitoring surveys shall be conducted during a spring or summer month and repeated as close as practicable during that same month of the year. If the time period between the immediate post-construction survey and the first annual monitoring survey is less than six months, then the Permittee may request a postponement of the first monitoring survey until the following late spring/summer. The request should be submitted as part of the cover letter for the post-construction report.

The monitoring area shall include profile surveys at each of the DEP reference monuments within the bounds of the beach fill area, and along at least 5,000 feet of the adjacent shoreline on both sides of the beach fill area. For those project areas that contain erosion control structures, such as groins or breakwaters, additional profile lines shall be surveyed at a sufficient number of intermediate locations to accurately identify patterns of erosion and accretion within this subarea. All work activities and deliverables shall be conducted in accordance with the latest update of the Bureau of Beaches and Coastal Systems (BBCS) *Monitoring Standards for Beach Erosion Control Projects, Sections 01000 and 01100*.

- b. Bathymetric surveys of the borrow area(s) shall be conducted within 90 days prior to commencement of construction, and within 60 days following completion of construction of the project concurrently with the beach and offshore surveys required above. Thereafter, monitoring surveys of the borrow areas shall be dependent on their location. Borrow sites located in tidal inlet shoals or in nearshore waters above the depth of closure for littoral transport processes shall be at two (2) year intervals concurrently with the beach and offshore surveys required above. These biennially

monitoring surveys are not required for borrow sites located below the depth of closure for littoral transport processes.

Survey grid lines across the borrow area(s) shall be spaced to provide sufficient detail for accurate volumetric calculations but spaced not more than a maximum of 500 feet apart, and shall extend a minimum of 500 feet beyond the boundaries of the borrow site. For borrow sites located in tidal inlet shoals, bathymetric surveys of the entire shoal complex, including any attachment bars, shall be conducted unless otherwise specified by the Department based upon the size of the shoal and the potential effects of the dredging on inlet processes. In all other aspects, work activities and deliverables shall be consistent with the *BBCS Monitoring Standards for Beach Erosion Control Projects, Section 01200*.

- c. The Permittee shall submit an engineering report and the monitoring data to the BBCS within 90 days following completion of the post-construction survey and each annual or biennial monitoring survey.

The report shall summarize and discuss the data, the performance of the beach fill project, and identify erosion and accretion patterns within the monitored area. In addition, the report shall include a comparative review of project performance to performance expectations and identification of adverse impacts attributable to the project.

Appendices shall include plots of survey profiles and graphical representations of volumetric and shoreline position changes for the monitoring area. Results shall be analyzed for patterns, trends, or changes between annual surveys and cumulatively since project construction.

- d. Two paper copies and one electronic copy of the monitoring report, and one electronic copy of the survey data shall be submitted to the Bureau of Beaches and Coastal Systems in Tallahassee. Failure to submit reports and data in a timely manner constitutes grounds for revocation of the permit. When submitting any monitoring information to the Bureau, 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. 0303553-001-JC for the monitoring period [XX]."**

Executed in Tallahassee, Florida.

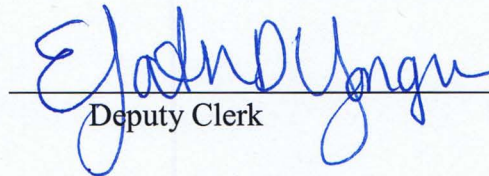
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION




Gene Chalecki, P.E., Acting Chief
Bureau of Beaches and Coastal Systems

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



Date

Prepared by Lainie Edwards, Ph.D.

Attachments: Approved Permit Drawings (21 pages)
QA QC Plan (dated October 27, 2010)