



Florida Department of Environmental Protection

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3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

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

PERMITTEE/AUTHORIZED ENTITY:

Richard Bouchard, P.E.
St. Lucie County
2300 Virginia Ave., 2nd Floor Annex, Room 229
Ft. Pierce, Florida 34982

AGENT:

Michael Trudnak, P.E.
Taylor Engineering, Inc.
9000 Cypress Green Drive, Suite 200
Jacksonville, Florida 32256

PERMIT INFORMATION:

Permit/Authorization Number: 0269646-001-JC

Issuance Date: February 23, 2007

Expiration Date of Construction Phase:
February 22, 2017

Project Name: Ft. Pierce Nourishment

County: St. Lucie

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.

ACTIVITY DESCRIPTION:

The project is to nourish a 1.3-mile segment of beach south of Ft. Pierce Inlet, between FDEP Reference Monuments R-34 and R-41. The project includes a variable width (125-215 feet) berm with a crest elevation of 8.9 feet NGVD. The construction berm includes a 50-foot design berm width and a width of 75 – 165 feet for the advance nourishment, at a slope of 1 vertical on 100 horizontal, and a foreshore slope of 1 vertical on 10 horizontal. Approximately 500,000 cubic yards of beach quality material will be placed on the beach for the initial nourishment event, and that volume shall not be exceeded for subsequent events. The material for the initial event will be obtained from a borrow area located approximately 3 miles offshore on Capron Shoal, and subsequent events may combine material from this borrow area with sand bypassed from Ft. Pierce Inlet.

No additional impacts to hardbottom communities are authorized by this permit. If the Biological Monitoring required by this permit indicates that hardbottom impacts have occurred seaward of the predicted Equilibrium Toe of Fill (ETOF) for Permit No. 0126215-001-JC,

regardless of when those impacts may have occurred, additional mitigation shall be required. Permit No. 0126215-001-JC, issued in 1998, authorized the placement of 800,000 cubic yards of sand between DEP Reference Monuments R-34 and R-41. Impacts from this placement have been previously mitigated.

ACTIVITY LOCATION:

The nourishment site is located between R-34 and R-41, St. Lucie County, Sections 6 and 7, Township 35 South, Range 41 East; Section 1, Township 35 South, Range 40 East; and Section 36, Township 34 South, Range 40 East, Atlantic Ocean, Class III Waters.

The borrow area is located approximately 3 miles offshore of the nourishment site, on Capron Shoal, Atlantic Ocean, Class III Waters.

This permit constitutes a finding of consistency with Florida's Coastal Management Program, as required by Section 307 of the Coastal Zone Management Act. This permit also constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341.

This activity also requires a proprietary authorization, as the activity is located on sovereign submerged lands owned by the Board of Trustees of the Internal Improvement Trust Fund, 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 Department has 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. In addition to the above, this proprietary authorization has been reviewed in accordance with Chapter 253, F.S., Chapter 18-21, 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 activity 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 long-term dredging of the borrow area requires a public easement for the use of those lands, pursuant to Chapter 253.77, F.S. The Department intends to issue the easement, subject to the recommended conditions in the previously issued Consolidated Notice of Intent to Issue.

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.**

Authorization from the Department does not relieve you from the responsibility of obtaining other permits (Federal, State, or local) which may be required for the project. Your proposed activity as outlined on your application and attached drawings **does not qualify** for Federal authorization pursuant to State Programmatic General Permit IV (SGPG IV), and a **separate** permit or authorization may be required from the U.S. Army Corps of Engineers (USACE). A copy of this authorization has been sent to the USACE for review. The USACE will issue their authorization directly to you, or contact you if additional information is needed. If you have not heard from the USACE within 30 days from the date that your application was received by the Department, contact the nearest USACE regulatory office for status and further information. Failure to obtain USACE authorization prior to construction could subject you to federal enforcement action by that agency.

The above named permittee is hereby authorized to construct the work shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit and authorization to use sovereign submerged lands is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the General Conditions and Specific Conditions, which are a binding part of this permit and authorization.** You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities.

GENERAL CONDITIONS:

1. All activities authorized by this permit shall be implemented as set forth in the plans and specification 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 which 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 which 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 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 historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the State Historic Preservation Officer and the Bureau of Beaches and Coastal Systems.
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 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 specification, 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 copies of as-built drawings submitted to the Department.

SPECIFIC CONDITIONS:

1. The terms, conditions, and provisions of the required public easement (Instrument No. 31017, BOT File No. 560226706) for the borrow area shall be met. Construction of this activity shall not commence on sovereign submerged lands, title to which is held by the Board of Trustees of the Internal Improvement Trust Fund, until all easement documents have been executed to the satisfaction of the Department.
2. No work shall be conducted until the Department issues a Final Order of Variance (File No. 0269646-002-EV) from Rule 62-4.244(5)(c), F.A.C. to establish an expanded mixing zone of 150 meters offshore and 1,000 meters downcurrent from the point where runoff from the discharge pipe re-enters waters of the state at the beach fill area.
3. At least 48 hours prior to commencement of work authorized by this permit, the permittee shall provide written notification of the date of the commencement and proposed schedule of construction. 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 dredging or 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 in the Notice of Commencement.

4. All documents relating to this permit shall be sent to DEP's 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](mailto:JCP.Compliance@dep.state.fl.us)) and the DEP Southeast District Office, 400 North Congress Avenue, Suite 200, West Palm Beach, Florida 33401.
5. The permittee shall comply with and implement the attached Department-approved Borrow Area Sediment Quality Assurance/Quality Control Plan.
6. The permittee shall comply with and implement the attached Department-approved Physical Monitoring Plan.
7. No work shall be conducted 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 proceed, the permittee shall submit the following for review and approval by the Department:
 - a. A detailed, Department-approved *Contingency Mitigation Plan* that addresses all potential mitigation that could be used to offset any unexpected hardbottom impacts from the project. Once approved, compliance with and implementation of this plan shall become a condition of this permit;
 - b. A detailed, Department-approved *Biological Monitoring Plan* addressing plans for monitoring environmental changes caused by the project. Once approved, compliance with and implementation of this Plan shall become a condition of this permit;
 - c. *Final construction plans and specifications* for all authorized activities, including a vessel operations plan, shall be provided. 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 beach 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. The Department may request additional information that may be necessary to understand and evaluate the proposal;
 - d. *Biological monitoring qualifications*. The names and qualifications of those individuals performing the biological monitoring shall be submitted for Department approval. All biological monitoring required by this permit shall be conducted by individuals have a good working knowledge of marine fish, marine turtles, algae, coral, and sponge taxonomy.

8. At least 14 days prior to commencement of construction activities authorized by this permit, 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, and Department staff representatives. The permittee shall provide written notification, at least 7 days in advance of the meeting, to the following offices advising of the date, time, location, and teleconference number of the pre-construction conference.

DEP Bureau of Beaches & Coastal Systems
JCP Compliance Officer
Mail Station 300
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
phone: (850) 414-7716
fax: (850) 414-7725
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, Florida 33401
phone: (561) 681-6600
fax: (561) 681-6755

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

9. In order to help control turbidity and prevent additional hardbottom impacts, the permittee shall construct and maintain a shore-parallel sand dike at the beach disposal area at all times during hydraulic discharge on the beach as may be required to meet turbidity standards prescribed by this permit.
10. Following the first nourishment event authorized in this permit, the permittee shall review the turbidity data provided from the intermediate monitoring locations (100m offshore; 150m, 300m, and 600m downdrift) and reevaluate the length of both the offshore and downdrift dimensions of the mixing zone for the beach placement site. The permittee shall provide a summary of this analysis, along with the compiled data, to the Department within 90 days following completion of construction of the first nourishment event. If warranted,

the Department shall adjust the dimensions of this mixing zone to minimize its size and the potential impacts to nearshore hardbottom communities.

11. During this and all subsequent nourishment events, the amount of sand to be placed shall restore the approved construction template, but at no time exceed it.
12. The beach fill area to be constructed seaward of the established Erosion Control Line shall remain sovereign submerged lands and shall be accessible to the general public. Additionally, the resulting additions to upland property are also subject to a public easement for traditional uses of the sandy beach consistent with uses that would have been allowed prior to the need for the restoration project in accordance with Chapter 161.141, Florida Statutes.
13. Before the second nourishment event, the applicant shall submit a Sediment Bypassing Plan that is acceptable and approved by the Department. Nourishment after the initial event will not be authorized without submittal and approval of this plan.
14. In order to ensure that marine turtles are not adversely affected by the construction activities authorized by this permit, the permittee shall adhere to the following conditions:
 - a. Beach restoration shall be started after October 31 and shall be completed by May 1 except as authorized below.
 - b. During 2007 only, sand placement activities between DEP Reference Monuments R-37 and R-41 shall be completed on or before May 15. Sand placement activities after May 15 shall only occur between R-37 and R-34, and shall be completed on or before May 30. Tilling shall be completed immediately after completion of each fill section, with all tilling of the beach between R-41 and R-37 completed by May 15 and all tilling of the beach between R-37 and R-34 completed by May 30. All equipment shall be removed from the beach between R-41 and R-37 by May 15 and between R-37 and R-34 by May 30, and no additional transport of equipment or vehicle movement associated with this project shall occur in that area after that time.
 - c. Construction-related activities are authorized to occur on the nesting beach (seaward of the existing coastal armoring structures or the dune crest) during the early part of the nesting season (March 1 through May 1 (it shall run through May 15 for R-41 to R-37 and through May 30 for R-37 to R-34 for 2007 only)) under the following conditions:
 - i. A daily marine turtle nest survey of the nesting beach in the vicinity of the project (including areas of beach access) shall be conducted starting March 1 and continue until October 31.

- ii. Only those nests that may be affected by construction activities shall be relocated. 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. Nest relocations in association with construction activities shall cease when construction activities no longer threaten nests.
 - iii. Nests deposited within areas where construction activities have ceased or will not occur for 65 days shall be marked and left in place unless other factors threaten the success of the nest. Such nests will be marked and the actual location of the clutch determined. A circle with a radius of ten (10) feet, centered at the clutch, shall be marked by stake and survey tape or string. No construction activities shall enter this circle and no adjacent construction shall be allowed which might directly or indirectly disturb the area within the staked circle.
 - iv. Nighttime surveys for nesting turtles must be conducted from 9:00 p.m. until 6:00 a.m. if work occurs after March 1. Surveys shall begin on March 15 during 2007 only. The project area must be surveyed at 1-hour intervals (since leatherbacks require at least 1 ½ hours to complete nesting, this will ensure that all nesting leatherbacks are encountered).
 - v. If nighttime surveys are not conducted, then no construction activity may commence until completion of the morning marine turtle survey.
 - vi. It is the responsibility of the permittee to ensure that the project area and access sites are surveyed for marine turtle nesting activity. All nesting surveys, nest relocations screening or caging activities etc. 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 Fish and Wildlife Conservation Commission (FWC), pursuant to Florida Administrative Code 68E-1.
- d. If the beach nourishment project will be conducted during the period from November 1 through November 30, daily early morning sea turtle nesting surveys must be conducted 65 days prior to project initiation and continue through September 30, and eggs must be relocated per the preceding requirements.
 - e. In the event a sea turtle nest is excavated during construction activities, all work shall cease in that area immediately and the permitted person responsible for egg relocation for the project should be notified so the eggs can be moved to a suitable relocation site.
 - f. Reports on all nesting activity shall be provided for the initial nesting season and for a minimum of two additional nesting seasons after fill placement. 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 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. 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 (Table 1). 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 1
Marine Turtle Monitoring for Beach Restoration Projects

The following monitoring is required for beach restoration projects. Reports summarizing the nesting should be submitted to the Tequesta office with a copy to the Tallahassee office and the BBCS JCP Compliance Officer by January 15 of the subsequent year. Data for nesting activity on the nourished beach and on an equal length of beach that is not nourished shall be reported separately, and should include numbers of nests lost to erosion or washed out. Summaries of nesting activity shall be submitted in electronic format (Excel spreadsheets).

Characteristic	Parameter	Measurement	Variable
Nesting Success	False crawls - number	Visual assessment of all false crawls	Number and location of false crawls the project area: any interaction of the turtle with obstructions, such as scarps, should be noted.
	False crawl - type	Categorization of the stage at which nesting was abandoned	Number in each of the following categories: emergence-no digging, preliminary body pit, abandoned egg chamber.
	Nests	Number	The number of marine turtle nests should be noted. If possible, the location of all marine turtle nests shall be marked on map of project, and approximate distance to sea walls or scarps measured using a meter tape. Any abnormal cavity morphologies should be reported as well as whether turtle touched groins, seawalls, or scarps during nest excavation
		Lost Nests	The number of nests lost to inundation, erosion or the number with lost markers that could not be found.
	Lighting Impacts	Disoriented sea turtles	The number of disoriented hatchlings and adults shall be documented and reported in accordance with existing FWC protocol for disorientation events.
Reproductive Success	Emergence & hatching success	Standard survey protocol	Numbers of the following: unhatched eggs, depredated nests and eggs, live pipped eggs, dead pipped eggs, live hatchlings in nest, dead hatchlings in nest, hatchlings emerged, disoriented hatchlings, depredated hatchlings

- g. From March 1 through May 1 (and through May 15 from R-41 to R-37 for 2007 only) (and through May 30 from R-37 to R-34 for 2007 only) and November 1 through November 30, all project lighting shall be limited to the immediate area of active construction only and shall be minimal lighting necessary to comply with U.S. Coast Guard and/or OSHA requirements. Stationary lighting on the beach and all lighting on the dredge shall be minimized through reduction, shielding, lowering, and appropriate placement of lights to minimize illumination of the nesting beach and water. Shields must be affixed to the light housing and be large enough to block light from all lamps from being transmitted outside the construction area (Figure 1).

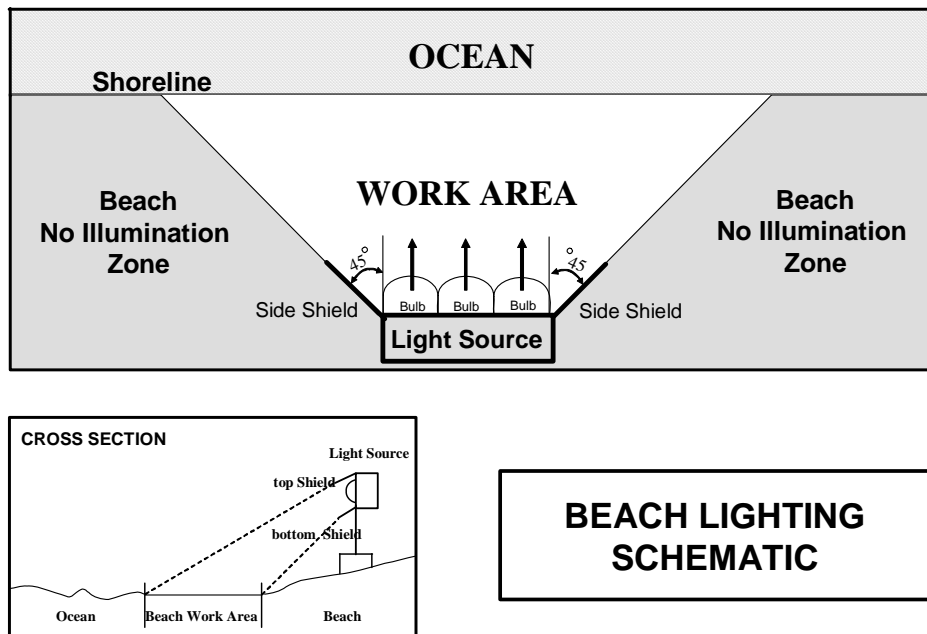


Figure 1. Lighting Operational Plan for beach restoration projects.

- h. A survey shall be conducted of all lighting visible from the beach placement area, using standard techniques for such a survey immediately after construction and no later than June 15, in 2007 only, and by March 15 each year following fill placement. For each light source visible, the local sponsor shall provide documentation that the property owner(s) have been notified of the light and specify the action(s) recommended for correcting the light with a reasonable resolution timeline within one month of the survey. At a minimum, all lights that are observed from the nourished berm must be brought into compliance with the St. Lucie Lighting Ordinance (#98-11). A summary report of the survey and documentation of property owner notification shall be submitted by May 30 of each year following fill placement. Additional lighting surveys

shall be conducted monthly through September and results reported in a final report by December 1 of each year. The Permittee (St. Lucie County) shall arrange for a meeting between FWC, FWS, DEP, and code enforcement staff from all local municipalities within the project area to discuss appropriate actions to be taken to address all lights documented during the lighting surveys; this meeting must occur within two weeks of completion of the first post-construction lighting survey after each nourishment.

- i. From March 1 through May 1 (and through May 15 from R-41 to R-37 for 2007 only) (and through May 30 from R-37 to R-34 for 2007 only), staging areas for construction equipment shall be located off the beach. Nighttime storage of construction equipment not in use shall be off the beach to minimize disturbance to sea turtle nesting and hatching activities. 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.
- j. Immediately after completion of the fill placement event and prior to March 1 for two additional years if placed sand still remains on the beach, the beach shall be tilled as described below or the applicant may follow the procedure outlined below to request a waiver of the tilling requirement. During tilling, at a minimum, the protocol provided below shall be followed:
 - i. The area shall be tilled to a depth of 36 inches. All tilling activity must be completed immediately after completion of sand placement and then prior to March 1 for the following years.
 - ii. An annual summary of compaction surveys and the actions taken shall be submitted to the FWC.
 - iii. If the project is completed during the nesting season, tilling shall not occur in areas where nests have been left in place or relocated unless authorized by FWC.
 - iv. This condition shall be evaluated annually and may be modified if necessary to address sand compaction problems identified during the previous year.
- k. To request a waiver of the tilling requirements, the permittee may measure sand compaction in the area of restoration in accordance with a protocol agreed to by the FWC, the Department, the U.S. Fish and Wildlife Service, and the applicant to determine if tilling is necessary. The protocols provided below shall be followed:
 - i. 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).
- ii. 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 reside 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.
 - iii. The three replicate compaction values for each depth shall be averaged to produce final values for each depth at each station. Reports shall include 18 values for each transect line, and the final 6 compaction values.
 - iv. If the average value for any depth exceeds 500 psi for any two or more adjacent stations, then that area shall be tilled prior to March 1. 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 FWC shall be required to determine if tilling is required. If a few values exceeding 500 psi are present randomly within the project area, tilling shall not be required.
1. Visual surveys for escarpments along the beach fill area shall be made immediately after completion of the beach nourishment project and prior to March 1 and for two additional years if placed sand still remains on the beach. All scarps shall be leveled or the beach profile shall be reconfigured to minimize scarp formation. In addition, weekly surveys of the project area shall be conducted during the two nesting seasons following completion of fill placement as follows:
 - i. The number of escarpments and their location relative to DNR-DEP reference monuments shall be recorded during each weekly survey and reported relative to the length of the beach surveyed (e.g., 50% scarps). Notations on the height of these escarpments shall be included (0 to 2 feet, 2 to 4 feet, and 4 feet or higher) as well as the maximum height of all escarpments.
 - ii. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet shall be leveled to the natural beach contour by April 15. Any escarpment removal shall be reported relative to R-monument.
 - iii. If weekly surveys during the marine turtle nesting season document subsequent reformation of escarpments that exceed 18 inches in height for a distance of 100 feet, the FWC shall be contacted immediately to determine the appropriate action to

be taken. Upon written notification, the permittee shall level escarpments in accordance with mechanical methods prescribed by the FWC.

- m. The applicant shall arrange a meeting between representatives of the contractor, the Department, the FWC, and the permitted person responsible for marine turtle (and shorebird) monitoring at least 30 days prior to the commencement of work on this project. At least 15 days advance notice shall be provided prior to conducting this meeting. This will provide an opportunity for explanation and/or clarification of the sea turtle protection measures.
- n. Upon locating a dead, injured, or sick endangered or threatened sea turtle specimen, initial notification must be made to the FWC at 1-888-404-FWCC. Care should be taken in handling sick or injured specimens to ensure effective treatment and care and in handling dead specimens to preserve biological materials in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- o. 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 of Channels and Beach Nourishment Activities in the Southeastern United States from North Carolina through Florida East Coast:
 - i. 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.
 - ii. *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.
 - iii. *Sea Turtle Deflecting Draghead*: A state-of-the-art rigid deflector draghead must be used on all hopper dredges in all Gulf of Mexico channels at all times of the year.
 - iv. 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.

- v. Relocation trawling shall be undertaken at all projects where any of the following conditions are met:
 - a. Two or more turtles are taken in a 24-hour period in the project.
 - b. Four or more turtles are taken in the project.
 - vi. The permittee shall fax (850-921-6988) or email (Megan.Conti@MyFWC.com) weekly reports to the Imperiled Species Management section on Friday each week that relocation trawling is conducted in Florida water. These faxes shall include: the species and number of turtles captured in Florida waters, general health, and release information. A summary of 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.
 - p. Reports of the distribution and abundance of marine turtles in the vicinity of the nearshore hard bottom in the project area, on mitigation sites, and on adjacent undisturbed “control” sites shall also be provided prior to any beach filling activity, during all restoration work, and then for a minimum of two additional years. Monitoring of in-water sea turtle distributions shall include quarterly surveys and any additional measures authorized by FWC.
15. In order to ensure that shorebirds are not adversely affected by construction activities, the following conditions shall be followed. Shorebird surveys should be conducted by trained, dedicated individuals (Shorebird Monitor) with proven shorebird identification skills and avian survey experience. Credentials of the Shorebird Monitor will be submitted to the FWC Regional Biologists for review and approval. Shorebird Monitors will use the following survey protocols:
- a. **Nesting Season Surveys.** Shorebird Monitors should review and become familiar with the general information and data collection protocols outlined on the FWC’s Beach-Nesting Bird Website (<http://myfwc.com/shorebirds/>). An outline of what data should be collected, including downloadable field data sheets, is available on the website.
 - i. The nesting season is generally April 1 through September 1, but some nesting may occur through September. In addition, the imperiled snowy plover (*Charadrius alexandrinus*) may nest as early as February along the west coast and panhandle of Florida. Nesting season surveys shall begin on April 1 (or February 15 in snowy plover habitat) or 10 days prior to project commencement (including surveying activities and other preconstruction presence on the beach), whichever is later, and

- be conducted daily throughout the construction period or through August if no shorebird nesting activity is observed.
- ii. Nesting season surveys shall be conducted in all potential beach-nesting bird habitats within the project boundaries that may be impacted by construction or pre-construction activities during the nesting season. Portions of the project in which there is no potential for project-related activity during the nesting season may be excluded.
 - iii. Surveys for detecting new nesting activity will be completed on a daily basis prior to movement of equipment, operation of vehicles, or other activities that could potentially disrupt nesting behavior or cause harm to the birds or their eggs or young.
 - iv. Surveys should be conducted by walking the length of the project area and visually inspecting, using binoculars or spotting scope, for the presence of shorebirds exhibiting breeding behavior.
 - a. In an ATV or other vehicle is needed to cover large project areas, the vehicle must be operated at a speed <6 mph, shall be run at or below the high-tide line, and the Shorebird Monitor will stop at no greater than 200 meter intervals to visually inspect for nesting activity.
 - v. Once breeding is confirmed by the presence of a scrape, eggs, or young, the Bird Monitor will notify the Regional Nongame Biologist of the FWC (1239 S.W. 10th Street, Ocala, FL 34474-2797; Phone (352) 732-1225/Fax (352) 620-7627) within 24 hours. All breeding activity will be reported to the Beach-Nesting Bird website within one week of data collection.
 - vi. Observations of non-breeding shorebirds should be reported to the Shorebird-Seabird Occurrence Database, as described below.
- b. **Non-Breeding Shorebird Surveys.** Data collected on non-breeding shorebirds should be compatible with, and reported to, the Shorebird-Seabird Occurrence Database (<http://myfwc.com/shorebirds>).
- i. Surveys for non-breeding shorebirds should begin 14 days prior to construction commencement and be conducted once every 2 weeks for at least one year post-construction. Data collected during these surveys will provide valuable information on the use of nourished beaches to shorebirds.

- ii. Surveys for non-breeding shorebirds will include all potential shorebird habitats within the project boundary.
 - iii. Data should be entered into the database within one month of collection.
- c. **Buffer Zones and Travel Corridors.** Within the project area, the permittee shall establish a 300-foot wide buffer zone around any location where shorebirds have been engaged in nesting behavior, including territory defense. Any and all construction activities, including movement of vehicles, should be prohibited in the buffer zone.
- i. The width of the buffer zone shall be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas.
 - ii. Site-specific buffers may be implemented upon approval by FWC as needed. Reasonable and traditional pedestrian access should not be blocked where nesting birds will tolerate pedestrian traffic. This is generally the case with lateral movement of beach-goers walking parallel to the beach at or below the highest tide line. Pedestrian traffic may also be tolerated when nesting was initiated within 300 feet of an established beach access pathway. The permittee shall work with FWC staff to determine if pedestrian access can be accommodated without compromising nesting success.
 - iii. Designated buffer zones must be posted with clearly marked signs around the perimeter. If pedestrian pathways are approved within the 300-foot buffer zone, these should be clearly marked. These markings shall be maintained until nesting is completed or terminated. In the case of solitary nesters, nesting is not considered to be completed until all chicks have fledged.
 - iv. No construction activities, movement of vehicles, or stockpiling of equipment shall be allowed within the buffer area.
 - v. FWC-approved travel corridors should be designated and marked outside the buffer areas. Heavy equipment, other vehicles, or pedestrians may transit past nesting areas in these corridors. However, other activities such as stopping or turning shall be prohibited within the designated travel corridors adjacent to the nesting site.
 - vi. Where such a travel corridor must be established within the project area, it should avoid critical areas for shorebirds (known nesting sites, wintering grounds, FWC-designated Critical Wildlife Areas, and USFWS-designated critical piping plover habitat) as much as possible, and be marked with signs clearly delineating the travel corridor from the shorebird buffer areas described above.

- vii. To the degree possible, the permittee should maintain some activity within these corridors on a daily basis, without directly disturbing any shorebirds documented on site or interfering with sea turtle nesting, especially when those corridors are established prior to commencement of construction. Passive methods to modify nesting site suitability must be approved by FWC Regional Nongame Biologist for that region.
 - d. **Notification.** If shorebird nesting occurs within the project area, a bulletin board will be placed and maintained in the construction area with the location map of the construction site showing the bird nesting areas and a warning, clearly visible, stating that “BIRD NESTING AREAS ARE PROTECTED BY THE FLORIDA THREATENED AND ENDANGERED SPECIES ACT AND THE STATE and FEDERAL MIGRATORY BIRD ACTS.”
 - e. **Beach Contours.** All tilling and scarp removal should be done outside the shorebird nesting season. It is the responsibility of the contractors to avoid tilling or scarp removal in areas where nesting birds are present.
 - i. A relatively even surface, with no deep ruts or furrows, shall be created during tilling. To do this chain-linked fencing or other material shall be dragged over those areas as necessary after tilling.
 - ii. The slope between the mean high water line and the mean low water line must be maintained in such a manner as to approximate natural slopes.
 - f. **Placement of Equipment and Sand.** If it will be necessary to extend construction pipes past a known shorebird nesting site or over-wintering area for piping plovers, then whenever possible those pipes should be placed landward of the site before birds are active in that area. No pipe or sand shall be placed seaward of a known shorebird nesting site during the shorebird nesting season.
16. In order to ensure that manatees are not adversely affected by construction activities, the below conditions shall be followed:
- 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 construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels shall follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers 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 personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down 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-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580) for north Florida or Vero Beach (1-561-562-3909) for south Florida.
- 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. Awareness signs that have already been approved for this use by the Florida Fish and Wildlife Conservation Commission (FWC) must be used. One sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* 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.

FWC Approved Manatee Educational Sign Suppliers

ASAP Signs & Designs

624-B Pinellas Street
Clearwater, FL 33756
Phone: (727) 443-4878
Fax: (727) 442-7573

Wilderness Graphics, Inc.

P. O. Box 1635
Tallahassee, FL 32302
Phone: (850) 224-6414
Fax: (850) 561-3943
www.wildernessgraphics.com

Cape Coral Signs & Designs

1311 Del Prado Boulevard
Cape Coral, FL 33990
Phone: (239) 772-9992
Fax: (239) 772-3848

Municipal Supply & Sign Co.

1095 Fifth Avenue, North
P.O. Box 1765
Naples, FL 33939-1765
Phone: (800) 329-5366 or
(239) 262-4639
Fax: (239) 262-4645
www.municipalsigns.com

Vital Signs

104615 Overseas Highway
Key Largo, FL 33037
Phone: (305) 451-5133
Fax: (305) 451-5163

Universal Signs & Accessories

2912 Orange Avenue
Ft. Pierce, FL 34947
Phone: (800) 432-0331 or
(772) 461-0665
Fax: (772) 461-0669

New City Signs

1739 28th Street N.
St. Petersburg, FL 33713
Phone: (727) 323-7897
Fax: (727) 323-1897
www.NewCitySigns.com

United Rentals Highway Technologies

309 Angle Road
Ft. Pierce, FL 34947
Phone: (772) 489-8772
or (800) 489-8758 (FL only)
Fax: (772) 489-8757

CAUTION: MANATEE **HABITAT**

All project vessels
IDLE SPEED / NO
WAKE

When a manatee is within 50 feet of work
all in-water activities must
SHUT DOWN

Report any collision or injury to:
1-888-404-FWCC (1-888-404-3922)

Florida Fish and Wildlife Conservation Commission

WATER QUALITY MONITORING:

17. Turbidity monitoring in the vicinity of the dredging area and disposal sites shall be conducted during construction. Turbidity shall be measured in NTUs at background and compliance stations as follows:
- a. Borrow Site:
- Frequency: Every six hours during dredging.
- Location: **Background:** One meter below the surface and one meter above the bottom, at least 300 meters upcurrent from the dredge site, clearly outside of any turbidity generated by the project.
- Compliance:** One meter below the surface and one meter above the bottom, no more than 150 meters down current from the dredge site, within the densest portion of any visible turbidity plume.
- b. Beach disposal Area:
- Frequency: Every six hours during pumping operations.
- Location: **Background:** Mid-depth, at a point approximately 150 meters offshore and at least 150 meters upcurrent from the discharge point, clearly outside of any turbidity generated by the project or coming from the inlet.
- Compliance:** Mid-depth, at a point no more than 150 meters offshore and 1,000 meters down current from the point where runoff from the discharge pipe re-entering waters of the state, within the densest portion of any visible turbidity plume.
- Intermediate Monitoring:** Mid-depth, at a point approximately 100 meters offshore and 150, 300, and 600 meters downcurrent from the point where runoff from the discharge pipe re-entering waters of the state, within the densest portion of any visible turbidity plume.
- c. All monitoring data shall be submitted within one week of analysis with documents containing the following information: (1) "Permit Number 0269646-001-JC"; (2) "Ft. Pierce Nourishment Project"; (3) dates of sampling and analysis; (4) a statement describing the methods used in data collection, handling, storage

and analysis of the samples; (5) a map indicating the sampling locations; (6) a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data and calibration of the meter. **Each exceedance of 29 NTUs above background shall be highlighted in the table and discussed in the report.** Monitoring reports shall also include the following information for each sample that is taken:

- i. time of day samples taken;
- ii. depth of water body;
- iii. depth of sample;
- iv. antecedent weather conditions;
- v. tidal stage and direction of flow; and
- vi. wind direction and velocity.

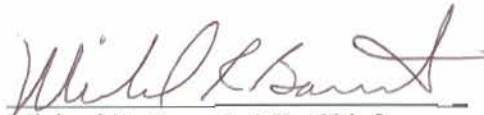
The compliance locations given above shall be considered the limits of the mixing zone for turbidity allowed during construction. If monitoring reveals turbidity levels at the compliance site greater than or equal to 29 NTUs above background turbidity levels, construction activities shall **cease immediately** 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 BBCS's JCP Compliance Officer and DEP Southeast District Office, Submerged Lands and Environmental Resources, in West Palm Beach, Florida.

The regular monitoring reports shall be submitted to the BBCS's JCP Compliance Officer in Tallahassee and to the DEP Southeast District Office, Submerged Lands and Environmental Resources, in West Palm Beach, Florida. Failure to submit reports in a timely manner constitutes ground for revocation of the permit. When submitting this information to the DEP, please clearly include, at the top of each page or as a cover page to the submittal: "This information is provided in partial fulfillment of the monitoring requirements in Permit No. 0269646-001-JC for the Ft. Pierce Nourishment Project."

Joint Coastal Permit
Ft. Pierce Nourishment Project
Permit No. 0269646-001-JC
February 23, 2007
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Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Michael R. Barnett, P.E., 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.

 2/23/07
Deputy Clerk Date

Prepared by Caitlin Lustic.

Attachments: Permit Drawings (9 pages)
Physical Monitoring Plan (4 pages)
Quality Assurance/Quality Control Plan (5 pages)