

Florida Department of Environmental Protection

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CONSOLIDATED JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

PERMITTEE:

U.S. Army Corps of Engineers Attn: Eric Summa, Chief Environmental Branch Jacksonville District P.O. Box 4970 Jacksonville, FL 32232 **PERMIT INFORMATION:**

Permit Number: 0129260-002-JC

Project Name: Canaveral Harbor Federal

Maintenance Dredging

County: Brevard

Issuance Date: January 15, 2010

Expiration Date of Construction Phase:

January 15, 2020

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.

ACTIVITY DESCRIPTION:

The proposed project is to maintenance dredge up to approximately 1,500,000 cubic yards of sediment annually from the federally-authorized portions of the Port Canaveral navigational complex, including the entrance channel to the east of the port and the barge canal to the west of the port, not to exceed an allowed dredging tolerance that extends six (6) feet deeper than the federally-authorized depths identified in the table below (except for the Barge Canal west of the port locks, where the tolerance is limited to three (3) feet deeper than the authorized pay depth). However, Zones 4, 13 and 14 of the Barge Canal are currently excluded from the project. The majority of the dredged material will be deposited in the Canaveral Ocean Dredged Material Disposal Site (ODMDS), and smaller portions of the material may also be placed in the West Confined Disposal Area (CDA-C) or the Barge Canal Disposal Area (CDA-B). If some of the sediment is suitable for placement in the nearshore portion of the beach, pursuant to Rule 62B-41.007(2)(k), F.A.C., it may be deposited in the designated Nearshore Disposal Area, at depths between approximately -10 feet and -25 feet, mean lower low water (MLLW).

Table 1. Authorized dredge depths at Port Canaveral*

Dredge Locations***	Section of Port	Depth (MLLW)**
Entrance Channel (Cut 1) and Navy Widener (East of Station 125)	East	-46 feet
Entrance Channel (Cut 2) and Settling Basin (Between Stations 125 and 182)	East	-48 feet
Civil Works Widener, Trident Access Channel and Turning Basin	East	-43 feet
Inner Channel (Cut 3) (Between Stations 182 and 215)	East/Central	-42 feet
Middle Turning Basin (NE Portion)	Central	-37 feet
Middle Turning Basin (SW Portion) and West Access Channel (Eastern Portion) (East of Stations 260)	West/Central	-41 feet
West Turning Basin and West Access Channel (Cut A) (West of Stations 260)	West	-33 feet
Barge Canal	West/Central	-14 feet

^{*}Dredge depths include USACE design depth, advance maintenance and a two-foot paid overdepth allowance.

ACTIVITY LOCATION:

The authorized dredge areas located at Port Canaveral are immediately north of the City of Cape Canaveral, Sections 10 and 11, Township 24 South, Range 37 East. The entrance channel extends southeast from the inlet for over six (6) miles into the Atlantic Ocean. The Barge Canal extends west from the Port locks for approximately six (6) miles, through the Banana River Lagoon and Indian River Lagoon, Sections 7 to 9, Township 24 South, Range 37 East and Sections 9 to 12, Township 24 South, Range 36 East. The Nearshore Disposal Area is located offshore of the City of Cocoa Beach, between DEP reference monuments R-27 and R-38, Sections 2, 11 and 14, Township 25 South, Range 37 East. The West Confined Disposal Area is immediately west of the Trident Access Channel, within the Port Canaveral location identified above. The Barge Canal Disposal Area is located immediately north of the barge canal, on Merritt Island, Section 7, Township 24 South, Range 37 East. All dredging and upland disposal work within three (3) nautical miles of the coast is located in Brevard County, Class III Waters. The outer portion of the entrance channel and the Canaveral ODMDS lie east of Cocoa Beach, outside of state waters.

West of the Port Canaveral locks, within the Banana River Lagoon, the Barge Canal marks the southern boundary of the Merritt Island National Wildlife Refuge, which is designated as Outstanding Florida Waters (OFW). This section of the Barge Canal is also approximately

^{**}*MLLW* = -0.2 feet *MLW* = -1.8 feet *NGVD*

^{*** &}quot;Cut" and "Station" designations are referenced from USACE construction plans

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450 meters north of the Banana River Aquatic Preserve, which is also OFW. A portion of the Barge Canal within Merritt Island also crosses Sykes Creek, which is part of the Banana River Aquatic Preserve.

PROPRIETARY AUTHORIZATION:

The placement of material in the Nearshore Disposal Area 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 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. In addition to the above, this proprietary authorization has been reviewed in accordance with Chapter 253 and Chapter 258, F.S., Chapter 18-20, Chapter 18-21 and Section 62-343.075, 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 nearshore disposal activity qualifies for a Letter of Consent to use sovereign, submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and conditions herein. Therefore, consent is hereby granted to the Canaveral Port Authority, the project's local sponsor, pursuant to Chapter 253.77, F.S., to perform the activity on the specified sovereign submerged lands.

The majority of the federally-authorized navigation areas, including the barge canal, the inlet and the interior portions of the port lie on submerged lands that are owned by the Canaveral Port Authority (Deed Nos. 19081, 19228, 19524, 19590 and 23581). The outer portion of the entrance channel, east of the boundaries of Deed No. 23581 but within state waters, is sovereignty (state-owned) submerged land. The Department acknowledges that maintenance dredging of a federally-authorized navigation project falls within one of the federal powers listed in the Submerged Lands Act under 43 U.S.C. 1311(d) or 43 U.S.C. 1314, and, under those provisions, needs no authorization from the Board of Trustees to utilize sovereignty submerged land within the limits of the designated navigation channel. However, under the provisions of the Coastal Zone Management Act (16 U.S.C. 1451-1465) this activity requires the State of Florida's concurrence with a determination of consistency with the sovereignty submerged lands provisions of Florida's approved Coastal Management Program prior to federal approval of the proposed activity. The Applicant has provided affirmative reasonable assurance that the maintenance dredging activities are consistent with the sovereignty lands provisions of Florida's approved Coastal Management Program.

COASTAL ZONE CONSISTENCY:

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. 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.

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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.

Abbreviations used in the general and specific permit conditions below include:

BBCS: Bureau of Beaches and Coastal Systems (DEP)

BMP: Best Management Practice

DEP or Department: Florida Department of Environmental Protection

EPA: U.S. Environmental Protection Agency

FWC: Florida Fish and Wildlife Conservation Commission

F.A.C.: Florida Administrative Code

F.S.: Florida Statutes

JCP: Joint Coastal Permit Section (of the BBCS)

NMFS: National Marine Fisheries Service

NTU: Nephelometric Turbidity Unit

ODMDS: Offshore Dredged Material Disposal Site USACE or Corps: U.S. Army Corps of Engineers

USFWS: U.S. Fish and Wildlife Service

U.S.C.: Unites States Code

GENERAL CONDITIONS:

1. This permit, including its general and specific conditions, must be construed in light of the February 28, 2006 Interagency Coordination Agreement for Civil Works Projects (ICA) between the Department and the Corps. As recognized in the ICA, the Department has the authority to include reasonable conditions in this permit. All of the conditions in this permit, both general and specific, are enforceable to the extent sovereign immunity has been waived under 33 U.S.C. §§ 1323 and 1344(t). The ICA is incorporated herein by reference.

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- 2. All activities approved shall be implemented as set forth in the drawings incorporated by reference and in compliance with the conditions and requirements of this document. The Corps shall notify the Department in writing of any anticipated changes in:
 - a) operational plans;
 - b) project dimensions, size or location;
 - c) ability to adhere to permit conditions;
 - d) project description included in the permit;
 - e) monitoring plans.

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

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

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

- 4. The Corps shall obtain any applicable licenses, permits, or other authorizations which may be required by federal, state, local or special district laws and regulations. Nothing herein constitutes a waiver or approval of other Department permits or authorizations that may be required for other aspects of the total project.
- 5. Nothing herein conveys to the Corps or creates in the Corps any property right, any interest in real property, any title to land or water, constitutes State recognition or acknowledgment of title, or constitutes authority for the use of Florida's sovereign submerged lands seaward of the mean high-water line or an established erosion control line, unless herein provided, and the necessary title, lease, easement, or other form of consent authorizing the proposed use has been obtained from the State.
- 6. Any delineation of the extent of a wetland or other surface water submitted as part of the application, including plans or other supporting documentation, shall not be considered

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- specifically approved unless a specific condition of this authorization or a formal determination under section 373.421(2), F.S., provides otherwise.
- 7. Nothing herein authorizes any entrance upon or activities on property which is not owned or controlled by the Corps or local sponsor, or conveys any vested rights or any exclusive privileges.
- 8. This document or a copy thereof, complete with all conditions, attachments, modifications, and time extensions shall be kept at the work site of the authorized activity. The Corps shall require the contractor to review this document prior to commencement of the authorized activity.
- 9. The Corps specifically agrees to allow Department personnel with proper identification, at reasonable times and in compliance with Corps specified safety standards access to the premises where the authorized activity is located or conducted for the purpose of ascertaining compliance with the terms of this document and with the rules of the Department and to have access to and copy any records that must be kept; to inspect the facility, equipment, practices, or operations regulated or required; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance. Reasonable time may depend on the nature of the concern being investigated.
- 10. At least forty-eight (48) hours prior to the commencement of authorized activity, the Corps shall submit to the Department a written notice of commencement of activities indicating the anticipated start date and the anticipated completion date.
- 11. If historic or archaeological artifacts such as, but not limited to, Indian canoes, arrow heads, pottery or physical remains, are discovered at any time on the project site, the Corps shall immediately stop all activities in the immediate area which disturb the soil and notify the Department and the State Historic Preservation Officer. In the event that unmarked human remains are encountered during permitted activities, all work shall stop in the immediate area and the proper authorities notified in accordance with Section 872.05, Florida Statutes.
- 12. Within a reasonable time after completion of construction activities authorized by this permit, the Corps shall submit to the Department a written statement of completion. This statement shall notify the Department that the work has been completed as authorized and shall include a description of the actual work completed. The Department shall be provided, if requested, a copy of any as-built drawings required of the contractor or survey performed by the Corps.

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SPECIFIC CONDITIONS:

- 1. If the General Conditions, approved permit drawings or final Plans & Specifications contradict the Specific Conditions, then the Permittee shall be responsible for adhering to the Specific Conditions. The approved permit drawings shall prevail over any other depiction of the project.
- 2. All submittals required herein shall be directed to both the DEP's Bureau of Beaches & Coastal Systems office and the Central District office (cover letter only) at the following addresses:

Florida Dept. of Environmental Protection Bureau of Beaches and Coastal Systems

Attn: JCP Compliance Officer 3900 Commonwealth Boulevard Mail Station 300

Tallahassee, Florida 32399-3000

Phone: 850-414-7716

Email: JCPCompliance@dep.state.fl.us

Florida Dept. of Environmental Protection Central District Office, SLERP Program

Attn: Compliance Manager 3319 Maguire Blvd, Suite 232 Orlando, Florida 32803-3767

Phone: 407-893-7861 FAX: 407-893-3075

Such submittals include, but are not limited to, notices, progress reports, and water quality monitoring reports. All submittals shall clearly indicate the project name (Canaveral Harbor Federal Maintenance Dredging) and the permit number (0129260-002-JC).

- 3. No elevation of turbidity is authorized beyond the edge of the approved mixing zone within the boundaries of the Merritt Island National Wildlife Refuge, designated as Outstanding Florida Waters (OFW), located north of the Barge Canal within the Banana River Lagoon, until and unless the Department issues a Final Order for a Variance (File No. 0129260-004-BV) from Rules 62-4.242(2)(a)2.b., 62-302.700(1) and 62-312.080(3), F.A.C., to establish a maximum allowable turbidity level above background within these Outstanding Florida Waters (OFW) during project construction.
- 4. **Pre-Construction Meeting.** At least 7 days prior to commencement of each dredging event authorized by this permit, the Permittee shall review the specific conditions and monitoring requirements of this permit with the Permittee's contractors, Contracting Officer Representative, and Department staff representatives. This condition can be best met at the pre-construction conference arranged by the Corps field office. Once the participants have confirmed their availability, the Permittee shall provide written notification, at least 14 days in advance of the meeting, to the following offices advising of the date, time, and location of the pre-construction conference:
 - DEP, Bureau of Beaches and Coastal Systems (BBCS)
 - FWC, Imperiled Species Management Section
 - DEP, Central District Office

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The contact information for the DEP BBCS and the DEP Central District Office is given above. The contact information for FWC is:

FWC, Imperiled Species Mgmt. Section 620 South Meridian Street, 6A Tallahassee, FL 32399-1600 Phone: (850) 922-4330

Fax: (850) 921-4369

E-mail: fcmpmail@myfwc.com

- 5. At least 21 days prior to the commencement of each dredging event authorized by this permit, the following items shall be submitted to the Department, with clear reference to the project name and permit number:
 - a. A written summary of the construction schedule, the specific type of dredge equipment to be used, the anticipated volume of material to be dredged and the disposal sites that may be utilized.
 - b. The use of bed-leveling devices has been approved for this project. However, in order to monitor the effects of different types of devices, the Permittee shall provide technical drawings and photographs of any bed-leveling devices that will be used for this project.
 - c. One (1) electronic copy of the final Plans and Specifications, and one (1) paper copy (sized 11 inches by 17 inches or larger, with all text legible) of the final Plans only, that are consistent with the Activity Description of this permit and the approved permit drawings.
 - d. A plan view of all staging areas, overlaid on a recent aerial photograph.
 - e. The names, credentials and contact information for the individuals who will conduct the turbidity monitoring, manatee/sea turtle observations and shorebird surveys (if applicable).
 - f. A copy of the Contractor's Environmental Protection Plan, or equivalent, that provides project-specific details of the Best Management Practices (BMPs) that will be implemented to prevent erosion, turbidity and the release of hazardous substances at the dredge/scow, disposal sites and staging areas.
 - g. If use of the Canaveral ODMDS is planned, a copy of the valid EPA authorization for offshore disposal. If new sediment sampling and testing has been performed in support of the EPA authorization since the previous dredge event, a copy of

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that testing report and supporting geotechnical, chemical and/or toxicity data shall also be submitted to the Department.

- h. If dredging in the Barge Canal west of the port locks is planned within 75 meters of seagrass beds established on the permit drawings, a report of the results of the pre-construction seagrass survey that is conducted according to the protocol described in this permit.
- i. If use of either upland disposal area is planned, a signed report from a project engineer on the integrity and suitability of the upland disposal site to accept dredged material based on a site inspection conducted within 60 days prior to construction. The report shall document any follow-up repairs, and shall state that the integrity of the dikes has been verified, that weir and outfall structure at the Barge Canal Disposal Area is blocked (if applicable), and that the disposal site will adequately contain and treat the discharge generated by the dredging activities authorized by this permit. The report shall also include a brief summary of the engineer's site inspection addressing, as applicable, the capacity, the visual condition of embankments and details of the maintenance events reviewed by the engineer prior to authorizing the use of the disposal sites for the subject dredging event.
- 6. **Best management practices (BMPs)** for erosion and sediment control shall be utilized where appropriate and maintained at all times during project construction to minimize turbidity generation and prevent the spillage of hazardous substances into waters of the state from the dredge and scows, the upland disposal facilities and any staging or equipment storage areas. Turbidity control devices shall be installed prior to the commencement of construction in each work area and maintained daily to ensure integrity and functionality until post-construction clean-up of each work area has been completed. BMPs shall generally adhere to the guidance in the Florida "Erosion and Sediment Control Designer and Reviewer Manual," available at the following website: www.stormwater.ucf.edu/FLErosionSedimentManual 6 07.pdf

Note that hay bales shall be isolated from runoff water to avoid nutrient enrichment.

7. 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, wetlands or vegetated dunes is prohibited. Anchoring of vessels within beds of aquatic vegetation is also prohibited. Impacts to aquatic vegetation outside the limits of the authorized channels and basins are not authorized by this permit. If a hydraulic/cutterhead dredge is used, anchor drop points shall be positioned at least five (5) meters from established seagrass beds that are depicted on the permit drawings. Staging areas shall not be located seaward of the primary dune line during the marine turtle or shorebird nesting seasons, the dates of which are indicated below.

- 8. This permit authorizes the disposal of dredged material containing up to 20% fines (i.e., passing the No. 230 sieve) in the authorized Nearshore Disposal Area. An individual trained to make a field estimate of the average percentage of fines in a dredged load shall be on duty at all times that dredging is to occur in the "Nearshore Material Assessment Zone" that is designated in the permit drawings. Sediment Inspector training shall be conducted by an engineer or geologist familiar with beach nourishment projects, in consultation with Department engineering staff at the Bureau of Beaches and Coastal Systems. If turbidity monitoring indicates that the disposal of dredged material at the nearshore disposal area causes turbidity to be elevated above 29 NTUs over background levels outside of the mixing zone established for this project (see below), disposal of dredged material at the Nearshore Disposal Area shall be discontinued until and unless a load with significantly lower percentage of fine material is identified.
- 9. The use of a hopper dredge is not authorized by this permit, in accordance with restrictions imposed by the 1997 NOAA National Marine Fisheries Service (NMFS) Regional Biological Opinion for hopper dredges in the South Atlantic Region. If the NMFS Regional Biological Opinion is updated to allow hopper dredging at Port Canaveral, the Permittee may apply for a permit modification to remove this permit condition.

UPLAND DISPOSAL AREA

- 10. The following upland disposal facility activities are not authorized by this permit:
 - Dike alterations to increase the capacity of the upland disposal facilities or that otherwise might lower the integrity of the external dikes;
 - Discharge from the upland disposal facility into surface waters of the state; and
 - Removal of material from the upland disposal facilities (i.e., rejuvenation).
- 11. The Permittee shall maintain at all times a minimum of two (2) feet of freeboard (i.e., the distance between the lowest point on the dike and the level of any free-standing dredge slurry), including consideration of the maximum predicted amount of rain volume from any anticipated storm.
- 12. Once per week during disposal operations, the Permittee shall conduct inspections of the upland disposal facility for certain critical conditions that may require the implementation of remedial measures. The Permittee shall maintain documentation of the inspections and implemented remedial actions. Any of the following items shall be considered as indicating a critical condition that requires immediate investigation and may require emergency maintenance action:
 - Seepage on outer face or downstream from the toe of the upland disposal facility in which there are boils, sand cones or deltas;

- Silt accumulations, boils, deltas, or cones in the drainage ditches at the impoundment bases:
- Cracking of soil surface on crest or either face of the impoundment;
- Bulging of the downstream face of the impoundment;
- Seepage, damp area, or boils in vicinity of (or erosion around) a conduit through the impoundment; or,
- Any subsidence of the crest or faces.

If the existence of a critical condition is confirmed, the inspection frequency shall be increased to a minimum of once daily while the condition exists and the Permittee shall **immediately** notify the JCP Compliance Officer by phone at 850-414-7716 or email at JCPCompliance@dep.state.fl.us . A written report detailing the condition and the remedial actions that have been planned or implemented shall be submitted to the Department within seven (7) days of confirmation of the critical condition.

SPECIES OF CONCERN

- 13. **Manatee Protection Measures.** The Permittee shall comply with the following conditions to protect manatees and marine turtles 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.

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- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatees. All in-water activities, including vessel operation, must be shut down if a manatee comes within 50 feet of the active construction site. Activities will not resume until the manatee has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee has not reappeared within 50 feet of the operation. During nighttime dredging, all moving equipment and construction activities shall cease if a manatee moves closer than 75 feet from such equipment or the project area. Activities will not resume until the manatee has moved beyond the 75-foot radius of the project operation, or until 30 minutes elapses if the manatee has not reappeared within 75 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with and/or injury to a manatee or marine turtle shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (904-232-2580).
- f. Temporary signs concerning manatees shall be posted prior to and during all inwater 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 (see www.MyFWC.com). One sign measuring at least 3 feet by 4 feet, which reads "Caution: Boaters", must be posted in a location prominently visible to all personnel engaged in water-related activities. Additional signs measuring at least 8 ½ inches by 11 inches explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted on vessels associated with the construction, and should be placed visible to the vessel operator.
- g. During daylight hours, at least one person shall be designated as a protected marine animal observer when in-water work is being performed. During nighttime hours, at least two people shall be designated as protected marine animal observers. Designated observers shall have appropriate qualifications and observation experience. Appropriate experience shall be demonstrated by a minimum of 100 hours of documented experience as an approved U.S. Fish and Wildlife Service or Florida Fish and Wildlife Conservation Commission observer that has monitored marine animals and their behaviors in association with inwater construction projects. No later than 15 calendar days prior to the commencement of each dredging event, the permittee shall ensure that the names, contact information, and experience has been submitted to the Florida Fish and Wildlife Conservation Commission at ImperiledSpecies@myfwc.com. The protected marine animal observer must be on site during all in-water construction

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- activities and will advise personnel to cease operation upon sighting a manatee within 50 feet of any in-water construction activity (75 feet for nighttime work).
- h. All observers shall maintain a daily log that details sightings, collisions, or injuries to protected marine animals, as well as project specific information such as work itinerary, weather, work shutdowns, observer shift changes, etc. In regard to manatee behavior, the observers shall also log time of observation, estimated distance of manatees from the dredge, type of behavior (such as passing through, pausing in the vicinity of the project, interacting with the dredge, scows, tugs, etc., attracted to running or dripping water), detection method (i.e. unaided visual, infrared, light intensification equipment, etc) and whether the dredge is operating at the time of observation. The permittee shall ensure that copies of the daily logs are submitted on a monthly basis to ImperiledSpecies@myfwc.com. A final report for each dredging event, summarizing all activities noted in the daily observer logs, an assessment and documentation (via photo or digital imagery) of effectiveness of any new technology implemented for observation (such as infrared) and new protocols, the location and name of project, and the dates and times of work shall be submitted within 30 days following project completion. The final report shall be submitted to the Environmental Branch and the Florida Fish and Wildlife Conservation Commission's Imperiled Species Management Section mailto: ImperiledSpecies@myfwc.com, and to the Field Supervisor, USFWS, 7915 Baymeadows Way, Suite 200, Jacksonville, Florida 32256-7517. A copy of the cover/transmittal letter shall be submitted to the Department.
- i. To reduce the risk of a vessel crushing a manatee, fenders or buoys providing a minimum standoff space of at least four feet under maximum designed compression shall be utilized between two vessels that are moored together such as, but not limited to, the mooring of the scow and dredge barges.
- j. During clamshell operations, the dredge operator shall gravity-release the clamshell bucket only at the water's surface, and only after confirmation that there are no manatees within the 50-foot safety distance during the day or the 75-foot distance during nighttime operations. The observers will notify the dredge operator if manatees enter within the designated safety distances.
- k. No clamshell or other mechanical dredging of the Canaveral Barge Canal west of the Canaveral Locks shall occur at nighttime, defined as one-half hour before sunset to one-half hour after sunrise.
- 1. During nighttime clamshell or mechanical dredging, the use of night vision technology (infrared, light intensification) shall be used to supplement direct observations. The observers shall, prior to commencement of work, be given operational information and time using the equipment to gain experience with the chosen type(s) of technology.

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- From March 1 through November 30, all project lighting east of the port locks m. shall be limited to the immediate area of active construction only and shall be the minimal lighting necessary to comply with U.S. Coast Guard, USACE and/or OSHA requirements. In order to better observe manatees during nighttime clamshell operations, the Contractor shall use shielded lights to illuminate the water surface for 75 feet around the hoist line (cable attached to bucket). These lights shall be shielded and/or positioned such that they are not visible from any sea turtle nesting beaches immediately north and south of Port Canaveral. The light intensity shall be a minimum of 54 lux (5 foot candles) at the water surface throughout this illuminated area including the edge. The Contractor shall also have a handheld spotlight with a minimum of 10,000,000 candle power available to better observe manatees outside of this illuminated area. The Contractor shall measure the size of the illuminated area, intensity of the specified illumination, and assess its direct visibility from adjacent beaches, prior to commencement of the project. No night-time operations shall commence or continue if one or more of these lighting parameters do not comply with the required specifications. The illumination and line of sight shall be documented through quality assurance inspections by Corps staff, and/or an independent environmental contractor hired by the Corps.
- n. If the dedicated observers determine that detection of manatees during certain weather conditions (i.e. fog, rain, wind, etc.) is not possible, and if other technologies, e.g., infrared and/or light intensification equipment, cannot be effectively used to compensate for the loss of visual detection during certain weather (i.e. fog, rain, wind, etc.), then dredging operations shall cease until weather conditions improve and detection is again possible. The observers shall report any issues of non-compliance with the special operating measures to the Contracting Officer and record these instances on their Daily Control Reports.
- o. At least 48 hours prior to the commencement of each dredging event, the permittee shall ensure that notification is sent to the Florida Fish and Wildlife Conservation Commission indicating the actual start date and the expected completion date to ImperiledSpecies@myfwc.com. The permittee shall also ensure that all contracted workers and observers are provided a copy of all permit conditions.
- p. Non-compliance with any one of sub-conditions b, d, g, h, j, k, l, m, n, and o (listed above), shall require immediate notification to the Chief, USACE Jacksonville District, Environmental Branch, at 904-232-2202, or on the morning of the following work day if it occurs after normal work hours. In addition, all dredging activity shall cease immediately and all measures taken to comply with the conditions. Dredging shall not resume until corrective measures are taken, and compliance with the conditions is achieved.

- q. The manatee conditions will be reviewed at three year intervals, post permit issuance, by the FWCC, FWS and Corps of Engineers, and modified as necessary to incorporate new technologies or revised as needed to insure adequate protection measures. Within 90 days of the three-year meetings, the Corps shall submit to the Department (Attn: JCP Compliance Officer) a summary of the meeting with FWC and USFWS.
- 14. **Sea Turtle Protection Measures.** In order to protect sea turtles from direct project effects, the following measures shall be taken:
 - a. All personnel associated with the project shall be instructed about the presence of sea turtles, and the need to avoid collisions with and injury to sea turtles. The Permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles, which are protected under the federal Endangered Species Act and the Florida Marine Turtle Protection Act.
 - b. In conjunction with the manatee protection conditions above, the designated marine animal observers shall also log details on sea turtles, include time of observation, estimated distance of sea turtles from the dredge, type of behavior (e.g., passing through, pausing in the vicinity of the project, responding to dredge activity, coming into contact with any stopped vessel, etc.), detection method (e.g., unaided visual, polarized glasses, infrared, light intensification equipment, etc.), and whether the dredge is operating at the time of observation.
 - c. Prior to lowering a mechanical dredge bucket to the water's surface, the water immediately below and adjacent to the bucket shall be scanned for the presence of sea turtles, and all dredging operations shall be shutdown if a sea turtle is observed there. Activities shall not resume until the sea turtle has moved beyond the immediate area of the project operation, or, if the sea turtle submerges, until 15 minutes elapses and the sea turtle has not reappeared within the immediate area of the operation.
- 15. **Migratory/Shorebird Protection Measures.** During all operations at the upland disposal areas authorized by this permit, the Permittee shall comply with the following conditions intended to protect shorebirds from direct project effects. Under these conditions, the term "shorebirds" will include both solitary nesting shorebirds such as the Wilson's plover (*Charadrius wilsonia*) and colonial nesting seabirds such as the least tern (*Sternula antillarum*) and black skimmer (*Rynchops niger*):
 - a. Shorebird surveys shall be conducted by trained, dedicated individuals (Shorebird Monitor) with proven shorebird identification skills and avian survey experience. Credentials of any Shorebird Monitor, approved by the Florida Fish and Wildlife Conservation Commission (FWC), shall be submitted to the Department prior to

commencement. For approval of the Shorebird Monitor, the Permittee should coordinate with the Regional Species Conservation Biologist in the FWC's Northeast Region, 1239 S.W. 10th Street, Ocala, FL 34474-2797, (Phone 352-732-1225). Shorebird Monitors shall use the survey protocols outlined below.

- b. **Nesting Season Surveys**. Shorebird Monitors shall review and become familiar with the general information and data collection protocols outlined on the FWC's Shorebird 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 1 April to 1 September, but some nesting may occur through September. **Nesting season surveys shall begin on April 1 or 10 days prior to project commencement** (including surveying activities and other pre-construction presence on the shore), whichever is later, and be conducted daily throughout the construction period until August 31, or until all shorebird nesting within the project area is complete, whichever is later.
 - ii. Nesting season surveys shall be conducted in all potential shorebird nesting 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. If an ATV or other vehicle is needed to cover large project areas, the vehicle must be operated at a speed under six (6) mph 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 Species Conservation Biologist in the FWC's Northeast Region within 24 hours by phone at 352-732-1225. All breeding activity will be reported to the Beach-Nesting Bird website within one week of data collection.

- c. **Buffer Zones and Travel Corridors**. Within the project area, the Permittee shall establish a buffer zone around any location where shorebirds have been engaged in nesting behavior, including territory defense. The buffer zone shall extend 300 feet in radius from the nest, except as noted below.
 - 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 less than 300 feet in radius may be implemented upon approval by FWC as needed. The Permittee shall work with FWC staff to determine if pedestrian access within the buffer zone 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 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 when adjacent to 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 Species Conservation Biologist.
- d. **Notification to Workers**. 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. **Violation Reports.** Construction activities that potentially cause a disturbance or loss of existing nests (e.g., operation of a vehicle within an established buffer zone) shall be reported to the FWC Regional Species Conservation Biologist and the Department's JCP Compliance Officer (JCPCompliance@dep.state.fl.us) within 24 hours of when the potential disturbance/loss is first recognized. The report should summarize any actions taken or proposed to remedy or mitigate the potential impact.

WATER QUALITY

- 16. Turbidity monitoring for this project shall be conducted by individuals with prior experience in turbidity monitoring for major dredging projects. Routine **turbidity monitoring** at the dredge site (including bed leveling) shall be measured according to the following protocols:
 - a. DREDGE SITE EAST OF PORT LOCKS (INCLUDING LOCK AREA)

Location

Background:

At least 200 meters upcurrent of the dredge location, outside the influence of any visible turbidity plume, at mid-depth.

Compliance:

At mid-depth, not more than 150 meters downcurrent from the dredge location (clamshell bucket, bed leveler, etc.), within the densest portion of any dredge-generated turbidity plume.

Frequency

Approximately every four (4) hours during daylight dredging, beginning approximately 30 minutes after the commencement of dredging, and also whenever a substantial plume approaches the edge of the mixing zone (i.e., 150 meters from dredge) such that a water quality violation may exist.

b. NEARSHORE DISPOSAL AREA

Location Background:

At least 200 meters upcurrent of the scow/barge location, outside the influence of any visible turbidity plume, at mid-depth.

Compliance:

At mid-depth, not more than 150 meters downcurrent from the scow/barge location, within the densest portion of any dredge-generated turbidity plume.

Frequency Once for every load, approximately 10 to 15 minutes after the sediment is first released.

c. DREDGE SITE WEST OF PORT LOCKS (BARGE CANAL ONLY)

Location Background:

At least 150 meters upcurrent of the dredge location, outside the influence of any visible turbidity plume, at mid-depth.

Compliance:

At mid-depth, not more than 75 meters downcurrent from the dredge location (clamshell bucket, cutterhead, etc.), OR at the edge of the nearest seagrass bed that is downcurrent of the dredge location, whichever is closer, within the densest portion of any dredge-generated turbidity plume.

Frequency

Approximately every four (4) hours during daylight dredging, beginning approximately 30 minutes after the commencement of dredging, and also whenever a substantial plume approaches the edge of the mixing zone such that a water quality violation may exist.

- d. The compliance monitoring locations delineate the edge of the approved mixing zone.
- e. The mixing zone only applies at the dredge site and Nearshore Disposal Area. Any other project-associated discharge that occurs beyond the approved mixing zone (e.g., scow leakage or runoff from staging areas) shall be monitored as close to the source as possible every hour until turbidity levels meet the state standard or until otherwise directed by the Department. When this type of unanticipated discharge causes a turbidity exceedance, as compared to a corresponding Background site at least 150 meters upcurrent of the discharge and outside of any artificially elevated turbidity plumes, the Permittee shall adhere to the turbidity compliance actions outlined in Specific Condition No. 18 below.

f. STANDARD

Turbidity shall be measured in terms of Nephelometric Turbidity Units (NTUs). For areas outside of Outstanding Florida Waters (OFWs), project activities shall not elevate turbidity more than **29 NTUs** above the measured background beyond the edge of the approved mixing zone. However, for dredging within 150 meters of the Trident Wharf, where bioassays have indicated toxic constituents in the

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sediment, turbidity at the edge of the mixing zone shall not exceed **10 NTUs** above background. For areas within OFWs (i.e., the Merritt Island National Wildlife Refuge), project activities shall not elevate turbidity more than **12 NTUs** above background beyond the edge of the approved mixing zone, according to the terms of Variance No. 0129260-004-EV. If the variance has not been issued, or is expired, the project shall not cause turbidity within the OFWs to exceed background levels outside of the mixing zone.

g. CALIBRATION

Turbidity measurements shall be acquired in adherence to the Department's Standard Operating Procedure (SOP) for field turbidity, available at the website: www.dep.state.fl.us/labs/qa/sops.htm

More specifically, the instruments used to measure turbidity shall be fully calibrated within one month of the commencement of the project, and at least once a month thereafter during the project. Calibration shall be verified each morning prior to use, and after each time the instrument is turned on, using a turbidity "standard" that is different from the one used during calibration.

- 17. If barge/scow dewatering is employed, **Dissolved Oxygen** (DO) shall be measured in conjunction with turbidity, as outlined in the monitoring protocol above, between June 1 and September 30. If DO levels at the compliance sites are below the state standard of 4.0 mg/L **and** more than 5% below the background levels, then the Permittee shall adhere to the DO compliance actions outlined in Specific Condition No. 18 below.
- 18. The following measures shall be taken when turbidity or dissolved oxygen levels at the compliance locations exceed the standards stated above, which indicates a violation of state water quality standards, though not necessarily a violation of this permit:
 - a. Immediately **cease all work** that may be contributing to the water quality violation;
 - b. Modify the work procedures that were responsible for the violation such as reducing the dredge rate and/or installing additional BMPs or repairing any nonfunctioning turbidity control devices;
 - c. Notify the JCP Compliance Officer, at JCPCompliance@dep.state.fl.us, within 24 hours of the time the violation is first detected. The subject line shall include the phrase "Water Quality Violation." The violation report shall include the description of the corrective actions taken or proposed to be taken and the turbidity values (background, compliance and the difference) of the violation;
 - d. Maintain the cessation of all turbidity-generating work until continued monitoring has revealed that no further violation exists; and,

- e. Provide a copy of all monitoring data sheets to the JCP Compliance Officer within 24 hours of the time when any suspended dredge or discharge operations resume (e-mail acceptable).
- 19. **Turbidity and Dissolved Oxygen monitoring reports** shall be submitted to the Department on a weekly basis within seven (7) days of collection. These reports may be submitted electronically to the JCP Compliance Officer at JCPCompliance@dep.state.fl.us. Reports shall be submitted with a cover letter or e-mail message containing the following statement: "**This information is provided in partial fulfillment of the monitoring requirements in Permit No. 0129260-002-JC for the Canaveral Harbor Federal Maintenance Dredging.**" The cover letter shall summarize any significant compliance issues and the dates or monitoring period of the reports. Also, please clearly reference the permit number on each page of the reports. In addition to analytical results for samples and quality control, each report should also include:
 - a. Time and date samples were taken;
 - b. Sampling results, the net difference between compliance and background results, and whether the turbidity or DO level is in compliance.
 - c. Depth of water body and depth of samples;
 - d. Antecedent weather conditions, including wind direction and velocity;
 - e. Tidal stage and direction of flow;
 - f. A statement describing the methods used in collection, handling and analysis of the samples;
 - g. Turbidity meter calibration/verification documentation;
 - h. A map indicating the location of the current construction activity, the sampling locations (background and compliance), the visible plume pattern of the applicable mixing zone, and location of nearby Outstanding Florida Waters, if applicable; and
 - i. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data.

SEAGRASS (SUBMERGED AQUATIC VEGETATION)

20. **In-water monitoring for seagrass** and other submerged aquatic vegetation (SAV) shall be conducted in established seagrass areas west of the port locks, on both sides (north

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and/or south) of the channel, as depicted on the permit drawings, that are within 75 meters of the maintenance dredging activities (including staging areas) according to the following protocol:

- a. A pre-construction diver survey for SAV shall be performed during the growing season (between April 30 and July 31) by scientists familiar with SAV (both seagrass and macroalgae) in this region within 30 days prior to the commencement of each maintenance dredging event. If the 30-day timeframe for the SAV survey would occur outside of the growing season, the survey shall have been conducted during the previous growing season.
- b. A post-construction diver survey for SAV shall be conducted within 30 days following the completion of construction of each maintenance dredging event, following the same transect locations that were established during the preconstruction event.
- c. Transects shall be established that are perpendicular to the channel or other work site at a spacing of 40 meters or less, such that visual coverage is possible for at least 5% of the area of all established seagrass beds within 75 meters of the designated work and staging areas. The actually spacing should be adjusted based on visibility to meet this 5% minimum visual coverage (i.e., visibility must be at least one (1) meter to allow a spacing of 40 meters). In addition, the perimeter of the seagrass bed nearest to the portion of the channel to be dredged shall be visually confirmed.
- d. End points of the transects and the entire seagrass perimeter nearest the portion of the channel to be dredged shall be mapped with DGPS accurate to one (1) meter. Breaks in coverage (i.e., less than 1% SAV, based on visual estimate) shall also be mapped.
- e. Qualitative visual estimates of SAV coverage shall be made for the entire length of all transects and the perimeter line. Qualitative categories of SAV (with indication of single or mixed species composition) along the transect line will include: I) Less than 1% total cover, II) 1% to 25% total cover, III) 25-50% total cover, IV) 50-75% total cover and V) greater than 75% total cover. Signs of unnatural impact, such as prop scars, anchor gouges or sedimentation on grass blades, shall be documented, including approximate dimensions of the affected area(s).
- f. Quantitative measurements of SAV shall be conducted at 10-meter intervals along each transect using quadrats that measure one (1) square meter in area (i.e., one (1) meter per side) and are subdivided into 100 cells measuring 10 centimeters on a side. Alternative sizes may be used as long as total quadrat coverage is at least one square meter for every 10-meter interval of the transects, the quadrats are

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equally subdivided into areas no larger than 10 centimeters on a side, and the sizes are consistent for both the pre- and post-construction survey. Within these quadrats, total percent cover of submerged aquatic vegetation (SAV) shall be determined by counting the number of cells with seagrass or macroalgae present regardless of quantity (i.e., frequency of occurrence). Percent cover will also be determined for each species of SAV individually. Visual percent cover shall also be estimated for all seagrass species occurring in the quadrat, and a score based on the cover of the species in that quadrat shall be assigned according to the Braun-Blanquet abundance scale. Presence of flowering populations of seagrasses within the quadrats shall also be noted.

- g. If a hydraulic/cutterhead dredge is used, anchor drop points within five (5) meters of established seagrass beds, as depicted on the permit drawings, shall be mapped using DGPS technology accurate to approximately one (1) meter. During the post-construction survey, divers shall inspect all mapped anchor points to confirm whether or not SAV was impacted.
- h. Based on the post-construction seagrass monitoring, the Permittee shall be responsible for mitigating impacts to SAV that may have occurred as a result of project-related activities outside the boundaries of the authorized channels (e.g., anchoring impacts, sedimentation and/or burial impacts, side slope sloughing, propeller wash, etc.). The Permittee shall submit a remediation/compensatory mitigation plan within 30 days of discovery of impact for Department approval. The plan shall be implemented within 30 days of Department approval.
- i. At least seven (7) days prior to the commencement of construction of each maintenance dredging event, one electronic and one paper copy of a report summarizing the pre-construction seagrass/SAV survey shall be submitted to the Department. The report shall include maps that graphically depict the established seagrass beds shown on the permit drawings overlayed with the transect locations (including perimeter lines), the visual coverage identified along those transects (perhaps with color-coding), and the authorized work areas.
- j. Within 60 days following the completion of the post-construction seagrass/SAV survey, one electronic and one paper copy of a report shall be submitted to the Department. The post-construction report shall include a narrative description and graphic depiction (similar to the pre-event depiction) of the work areas and evaluate the differences between the pre- and post-construction surveys. From this, the report shall identify all signs of impact to the seagrass beds since the pre-construction survey (e.g., receded perimeter, reduced density, sediment coverage and scouring), an approximate quantification of the extent of the impacts, mitigation activities planned or performed to offset any impacts that may have been dredge-related and an explanation of any impacts that have been attributed to something besides the dredge activities.

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- 21. In accordance with General Condition No. 12, the Permittee shall include a written statement of completion following each event. The following information shall be included:
 - a. The permit number (0129260-002-JC); and project name (Canaveral Harbor Federal Maintenance Dredging);
 - b. The specific location of the dredging;
 - c. The date on which dredging began and the date of completion;
 - A table identifying any violations of turbidity standards which occurred during dredging or disposal, the probable causes of the violations, and corrective measures taken to reduce turbidity;
 - e. If a bed-leveling device was used, a summary of specific dates, times and locations that bed leveling was under way.
 - f. The quality and quantity of material dredged; and
 - g. A summary of all occurrences where final dredged depth was deeper than the authorized depths (including two-foot overdredge depth) outlined in the Activity Description, including locations, size of the areas and volumes.
- 22. Per General Condition No. 12, the Department hereby notifies the Permittee that a copy of any as-built drawings required of the contractor or survey performed by the Corps is requested upon completion of the dredging event. The as-built or record drawings should be based on the Department permit construction drawings and should be clearly labeled as "As-Built" or "Record" drawings.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Michael R. Barnett, P.E., Chief

Bureau of Beaches and Coastal Systems

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Prepared by S. MacLeod.

Attachments: Permit Drawings (13 pages)

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