

vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers shall provide a minimum stand-off distance of four feet. Boats used to transport personnel will be shallow draft vessels, preferably of the light-displacement category, where navigational safety permits. Vessels transporting personnel between the landing and any work boat shall follow routes of deep water to the greatest possible extent. Shore crews or personnel assigned to the disposal site for the workshift shall use upland road access if available. All personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Endangered Species Act and the Marine Mammal Protection Act. The contractor shall be held responsible for any manatee harmed, harassed, or killed as a result of the construction of the project.

#### 4.3.2.2 Sea turtles

The NMFS has issued a Regional Biological Opinion on sea turtles for hopper dredging within the southeastern United States. All special conditions pertaining to the use of a hopper dredge will be implemented should one be used. Protective measures will also be taken to minimize impacts to sea turtle nesting if dredged material is placed on the beach. Turtle nest surveys and relocation will be initiated 65 days prior to construction or by March 1, whichever is the later date, and continue until construction is complete, or November 15, whichever is earliest. The beach will be tilled to a depth of 36" immediately following completion of disposal activities if measured sand compaction is greater than 500 cone penetrometer units.

#### 4.3.2.3 Whales

In the event that ocean disposal takes place during the period December through March, an observer approved by the NMFS will be aboard transport vessels to monitor for the presence of whales. During transit to and from the Fernandina ODMDS, the observer shall monitor from the bridge during daylight hours for the presence of all whales, especially the right whale. If a whale is seen, the vessel speed will be reduced (8 knots is suggested) and the vessel operator must stay at least 500 yards from the animal. During evening hours or when there is limited visibility due to fog or sea states of greater than Beaufort 3, the vessel must slow down to 5 knots or less when traversing between areas if whales have been spotted within 15 nautical miles of the vessel's path within the previous 24 hours. All other standard protection measures for whales will be incorporated into the project plans when appropriate.

#### 4.3.2.4 Shortnose sturgeon

Even though the shortnose sturgeon may be present in project waters, no adverse effects to this species are anticipated.

#### **4.4 WILDLIFE RESOURCES OTHER THAN THREATENED AND ENDANGERED SPECIES**

##### **4.4.1 NO-ACTION ALTERNATIVE**

There will be no impact to wildlife resources other than threatened and endangered species if Fernandina Harbor is not dredged.

##### **4.4.2 DREDGING ALTERNATIVE**

Disposal of dredged sand at the designated beach disposal sites will have a temporary impact on aquatic and shore life. Species of birds which use these beaches for resting or feeding will be temporarily displaced but should quickly return once the work is terminated. Nearshore free-swimming organisms will also avoid the construction zone and should eventually recolonize the area. Turbidity levels along the disposal site will temporarily increase, but will return to normal after beach equilibrium is achieved. Because the beach disposal areas occur within a surf zone, naturally occurring turbidity levels are high. Organisms inhabiting this zone will be impacted by run-off from the disposal area but are adapted for survival in such conditions. Thus, impacts will be minor. Any losses due to the project should be replaced within a short time.

#### **4.5 ESSENTIAL FISH HABITAT**

##### **4.5.1 NO-ACTION ALTERNATIVE**

There will be no impact to Essential Fish Habitat if Fernandina Harbor is not dredged.

##### **4.5.2 DREDGING ALTERNATIVE**

All coastal inlets, such as the Fernandina Harbor entrance channel, are considered by the South Atlantic Fishery Management Council to be habitat areas of particular concern for some commercially important species. Because it has a soft bottom and is naturally dynamic, impacts to the inlet caused by the proposed dredging should be short-term and minor in nature. Effects to salt marsh, another habitat area of particular concern, are not anticipated. Therefore, the Corps has determined that Essential Fish Habitat will not be adversely affected by the proposed maintenance dredging of Fernandina Harbor. The NMFS concurs with this finding (see Section 6.2).

#### **4.6 BENTHOS**

##### **4.6.1 NO-ACTION ALTERNATIVE**

There will be no impact to benthos if Fernandina Harbor is not dredged.

#### **4.6.2 DREDGING ALTERNATIVE**

Dredging the project channel will result in minor impacts to benthos. The Fernandina Harbor inner channel and turning basin should be quickly recolonized with benthic organisms from adjacent similar habitats. Due to the frequency of dredging the entrance channel, recolonization will not be as successful as the inner channel.

##### **4.6.2.1 Disposal Sites**

The proposed beach fill may cause a temporary short-term impact to invertebrates by burying these organisms. However, these organisms are highly adapted to periodic burial by sand in the intertidal zone. These organisms are highly fecund and are expected to return to pre-construction levels within six months to one year after construction.

### **4.7 CULTURAL RESOURCES**

#### **4.7.1 NO-ACTION ALTERNATIVE**

There will be no impact to cultural resources if Fernandina Harbor is not dredged.

#### **4.7.2 DREDGING ALTERNATIVE**

Efforts will be taken to avoid the four shipwrecks identified near the project channel. An appropriate buffer zone around these structures is being considered. Placement of beach quality sand within the groin field adjacent to Fort Clinch will be done in such a way as to not damage the structure. In fact, the purpose of placing sand at this location is to help prevent the fort from being undermined by erosion.

### **4.8 RECREATION**

#### **4.8.1 NO-ACTION ALTERNATIVE**

Recreational boating would be impacted if Fernandina Harbor were no longer dredged because of increased shoaling and decreased navigable capacity of the project channel. In addition, recreational beach activities would be affected due to continued loss of beach area.

#### **4.8.2 DREDGING ALTERNATIVE**

Recreational boat traffic would experience temporary delays due to construction traffic and congestion. Minor temporary impacts would also occur to recreational beach activities because of sand placement construction activities. However, recreational boat traffic would benefit from the increased navigable capacity of the channel. Recreational beach activities would benefit from the increased beach area resulting from the dredging and beach placement.

## **4.9 NAVIGATION (COMMERCIAL AND MILITARY)**

### **4.9.1 NO-ACTION ALTERNATIVE**

Deep-draft vessels, commercial and Naval ships, would eventually not be able to navigate the project channel because of increased shoaling.

### **4.9.2 DREDGING ALTERNATIVE**

Dredging will maintain the navigable capacity of the project channel for deep-draft vessels.

## **4.10 ECONOMICS**

### **4.10.1 NO-ACTION ALTERNATIVE**

The port of Fernandina would not be able to operate if the project channel became unnavigable. Loss of the port would impact the local economy. The cessation of placing dredged sand on Amelia Island beaches could limit recreational beach activities and impact the local tourist industry.

### **4.10.2 DREDGING ALTERNATIVE**

Maintenance dredging of the project channel will allow full access to the port of Fernandina. Transportation of commodities through the port creates a stimulus for attracting new business to the area. Recreational boaters as well as commercial fishing enterprises also rely on the navigable capacity of the project channel for access purposes. Additionally, the port provides jobs and generates revenue for the surrounding community through the purchase of goods and materials. Maintained beaches provide attractions that generate revenue for the local tourist industry.

## **4.11 AESTHETICS**

### **4.11.1 NO-ACTION ALTERNATIVE**

There will be no impact to aesthetics if Fernandina Harbor is no longer dredged.

### **4.11.2 DREDGING ALTERNATIVE**

Construction activities within the project channel and at the disposal sites would temporarily impact the aesthetic appeal of the area. Permanent impacts to the aesthetics of the area caused by the construction are not anticipated.

## **4.12 CUMULATIVE IMPACTS**

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (40 CFR 1508.7). The regional economy as well as recreational opportunities would be negatively impacted if maintenance dredging projects, such as the one proposed for Fernandina Harbor, are not performed.

## **4.13 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

### **4.13.1 IRREVERSIBLE**

An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. The only irreversible commitment of resources associated with the proposed project would be the expenditure of federal funds to complete the work.

### **4.13.2 IRRETRIEVABLE**

An irretrievable commitment of resources is one in which, due to decisions to manage the resource for another purpose, opportunities to use or enjoy the resource as they presently exist are lost for a period of time. Placement of dredged sand at the beach disposal sites would temporarily disrupt the normal use of these areas.

## **4.14 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS**

There may be short-term degradation of water quality due to turbidity caused by dredging and dredged material disposal operations. The potential exists for the incidental taking of sea turtles during dredging operations. However, the implementation of standard protective measures should minimize and mitigate for this potential.

## **4.15 ENVIRONMENTAL COMMITMENTS**

The U.S. Army Corps of Engineers and contractors commit to avoiding, minimizing or mitigating for adverse effects during construction activities by taking the following actions:

1. The contractor shall comply with all terms and conditions set out in the Water Quality Certification issued by the Florida Department of Environmental Protection as well as the Biological Opinion of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for those federally endangered or threatened species identified in this Environmental Assessment. These terms and conditions are stipulated within the plans and specifications for the project. In addition to following the Biological Opinion issued by the U.S. Fish and Wildlife Service for sea turtles, the Corps will make every effort to avoid beach placement of sand during the sea turtle nesting season.
2. The contractor shall establish and maintain quality control for environmental protection of all items set forth in the project plans and specifications. The contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

3. The contracting officer will notify the contractor in writing of any observed noncompliance with federal, state, or local laws or regulations, permits and other elements of the contractor's Environmental Protection Plan. The contractor shall, after receipt of such notice, inform the contracting officer of proposed corrective action and take such action as may be approved. If the contractor fails to comply promptly, the contracting officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the contractor for any such suspension.

4. The contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to insure adequate and continuous environmental pollution control. Quality control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of federal, state, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the contractor.

5. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The contractor shall confine his activities to areas defined by the drawings and specifications.

6. As stated in the contract specifications, the disposal of hazardous or solid wastes will be in compliance with federal, state, and local laws. A spill prevention plan will also be required.

Additional actions will be taken in order to comply with the following environmental requirements.

#### **4.16 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS**

##### **4.16.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969**

Environmental information on the project has been compiled and this Environmental Assessment has been prepared. It is available to any interested parties. The project is in compliance with the National Environmental Policy Act.

##### **4.16.2 ENDANGERED SPECIES ACT OF 1973**

Consultation was initiated with the US Fish and Wildlife Service on 20 December 1999, and completed on May 3, 2000 (see Appendix C). Dredging operations and dredged material disposal has also been coordinated with the National Marine

Fisheries Service (NMFS) during the public notice period. The NMFS has issued a Regional Biological Opinion for hopper dredging within the southeastern United States. All special conditions pertaining to the use of a hopper dredge will be implemented should one be used. This project was fully coordinated under the Endangered Species Act and is therefore, in full compliance with the Act.

#### 4.16.3 FISH AND WILDLIFE COORDINATION ACT OF 1958

This project has been coordinated with the U.S. Fish and Wildlife Service (USFWS). A Coordination Act Report was not required for this project. This project is in full compliance with the Act.

#### 4.16.4 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (INTER ALIA)

(PL 89-665, the Archeology and Historic Preservation Act (PL 93-291), and executive order 11593) Archival research, channel surveys, and consultation with the Florida State Historic Preservation Officer (SHPO), have been conducted in accordance with the National Historic Preservation Act, as amended; the Archeological and Historic Preservation Act, as amended and Executive Order 11593. The project is in full compliance with the Act.

#### 4.16.5 CLEAN WATER ACT OF 1972

A Section 401 water quality certification will be required from the Florida Department of Environmental Protection. All state water quality standards would be met. A Section 404(b) evaluation is included in this report as Appendix A. A public notice was issued in a manner which satisfies the requirements of Section 404 of the Clean Water Act.

#### 4.16.6 CLEAN AIR ACT OF 1972

No air quality permits would be required for this project.

#### 4.16.7 COASTAL ZONE MANAGEMENT ACT OF 1972

A federal consistency determination in accordance with 15 CFR 930 Subpart C is included in this report as Appendix B. The Corps has determined that the project would have no unacceptable impacts and would be consistent with the Florida Coastal Management Plan. In accordance with the Memorandum of Understanding (1979) and the Addendum to the Memorandum (1983) concerning acquisition of Water Quality Certifications and other state authorizations, the preliminary Environmental Assessment and Section 404 (b)(1) Evaluation have been submitted to the state in lieu of a summary of environmental impacts to show consistency

with the Florida Coastal Zone Management Plan. Final state concurrence will be received with the issuance of the Water Quality Certification.

#### 4.16.8 FARMLAND PROTECTION POLICY ACT OF 1981

No prime or unique farmland would be impacted by implementation of this project. This Act is not applicable.

#### 4.16.9 WILD AND SCENIC RIVER ACT OF 1968

No designated Wild and Scenic River reaches would be affected by project related activities. This Act is not applicable.

#### 4.16.10 MARINE MAMMAL PROTECTION ACT OF 1972

Incorporation of the safe guards used to protect threatened or endangered species during dredging and disposal operations would also protect any marine mammals in the area, therefore, this project is in compliance with the Act.

#### 4.16.11 ESTUARY PROTECTION ACT OF 1968

No designated estuary would be affected by project activities. This Act is not applicable.

#### 4.16.12 FEDERAL WATER PROJECT RECREATION ACT

There is no recreational development proposed for maintenance dredging or disposal. Therefore, this Act does not apply.

#### 4.16.13 FISHERY CONSERVATION AND MANAGEMENT ACT OF 1976

The project has been coordinated with the National Marine Fisheries Service (NMFS) and is in compliance with the Act.

#### 4.16.14 SUBMERGED LANDS ACT OF 1953

The project would occur on submerged lands of the state of Florida. The project has been coordinated with the state and is in compliance with the Act.

#### 4.16.15 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT OF 1990

There are no designated coastal barrier resources in the project area that would be affected by this project. These Acts are not applicable.

#### **4.16.16 RIVERS AND HARBORS ACT OF 1899**

The proposed work would not obstruct navigable waters of the United States. The proposed action has been subject to the public notice, public hearing, and other evaluations normally conducted for activities subject to the act. The project is in full compliance.

#### **4.16.17 ANADROMOUS FISH CONSERVATION ACT**

Anadromous fish species would not be affected. The project has been coordinated with the National Marine Fisheries Service and is in compliance with the Act.

#### **4.16.18 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT**

No migratory birds would be affected by project activities. The project is in compliance with these Acts.

#### **4.16.19 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT**

Disposal of dredged material into the Fernandina ODMDS will be performed pursuant to Section 102(c) of this Act. A Section 103 report can be found in Appendix D. The term "dumping" as defined in the Act (33 U.S.C. 1402)(f) does not apply to the disposal of material for beach nourishment or to the placement of material for a purpose other than disposal (e.g. placement of rock material as an artificial reef or the construction of artificial reefs as mitigation). The disposal activities addressed in this Environmental Assessment have also been evaluated under Section 404 of the Clean Water Act.

#### **4.16.20 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT**

The proposed dredging and disposal activities have been previously coordinated with the National Marine Fisheries Service (NMFS) during the public notice period. According to a letter of agreement between the NMFS and the Corps, further coordination regarding Essential Fish Habitat within maintenance areas is not normally required for each event.

#### **4.16.21 E.O. 11990, PROTECTION OF WETLANDS**

No wetlands would be affected by project activities. This project is in compliance with the goals of this Executive Order.

#### 4.16.22 E.O. 11988, FLOOD PLAIN MANAGEMENT

No activities associated with this project will take place within a floodplain, therefore this project is in compliance with the goals of this Executive Order.

#### 4.16.23 E.O. 12898, ENVIRONMENTAL JUSTICE

The proposed action would not result in adverse health or environmental effects. Any impacts of this action would not be disproportionate toward any minority. The activity does not (a) exclude persons from participation in, (b) deny persons the benefits of, or (c) subject persons to discrimination because of their race, color, or national origin. The activity would not impact "subsistence consumption of fish and wildlife."

#### 4.16.24 E.O. 13089, CORAL REEF PROTECTION

No coral reef or coral reef organism would be impacted by this project.

## 5 LIST OF PREPARERS

### 5.1 PREPARERS

Preparer	Discipline	Role
Paul Stodola	Biologist	Principal Author
Brian Brodehl	Engineer	Engineering
Thomas Birchett	Archaeologist	Historic Properties

### 5.2 REVIEWERS

This Environmental Assessment was reviewed by Kenneth Dugger, Team Leader, Environmental Branch-Coastal Projects Section.

## 6 PUBLIC INVOLVEMENT

### 6.1 SCOPING

A public notice (PN-CO-FEH-238) dated August 4, 1999, was issued for the project (Appendix C). Notices were mailed to appropriate local, state, and federal agencies as well as environmental groups.

## 6.2 COMMENTS RECEIVED AND RESPONSE

The only comment received as a result of the public notice was from the National Marine Fisheries Service (NMFS). The NMFS reviewed the project plans advertised in the notice and stated "we anticipate that any adverse effect that might occur on marine and anadromous fishery resources would be minimal and, therefore, do not object to issuance of the permit(s)."

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**APPENDIX A - SECTION 404(B) EVALUATION**



## SECTION 404(b) EVALUATION

### MAINTENANCE DREDGING FERNANDINA HARBOR NASSAU COUNTY, FLORIDA

#### I. Project Description

a. Location. The proposed work will be performed at Fernandina Harbor, Nassau County, Florida.

b. General Description. The proposed plan calls for the maintenance dredging of the Fernandina Harbor entrance channel, inner channel, and turning basin. Depending on composition, dredged material will be taken either to the Fernandina ODMDS, the Nearshore Disposal Area, the North or South Beach Disposal Areas.

c. Authority and Purpose. Maintenance dredging of Fernandina Harbor is authorized under Section 107 of the River and Harbor Act of 1960, as amended. Under the terms of a Memorandum of Understanding between the U.S. Department of the Navy and the state of Florida, dredged material from the Fernandina entrance channel will be placed (by the Corps) at designated beach disposal sites, the ODMDS, or the Nearshore Disposal Area. Disposal of dredged material within the Fernandina ODMDS is authorized under the Marine Protection, Research, and Sanctuaries Act, the Water Resources Development Act of 1992, and a Memorandum of Agreement between the U.S. Environmental Protection Agency and the Corps. The purpose of the project is to maintain safe navigation conditions.

d. General Description of Dredged or Fill Material.

(1) General Characteristics of Material. The physical structure of the sediments from the inner channel indicates that the composition is primarily silt and clay. Physical analysis of sediments from the entrance channel indicates the presence of beach quality sand, less than 10% fines, from the inner channel junction to station 220. Beyond station 220, the sediments contain a significant percentage of silt.

(2) Quantity of Material. Approximately 300,000 cubic yards of sand and silt will be removed from the harbor's entrance channel on an annual basis. An

estimated 300,000 cubic yards of additional material will be removed from the inner channel and turning basin about every 5 years.

(3) Source of Material. The entrance channel will be dredged to a depth of 49-feet plus 2-feet allowable overdepth (total of 51-feet). It's length, from the junction with the Inner channel to station 270, is 27,000 feet. The inner channel, will be dredged to a depth of 36-feet and the turning basin to a depth of 35-feet, both areas have a 1-foot allowable overdepth condition. Their combined length, from cut 1 up to and including part of cut 6, is 15,337 feet.

e. Description of the proposed Discharge Site.

(1) Location. The Fernandina ODMDS is located approximately 7 miles east of Amelia Island's southern terminus (center coordinates  $x = 772,792.30$ ,  $y = 194,9038.54$ ). The Nearshore Disposal Area is 10,000 feet offshore from the eastern shoreline of Amelia Island and centered some 5.5 miles south of the entrance channel. The North Beach Disposal Area begins 0.7 miles south of the entrance channel on the eastern shoreline of Amelia Island. The South Beach Disposal Area is located near the community of American Beach, also on the eastern shoreline of Amelia Island. The Fort Clinch groin field is located on the northern terminus of Amelia Island.

(2) Size. The Fernandina ODMDS is 4-square nautical miles. The Nearshore Disposal Area is approximately 3,500 acres in total size. The North and South Beach Disposal Areas are 3.6 miles and 5.2 miles in length, respectively. The Fort Clinch groin field occupies that part of the beach immediately adjacent to the fort.

(3) Type of Site. The Fernandina ODMDS and Nearshore Disposal Area are located in the open ocean and have soft, primarily sandy, bottoms. The two beach disposal areas are open, sandy beaches. The Fort Clinch groin field is a sandy shoreline on the southern side of Cumberland Sound.

(4) Type of Habitat. As stated above, see Section 2 of the Environmental Assessment for more detail.

(5) Timing and Duration of Discharge. The schedule for dredging is variable. Currently, the inner channel and turning basin are scheduled for dredging during the summer of 2000. Recently, a portion of the entrance channel has been dredged during the winter and the remainder during the summer.

f. Description of Disposal Method. Disposal could be either from a pipeline or hopper dredge. A clamshell dredge may also be used in conjunction with a

transport barge. Sand placed on the beach will be graded out with front-end loaders and bulldozers.

## II. Factual Determinations

### a. Physical Substrate Determinations.

(1) Substrate Elevation and Slope. Gentle sloped beach and littoral zone. Discharge within the ODMDS will be according to the management plan.

(2) Sediment Type. The sediment from the project channel ranges from fine to coarse sand with varying amounts of silt, clay, and shell.

(3) Dredge/Fill Material Movement. Material placed at the North Beach Disposal Area accretes and erodes, then moves generally to the south.

(4) Physical Effects on Benthos. Some benthic organisms will be buried under the disposed dredged material. Most of these organisms should be able to burrow through this material. Recolonization should occur fairly rapidly, within a year.

### b. Water Circulation, Fluctuation and Salinity Determination.

(1) Water Column Effects. Placement of fill material at any of the disposal sites will cause a temporary increase in turbidity. Because the immediate nearshore area is subject to naturally occurring elevated turbidity levels caused by the surf, increases due to the project will not be significant.

(2) Current Patterns and Circulation. Currents in the project area are both tidal and longshore. Net movement of water due to the longshore current is from the north to the south. Dredging and disposal operations will not affect the currents.

(3) Normal Water Level Fluctuations and Salinity Gradients. Tides in the project area are semi-diurnal. The mean tidal range along Amelia Island is 5.7 feet. The mean tide level is 0.3 feet NGVD. Salinity is that of the ocean. Dredging and disposal operations will not affect normal tide fluctuations or salinity.

### c. Suspended Particulate/Turbidity Determinations.

(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site. There will be a temporary increase in turbidity

levels in the project area during discharge. Turbidity will be short-term and localized and no significant adverse impacts are expected. State standards for turbidity should not be exceeded.

(2) Effects on the Chemical and Physical Properties of the Water Column.

(a) Light Penetration. Light penetration will decrease during dredging and disposal operations due to increased levels of turbidity. This effect will be temporary and will have no adverse impact on the environment.

(b) Dissolved Oxygen. Dissolved oxygen levels will not be altered by this project.

(c) Toxic Metals, Organics, and Pathogens. No toxic metals, organics, or pathogens will be disturbed or released at levels that exceed state standards.

(d) Aesthetics. Aesthetic quality will be reduced during construction activities due to turbidity.

(3) Effects on Biota.

(a) Primary Productivity and Photosynthesis. Impacts to primary productivity during dredging and disposal operations will be short-term and insignificant.

(b) Suspension/Filter Feeders. There will be no long-term adverse impact to suspension/filter feeders.

(c) Sight Feeders. There will be no long-term adverse impact to sight feeders.

d. Contaminant Determinations.

e. Aquatic Ecosystem and Organism Determinations.

(1) Effects on Plankton. Levels of contaminants within the dredged material should not adversely impact these organisms.

(2) Effects on Benthos. Levels of contaminants within the dredged material should not adversely impact these organisms.

(3) Effects on Nekton. Levels of contaminants within the dredged material should not adversely impact these organisms.

(4) Effects on the Aquatic Food Web. No negative effects are anticipated.

(5) Effects on Special Aquatic Sites.

(a) Hardground and Coral Reef Communities. Hardground and coral reef communities do not exist offshore of Amelia Island.

(b) Sanctuaries and Refuges. Dredging impacts to the Fort Clinch Aquatic Preserve should be minor and short-term.

(c) Wetlands. No wetlands will be impacted by this project.

(d) Mud Flats. No mud flats will be impacted by this project.

(e) Vegetated Shallows. No vegetated shallows will be impacted by this project.

(f) Riffle and Pool Complexes. No riffle and pool complexes will be impacted by this project.

(6) Endangered and Threatened Species. The project may impact the manatee and sea turtles. Therefore, standard protective measures will be implemented. See Sections 3 and 4 of the Environmental Assessment.

(7) Other Wildlife. Impacts to other species of wildlife should be minor and short term.

(8) Actions to Minimize Impacts. See Section 4 of the Environmental Assessment.

f. Proposed Disposal Site Determinations.

(1) Mixing Zone Determination. During the disposal operations, there will be temporary elevated levels of turbidity in the surrounding waters.

(2) Determination of Compliance with Applicable Water Quality Standards. The work will be conducted in accordance with the state of Florida Water Quality Certification issued for this project.

(3) Potential Effects on Human Use Characteristics.

(a) Municipal and Private Water Supplies. No effects are anticipated.

(b) Recreational and Commercial Fisheries. Impacts caused by dredging and disposal activities will be minor and short-term.

(c) Water Related Recreation. Construction activities will temporarily disrupt recreational opportunities. Dredging will maintain the navigational capacity of the project channel for recreational boaters. Placement of dredged material on the beach will preserve and enhance recreational beach activities.

(d) Aesthetics. Construction will temporarily adversely impact the aesthetics of the area. Placement of dredged sand on the beach will compensate for losses caused by erosion and improve the aesthetics of the beach environment.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. Construction activities will temporarily impact the Fort Clinch Aquatic Preserve. These impacts are anticipated to be minor.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. Cumulative effects that will adversely impact the aquatic ecosystem as a result of dredging and disposal activities are not anticipated.

h. Determination of Secondary Effects on the Aquatic Ecosystem. Secondary effects that will adversely impact the aquatic ecosystem as a result of dredging and disposal activities are not anticipated.

III. Findings of Compliance or Non-compliance with the Restrictions on Discharge.

a. No significant adaptations of the guidelines were made relative to this evaluation.

b. No practicable alternative exists which meets the study objectives that does not involve discharge of fill into waters of the United States.

c. After consideration of disposal site dilution and dispersion, the discharge of fill materials will not cause or contribute to, violations of any

applicable state water quality standards for Class III waters. The discharge operation will not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.

d. The maintenance dredging of Fernandina Harbor will not jeopardize the continued existence of any species listed as threatened or endangered or result in the likelihood of destruction or adverse modification of any critical habitat as specified by the Endangered Species Act of 1973, as amended.

e. The placement of fill material will not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life stages of aquatic species and other wildlife will not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values will not occur.

f. On the basis of the guidelines, the proposed disposal site for the discharge of dredged material is specified as complying with the requirements of these guidelines.



## **APPENDIX B - COASTAL ZONE MANAGEMENT CONSISTENCY**



**FLORIDA COASTAL ZONE MANAGEMENT PROGRAM  
FEDERAL CONSISTENCY EVALUATION PROCEDURES**

**MAINTENANCE DREDGING  
FERNANDINA HARBOR  
NASSAU COUNTY, FLORIDA**

1. Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

Response: The proposed plans and information will be submitted to the state in compliance with this chapter.

2. Chapters 163(part II), 186, and 187, County, Municipal, State and Regional Planning. These chapters establish the Local Comprehensive Plans, the Strategic Regional Policy Plans, and the State Comprehensive Plan (SCP). The SCP sets goals that articulate a strategic vision of the state's future. It's purpose is to define in a broad sense, goals, and policies that provide decision-makers directions for the future and provide long-range guidance for an orderly social, economic and physical growth.

Response: The proposed project has been coordinated with various federal, state and local agencies during the planning process. The project meets the primary goal of the State Comprehensive Plan through preservation and protection of the shorefront development and infrastructure.

3. Chapter 252, Disaster Preparation, Response and Mitigation. This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The proposed project involves the dredging Fernandina Harbor in order to maintain safe navigation conditions. It also involves the placing of beach compatible material onto an eroding beach as a protective means for residents, development and infrastructure located along the Atlantic shoreline within Nassau County. Therefore, this project would be consistent with the efforts of Division of Emergency Management.

4. Chapter 253, State Lands. This chapter governs the management of submerged state lands and resources within state lands. This includes archeological and historical resources; water resources; fish and wildlife resources;

beaches and dunes; submerged grass beds and other benthic communities; swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: Maintenance dredging of Fernandina Harbor has been performed on multiple occasions in the past. Project activities have complied with state regulations pertaining to the above resources. The proposed project would comply with the intent of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition. This chapter authorizes the state to acquire land to protect environmentally sensitive areas.

Response: Since the affected property already is in public ownership, this chapter does not apply.

6. Chapter 258, State Parks and Aquatic Preserves. This chapter authorizes the state to manage state parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: The proposed project will affect the Fort Clinch Aquatic Preserve. Project related activities have been fully coordinated with the state. The project is consistent with this chapter.

7. Chapter 267, Historic Preservation. This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: This project has been coordinated with the State Historic Preservation Officer (SHPO). Survey results indicated the presence of four historical properties near, but outside, the project channel. An appropriate buffer zone around these objects is being considered. The project will be consistent with the goals of this chapter.

8. Chapter 288, Economic Development and Tourism. This chapter directs the State to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: The maintenance dredging of the Fernandina Harbor encourages economic growth of the area. Also, the proposed beach nourishment would provide more space for recreation and the protection of recreational facilities along the receiving beach. This would be compatible with tourism for this area and therefore, is consistent with the goals of this chapter.

9. Chapters 334 and 339, Transportation. This chapter authorizes the planning and development of a safe balanced and efficient transportation system.

Response: The maintenance dredging of Fernandina Harbor promotes navigation within the harbor and the Intracoastal Waterway.

10. Chapter 370, Saltwater Living Resources. This chapter directs the state to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in state waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the state engaged in the taking of such resources within or without state waters; to issue licenses for the taking and processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: Dredging activities should not adversely impact saltwater living resources. The placement of sand on the beach will create a larger more suitable area for nesting sea turtles. The proposed beach fill may represent a temporary short-term impact to invertebrates by burying these organisms. However, these organisms are highly adapted to the periodic burial by sand in the intertidal zone. These organisms are highly fecund and are expected to return to pre-construction levels within 6 months to one year after construction. Based on the overall impacts of the project, the project is consistent with the goals of this chapter.

11. Chapter 372, Living Land and Freshwater Resources. This chapter establishes the Game and Freshwater Fish Commission and directs it to manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions which provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: The project will have no effect on freshwater aquatic life or wild animal life. Therefore, the work would comply with the goals of this chapter.

12. Chapter 373, Water Resources. This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: This project does not involve water resources as described by this chapter.

13. Chapter 376, Pollutant Spill Prevention and Control. This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

Response: The contract specifications will prohibit the contractor from dumping oil, fuel, or hazardous wastes in the work area and will require that the contractor adopt safe and sanitary measures for the disposal of solid wastes. A spill prevention plan will be required.

14. Chapter 377, Oil and Gas Exploration and Production. This chapter authorizes the regulation of all phases of exploration, drilling, and production of oil, gas, and other petroleum products.

Response: This project does not involve the exploration, drilling or production of gas, oil or petroleum product and therefore, this chapter does not apply.

15. Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development. This chapter also deals with the Area of Critical State Concern program and the Coastal Infrastructure Policy.

Response: The proposed dredging of Fernandina Harbor has been coordinated with the local regional planning commission. Therefore, the project is consistent with the goals of this chapter.

16. Chapters 381 (selected subsections on on-site sewage treatment and disposal systems) and 388 (Mosquito/Arthropod Control). Chapter 388 provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the State.

Response: The project will not increase the potential propagation of mosquitoes or other pest arthropods.

17. Chapter 403, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the state by the Florida Department of Environmental Regulation (now a part of the Florida Department of Environmental Protection).

Response: Environmental protection measures will be implemented to ensure that no lasting adverse effects on water quality, air quality, or other environmental resources will occur. Water Quality Certification will be sought from the state prior to construction. The project complies with the intent of this chapter.

18. Chapter 582, Soil and Water Conservation. This chapter establishes policy for the conservation of the state soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute

to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by the project. Particular attention will be given to projects on or near agricultural lands.

Response: The proposed project is not located near or on agricultural lands; therefore, this chapter does not apply.

