

APPENDIX D

SECTION 404(B)(1) EVALUATION

**GULF INTRACOASTAL WATERWAY (GIWW)
CUTS M-4, M-5, M-7, M-8, M-9, M-12, M-13, AND
M-14, & LONGBOAT PASS CUTS 2 AND 3**

MANATEE COUNTY, FLORIDA



U.S. Army Corps of Engineers
JACKSONVILLE DISTRICT

I. Project Description

1. Location

The portion of the Gulf Intracoastal Waterway (GIWW) in Florida maintained by the U.S. Army Corps of Engineers, Jacksonville District (Corps) extends from the Caloosahatchee River to Anclote River, a distance of 160 miles. The GIWW traverses Lee, Charlotte, Sarasota, Manatee, and Pinellas Counties. The GIWW also exists in the Panhandle of Florida, however, this portion is maintained by the Mobile District Corps. Manatee County is located on Florida's Gulf Coast along the Gulf of America (formerly Gulf of Mexico) coastline. It is bordered to the north by Hillsborough County and to the south by Sarasota County, Florida. The project area lies adjacent to Longboat Key, Jewfish Key, and Anna Maria Island, just north of Sarasota Bay. Egmont Key is located just north of Anna Maria Island, outside of Tampa Harbor.

2. General Description

Federal authorization for the GIWW occurred as far back as 1890, when a 5-by-100-foot shipping channel was funded and constructed within Sarasota Bay and extending north to Tampa Bay. A modification of the Sarasota Bay project extended the channel south to Caseys Pass with a 3-by-75-foot channel in 1896. A further extension to Venice occurred in 1907. Along the coast to the north of Tampa Bay, the basis of an inland waterway from Tampa Bay to the Anclote River was formed by Boca Ciega Bay, the Narrows, and Clearwater Harbor. Congress adopted a project to improve this stretch with a 7-by-10-foot channel from Tampa Bay into Boca Ciega Bay, and a 5-by-50-foot channel on to Clearwater Harbor in 1910. Additional legislation in 1919 provided for an 8-by-100-foot channel from Boca Ciega Bay to Tampa Bay. This channel enlargement was completed in 1920.

Following these efforts, in 1939, the Board of Engineers for Rivers and Harbors recommended an intracoastal project from the Caloosahatchee River to the Anclote River at 9-by-100-feet. Delays in funding due to the war effort paused any improvements to the existing channel segments until 1945, when it received authorization. In 1947, the West Coast Inland Navigation District (WCIND) was created by the Florida legislature, and the WCIND was empowered to levy taxes in order to procure the necessary land for the channel. Continued development and infrastructure throughout this time led to modifying legislation in 1948, 1950, 1954, and 1957. It wasn't until June 1960 that dredging of the channel began, and it was completed in January 1967. Subsequent maintenance dredging efforts for the GIWW within the project area is believed to have occurred since the 1960s, but this is unverified.

3. Authority and Purpose

The Gulf Intracoastal Waterway (GIWW) from the Caloosahatchee River to the Anclote River (CR to AR) was authorized and funded by Section 107 of the Rivers

and Harbors Act of 1960, as amended. This was preceded by authorization from Chapter 19 of the River and Harbors Act of 1945 (PL-79-14) in accordance with House Document Number 371, 76th Congress. Congressional authorization directed the U.S. Army Corps of Engineers (Corps) to construct and maintain the GIWW channel to a depth of nine (9) feet plus two (2) feet of allowable over depth at Mean Lower Low Water (MLLW).

The authorized purpose of the project is to provide safe and efficient vessel navigation within the federal GIWW channel. The current proposed actions are driven by the accumulation of sediment, commonly referred to as shoaling. Shoaling has reduced depths within the channel, thus hindering safe and efficient navigation. The National Environmental Policy Act (NEPA) Supplemental Environmental Assessment (SEA) analysis will evaluate maintenance dredging of GIWW Cuts M-4, M-5, M-12, M-13, M-14, and Longboat Pass Cuts 2 and 3 within Manatee County, Florida and identify locations for placement of dredged material.

4. Description of Dredged or Fill Material

a. General Characteristics of Material (grain size or sand, silt, clay, etc., soil type)

The materials to be dredged within the GIWW Manatee County are composed of poorly graded fine-grained sand consisting of quartz and shell fragments with an average grain size of 0.21 mm. The average percentage of fines passing the #230 sieve is 3.20 %. Material retained in the #4 sieve averages 1.57%.

b. Quantity of Material (cubic yards)

Approximately 120,000 cubic yards of material would be removed from the channel as needed.

c. Source of Material

The source of the material would be obtained from the GIWW channel in Manatee County.

5. Description of the Proposed Discharge Site(s)

a. Location (map)



Figure 1. GIWW Cuts M-4, M-5, M-12, M-13, and M-14, and Longboat Pass Cuts 2 and 3 in relation to the nearshore and dredge hole placement sites in relation to Bradenton Beach, Anna Maria Island, and Egmont Key.

b. Size (acres)

Dredge Hole: 7.5 Acres; Egmont Key Nearshore 170-230 Acres

c. Type of Site (confined, unconfined, open water)

The nearshore placement sites are all unconfined and the dredge hole is considered open water.

d. Depth of Water

Nearshore placement occurs in waters between 5 and 13 feet, while the dredge hole is between 11 and 14 feet deep with an average of 12 feet deep.

e. Current velocity, direction, and variability

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

f. Degree of Turbulence

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

g. Stratification attributable to causes such as obstructions, salinity or density profiles

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

h. Type(s) of Habitat

Seagrass is expected within the project area. Turbidity control measure will be utilized to prevent impacts to this resource.

i. Timing and Duration of Discharge

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

Timing is undetermined and duration is expected to be approximately XX months. Dredged material placement could occur year-round.

j. Rate of Discharge

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

k. Number of discharge actions per unit of time

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

l. Ambient concentration of constituents of interest

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

m. Discharge vessel speed and direction, if appropriate

No effect. Turbidity may incur temporary impacts that will dissipate. Monitoring will occur to regulate these temporary impacts.

6. Description of Disposal Method (hydraulic, drag line, etc.)

As the Corps does not dictate contractor methods to perform the required dredging and placement, the Corps has evaluated a wide range of potential hydraulic or mechanical dredge techniques, equipment, and associated characteristics as describe in the Corps' Engineer Manual (EM) 1110-2-5025, Engineering and Design – Dredging and Dredged Material Management, 31 July 2015. Potential options for placement in the Egmont Key nearshore areas include, but are not limited to, the use of hopper dredges to bottom dump material into the placement areas. Potential options for placement in the dredge hole include, but are not limited to, the use of cutter suction dredges to pump material to the dredge hole, or the use of a mechanical dredges to load scows that bring material to the dredge hole. In addition to these methods, the use of a drag bar may also be employed to smooth down high spots and fill low spots.

II. Factual Determinations

1. Physical Substrate Determinations

Determine the nature and degree of effect that the proposed discharge will have, individually and cumulatively, on the characteristics of the substrate at the proposed disposal site. Considering the effects on:

a. Substrate Elevation, Contours and Slope

The project channels have sloped bottoms with authorized depths (see Section 1.1 for more information). Actual depths vary due to shoaling and local hydrodynamic processes.

b. Sediment Type.

Unconsolidated with sand, silt, and shell.

c. Dredged/Fill Material Movement

Material will be piped or bottom-dumped into the nearshore or dredge hole for placement.

d. Physical Effects on Benthos (burial, changes in sediment type, etc.)

Benthic organisms will be temporarily displaced by dredging and placement operations. These organisms are expected to recolonize following cessation of dredging and placement.

e. Other Effects

N/A

f. Actions Taken to Minimize Impacts

Placement in the nearshore of Egmont Key has been used previously for this project and others in the area. The dredge hole site has been identified by the NFS as a mitigation site that they have permitted through the Corps regulatory process. Substrate of material at disposal sites are similar to that of the dredged material to be placed.

2. Water Circulation, Fluctuation, and Salinity Determinations

Determine the nature and degree of effect that the proposed discharge will have individually and cumulatively on water, current patterns, circulation including downstream flows, and normal water fluctuation.

a. Water (Refer to sections [230.11\(b\)](#), [230.22, Water](#), and [230.25, Salinity Gradients](#); test specified in [Subpart G](#) may be required). Consider effects on:

- i. Salinity
- ii. Water Chemistry (pH, etc.)
- iii. Clarity
- iv. Color
- v. Odor
- vi. Taste
- vii. Dissolved Gas Levels
- viii. Nutrients
- ix. Eutrophication

- x. Temperature
- xi. Other Characteristics as Appropriate
- b. Current Patterns and Circulation (*Consider items in sections [230.11\(b\)](#), and [230.23](#)*)
 - i. Current Patterns and Flow (including diversions and obstructions)
 - ii. Water Circulation
 - iii. Velocity
 - iv. Stratification
 - v. Alteration of Bottom Contours
 - vi. Other Hydrologic Regime Changes
- c. Normal Water Level Fluctuations (tides, river stage, etc.) (*Consider items in sections [230.11\(b\)](#) and [230.24](#)*)
- d. Salinity Gradients (*Consider items in sections [230.11\(b\)](#) and [230.25](#)*)
- e. Actions That Will Be Taken to Minimize Impacts (*Refer to [Subpart H](#)*)

3. Suspended Particulate/Turbidity Determinations

Determine the nature and degree of effect that the proposed discharge will have, individually and cumulatively, in terms of potential changes in the kinds and concentrations of suspended particulate/turbidity in the vicinity of the disposal site.

- a. Expected Changes in Suspended Particulates and Turbidity Levels in Vicinity of Disposal Site (*Consider items in sections [230.11\(c\)](#) and [230.21](#). List below is not all inclusive.*)
 - i. Grain Size of the Material Proposed for Discharge
 - ii. Shape and Size of the Plume of Suspended Particulates
 - iii. Duration of the Discharge and Resulting Plume
 - iv. Potential Changes That May Cause Violations of Applicable Water Quality Standards
- b. Effects (degree and duration) on Chemical and Physical Properties of the Water Column (*Consider environmental values in section [230.21](#), as appropriate*)

- i. Light Penetration
- ii. Dissolved Oxygen
- iii. Toxic Metals and Organics
- iv. Pathogens and Viruses
- v. Aesthetics
- vi. Others as Appropriate

c. Effects on Biota (*Consider environmental values in sections [230.21](#), as appropriate*)

- i. Primary Production, Photosynthesis
- ii. Suspension/Filter Feeders
- iii. Sight Feeders

d. Actions taken to Minimize Impacts ([Subpart H](#))

4. Contaminant Determinations

Determine the degree to which the material proposed for discharge will introduce, relocate, or increase contaminants. This determination shall consider the material to be discharged, the aquatic environment at the proposed disposal site, and the availability of contaminants.

No contaminants are expected to be introduced, relocated, or increased by the dredging and placement operations.

5. Aquatic Ecosystem and Organism Determinations

Determine the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms. Consideration shall be given to the effect at the proposed disposal site of potential changes in substrate characteristics and elevation, water or substrate chemistry, nutrients; currents, circulation, fluctuation, and salinity, on the recolonization and existence of indigenous aquatic organisms or communities.

a. Effects on the aquatic food web

Benthic organisms will be temporarily displaced by dredging and placement operations. These organisms are expected to recolonize following cessation of

dredging and placement. The Corps does not anticipate additional significant impacts on the aquatic food web.

b. Effects on Special Aquatic Sites (*Discuss only those found in project area or disposal site*)

i. Sanctuaries and Refuges (*Refer to section [230.40](#)*)

ii. Wetlands (*Refer to section [230.41](#)*)

iii. Mud Flats (*Refer to section [230.42](#)*)

iv. Vegetated Shallows (*Refer to section [230.43](#)*)

v. Coral Reefs (*Refer to Section [230.44](#)*)

vi. Riffle and Pool Complexes (*Refer to section [230.45](#)*)

vii. Threatened and Endangered Species

Temporary, minor adverse impacts are expected to occur from dredging and placement. These impacts will be avoided and minimized through implementation of appropriate terms and conditions of the SPBO, P3BO, informal consultation with USFWS, and GRBO. The project will also adhere to the standard manatee conditions for in-water work. See section 4.1 of the SEA for more information.

c. Effects on Other Wildlife

See the 2011 EA for more information, which is incorporated by reference into the 2026 SEA. Risk to other wildlife species will be avoided and minimized through implementation of the appropriate terms and conditions of the SPBO, P3BO, informal consultation, and GRBO, which are expected to provide protections to non-listed species as well.

d. Actions to Minimize Impacts (*Refer to [Subpart H](#)*)

Mitigation of environmental impacts would be addressed in terms of avoidance, minimization, and other actions, such as best management practices, that reduce or offset the negative environmental impacts. Compensatory mitigation will be completed to address impacts from the implementation of the proposed action.

6. Proposed Disposal Site Determinations

a. Mixing Zone Determination (*Consider factors in section 230.11(f)*)

b. Determination of Compliance with Applicable Water Quality Standards *(Present the standards and rationale for compliance or non-compliance with each standard)*

c. Potential Effects on Human Use Characteristics

i. Municipal and Private Water Supply *(Refer to section [230.50](#))*

ii. Recreational and Commercial Fisheries *(Refer to section [230.51](#))*

iii. Water Related Recreation *(Refer to section [230.52](#))*

iv. Aesthetics *(Refer to section [230.53](#))*

v. Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves *(Refer to section [230.54](#))*

7. Determination of Cumulative Effects on the Aquatic Ecosystem *(Consider requirements in section [230.11\(g\)](#))*

8. Determination of Secondary Effects on the Aquatic Ecosystem *(Consider requirements in section [230.11\(h\)](#))*

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

The Findings and Compliance or Non-Compliance with Restriction on the Discharge should be a narrative and cover the items listed in Section III of the outline. The data presented in the Factual Determination (Section II of the outline) should be compared to the restrictions on the discharge in paragraph [230.10](#), and a determination should be made as to whether the discharge will or will not be in compliance. Do not repeat data given in the Factual Determination in the Finding of Compliance. The determinations in this section need to be supported by the information entered in the Factual Determinations.

1. Include a brief explanation of any adaptation of these Guidelines to the activity under consideration.

2. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem

a. Alternatives that must be considered: (1) activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters; (2) discharges at other locations in waters of the United States or ocean waters.

- b. Special Aquatic Sites – If the proposed placement site is a special aquatic site (as defined in Subpart E) additional analysis must be undertaken to justify why access, proximity, or siting within a special aquatic site is necessary to achieve the activity's basic purpose *or* it must be demonstrated that there are no practical alternatives that do not involve placement in a special aquatic site.

3. Compliance with Applicable State Water Quality Standards.

4. Compliance with Applicable Toxic Effluent Standard or Prohibition Under Section 307 Of the Clean Water Act.

5. Compliance with the Endangered Species Act of 1973.

6. Compliance with Specified Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972.

7. Evaluation of Extent of Degradation of the Waters of the United States to Ensure there will not be Significant Degradation, including consideration of the following:

a. Significant Adverse Effects on Human Health and Welfare

b. Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife Dependent on Aquatic Ecosystems

c. Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity and Stability

d. Significant Adverse Effects on Recreational, Aesthetic, and Economic Values

8. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

9. On the Basis of the Guidelines, the Proposed Disposal Site(s) for the Discharge of Dredged or Fill Material must be (*Select one...a, b, or c*) (Refer to Section 230.12)

a. Specified as complying with the requirements of these guidelines; or,

b. Specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical discharge conditions to minimize pollution or adverse effects to the affected aquatic ecosystem(s); or,

c. Specified as failing to comply with the requirements of these guidelines where:

- i. There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as

such alternative does not have other significant adverse environmental consequences; or

- ii. The proposed discharge will result in significant degradation of the aquatic ecosystem under § 230.10(b) or (c); or
- iii. The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; or
- iv. There does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines.