Freeport Harbor Channel Improvement Project, Brazoria County, Texas
Draft Integrated General Reevaluation Report and Environmental Assessment

Draft Appendix G

Texas Coastal Management Program Consistency Determination

March 2017

INTRODUCTION

This General Conformity Determination is being prepared to coordinate proposed changes to the Freeport Harbor Channel Improvement Project (FHCIP), which are described in the 2017 Draft Integrated General Reevaluation Report-Environmental Assessment (DIGRR-EA). The Freeport Harbor Channel is an existing deep-draft navigation project located immediately south of the City of Freeport, Texas, in Brazoria County. Construction of the existing project was completed in 1993, providing a deep draft channel at 46 feet deep mean lower low water (MLLW). In 2012, the 2012 *Freeport Harbor Channel Improvement Project Final Feasibility Report and Environmental Impact Statement* (2012 Feasibility Report) proposed deepening and selective widening of the existing project to 51 feet MLLW. This project was authorized for construction in Section 7002 of the Water Resources Reform and Development Act (WRRDA) of 2014 (WRRDA 2014 Project). Construction of the authorized project has not yet begun.

The study purpose of the DIGRR-EA is to determine what modifications to the WRRDA 2014 Project are necessary to facilitate the safe and efficient navigation of Panamax vessels around a large bend in the inner harbor (called the Dow Thumb) and to the Velasco Container Terminal at the existing channel depth of 46 feet MLLW (Figure 1).

Figure 1: Project Area at Dow Thumb

The Tentatively Selected Plan (TSP) consists of construction of the following features in Reach 2 at the existing depth of 46 feet MLLW (Figure 2):

- Channel widening from approximately 275 feet to 400 feet from approximately Station 142+27 to Station 185+25 on the east side of the channel at the Dow Thumb;
- Dredging a new bend easing on the west side of the channel at the wave barrier from Sta. 147+00 to Sta. 160+00; and
- Dredging a new turning notch to expand the west side of the Upper Turning Basin (Sta. 175+00 to 182+00).

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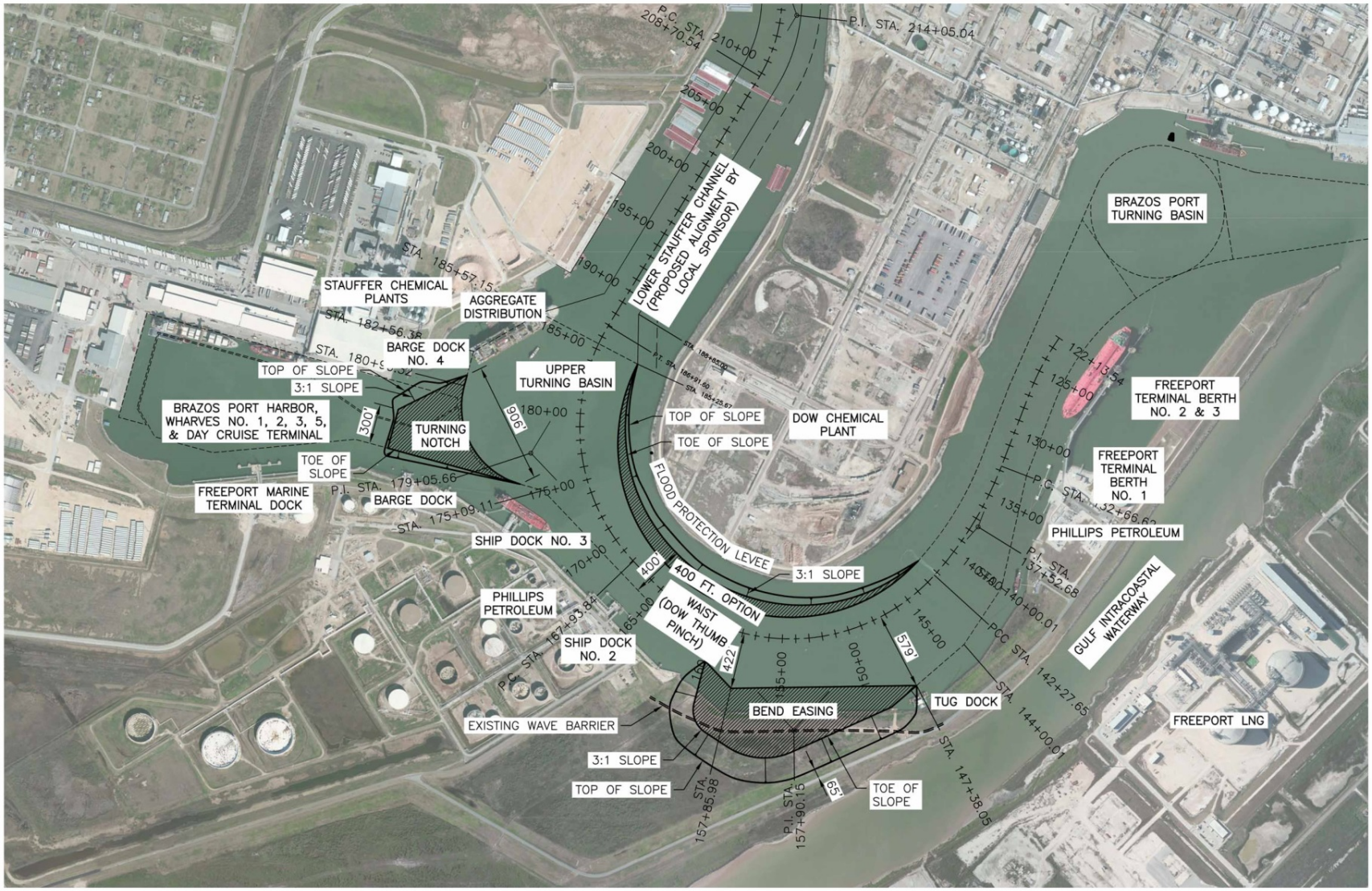

Figure 2: Construction Project Area

Prior to channel widening from Sta. 142+27 to Sta. 185+25, an approximately 3,110-foot long stability wall would be constructed to reinforce the Freeport Hurricane Flood Protection Project (HFPP) levee prior to the removal of a submerged bench by channel widening. It would be constructed on the outside levee slope, between the levee and eastern Old Brazos River river bank. This wall would provide stability for the HFPP levee, replacing stability currently provided by the submerged bench. In addition, a portion of the HFPP wave barrier, located in the area to be removed by bend easing from Sta. 147+00 to Sta. 160+00, would need to be removed and a portion of the Old Quintana Highway designated to replace it. It is currently anticipated that no modifications to the highway would be needed to make this designation.

Construction of the TSP is anticipated to reduce and/or eliminate existing operational constraints inherent to the existing channel. The channel widening at the Dow Thumb and the notch would impact about 9.9 acres and 8.3 acres of submerged bottom, respectively. All of this dredging would occur entirely within the banks of the existing channel, taking place only at the base of the channel. Construction of the bend easing would affect about 7.5 acres of submerged bottom and 16.4 acres of emergent land. The emergent area has been disturbed by construction of the wave barrier, and is impounded by the wave barrier, Old Quintana Road and upland development. It is comprised primarily of the wave barrier and slope, and vegetated with Bermuda grass and other common grasses. No wetlands or submerged aquatic vegetation are present in the affected area. All dredged material for new work is designated for placement at existing Placement Area (PA) 1 by transfer through hydraulic cutterhead pipeline. All maintenance dredged material is designated for placement at the maintenance ocean dredged material disposal site (ODMDS) by hopper dredge. The non-Federal Sponsor of the proposed project is Port Freeport. Plan details are provided in the Draft Integrated General Reevaluation Report – Environmental Assessment (DIGRR - EA) Appendix B.

COMPLIANCE WITH GOALS AND POLICIES

The following goals and policies of the Texas Coastal Management Program (TCMP) were reviewed for compliance:

§ 501.25 Policies for Dredging and Dredged Material and Placement
(a) Dredging and the disposal and placement of dredged material shall avoid and otherwise minimize adverse effects to coastal waters, submerged lands, critical areas, coastal shore areas, and Gulf beaches to the greatest extent practicable. The policies of this section are supplemental to any further restrictions or requirements relating to the beach access and use rights of the public. In implementing this section, cumulative and secondary adverse effects of dredging and the

disposal and placement of dredged material and the unique characteristics of affected sites shall be considered.

(1) Dredging and dredged material disposal and placement shall not cause or contribute, after consideration of dilution and dispersion, to violation of any applicable surface water quality standards established under §501.21 of this title.

Compliance: In its review of the 2012 FEIS which encompassed the project area, TCEQ concurred that there is reasonable certainty that the FHCIP would not violate water quality standards, and provided water quality certification for the Preferred Alternative of the FHCIP.

Coring and testing of sediments from the submerged bench at Dow Thumb waist where the widening would occur were conducted in April of 2016 (Terracon, 2016; Montgomery and Bourne, 2017). The testing included the collection of sediment, water and modified elutriate samples within the submerged bench on the east side of the channel at the "Waist" of the Dow Thumb. No significant contaminants were identified by the analysis.

The USACE conducted monitoring of the ocean placement of construction material from dredging of the Outer Bar and Jetty channels for the 45-foot Project (USACE, 1978). No unacceptable water quality impacts were found. According to the 2012 FEIS, no water column, sediment, or benthos problems were noted during the monitoring. There was also monitoring of the water column before, during, and after dredging and placement in the New Work ODMDS in the early 1990s (EH&A, 1994). No causes for concern for the water column were found upon placement of this material in the New Work ODMDS.

Because no concerns for water quality impacts during dredging for construction or placement of dredge material are anticipated this project would not violate any standards established under §501.21.

(2) *Except as otherwise provided in paragraph (4) of this subsection, adverse effects on critical areas from dredging and dredged material disposal or placement shall be avoided and otherwise minimized, and appropriate and practicable compensatory mitigation shall be required, in accordance with §501.23 of this title.*

Compliance: The project would not impact any critical areas.

(3) *Except as provided in paragraph (4) of this subsection, dredging and the disposal and placement of dredged material shall not be authorized if:*

(A) *there is a practicable alternative that would have fewer adverse effects on coastal waters, submerged lands, critical areas, coastal shore areas, and Gulf beaches, so long as that alternative does not have other significant adverse effects;*
(B) *all appropriate and practicable steps have not been taken to minimize adverse effects on coastal waters, submerged lands, critical areas, coastal shore areas, and Gulf beaches; or*
(C) *significant degradation of critical areas under §501.23(a)(7)(E) of this title would result.*

Compliance: There is no practicable alternative that would have fewer adverse effects on coastal waters and submerged areas. The preferred alternative was chosen out of several alternatives looking at different channel widths to meet the need and purpose. Two of those alternatives – widening to 400 feet and widening to 425 feet met the need and purpose. However the 400-foot wide alternative was chosen because it provides needed improvements to navigation while resulting in fewer impacts to coastal waters than the 425-foot alternative, minimizing adverse effects on coastal waters, and avoiding significant degradation of critical areas. The TSP would have no effect on critical areas, coastal shore areas, or Gulf beaches. All appropriate and practicable steps have been taken to minimize adverse effects on these coastal resources.

(4) *A dredging or dredged material disposal or placement project that would be prohibited solely by application of paragraph (3) of this subsection may be allowed if it is determined to be of overriding importance to the public and national interest in light of economic impacts on navigation and maintenance of commercially navigable waterways.*

Compliance: Dredging and placement is not precluded by paragraph (3) as noted above

(b) *Adverse effects from dredging and dredged material disposal and placement shall be minimized as required in subsection (a) of this section. Adverse effects can be minimized by employing the techniques in this subsection where appropriate and practicable.*

(1) *Adverse effects from dredging and dredged material disposal and placement can be minimized by controlling the location and dimensions of the activity. Some of the ways to accomplish this include:*
(A) *locating and confining discharges to minimize smothering of organisms;*
(B) *locating and designing projects to avoid adverse disruption of water inundation patterns, water circulation, erosion and accretion processes, and other hydrodynamic processes;*
(C) *using existing or natural channels and basins instead of dredging new channels or basins, and discharging materials in areas that have been previously disturbed or used for disposal or placement of dredged material;*
(D) *limiting the dimensions of channels, basins, and disposal and placement sites to the minimum reasonably required to serve the project purpose, including allowing for reasonable overdredging*

of channels and basins, and taking into account the need for capacity to accommodate future expansion without causing additional adverse effects;
(E) *discharging materials at sites where the substrate is composed of material similar to that being discharged;*
(F) *locating and designing discharges to minimize the extent of any plume and otherwise control dispersion of material; and*
(G) *avoiding the impoundment or drainage of critical areas.*

Compliance: The project would place dredge material from construction into existing upland placement area (PA) 1 and maintenance material would be placed into the existing maintenance offshore dredge material disposal site (ODMDS). These placement areas have been sized to the minimum reasonably required to achieve the project purpose. Utilizing an upland placement area and an existing ODMDS will reduce the chance of smothering organisms and avoid adverse disruption of hydrodynamic processes. The TSP was chosen because it limits the dimensions of the channel to the minimum required to allow Panamax sized vessels to navigate the channel. No impoundment or draining of critical areas would occur.

(2) *Dredging and disposal and placement of material to be dredged shall comply with applicable standards for sediment toxicity. Adverse effects from constituents contained in materials discharged can be minimized by treatment of or limitations on the material itself. Some ways to accomplish this include:*
(A) *disposal or placement of dredged material in a manner that maintains physiochemical conditions at discharge sites and limits or reduces the potency and availability of pollutants;*
(B) *limiting the solid, liquid, and gaseous components of material discharged;*
(C) *adding treatment substances to the discharged material; and*
(D) *adding chemical flocculants to enhance the deposition of suspended particulates in confined disposal areas.*

Compliance: Hazardous, toxic and radioactive waste assessments recently conducted for the study area have found no cause for concern with dredging to construct the TSP or placement of the dredged material . According to a review of regulatory database findings conducted for the WRRDA 2014 authorized project (USACE, 2012) and the 2015 Sabine Pass to Galveston Bay feasibility study (USACE, 2015), there are no concerns with sediment quality in the project area or with the placement of sediments within PA 1 and the maintenance ODMDS. In addition, coring and testing of sediments from the submerged bench at Dow Thumb waist where the widening would occur were conducted in April of 2016 (Terracon, 2016;). The testing included the collection of sediment, water and modified elutriate samples within the dredge prism at the “Waist” of the Dow Thumb. No significant contaminants were identified during the analysis (Montgomery and Bourne, 2017). Therefore it is unlikely that the material discharged from

construction dredging would contain toxic materials.

(3) *Adverse effects from dredging and dredged material disposal or placement can be minimized through control of the materials discharged. Some ways of accomplishing this include:*
(A) use of containment levees and sediment basins designed, constructed, and maintained to resist breaches, erosion, slumping, or leaching;
(B) use of lined containment areas to reduce leaching where leaching of chemical constituents from the material is expected to be a problem;
(C) capping in-place contaminated material or, selectively discharging the most contaminated material first and then capping it with the remaining material;
(D) properly containing discharged material and maintaining discharge sites to prevent point and nonpoint pollution; and
(E) timing the discharge to minimize adverse effects from unusually high water flows, wind, wave, and tidal actions.

Compliance: New work dredged material would be pumped from a hydraulic cutterhead dredge through a combination of fully submerged and floating hydraulic pipelines into existing upland confined PA 1. Maintenance dredged material would be placed by hopper dredge into the unconfined Maintenance ODMDS. Additionally, the timing of pumping/placement would be planned in a manner to reduce or avoid adverse impacts from unusually high water flows, wind, wave, and tidal actions.

(4) Adverse effects from dredging and dredged material disposal or placement can be minimized by controlling the manner in which material is dispersed. Some ways of accomplishing this include:
(A) where environmentally desirable, distributing the material in a thin layer;
(B) orienting material to minimize undesirable obstruction of the water current or circulation patterns;
(C) using silt screens or other appropriate methods to confine suspended particulates or turbidity to a small area where settling or removal can occur;
(D) using currents and circulation patterns to mix, disperse, dilute, or otherwise control the discharge;
(E) minimizing turbidity by using a diffuser system or releasing material near the bottom;
(F) selecting sites or managing discharges to confine and minimize the release of suspended particulates and turbidity and maintain light penetration for organisms; and
(G) setting limits on the amount of material to be discharged per unit of time or volume of receiving waters.

Compliance: The upland PA has containment levees to control fill movement after deposition; the release of minor amounts of suspended solids may occur during construction. The ODMDS site

is dispersive by nature, has been previously used, and will likely revert to the in situ topography prior to the next dredging event. The amount of additional maintenance material associated with the TSP is negligible.

Temporary and localized impacts to benthic organisms and coastal marine open water and associated bottom habitats would occur; however, benthic organisms are expected to recover quickly and impacts of dredged material placement are anticipated to be short term and temporary in nature. At the upland confined PA, BMPs would be used where appropriate to control erosion and runoff and contain and control dredged material movement.

(5) Adverse effects from dredging and dredged material disposal or placement operations can be minimized by adapting technology to the needs of each site. Some ways of accomplishing this include:
(A) using appropriate equipment, machinery, and operating techniques for access to sites and transport of material, including those designed to reduce damage to critical areas;
(B) having personnel on site adequately trained in avoidance and minimization techniques and requirements; and
(C) designing temporary and permanent access roads and channel spanning structures using culverts, open channels, and diversions that will pass both low and high water flows, accommodate fluctuating water levels, and maintain circulation and faunal movement.

Compliance: New work dredged material would be pumped from the dredge through a combination of fully submerged and floating hydraulic pipelines into existing upland confined PA 1. Existing control boxes and drainage canals from the PA would be utilized. No critical areas would be affected by improvements to the PA needed to contain the new work material USACE would require dredging contractors to provide appropriate levels of staff and equipment and compliance with contract requirements would be monitored. Maintenance dredged material would be placed by hopper dredge into the unconfined Maintenance ODMDS.

(6) Adverse effects on plant and animal populations from dredging and dredged material disposal or placement can be minimized by:
(A) avoiding changes in water current and circulation patterns that would interfere with the movement of animals;
(B) selecting sites or managing discharges to prevent or avoid creating habitat conducive to the development of undesirable predators or species that have a competitive edge ecologically over indigenous plants or animals;
(C) avoiding sites having unique habitat or other value, including habitat of endangered species;

(D) using planning and construction practices to institute habitat development and restoration to produce a new or modified environmental state of higher ecological value by displacement of some or all of the existing environmental characteristics;
(E) using techniques that have been demonstrated to be effective in circumstances similar to those under consideration whenever possible and, when proposed development and restoration techniques have not yet advanced to the pilot demonstration stage, initiating their use on a small scale to allow corrective action if unanticipated adverse effects occur;
(F) timing dredging and dredged material disposal or placement activities to avoid spawning or migration seasons and other biologically critical time periods; and
(G) avoiding the destruction of remnant natural sites within areas already affected by development.

Compliance: Water current and circulation patters would not be permanently impacted by the project. Dredge material would be discharged into existing PAs thereby avoiding creating habitat conducive to the development of undesirable predators and competitive species. The project area was evaluated for habitat and potential occurrence of each listed protected species. More information, including a full list of species and habitat can be found in the Biological Assessment (Appendix H). The BA was prepared to fulfill the USACE Galveston District's requirements as outlined under Section 7(c) of the ESA of 1973, as amended. The BA concludes that the associated dredging activities and dredge material placement activities of the project will have no effect on any listed protected species.

Elevated turbidities during construction and maintenance dredging may affect some aquatic organisms near the dredging activity; however, turbidities can be expected to return to near ambient conditions within a few hours after dredging ceases or moves out of a given area. Additionally, placement of material at the ODMDS would result in temporary local impacts to aquatic communities (primarily benthos) from increased sedimentation and turbidity. The maintenance ODMDS is currently used for placement of dredged material from maintenance cycles, and, therefore, continued placement of maintenance material at the site would not be expected to change current conditions. Generally, motile organisms are mobile enough to avoid highly turbid areas – under most conditions, fish and other motile organisms are only exposed to localized suspended-sediment plumes for short durations (minutes to hours) (Clarke and Wilber, 2000). No significant impacts to fishes or other pelagic fauna are anticipated from project construction or maintenance dredging.

(7) Adverse effects on human use potential from dredging and dredged material disposal or placement can be minimized by:
(A) selecting sites and following procedures to prevent or minimize any potential damage to the aesthetically pleasing features of the site, particularly with respect to water quality;

(B) selecting sites which are not valuable as natural aquatic areas;
(C) timing dredging and dredged material disposal or placement activities to avoid the seasons or periods when human recreational activity associated with the site is most important; and
(D) selecting sites that will not increase incompatible human activity or require frequent dredge or fill maintenance activity in remote fish and wildlife areas.

Compliance: The project is located within an existing channel surrounded by industrial land use. The project would not change the aesthetic resources in the area, is not in a valuable natural aquatic area, and would not increase incompatible human activity.

(8) Adverse effects from new channels and basins can be minimized by locating them at sites:
(A) that ensure adequate flushing and avoid stagnant pockets; or
(B) that will create the fewest practicable adverse effects on CNRAs from additional infrastructure such as roads, bridges, causeways, piers, docks, wharves, transmission line crossings, and ancillary channels reasonably likely to be constructed as a result of the project; or
(C) with the least practicable risk that increased vessel traffic could result in navigation hazards, spills, or other forms of contamination which could adversely affect CNRAs;
(D) provided that, for any dredging of new channels or basins subject to the requirements of §501.15 of this title (relating to Policy for Major Actions), data and information on minimization of secondary adverse effects need not be produced or evaluated to comply with this paragraph if such data and information is produced and evaluated in compliance with §501.15(b)(1) of this title.

Compliance: No new channels or basins are proposed as part of this project.

(c) Disposal or placement of dredged material in existing contained dredge disposal sites identified and actively used as described in an environmental assessment or environmental impact statement issued prior to the effective date of this chapter shall be presumed to comply with the requirements of subsection (a) of this section unless modified in design, size, use, or function.

Compliance: Compliance: New work dredged material would be placed into existing upland confined PA 1. Maintenance dredged material would be placed into the unconfined Maintenance ODMDS.

(d) *Dredged material from dredging projects in commercially navigable waterways is a potentially reusable resource and must be used beneficially in accordance with this policy.*

(1)*If the costs of the beneficial use of dredged material are reasonably comparable to the costs of disposal in a non-beneficial manner, the material shall be used beneficially.*

(2) *If the costs of the beneficial use of dredged material are significantly greater than the costs of disposal in a non-beneficial manner, the material shall be used beneficially unless it is demonstrated that the costs of using the material beneficially are not reasonably proportionate to the costs of the project and benefits that will result. Factors that shall be considered in determining whether the costs of the beneficial use are not reasonably proportionate to the benefits include, but are not limited to:*
(A) *environmental benefits, recreational benefits, flood or storm protection benefits, erosion prevention benefits, and economic development benefits;*
(B) *the proximity of the beneficial use site to the dredge site; and*
(C) *the quantity and quality of the dredged material and its suitability for beneficial use.*

(3) *Examples of the beneficial use of dredged material include, but are not limited to:*
(A) *projects designed to reduce or minimize erosion or provide shoreline protection;*
(B) *projects designed to create or enhance public beaches or recreational areas;*
(C) *projects designed to benefit the sediment budget or littoral system;*
(D) *projects designed to improve or maintain terrestrial or aquatic wildlife habitat;*
(E) *projects designed to create new terrestrial or aquatic wildlife habitat, including the construction of marshlands, coastal wetlands, or other critical areas;*
(F) *projects designed and demonstrated to benefit benthic communities or aquatic vegetation;*
(G) *projects designed to create wildlife management areas, parks, airports, or other public facilities;*
(H) *projects designed to cap landfills or other water disposal areas;*
(I) *projects designed to fill private property or upgrade agricultural land, if cost-effective public beneficial uses are not available; and (J) projects designed to remediate past adverse impacts on the coastal zone.*

(e) *If dredged material cannot be used beneficially as provided in subsection (d)(2) of this section, to avoid and otherwise minimize adverse effects as required in subsection (a) of this section, preference will be given to the greatest extent practicable to disposal in:*
(1) *contained upland sites;*
(2) *other contained sites; and*
(3) *open water areas of relatively low productivity or low biological value.*

Compliance: In accordance with existing policy and guidance, USACE has reviewed the potential for beneficial use (BU) of the limited quantity of new work material that will be generated by construction of the projects, and the additional maintenance material associated with these features. The amount of additional maintenance material associated with the project is negligible; therefore, the BU analysis presented here is focused on the limited amount of new work material

from the project features (1,730,000 cubic yards – primarily soft sandy clay). The project features would be constructed prior to the authorized deepening of the navigation channel; consequently, the analysis is limited to the quantity associated with the project features. Based on review of aerial photography, the nearest potential marsh restoration area is a small degraded marsh area in the southern Oyster Creek watershed, adjacent to the Gulf Intercostal Waterway (GIWW) and just east of the project area. The pumping distance to this area from the Bend Easing feature of the project is about 3.1 miles. The Bend Easing is the project feature closest to the BU area and contains the largest amount of new work material. It is possible that approximately 8 acres of marsh could be constructed with the available material. The pumping distance from the Bend Easing feature to PA 1 (the upland, confined placement area identified for material from this area) is about 2.3 miles. The PAs or BU areas selected in the DMMP are those which provide the needed capacity at the lowest cost per cubic yard. Based solely on pumping distance, the least-cost disposal option would be PA 1 since the closest potential BU site is about 30 percent farther than the proposed upland site (PA 1).

(f) *For new sites, dredged materials shall not be disposed of or placed directly on the boundaries of submerged lands or at such location so as to slump or migrate across the boundaries of submerged lands in the absence of an agreement between the affected public owner and the adjoining private owner or owners that defines the location of the boundary or boundaries affected by the deposition of the dredged material*.

Compliance: The placement areas for the TSP are not onnew sites nor will dredge material be placed into a new site.

(g) *Emergency dredging shall be allowed without a prior consistency determination as required in the applicable consistency rule when:*
(1) *there is an unacceptable hazard to life or navigation;*
(2) there is an immediate threat of significant loss of property; or
(3) an immediate and unforeseen significant economic hardship is likely if corrective action is not taken within a time period less than the normal time needed under standard procedures. The council secretary shall be notified at least 24 hours prior to commencement of any emergency dredging operation by the agency or entity responding to the emergency. The notice shall include a statement demonstrating the need for emergency action. Prior to initiation of the dredging operations the project sponsor or permit-issuing agency shall, if possible, make all reasonable efforts to meet with council's designated representatives to ensure consideration of and consistency with applicable policies in this subchapter. Compliance with all applicable policies in this subchapter shall be required at the earliest possible date. The permit-issuing agency and the applicant shall submit a consistency determination within 60 days after the emergency operation is complete.

Compliance: The project does not involve emergency dredging.

(h) *Mining of sand, shell, marl, gravel, and mudshell on submerged lands shall be prohibited unless there is an affirmative showing of no significant impact on erosion within the coastal zone and no significant adverse effect on coastal water quality or terrestrial and aquatic wildlife habitat within any CNRA.*

Compliance: The project does not involve any mining of sand, shell, marl, gravel, or mudshell.

(i) *The GLO and the SLB shall comply with the policies in this section when approving oil, gas, and other mineral lease plans of operation and granting surface leases, easements, and permits and adopting rules under the Texas Natural Resources Code, Chapters 32, 33, and 51 - 53, and Texas Water Code, Chapter 61, for dredging and dredged material disposal and placement. TxDOT shall comply with the policies in this subchapter when adopting rules and taking actions as local sponsor of the Gulf Intracoastal Waterway under Texas Transportation Code, Chapter 51. The TCEQ and the RRC shall comply with the policies in this section when issuing certifications and adopting rules under Texas Water Code, Chapter 26, and the Texas Natural Resources Code, Chapter 91, governing certification of compliance with surface water quality standards for federal actions and permits authorizing dredging or the discharge or placement of dredged material. The TPWD shall comply with the policies in this section when adopting rules at Chapter 57 of this title (relating to Fisheries) governing dredging and dredged material disposal and placement. The TPWD shall comply with the policies in subsection (h) of this section when adopting rules and issuing permits under Texas Parks and Wildlife Code, Chapter 86, governing the mining of sand, shell, marl, gravel, and mudshell.*

Compliance: This project does not pertain to oil, gas, and other mineral lease plans of operation and granting surface leases, easements, and permits; *section (i)* is not applicable.

IMPACTS ON COASTAL NATURAL RESOURCE AREAS

Potential impacts to Coastal Natural Resource Areas (CNRAs) listed in 31 Texas Administrative Code (TAC) §501.3, and of methods to minimize or avoid potential impacts, are discussed below.

Waters of the Open Gulf of Mexico
The ODMDS is located in the Open Gulf of Mexico; however, it is an EPA-designated placement area for maintenance material from the Freeport Harbor vicinity.

Waters Under Tidal Influence

The entire project is located in a region that experiences tidal influence. For the proposed FHCIP, dredging and placement activities represent a minimal impact because the release of suspended solids is minimized by using an upland confined PA and compliance with the required State §401 Certification.

Submerged Lands
Work conducted in the Freeport Harbor Channel for the project would affect estuarine subtidal unconsolidated river bottom. However, the river bottom is continuously disturbed by the frequent movement of deep draft vessels and maintenance dredging in the FHC; therefore, no long-term adverse effects to this wetland type are expected.

Coastal Wetlands
The use of PA1 for dredged material disposal would have no impacts on wetlands.

Submerged Aquatic Vegetation
No submerged aquatic vegetation occur in the project area.

Tidal Sand and Mud Flats
No tidal sands and mud flats occur in the project area.

Oyster Reefs
No oyster reefs occur in the project area.

Hard Substrate Reefs
No hard substrate reefs occur in the project area.

Coastal Barriers
No coastal barriers occur in the project area.

Coastal Shore Areas
No coastal shore areas occur in the project area.

Gulf Beaches
No Gulf beaches occur in the project area.

Critical Dune Areas
No critical dune areas occur in the project area.

Special Hazard Areas

The entire project area is mapped as Zone VE (coastal flood zone with wave velocity hazard) including the existing waterway. Approximately 16.4 acres of emergent land within Zone VE would be impacted for the bend easing portion of the project. However this impact would not change the floodplain designation or increase flooding in the project area.

Critical Erosion Areas

No critical erosion areas occur in the project area.

Coastal Historic Areas

No coastal historic areas (sites in the National Register of Historic Places on public land or State Archeological Landmarks that are identified by the Texas Historical Commission as being coastal in character) occur in the project area.

Coastal Preserves

No coastal preserves occur in the project area.

References:

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