

## **Appendix H**

# **Texas Coastal Zone Management Consistency Determination**

## APPENDIX H

### COMPLIANCE WITH GOALS AND POLICIES – SECTION 501.25 (a)–(f) DREDGING AND DREDGED MATERIAL DISPOSAL AND PLACEMENT PORT OF FREEPORT CHANNEL WIDENING ENVIRONMENTAL IMPACT STATEMENT

All new work material will be placed in an ODMDS and beach nourishment areas described in Section 2.4.2 of the DEIS. Maintenance material will be placed in an ODMDS. Therefore, this appendix refers only to the dredging and placement of new work material.

#### **Section 501.25 Dredging and Dredged Material Disposal 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.*

**Compliance: Dredged material will be placed on coastal shore areas as beach nourishment and in an ODMDS and may have some effects on coastal waters such as temporarily burying benthic organisms and increasing turbidity in area. However, these sites will be created only with new work material that has been tested and found not to contain harmful pollutants.**

- (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: For all sites, adequate dilution and dispersion occurs so as not to violate applicable surface water quality standards (EIS Section 3.9.2).**

- (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: No critical areas are affected by the location of the placement 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;*

**Compliance:** Placement of new work material in existing placement areas was not an available option for this project. However, the ODMDS proposed for use has been used and was designated by the EPA for placement of construction material from the 45-Foot Project. Beach nourishment placement is a practicable alternative that would have beneficial effects for the coastal shore area. See the Dredged Material Management Plan (DMMP, Appendix B) for a discussion of all placement alternatives (e.g. marsh restoration) that were evaluated.

- (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*

**Compliance:** All practicable steps have been taken to minimize adverse affects on these resources.

- (C) *significant degradation of critical areas under §501.23(a)(7)(E) of this title would result.*

**Compliance:** No critical areas are affected by the use of the placement areas; therefore, no significant degradation would result.

- (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:** For all sites, application of subparagraph (3) does not prohibit the use of the sites. Dredging is necessary to prevent economic impacts on navigation by improving the commercially navigable Freeport Harbor Jetty Channel system. Widening the channel is necessary to increase navigational safety.

- (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.*

**Compliance:** Adverse effects of dredging and disposal as described in this EIS have been minimized as described under "Compliance" for paragraph (1) of this subsection.

- (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;*

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- (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: Changes in water circulation and salinity should have minimal positive or negative impacts to fisheries. Most discharged material will be placed in an ODMDS and used for beach nourishment. No impoundment of draining or critical areas will 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: Sediments to be dredged from the Freeport Harbor Jetty Channel have been tested for a variety of chemical parameters of concern. There appear to be no significant cause for concern relative to placing these sediments in the Gulf of Mexico or using them beneficially. A summary of these results are included in the EIS.**

- (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;*

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- (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: Dredged material will be used beneficially to nourish Quintana or Surfside Beach. Material placed in an ODMDS may have some temporary impacts by increasing turbidity in area. However, only new work material will be generated from construction activities that has been tested and found not to contain harmful pollutants. Future maintenance is anticipated to equal to existing conditions.**

- (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: All of the sites minimize or avoid adverse effects to the greatest extent practicable. Material to be used as beach nourishment will be discharged directly onto the beach. Sequenced discharge points will be used to disperse the material across the ODMDS.**

- (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;*

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- (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: All sites in this project meet this requirement. Contracts will be written to ensure compliance with all standards.**

- (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: The beach nourishment site and ODMDS meet these requirements. Hopper dredging is also limited to the cooler months, where possible, when sea turtle activity and abundance is lowest. These dredges employ trawls in front of the dredge to remove sea turtles before the dredge gets to them and employs turtle observers to document any turtles that become entrained by the dragheads.**

- (7) *Adverse effects on human use potential from dredging and dredged material disposal or placement can be minimized by:*

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- (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: Placement of dredged material on the beach nourishment site may temporarily restrict use of the area by the public for recreational use. Temporary and minor adverse effects to fisheries may result from altering or removing productive fishing grounds and interfering with fishing activity in the ODMDS.**

- (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: The Freeport Harbor Channel widening constitutes new work dredging adjacent to the existing ship channel.**

- (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: No existing upland, confined placement areas are being modified with new work material.**

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- (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.*

**Compliance: All new work material from this project, which has the proper characteristics, is being used for beach nourishment/shoreline protection.**

- (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 waste 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.*

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(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: All new work material from this which has the proper characteristics, is being used for beach nourishment/shoreline protection. Material not capable of being used beneficially will be placed in an ODMDS.**

(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 new beach nourishment/shoreline protection placement area will affect submerged lands but will be of overall net environmental benefit.**