

## Appendix F

### Texas Coastal Zone Management Plan (TCMP) Compliance with Goals and Policies

APPENDIX F  
TEXAS COASTAL MANAGEMENT PROGRAM (TCMP)  
COMPLIANCE WITH GOALS AND POLICIES

INTRODUCTION

The Texas Coastal Management Program (TCMP) was submitted to NOAA for review pursuant to §306 of the Federal Coastal Zone Management Act of 1972, as amended, 16 U.S.C. 1451 et seq. The Office of Ocean and Coastal Resource Management approved the TCMP in 1996. Federal approval of the TCMP requires that Federal actions occurring within the TCMP boundary be consistent with the goals and policies of the TCMP. To show compliance, Federal agencies responsible for these actions must prepare a consistency determination and submit it to the State for review. This consistency determination, which is for the project covered by this Draft Environmental Impact Statement (DEIS), was prepared in accordance with the TCMP Final EIS, dated August 1996. Details of the project, as well as environmental impacts, are presented in Section 1 of this DEIS.

IMPACTS ON COASTAL NATURAL RESOURCE AREAS

The TCMP's regulatory program focuses on management of 16 areas of particular concern identified as coastal natural resource areas (CNRAs) that are associated with coastal resources considered valuable, vulnerable, or unique. Several of the CNRAs listed in 31 TAC §501.3 are found reasonably close to the areas discussed in this DEIS. Each CNRA near the project is briefly described, including the associated impacts, below.

Waters of the Open Gulf of Mexico

Waters of this CNRA include all those that are part of the Gulf of Mexico within the territorial limits of the State, including fishery habitat and resources, therein. There will be no impacts to this CNRA unless the possible options noted for PAs 220/221 and/or PAs 233/234 are used in the future. These options would result in placement of the maintenance material at Ocean Dredged Material Disposal Sites (ODMDSs), which would be designated by the EPA. An EIS would be required for that designation and impacts to this CNRA would be determined in that EIS. Therefore, for the purposes of this DEIS, no impacts to Waters of the Open Gulf of Mexico will occur.

Waters Under Tidal Influence

Waters under tidal influence include those waters mapped by TCEQ as such, including coastal wetlands. According to mapping provided by the Texas Coastal Coordination Council (1996), all waters near the project are considered tidally influenced. Neither of the alternatives addressed in this DEIS have more than minimal impacts on the tidal movements in the Laguna Madre, but some tidally influenced waters will be filled to build levees for confined placement areas. The DMMP alternative will impact more tidally influenced waters than will the No-Action alternative. However, the reduction in

turbidity, impacts to seagrass, and impacts to tidal flats, also included in the category of tidally influenced waters, will more than offset impacts to the water column itself.

#### Submerged Lands

Submerged lands are those lands under tidally influenced waters or under waters of the Gulf of Mexico, independent of whether they are State-owned. Reduction in impacts from the DMMP alternative to the submerged lands of most ecological importance, seagrasses (-1,307 acres) and tidal flats (-49 acres) more than offset the impacts (+115 acres) to open-bay bottom.

#### Coastal Wetlands

As noted in Section 4.4.2, there will be slightly more impacts to coastal wetlands (high salt marsh) from the DMMP alternative than from the No-Action alternative because of the increased use of confined or directed placement on the emergent parts of islands to protect seagrass and to expand islands for bird use. However, the amount of coastal wetlands in the Laguna Madre is small and much less important to the ecology of the system than in other estuaries of Texas, and this impact would not be inconsistent with the TCMP.

#### Submerged Aquatic Vegetation

The DMMP alternative would result in an overall reduction in impacts to SAV that is estimated to be 1,307 acres.

#### Tidal Flats (Sand and Mud)

The DMMP alternative would result in an overall reduction in impacts to tidal flats that is estimated to be 49 acres.

#### Oyster Reefs

No live oyster reefs exist in the Laguna Madre system, except for South Bay, which is roughly 2.5 miles south of, and on the other side of the Brownsville Ship Channel from, the southernmost PA. Neither alternative will impact oyster reefs.

#### Hard Substrate Reefs

This CNRA includes rocky outcrops and serpulid worm reefs, living and dead, found in intertidal or subtidal areas. Remnants of two types of naturally occurring hard substrate formations occur near the project vicinity: serpulid reefs and coquina rock outcrops. Serpulid reefs are located in Baffin and Alazan bays. PAs 196 through 199 are located nearest to the mouth of Baffin Bay. Coquina rock outcrops are located from Baffin Bay at Penascal Point and run for 6.2 miles south along the mainland shore. PAs 198 to 203 are located along this reach and only PA 198 is an open-bay site on the west side of the GIWW. Adverse impacts have not been documented to the rocky outcrops in the past and are not

expected to occur as a result of dredging and dredged material placement operations for either the No-Action or DMMP alternative.

### Coastal Barriers

Undeveloped areas on barrier islands, peninsulas, or other protected areas designated by FWS maps are considered coastal barrier resources. There are five coastal barrier areas that could potentially be affected by this project: Coastal Barrier Resources System unit TX-10, which goes south on Padre Island from the Nueces/Kleberg county lines to the Mansfield Channel and includes all of the PINS; TX-11, which extends from the Gulf shoreline to the Laguna Madre shoreline, east/west, and from the Mansfield Channel to PA 232, north/south; TX-11P, with the same north/south boundaries as TX-11, but which extends from the western boundary of TX-11, on the east, to the GIWW, on the west; TX-22P, a small area of South Padre Island just north of the Town of South Padre Island; and TX-2, which includes Boca Chica and South Bay, south of the project area (Figures 3-2a-c show the project vicinity features that will assist envisioning the location of these coastal barrier resource areas). Upland placement will occur only in the Land Cut and near the Arroyo Colorado, which are not in coastal barrier areas, and on many PAs in the Upper Laguna Madre, 12.5 of which are in TX-10. However, since these islands are from the original construction of the GIWW, they are not part of the coastal barrier system, even though they are included in the mapped area, any dredged material placed on these islands would enhance them.

### Coastal Shore Areas

Coastal shore areas are within 100 feet landward of the high water mark on submerged land. These resource areas function as buffers, protecting upland habitats from erosion and storm damage and adjacent marshes and waterways from water quality degradation. There would be impacts to these areas but they should be beneficial to neutral since any additional material placed on them would add to their function as buffers from damage and water quality degradation, were the latter a concern in the Laguna Madre. Any impacts to coastal shore areas are expected to be minimal.

### Gulf Beaches

Gulf beaches border the Gulf of Mexico and extend inland from the line of mean low tide to the natural line of vegetation. There should be no impacts to Gulf beaches even if the possible options noted for PAs 220/221 and/or PAs 233/234 are used in the future. These options would result in placement of the maintenance material at ODMDs, which would be designated by the EPA. Part of the designation process is the selection of ODMDs that will allow no impacts to beaches and other sensitive areas.

### Critical Dune Areas

Critical dune areas include those dunes within 1,000 feet of the mean high tide line. No critical dune areas will be impacted by either alternative for this project.

### Special Hazard Areas

Special hazard areas are areas designated by the administrator of the Federal Insurance Administration under the National Flood Insurance Act as having special flood, mudslide, and/or flood-related erosion hazards. The project is within special flood hazard areas mapped within the 100-year coastal floodplain, with velocity, and within the 100-year floodplain (FEMA, 1985). However, neither of the two alternatives for maintenance dredging of the GIWW through the Laguna Madre is likely to induce development inside the 100-year floodplain nor do either have any bearing on mudslides or flood-related erosion.

### Critical Erosion Areas

These areas are those Gulf and bay shorelines that are undergoing erosion and are designated by the Commissioner of the General Land Office under Texas Natural Resources Code, §33.601(b). The only critical erosion area in the project area is found on the Gulf shore line of the northern end of the Town of South Padre Island. Thus the project is not expected to affect any designated critical erosion areas.

### Coastal Historic Areas

This CNRA consists of sites listed or eligible for listing on the NRHP and SALs. Compliance with the TCMP regarding coastal historic areas is accomplished through procedures established by Section 106 of the National Historic Preservation Act of 1965 (NHPA), as amended. These coastal historic sites, as well as non-coastal historic sites, are discussed in Section 3.11 of this DEIS, with impacts discussed in Section 4.11. No impacts are expected.

### Coastal Preserves

This natural resource includes only State-owned lands, including wildlife management areas and parks, that are identified as coastal by TPWD. The only Coastal Preserve in the project area is in South Bay, which will not be affected by either alternative.

## COMPLIANCE WITH GOALS AND POLICIES

The following goals and policies of the TCMP were reviewed for compliance. A summary of actions designed to comply with the specific requirements is presented in Appendix F.

§501.14(h)	Development in Critical Areas
§501.14(j)	Dredging and Dredged Material Disposal and Placement
§501.15	Policy for Major Actions

## ENVIRONMENTAL BENEFITS

By emphasizing placement on dredged material islands with diffusers; the use of training and baffle levees; the use of containment levees; and the use of deeper, unvegetated areas for

unconfined open-bay placement, the DMMP alternative will reduce negative impacts to turbidity, seagrass (estimated at 1,307 acres), and tidal flats (estimated at 49 acres) and will benefit colonial waterbirds, while only increasing negative impacts to open-bay bottom by an estimated 115 acres and having no detrimental impacts on endangered and threatened species. Thus the DMMP alternative should provide significant benefits to the ecology of the Laguna Madre.

#### CONSISTENCY DETERMINATION

The project addressed in this DEIS has been reviewed for consistency with the goals and policies of the TCMP. CNRAs in the project area are identified and evaluated for potential impacts from activities associated with the project. Based on this analysis, the USACE finds that the project discussed in the EIS is consistent with the goals and policies of the TCMP to the maximum extent practicable.

The following pages provide a summary of actions designed to comply with the specific requirements of §501.14(h and j).

26 March 2003

Date

Leonard D. Waterworth

Leonard D. Waterworth  
Colonel, U.S. Army Corps of Engineers  
District Engineer

**COMPLIANCE WITH GOALS AND POLICIES - SECTION 501.14(h) and SECTION 501.14 (j)  
DREDGING AND DREDGED MATERIAL DISPOSAL AND PLACEMENT  
MAINTENANCE DREDGING OF THE LAGUNA MADRE, TEXAS  
ENVIRONMENTAL IMPACT STATEMENT**

**Section 501.(h) Development in Critical Areas**

- (1) *Dredging and construction of structures in, or the discharge of dredged or fill material into, critical areas shall comply with the policies in this subsection. In implementing this subsection, cumulative and secondary adverse effects of these activities will be considered.*

**Compliance:** The DMMP has been prepared by the USACE, with the advice and assistance of the ICT, to minimize impacts to CNAs that include seagrass, coastal wetlands, and sand and mud flats. The ICT considered numerous alternative methods for dredging and placement of maintenance material to identify the least environmental damaging alternative that was within the engineering capabilities of the USACE and was economically feasible.

- (A) *The policies in this subsection shall be applied in a manner consistent with the goal of achieving no net loss of critical area functions and values.*

**Compliance:** There is a net gain in seagrass and tidal flat habitat, the only critical areas affected, with the DMMP alternative relative to the No-Action alternative.

- (B) *Persons proposing development in critical areas shall demonstrate that no practicable alternative with fewer adverse effects is available.*

- (i) *The person proposing the activity shall demonstrate that the activity is water-dependent. If the activity is not water-dependent, practicable alternatives are presumed to exist, unless the person clearly demonstrates otherwise.*

**Compliance:** Maintenance dredging of the GIWW through the Laguna Madre, proposed for this project, is water-dependent.

- (ii) *The analysis of alternatives shall be conducted in light of the activity's overall purpose.*

**Compliance:** The overall purpose of the project is to maintain the GIWW through the Laguna Madre and the ICT considered numerous alternative methods to achieve that purpose to identify the least environmental damaging alternative that was within the engineering capabilities of the USACE and was economically feasible.

- (iii) *Alternatives may include different operation or maintenance techniques or practices or a different location, design, configuration, or size.*

**Compliance:** The initial alternative methods considered by the ICT for each of the six reaches of the GIWW included ocean placement by hopper dredges, by cutterhead suction dredges and pipelines, and cutterhead suction dredges and dump scows; upland confined and upland thin layer placement; fully confined, semiconfined, and unconfined open-bay placements; and beach and washover nourishment. Ocean placement was preliminarily eliminated for all 6 reaches based on lack of engineering feasibility. Based on the analysis of these preliminary alternatives, the ICT recommended that the DMMP address each placement area (PA) individually. Therefore, each PA was examined relative to the three types of open-bay placement, upland confined placement, and for certain PAs, ocean placement by bucket dredge and scows. The DMMP is a mix of these types of placement.

(C) *In evaluating practicable alternatives, the following sequence shall be applied:*

(i) *Adverse effects on critical areas shall be avoided to the greatest extent practicable.*

**Compliance:** There is a net gain in seagrass and tidal flat habitat with the DMMP alternative relative to the No-Action alternative. This has been achieved by the use of deep, unvegetated areas for unconfined open-bay placement, diffusers and training levees to avoid impacts to unconfined upland PAs, confinement of some PAs, limiting the timing of dredging and placement to the period of seagrass dormancy, and movement of PA 195 to avoid tidal flats.

(ii) *Unavoidable adverse effects shall be minimized to the greatest extent practicable by limiting the degree or magnitude of the activity and its implementation.*

**Compliance:** While the purpose of the activity cannot be achieved without impacts to critical areas, as noted in the DEIS, impacts have been avoided to the extent practicable, resulting in an overall reduction in impacts to critical areas.

(iii) *Appropriate and practicable compensatory mitigation shall be required to the greatest extent practicable for all adverse effects that cannot be avoided or minimized.*

**Compliance:** The PAs will be managed primarily for reducing impacts to nearby seagrass habitat, but some sites will be managed for bird use, vegetation control, or public recreation use. For each PA in each reach, methods for impact reduction have been proposed and are presented in the DMMP. To minimize impacts to seagrass, the ICT proposed restriction of confining open-bay, and unconfined maintenance material to the period from November through February, inclusive, when seagrass is dormant. No compensatory mitigation is required.

(D) *Compensatory mitigation includes restoring adversely affected critical areas or replacing adversely affected critical areas by creating new critical areas. Compensatory mitigation should be undertaken, when practicable, in areas adjacent or contiguous to the affected critical areas (on-site). If on-site compensatory mitigation is not practicable, compensatory mitigation should be undertaken in close physical proximity to the affected critical areas if practicable and in the same watershed if possible (off-site). Compensatory mitigation should also attempt to replace affected critical areas with critical areas with characteristics identical to or closely approximating those of the affected critical areas (in-kind). The preferred order of compensatory mitigation is:*

(i) *on-site, in-kind;*

(ii) *off-site, in-kind;*

(iii) *on-site, out-of-kind; and*

(iv) *off-site, out-of-kind.*

**Compliance:** Compensatory mitigation is not required for this project.

(E) *Mitigation banking is acceptable compensatory mitigation if use of the mitigation bank has been approved by the agency authorizing the development and mitigation credits are available for withdrawal. Preservation through acquisition for public ownership of unique critical areas or other ecologically important areas may be acceptable compensatory mitigation in exceptional circumstances. Examples of this include areas of high priority for*

*preservation or restoration, areas whose functions and values are difficult to replicate, or areas not adequately protected by regulatory programs. Acquisition will normally be allowed only in conjunction with preferred forms of compensatory mitigation.*

**Compliance: N/A**

- (F) *In determining compensatory mitigation requirements, the impaired functions and values of the affected critical area shall be replaced on a one-to-one ratio. Replacement of functions and values on a one-to-one ratio may require restoration or replacement of the physical area affected on a ratio higher than one-to-one. While no net loss of critical area functions and values is the goal, it is not required in individual cases where mitigation is not practicable or would result in only inconsequential environmental benefits. It is also important to recognize that there are circumstances where the adverse effects of the activity are so significant that, even if alternatives are not available, the activity may not be permitted regardless of the compensatory mitigation proposed.*

**Compliance: N/A**

- (G) *Development in critical areas shall not be authorized if significant degradation of critical areas will occur. Significant degradation occurs if:*
- (i) *the activity will jeopardize the continued existence of species listed as endangered or threatened, or will result in likelihood of the destruction or adverse modification of a habitat determined to be a critical habitat under the Endangered Species Act, 16 United States Code Annotated, §§1531–1544;*

**Compliance: The proposed project will not jeopardize the continued existence of species listed as endangered or threatened. The No-Action and DMMP alternatives would result in little or no immediate direct impacts to any protected species or designated critical habitat within the project area. Changes to habitats, over time, would be expected as a result of various natural influences (e.g., floral succession and subsequent use/abandonment by various faunal species, storm events of inland or coastal origin, natural continual wave action, etc.). In general, dredged material placement activities associated with the No-Action and DMMP alternatives may affect habitats used by the piping plover and State-threatened colonial waterbirds, and maintenance dredging may impose impacts on seaturtles. Both the No-Action and DMMP alternatives may have immediate short-term impacts on selected protected species and/or protected species' habitats within the vicinity of the project. Some species (e.g., sooty terns and piping plovers) may be temporarily displaced due to project disturbances. Abundant suitable habitats occur within the vicinity of the proposed project to allow for such temporary displacement and most disturbances would be of a duration short enough to allow for a prompt return to pre-project patterns. Those species with the ability to relocate in response to project activities would only be subject to minimal short-term impacts. Increased boat traffic within the project area during maintenance dredging and placement may also temporarily disturb various aquatic species and may increase erosion/sedimentation in some areas. However, these impacts would be considered short-term and generally insignificant. There will be a decrease in impacts to tidal flats, which are important to piping plovers, with the DMMP alternative, and tidal flats may be created at PA 195.**

- (ii) *the activity will cause or contribute, after consideration of dilution and dispersion, to violation of any applicable surface water quality standards established under subsection (f) of this section;*

**Compliance: Applicable surface water quality standards will not be violated.**

- (iii) *the activity violates any applicable toxic effluent standard or prohibition established under subsection (f) of this section;*

**Compliance:** **Applicable toxic effluent standards or prohibitions under subsection (f) will not be violated.**

- (iv) *the activity violates any requirement imposed to protect a marine sanctuary designated under the Marine Protection, Research, and Sanctuaries Act of 1972, 33 United States Code Annotated, Chapter 27; or*

**Compliance:** **The proposed activity will impact no marine sanctuary.**

- (v) *taking into account the nature and degree of all identifiable adverse effects, including their persistence, permanence, areal extent, and the degree to which these effects will have been mitigated pursuant to subparagraphs (C) and (D) of this paragraph, the activity will, individually or collectively, cause or contribute to significant adverse effects on:*

- (I) *human health and welfare, including effects on water supplies, plankton, benthos, fish, shellfish, wildlife, and consumption of fish and wildlife;*
- (II) *the life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, or spread of pollutants or their byproducts beyond the site, or their introduction into an ecosystem, through biological, physical, or chemical processes;*
- (III) *ecosystem diversity, productivity, and stability, including loss of fish and wildlife habitat or loss of the capacity of a coastal wetland to assimilate nutrients, purify water, or reduce wave energy; or*
- (IV) *generally accepted recreational, aesthetic or economic values of the critical area which are of exceptional character and importance.*

**Compliance:** **The proposed project will not contribute to significant adverse effects on the human health and welfare, aquatic organisms, ecosystem diversity or health or recreation.**

- (2) *The Texas Commission on Environmental Quality (TCEQ, formerly the Texas Natural Resource Conservation Commission) and the Railroad Commission of Texas (RRC) shall comply with the policies in this subsection 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 development affecting critical areas; provided that activities exempted from the requirement for a permit for the discharge of dredged or fill material, described in Code of Federal Regulations, Title 33, §323.4 and/or Code of Federal Regulations, Title 40, §232.3, including but not limited to normal farming, silviculture, and ranching activities, such as plowing, seeding, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices, shall not be considered activities for which a certification is required. The Texas General Land Office (GLO) and the School Land Board (SLB) shall comply with the policies in this subsection when approving oil, gas, or other mineral lease plans of operation or 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, governing development affecting critical areas on state submerged lands and private submerged lands, and when issuing approvals and adopting rules under Texas Civil Statutes, Article 5421u, for mitigation banks operated by subdivisions of the state.*

**Compliance:** No certification is required from the RRC but a Section 401 water quality certification will be obtained from the TCEQ and be appended to the Final EIS.

- (3) *Agencies required to comply with this subsection will coordinate with one another and with federal agencies when evaluating alternatives, determining appropriate and practicable mitigation, and assessing significant degradation. Those agencies' rules governing authorizations for development in critical areas shall require a demonstration that the requirements of paragraph (1)(A)–(G) of this subsection have been satisfied.*

**Compliance:** The ICT was established to address environmental concerns, help the USACE develop the scope of work for the environmental studies, and assist in the oversight and critique the study results.

- (4) *For any dredging or construction of structures in, or discharge of dredged or fill material into, critical areas that is subject to the requirements of §501.15 of this title (relating to Policy for Major Actions), data and information on the cumulative and secondary adverse affects of the project need not be produced or evaluated to comply with this subsection if such data and information is produced and evaluated in compliance with §501.15(b)–(c) of this title (relating to Policy for Major Actions).*

**Compliance:** This project involves action subject to Section 501.15 and constitutes a major action. Coordination has occurred among the State and Federal agencies having jurisdiction over the proposed activity.

#### **Section 501.14(j) Dredging and Dredged Material Disposal and Placement**

- (1) *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 subsection are supplemental to any further restrictions or requirements relating to the beach access and use rights of the public. In implementing this subsection, 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:** The ICT considered several alternative methods for dredging and placement of shoaled material to identify the least environmentally damaging alternative that was within the engineering capabilities of the USACE and was economically feasible. The ICT reached consensus on the DMMP. The PAs will be managed primarily for reducing impacts to nearby seagrass habitat, but some sites will be managed for bird use, vegetation control, or public recreation use. All islands inside the PAs were created during GIWW construction and nourished with shoaled material during subsequent maintenance dredging operations. The ICT also determined that new PAs were needed or existing PAs should be combined to meet special management requirements or to handle excess dredged material if it is determined an existing PA cannot accommodate all the material normally designated for the site and meet the goals of the DMMP. If any of the new PAs are located outside of the existing disposal easements, the USACE will use the submerged sites pursuant to the Navigation Servitude Authority.

The ICT placed particular emphasis on minimizing unavoidable environmental damages by:

- 1) Protection, preservation, and improvement of the existing fish and wildlife resources along with the protection and preservation of estuarine and wetland habitats and water quality;
- 2) Consideration in the projects design of the least disruptive construction techniques and methods;
- 3) Protection and preservation of endangered and/or threatened species; and
- 4) Preservation of significant historical and archeological resources through avoidance of effects.

For the DMMP alternative, approximately 3,477 acres of SAV will be negatively impacted with the placement of dredged material, 1,307 acres less than the No-Action alternative. The approximate acreage of tidal flats that will potentially be buried by placement material is 87.9 acres. There will likely be negative impacts to high salt marsh much more than low salt marsh, however there has been no specific surveys identifying these areas. It is assumed that after consolidation of disposal material many of these areas will revegetate.

- (A) *Dredging and dredged material disposal and placement shall not cause or contribute, after consideration of dilution and dispersions to violation of any applicable surface water quality standards established under subsection (f) of this section.*

**Compliance:** Confined PAs were designed, with the aid of models, such that adequate dilution and dispersion occurs so as not to violate applicable surface water quality standards. The materials from the sediment have been tested and no cause for concern was determined. No toxicity has been determined by past bioassays or bioaccumulation studies for either of the alternatives.

- (B) *Except as otherwise provided in subparagraph (D) of this paragraph, 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 subsection (h) of this section.*

**Compliance:** Some critical areas including coastal wetlands, seagrasses, tidal sand and mud flats, will be affected by the project, as noted above, but others may be created with consolidation of disposal material. Additionally, impacts to seagrass and tidal flats will be less with the DMMP alternative than with the No-Action alternative.

- (C) *Except as provided in subparagraph (D) of this paragraph, dredging and the disposal and placement of dredged material shall not be authorized if:*
- (i) *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;*
  - (ii) *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*
  - (iii) *significant degradation of critical areas under subsection (h)(1)(G)(v) of this section would result.*

**Compliance:** The ICT considered several alternative methods for dredging and placement of shoaled material in the GIWW to identify the least environmentally damaging alternative that was within the engineering capabilities of the USACE and was economically feasible. The ICT reached consensus on the DMMP. The PAs will be managed primarily for reducing impacts to nearby seagrass habitat, but some sites will be managed for bird use, vegetation control, or public recreation use. To minimize impacts to seagrass, the ICT recommended a restriction on confining open-bay, unconfined placement of maintenance material to the period from November through February, inclusive, throughout the Laguna Madre. This is the period when seagrass is dormant and will be impacted least by turbidity. Therefore, the criteria under (i)–(iii) have been met and dredging and placement are not prohibited under this subparagraph.

- (D) *A dredging or dredged material disposal or placement project that would be prohibited solely by application of subparagraph (C) of this paragraph 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:** The action is not prohibited by subparagraph C.

- (2) *Adverse effects from dredging and dredged material disposal and placement shall be minimized as required in paragraph (1) of this subsection. Adverse effects can be minimized by employing the techniques in this paragraph where appropriate and practicable.*

**Compliance:** Minimization has been achieved, as discussed under compliance with paragraph (1) of this subsection. The ICT considered several alternative methods for dredging and placement of disposal material to identify the least environmentally damaging alternative that was within the engineering capabilities of the USACE and was economically feasible.

- (A) *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:*
- (i) *locating and confining discharges to minimize smothering of organisms;*
  - (ii) *locating and designing projects to avoid adverse disruption of water inundation patterns, water circulation, erosion and accretion processes, and other hydrodynamic processes;*
  - (iii) *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;*
  - (iv) *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;*
  - (v) *discharging materials at sites where the substrate is composed of material similar to that being discharged;*
  - (vi) *locating and designing discharges to minimize the extent of any plume and otherwise control dispersion of material; and*
  - (vii) *avoiding the impoundment or drainage of critical areas.*

**Compliance:** The ICT considered all of the alternative dredging and placement options including ocean placement, upland confined and upland thin layer placement, fully confined, semiconfined and unconfined open-bay placements. Ocean placement was originally discounted for all six reaches but was added during the later stages of DMMP development for PAs 220/221 and 233/234, which are near Port Mansfield Pass and Brazos Santiago Pass. For each PA in each reach, methods for impact reduction have been proposed and are presented in the DMMP. The ICT recommended observing the management plan restriction of confining open-bay, unconfined placement of maintenance material to the period from November through February, throughout the Laguna Madre, during the period when seagrass is dormant. Reductions in impacts to seagrasses and tidal flats are documented in the DEIS.

- (B) *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:*
- (i) *disposal or placement of dredged material in a manner that maintains physicochemical conditions at discharge sites and limits or reduces the potency and availability of pollutants;*
  - (ii) *limiting the solid, liquid, and gaseous components of material discharged;*
  - (iii) *adding treatment substances to the discharged material; and*
  - (iv) *adding chemical flocculants to enhance the deposition of suspended particulates in confined disposal areas,*

**Compliance:** No indication of toxicity has been determined by past bioassays or bioaccumulation studies; thus, neither alternative is preferable from a toxicity testing perspective.

- (C) *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:*
- (i) *use of containment levees and sediment basins designed, constructed, and maintained to resist breaches, erosion, slumping, or leaching;*
  - (ii) *use of lined containment areas to reduce leaching where leaching of chemical constituents from the material is expected to be a problem;*
  - (iii) *capping in-place contaminated material or, selectively discharging the most contaminated material first and then capping it with the remaining material;*
  - (iv) *properly containing discharged material and maintaining discharge sites to prevent point and nonpoint pollution; and*
  - (v) *timing the discharge to minimize adverse effects from unusually high water flows, wind, wave, and tidal actions.*

**Compliance:** Baffle levees to slow sediment flow and to allow more settling, earthen levees, and placement of geotubes using dredged material are techniques proposed to be used to contain or direct dredged material. Use of a diffuser at the end of the pipe is proposed to prevent scouring.

- (D) *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:*
- (i) *where environmentally desirable, distributing the material in a thin layer;*
  - (ii) *orienting material to minimize undesirable obstruction of the water current or circulation patterns;*
  - (iii) *using silt screens or other appropriate methods to confine suspended particulates or turbidity to a small area where settling or removal can occur;*

- (iv) *using currents and circulation patterns to mix, disperse, dilute, or otherwise control the discharge;*
- (v) *minimizing turbidity by using a diffuser system or releasing material near the bottom;*
- (vi) *selecting sites or managing discharges to confine and minimize the release of suspended particulates and turbidity and maintain light penetration for organisms; and*
- (vii) *setting limits on the amount of material to be discharged per unit of time or volume of receiving waters.*

**Compliance:** For each PA in each reach methods for impact reduction have been proposed and are presented in the DMMP. Methods presented above under subparagraph (C) will apply.

- (E) *Adverse effects from dredging and dredged material disposal or placement operations can be minimized by adopting technology to the needs of each site. Some ways of accomplishing this include:*
  - (i) *using appropriate equipment, machinery, and operating techniques for access to sites and transport of material, including those designed to reduce damage to critical areas;*
  - (ii) *having personnel on site adequately trained in avoidance and minimization techniques and requirements; and*
  - (iii) *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 dredging and placement of dredged material and equipment to construct levees will be from water-based equipment. No roads are necessary.

- (F) *Adverse effects on plant and animal populations from dredging and dredged material disposal or placement can be minimized by:*
  - (i) *avoiding changes in water current and circulation patterns that would interfere with the movement of animals;*
  - (ii) *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;*
  - (iii) *avoiding sites having unique habitat or other values including habitat of endangered species;*
  - (iv) *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;*

- (v) *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;*
- (vi) *timing dredging and dredged material disposal or placement activities to avoid spawning or migration seasons and other biologically critical time periods; and*
- (vii) *avoiding the destruction of remnant natural sites within areas already affected by development.*

**Compliance:** In addition to specific placement at each PA, the following restoration measures to correct localized problems have been included in continuing discussions with the resource agencies. 1. The removal of selected emergent disposal islands that are too close to the mainland, the barrier island, or other islands. These islands allow terrestrial predators, such as coyotes and raccoons, access to larger islands that are used as rookeries by colonial waterbirds. Removal of these islands would allow the colonies to expand to several islands previously abandoned because of heavy predation, especially near the Padre Island National Seashore. 2. Dredging of circulation channels between several emergent unconfined PAs. Dredged material has filled in the shallow areas around some PAs, isolating several small bays from the Laguna Madre. Better circulation in the area would potentially restore productivity in these bays. 3. Increasing the area of algal mats on the mud flats of the Land Cut by removing some of the placement mounds no longer used for placement. This would increase feeding habitat for piping and snowy plovers. 4. Enlarging one or two of the disposal islands located around Mile 615 south of the Land Cut. These islands are experiencing erosion. If enlarged, these islands could be used as nesting islands for colonial waterbirds. 5. Confining and enlarging three sides of PA 220 located on the northeast side of the intersection of the GIWW and Port Mansfield Channel. This restoration measure would protect this PA, an important bird nesting island, from further erosion.

Because critical habitat along the lower Texas coast was only grossly defined in the final ruling (66 FR 36074–36078; Figure 3-3), units TX-3 (subunit 3) and TX-4 encompass vast expanses of open water that would not be considered habitable by plovers and does not contain the requisite primary constituent elements for piping plover Critical Habitat. Within reaches 4, 5, and 6, of the 30 existing PAs and two new PAs proposed under the DMMP, only three PAs in the southwestern portion of TX-3 (subunit 3), and the eastern extent of TX-4 encompass even marginally suitable habitat for the piping plover. Piping plovers were rarely, if ever, observed to use these PAs (EH&A, 1997b; Zonick et al., 1998; Drake et al., 1999); therefore impacts to the piping plover from direct project activities within this reach are expected to be negligible.

If seaturtles occur in the project area, they should not be impacted negatively by dredging activities. Dredged material placement would increase turbidity in the project area, but seaturtles are mobile enough to avoid disturbed sites. Project impacts would be temporary and local in nature. Cutterhead suction dredges would be used which move very slowly and can be avoided by all species of seaturtles. Studies have indicated that cutterhead dredges, since they act on only small areas at a time, do not impact seaturtles (NMFS, 1998). Since all dredging of the project area would be performed by cutterhead dredges, no effects to seaturtles are anticipated from maintenance dredging operations.

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

- (i) *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;*
- (ii) *selecting sites which are not valuable as natural aquatic areas;*
- (iii) *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*
- (iv) *selecting sites that will not increase incompatible human activity or require frequent dredge or fill maintenance activity in remote fish and wildlife areas.*

**Compliance:** This project currently utilizes 61 existing PAs. Maintenance dredging is required every 23 to 60 months in selected reaches, although some of these PAs have been used only once in the last 50 years. Recreational fishing will be temporarily affected in the areas where turbidity may occur. At their discretion, the GLO/SLB may require cabins on active PAs to be relocated or removed, as necessary, prior to placement of dredged material.

- (H) *Adverse effects from new channels and basins can be minimized by locating them at sites:*
  - (i) *that ensure adequate flushing and avoid stagnant pockets; or*
  - (ii) *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*
  - (iii) *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;*
  - (iv) *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 subparagraph if such data and information is produced and evaluated in compliance with §501.15(b)(1) of this title (relating to Policy for Major Actions).*

**Compliance:** The only new channels will be enlargements of existing circulation channels that the ICT determined were necessary for environmental enhancement of the Laguna Madre.

- (3) *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 paragraph (1) of this subsection unless modified in design, size, use, or function.*

**Compliance:** This DEIS is addressing existing PAs, except for 180A, 182S, 221A, and 233/234A. These were recommended by the ICT as needed for environmental enhancement of the Laguna Madre.

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

- (A) *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.*
  
- (B) *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:*
  - (i) *environmental benefits, recreational benefits, flood or storm protection benefits, erosion prevention benefits, and economic development benefits;*
  - (ii) *the proximity of the Beneficial Use site to the dredge site; and*
  - (iii) *the quantity and quality of the dredged material and its suitability for Beneficial Use.*
  
- (C) *Examples of the Beneficial Use of dredged material include, but are not limited to:*
  - (i) *projects designed to reduce or minimize erosion or provide shoreline protection;*
  - (ii) *projects designed to create or enhance public beaches or recreational areas;*
  - (iii) *projects designed to benefit the sediment budget or littoral system;*
  - (iv) *projects designed to improve or maintain terrestrial or aquatic wildlife habitat;*
  - (v) *projects designed to create new terrestrial or aquatic wildlife habitat, including the construction of marshlands, coastal wetlands, or other critical areas;*
  - (vi) *projects designed and demonstrated to benefit benthic communities or aquatic vegetation;*
  - (vii) *projects designed to create wildlife management areas, parks, airports, or other public facilities;*
  - (viii) *projects designed to cap landfills or other waste disposal areas;*
  - (ix) *projects designed to fill private property or upgrade agricultural land, if cost-effective public Beneficial Uses are not available; and*
  - (x) *projects designed to remediate past adverse impacts on the coastal zone.*

**Compliance:** All maintenance material from this project will be placed onto existing PAs or will be used to create new PAs. Shoreline protection is part of the DMMP for PA 220; there is no opportunity to enhance beaches or benefit the sediment budget because of the fine grain size of the dredged material, Federal regulations, and environmental concerns; terrestrial and aquatic wildlife habitat will be improved, including enhancement or improvement of bird islands; and benthic communities and aquatic vegetation will be benefited. The other portions of this subparagraph are not applicable to the project.

- (5) *If dredged material cannot be used beneficially as provided in paragraph (4) (B) of this subsection, to avoid and otherwise minimize adverse effects as required in paragraph (1) of this subsection, preference will be given to the greatest extent practicable to disposal in:*
- (A) *contained upland sites;*
  - (B) *other contained sites; and*
  - (C) *open water areas of relatively low productivity or low biological value.*

**Compliance:** Maintenance material will be placed into fully confined, semiconfined, and unconfined open-bay PAs and into upland confined PAs.

- (6) *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 PAS will not migrate across the boundaries of submerged lands between public lands and private owner or owners.

- (7) *Emergency dredging shall be allowed without a prior consistency determination as required in the applicable consistency rule when:*
- (A) *there is an unacceptable hazard to life or navigation;*
  - (B) *there is an immediate threat of significant loss of property; or*
  - (C) *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 section. Compliance with all applicable policies in this section 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:** N/A.

- (8) *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:** N/A.

- (9) *The GLO and the SLB shall comply with the policies in this subsection 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 polices in this section when adopting rules and taking actions as local sponsor of the Gulf Intracoastal Waterway under Texas Civil Statutes, Article 5415e-2. The TNRCC and the RRC 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 subsection 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 paragraph (8) of this subsection 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: N/A.**



# Coastal Coordination Council

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July 2, 2003

## Chairman

**Jerry Patterson**  
Texas Land Commissioner



## Members

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Railroad Commission of Texas

**Mayor Victor R. Pierson**  
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## RE: Consistency Agreement, Laguna Madre – Maintenance Dredging of the Gulf Intracoastal Waterway (GIWW)

Dear Colonel Waterworth:

Pursuant to 31 TAC §506.28(b), the Coastal Coordination Council (Council) issues this Consistency Agreement for the Laguna Madre – Maintenance Dredging of the GIWW (Project), a federal development project by the U.S. Army Corps of Engineers (Corps).

The Corps established an interagency coordination team (ICT), whose duties included advising the Corps on the consistency of the Project. The ICT included among its members a minimum of three Council members or their representatives from natural resource agencies.

The Corps prepared a Preliminary Environmental Impact Statement (EIS) on December 12, 2002, and obtained comments from the ICT on consistency. The Corps incorporated these comments into its consistency determination, which was submitted to the Council and circulated for public comment along with the Draft EIS for the Project on April 1, 2003. The Council simultaneously published notice of the consistency determination, requesting public comment. On June 19, 2003, after considering public comment, the ICT, including a majority of the Council member agency representatives on the ICT, agreed that the Project is consistent, to the maximum extent practicable, with the goals and policies of the Coastal Management Program, as demonstrated in the consistency determination in the DEIS.

Therefore, the Council accepts and adopts the consistency determination for the Project as submitted by the Corps and issues this Consistency Agreement under 31 TAC §506.28(b), in lieu of Council review under 31 TAC §506.26.

Sincerely,

**JERRY PATTERSON**  
Chairman, Coastal Coordination Council