

## **EXECUTIVE SUMMARY**

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### **ES.1 INTRODUCTION AND AUTHORITY**

The Brazos River Harbor Navigation District (also known as Port Freeport) proposes to widen portions of the Freeport Harbor Jetty Channel and all of the Freeport Harbor Entrance Channel to eliminate existing operational constraints. These constraints include one-way traffic, daylight-only operations for larger vessels, and restrictions when winds exceed 20 knots or crosscurrents exceed 0.5 knot.

The U.S. Army Corps of Engineers, Galveston District (USACE), under the authority of Section 404 (33 U.S.C. 1344) of the Clean Water Act, Section 10 (33 U.S.C. 403) of the Rivers and Harbors Act, and Section 103 of the Marine Protection Research and Sanctuary Act (33 U.S.C 1413), is the lead agency for the permit action. This Draft Environmental Impact Statement (DEIS) was prepared as required by the National Environmental Policy Act (NEPA) to present an evaluation of potential impacts associated with Port Freeport's proposed Freeport Channel Widening Project.

### **ES.2 PURPOSE AND NEED**

The purpose of the proposed project is to widen the Freeport Harbor Entrance and Jetty Channels to eliminate existing operational constraints, including one-way traffic, daylight-only operations for larger vessels, and restrictions when winds exceed 20 knots or crosscurrents exceed 0.5 knot. Maximum ship dimensions currently permitted by the pilots at Freeport Harbor are 825-foot (ft) length over all, 145-ft maximum beam, and 42-ft draft. Recent economic evaluations indicate that annual tanker calls and dry bulk calls will increase at Gulf Coast ports (Hackett, 2003) and that larger ships will likely be added to the existing fleet in pursuit of economic efficiency (Waters et al., 2000).

The project need is the elimination of existing operational constraints to avoid vessel delays, thereby reducing shipping costs and logistical problems. Light-loading, one-way traffic, and daylight-only operation for larger vessels result in significantly higher costs to Port Freeport users. The proposed widening project would allow the economic benefits that will result from a widened channel.

### **ES.3 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

Alternatives evaluated to meet the need for the proposed project included different channel width alternatives and several alternatives for placement of the dredged material. The Freeport Harbor Jetty and Entrance Channels are currently maintained by the Corps at a width of 400 ft. An analysis of jetty stability indicated that the maximum channel width should not exceed 600 ft. Thus, 500-ft and 600-ft channel widths were considered. An analysis of channel width to beam ratios indicated that a 500-ft-wide channel would allow two-way traffic for 107-ft beam vessels under ideal conditions, while a 600-ft-wide channel would allow two-way traffic for vessels up to 133-ft beam width under ideal conditions and one-

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way traffic for 148-ft beam vessels with up to a 3-knot cross current. Because the 600-ft channel width alternative would maximize navigation benefits and meet the purpose and need of the project, it was identified as the Proposed alternative for the channel widening project.

The Proposed alternative would generate approximately 3.2 million cubic yards (mcy) of dredged material during construction. Approximately 2.9 mcy of the new work material would consist of silt and clay and about 300,000 cubic yards would consist of silty sand material. A Dredged Material Management Plan (DMMP) Workgroup comprising representative from several Federal and State resource agencies, the applicant, and the applicant's consultant met several times to discuss placement options for the new work dredged material from the proposed project. Seventeen placement alternatives were considered. These included use of the material for beach nourishment, marsh restoration, offshore beneficial use, and upland beneficial use. Placing the dredged material in upland confined placement areas and in an Ocean Dredged Material Disposal Site (ODMDS) was also considered. Each of the placement alternatives was considered relative to the characteristics of the material, environmental effects, dredge type applicability, pumping cost, reliability, permanence, public perception, and overall performance. The physical characteristics of the material made several options unfeasible, as did the cost and logistics associated with transporting the material to many of the upland beneficial use and marsh restoration sites being considered. Upland placement areas in the vicinity of the proposed project were unavailable because they were either at capacity or designated for other uses. Ultimately, Port Freeport proposes to use the 300,000 cubic yards of silty sand material for beach nourishment and place the remaining 2.9 mcy of silt and clay into a previously designated dispersive ODMDS. The site was designated as a one-time use site for the new work material dredged when the channel was deepened to 45 ft in the early 1990s. Under the Proposed alternative the ODMDS would be redesignated for one-time placement of new work material dredged for the proposed entrance and jetty channels widening project.

Two action alternatives are evaluated in the Environmental Impact Statement. Both alternatives include widening the entrance and jetty channels to about 600 ft and placing 2.9 mcy of new-work dredged material into the ODMDS. One of the alternatives proposes to place the 300,000 cubic yards of silty sand material on Quintana Beach in front of the Seaway Dredged Material Placement Area). Placement of the material in this location would protect the Seaway Placement Area from further erosion and potential levee breaches and would provide continuity between enhanced beaches on either side of the site.

The second action alternative considered proposes to place the 300,000 cubic yards of silty sand material on Surfside Beach. Placement of the material here would provide some protection from erosion for homes located along the beach.

The third alternative evaluated is the No-action alternative. This alternative assumes USACE denial of the permit, in which case the channel would not be widened and it is assumed navigation restrictions would continue. The No-action alternative provides a baseline future-without-the-project scenario to which the two action alternatives can be compared.

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## **ES.4 POTENTIAL ENVIRONMENTAL IMPACTS**

The DEIS addresses the potential impacts of the proposed project on human and environmental issues identified during the public interest review, including placement of dredged material. All factors that may be relevant to the proposed project were considered. Among those factors are: dredged material management, air quality, shoreline erosion, economics, general environmental concerns, historic resources, protected species, navigation, recreation, water and sediment quality, energy needs, safety, hazardous materials, and, in general, the welfare of the people. The following provides a brief description of potential negative impacts that were identified. Differences between the two action alternatives were essentially equivalent.

### **Air Quality**

Activities associated with the proposed dredging operations (including dredges and support equipment such as tugboats, runabouts, and tenders, as well as land based equipment such as bulldozers and employee vehicles) are expected to increase air emissions in the Houston-Galveston Air Quality Control Region, which is currently classified as a non-attainment area for ozone. An analysis of estimated emissions associated with the proposed channel widening is expected to result in short-term impacts on air quality in the immediate vicinity of the project area but no long-term impacts are expected. However, the estimated emissions of nitrogen oxide (NO<sub>x</sub>) are expected to exceed the conformity threshold of 100 tons per year. Pursuant to Section 176 of the Clean Air Act Amendments of 1990, a Draft General Conformity Determination has been filed and coordination with the Texas Commission on Environmental Quality (TCEQ) and U.S. Environmental Protection Agency (EPA) is ongoing.

### **Noise**

Noise impacts associated with the proposed project are expected to be short-term and would be similar to those that occur during current maintenance dredging for the existing channel.

### **Physiography, Topography, and Bathymetry**

Local changes to bathymetry and topography are expected to occur as a result of the proposed project. However, these changes are expected to have negligible impacts on the regional physiography, topography and bathymetry in the project area.

### **Geology, Mineral Resources, and Soils**

No impacts are expected to occur geology or mineral resources in the project area as a result of the proposed project. Potential surface soil impacts could occur from the release of petroleum products during construction. Use of best management practices (BMPs) during construction would minimize this potential.

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## **Groundwater Hydrology**

Potential impacts to groundwater could occur from accidental spill of petroleum products during construction. Use of BMPs during construction would minimize this potential.

## **Hazardous Materials**

The proximity of industrial facilities increases the probability of encountering hazardous material during construction activities. However, sediment samples collected from the channel have identified only nickel as exceeding screening levels for marine sediment. One semivolatile organic compound (fluoranthene) was also detected in one sample.

## **Water and Sediment Quality**

No water or sediment quality concerns were identified. Potential impacts from ballast water would remain the same as for the No-action alternative.

## **Commercial and Recreational Navigation**

No negative impacts to navigation are expected to result from implementation of the proposed channel widening. Efficiency would be improved and the frequency of navigation restrictions reduced at the Port. Temporary delays are likely to occur during the dredging process. Scheduling and planning can be used to minimize these delays.

## **Vegetation and Wetlands**

No negative impacts to vegetation or wetland communities are expected. Use of the 300,000 cubic yards of silty sand material for beach nourishment may benefit beach and dune complexes by providing erosion protection, provided placement occurs on unvegetated portions of the beach.

## **Terrestrial and Aquatic Wildlife (Including EFH)**

No long-term impacts to terrestrial or aquatic species are expected. Temporary impacts may occur during construction from increased noise and turbidity. Aquatic communities in the benthos are likely to shift from current composition to that of more opportunistic species. Repeated dredging may prevent the benthic community from fully developing to pre-construction communities. However, these species would still provide a food source to other organisms. Similar shifts in community composition can be expected at the maintenance material ODMDS. The benthic community at the new work material ODMDS is expected to recover fairly quickly following placement of the new work material. Impacts to essential fish habitat (EFH) are not expected to be significant.

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## **Protected Species**

Dredging activities could result in the incidental take of sea turtles in the project area. However, restriction of hopper dredging activities to between December 1 and March 31, if possible, and the use of relocation trawlers working in front of the dredges would reduce the potential for these impacts. A Biological Assessment has been prepared and submitted with this DEIS as Appendix G. Coordination with U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) is ongoing.

## **Cultural Resources**

Six potential cultural resource sites have been identified within the project footprint. These consist of two potential shipwrecks and four anomalies that could be associated with the historic Velasco townsite. These six potential resources have been recommended by the Texas Historical Commission (THC) for possible further investigation prior to project construction. Coordination with the THC and investigations are ongoing.

## **Land Use, Recreation, Aesthetics , and Socioeconomics**

No significant impacts to land use, recreation, aesthetics or socioeconomics are expected to result from the proposed project. Reduced navigation restrictions and increased efficiency at the Port is likely to have a positive economic benefit in the local community, which could result in increased development in the area.

## **ES.5 COORDINATION AND PUBLIC INVOLVEMENT**

Public involvement in the proposed project has occurred through public meetings and other outreach throughout the history of the project. The public, resource agencies, industry, local government, and other interested parties have been proactively informed about the project.

Public and agency concerns were identified at the public scoping meeting held November 29, 2005 at the Freeport Community House in Freeport, Texas. At this meeting the project was introduced and comments on the proposed project were solicited from attendees. Oral and written comments were collected at the meeting and written comments were collected throughout the 45-day scoping period.

This DEIS is being made available to all known Federal, State and local agencies as well as interested organizations and individuals. A list of document recipients is included in the DEIS in Section 9.0.