Corpus Christi Ship Channel, Texas
La Quinta Ship Channel Extension Deepening Project
Section 204 (f) Federal Assumption of Maintenance

ENVIRONMENTAL ASSESSMENT

U.S. Army Corps of Engineers

HDR

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EXECUTIVE SUMMARY

The Port of Corpus Christi Authority (PCCA) received authorization from the United States Army Corps of Engineers (USACE), Galveston District, for a Section 10/404 permit SWG-2006-00515 (formerly No. 24150) in September 2006. This permit mirrored a previous federally authorized La Quinta Ship Channel Extension to an approved construction depth of -39 feet Mean Low Tide (MLT). Permit SWG-2006-00515 was amended in June 2011, authorizing additional dredging to deepen the 1.4 mile La Quinta Ship Channel Extension to -45 feet MLT. The 1.4-mile La Quinta Ship Channel Extension project is currently under construction and is expected to be complete in the spring of 2013.

This Environmental Assessment (EA) is part of a study prepared by the Port of Corpus Christi Authority (PCCA) and is an evaluation assessing the feasibility of deepening the La Quinta Ship Channel Extension from -39 feet to -45 feet. Additionally, the PCCA proposes to assume the costs of construction activities associated with the deepened channel extension with a federal assumption of responsibility for maintenance of the channel extension once construction activities are complete. This study is being conducted under the authority of Section 204(f) of the Water Resources and Development Act of 1986, as amended.

The Federal La Quinta Ship Channel Extension project was fully described in *Corpus Christi Ship Channel, Texas, Channel Improvement Project, Volume 1, Final Feasibility Report, April 2003* (2003 Feasibility Study) and *Corpus Christi Ship Channel, Channel Improvements Project, Corpus Christi and Nueces Bays, Nueces and San Patricio Counties, Texas, Final Environmental Impact Statement, April* 2003 (2003 FEIS). The 2003 Feasibility Study and 2003 FEIS fully considered numerous deepening alternatives (including -45 feet) for the La Quinta Ship Channel Extension in the context of the engineering, environmental, and economic factors. The 2003 FEIS can be obtained from the USACE Galveston District, Planning and Environmental Branch or online at http://ww3.swg.usace.army.mil/pe/Corpus/.

An Environmental Assessment/Statement of Findings was developed in June 2011 by the USACE Galveston District in association with the Section 10/404 permit for deepening the La Quinta Channel Extension to -45 feet.

Environmental effects of new work and maintenance dredging associated with the *Corpus Christi Ship Channel, Texas, Channel Improvement Project, Volume 1, Final Feasibility Report, April 2003* (2003 Feasibility Study) and *Corpus Christi Ship Channel, Channel Improvements Project, Corpus Christi and Nueces Bays, Nueces and San Patricio Counties, Texas, Final Environmental Impact Statement, April* 2003 (2003 FEIS) proposed -45 foot depth were fully described in the 2003 FEIS. Environmental effects of new work and maintenance dredging were again described in the Environmental Assessment/Statement of Findings associated with the Section 10/404 permit. However, the environmental review for the Section 10/404 permit was in the context of a non-Federal project and did not assess potential environmental effects in the context of the proposed Federal assumption of maintenance.

This EA relies on the 2003 FEIS, a 2012 Limited Re-Evaluation Report (LRR) (can be obtained from the USACE Galveston District, Planning and Environmental Branch), and the Environmental Assessment/Statement of Findings from the Section 10/404 permit for consideration of environmental effects

associated with deepening the La Quinta Ship Channel Extension to -45 feet and is being developed for the following primary reasons:

1. To provide updates to time-sensitive and/or new environmental categories such as Threatened and Endangered Species coordination, environmental justice, and greenhouse gas emissions.

2. To assess the potential environmental consequences of Federal assumption of maintenance of the deepened La Quinta Channel Extension.

MAJOR CONCLUSIONS AND FINDINGS

Conclusions of this EA found that there are no significant changes to the majority of environmental factors such as water quality, sediment quality, community types, fish and wildlife resources, historic resources, and cumulative impacts.

Threatened and Endangered Species

Updated Threatened and Endangered Species lists for the project area have been incorporated into this EA. While some changes to Federal Threatened and Endangered Species lists have been made, this EA concludes that the project will either have no effect or is not likely to adversely affect Threatened and Endangered Species in the project area. A Public Notice was issued on March 30, 2012, advertising the USACE's intent to develop this EA and soliciting interest from various resource agencies (including the U.S. Fish and Wildlife Service [USFWS] and National Marine Fisheries Service [(NMFS]).

Environmental Justice

Based on reviews of updated (2010) census data this EA concludes that the percentage of minority and low-income populations has changed insignificantly since the development of the 2003 FEIS. Based on the findings from the 2003 FEIS, 2012 LRR, and updates developed for this EA, this EA concludes that there is no change from conclusions made in the 2003 FEIS in the context of Environmental Justice.

Air Quality and Greenhouse Gas Emissions

The preferred alternative (deepening to -45 feet and Federal assumption of maintenance) will not result in a change in the operational characteristics (vessel traffic, etc) of the La Quinta Ship Channel from those considered in the 2003 FEIS. Additionally, the 50-year maintenance volume [9.4 million cubic yards (mcy)] derived for this study is equivalent to that previously considered in the 2003 FEIS. Given that there are no expected differences between the -45 foot alternative considered in 2003 and the -45 foot project currently proposed, and in consideration of the continued development of low-sulphur fuels and other technological developments aimed at minimizing impacts to air quality, this EA concludes that there is no significant change to conclusions made about air quality in the 2003 FEIS or the 2012 LRR.

Cumulative Impacts

Cumulative Impacts were addressed in the 2003 FEIS (which reported a net positive effect) and then again in 2011 in the Environmental Assessment/Statement of Findings for the Section 10/404 permit. The 2011 document provides updated information regarding the contribution of the new work and maintenance dredging (although it is assumed in the permit that maintenance dredging would be conducted by the PCCA) to cumulative impacts and concludes that the cumulative impacts are not considered significantly adverse.

Public Involvement

The USACE issued a public notice on March 30, 2012 notifying the Federal, State, local agencies, and the public of this 204(f) study (See Appendix A). The public notice advertised the USACE's intent to prepare this EA and requested that recipients notify the USACE of their interest in coordinating during development of the document. Only one response was received. That response was from TPWD, who issued a letter expressing no opposition to the project (See Appendix B).

Following the preliminary approval of the EA for further processing, a Notice of Availability will be published on the PCCA and USACE Galveston District websites.

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1.0 NEED FOR AND OBJECTIVES OF ACTION

1.1 Study Authority and Location

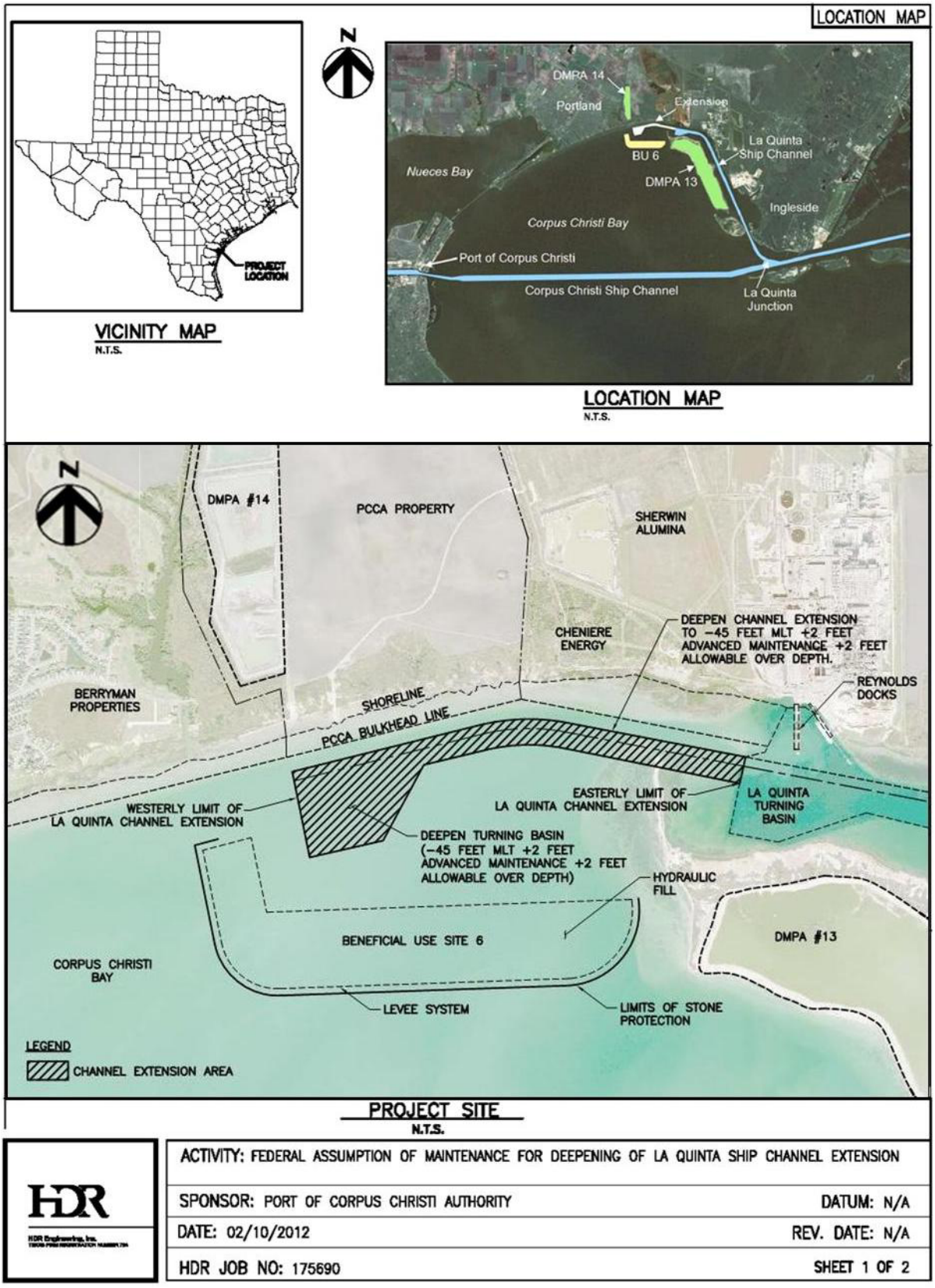
This Environmental Assessment (EA) is part of a study prepared by the Port of Corpus Christi Authority (PCCA) and is an evaluation assessing the feasibility of deepening the La Quinta Ship Channel Extension from -39 feet to -45 feet. The Port of Corpus Christi Authority proposes to deepen the 1.4 mile La Quinta Ship Channel Extension to -45 feet MLT from the currently authorized construction depth of -39 feet Mean Low Tide (MLT). The proposed project includes activities for the deepening and ongoing maintenance of a navigational waterway, and thus subject to the United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 10 of the Rivers and Harbors Act of 1899. The PCCA is conducting a Feasibility Study for Federal assumption of maintenance under the authority of Section 204(f) of Water Resources Development Act (WRDA), as amended.

The project site is located on Corpus Christi Bay, at the northwest end of the existing La Quinta Ship Channel, approximately 2.5 miles southeast of Portland, Nueces County, Texas. The La Quinta Ship Channel extends off of the Corpus Christi Ship Channel (CCSC) near Ingleside, Texas, and runs parallel to the eastern shoreline of Corpus Christi Bay for 5.5 miles to the La Quinta Ship Channel Turning Basin (Figure 1). The width of the La Quinta Ship Channel varies from 300 to 400 feet, except at the turning basin, which is 1400 feet wide. The proposed construction would take place entirely within the footprint of the federally authorized 1.4 mile La Quinta Ship Channel Extension Project, which is currently under construction. The study area is the footprint of the federally authorized project. A complete description of the study area is included in *Corpus Christi Ship Channel, Texas, Channel Improvement Project, Volume 1, Final Feasibility Report, April 2003* (USACE 2003) which will be referred to as the 2003 Feasibility Study. Additionally, the *Corpus Christi Ship Channel, Channel Improvements Project, Corpus Christi and Nueces Bays, Nueces and San Patricio Counties, Texas, Final Environmental Impact Statement, April 2003* document will be referenced throughout this EA. In this document it will be referred to as the 2003 FEIS (USACE 2003). The 2012 Limited Reevaluation Report (LRR) will also be referenced throughout this EA (USACE 2012).

The PCCA has received authorization (SWG-2006-00515) to deepen the La Quinta Ship Channel from -39 feet MLT to -45 feet MLT plus two feet of advanced maintenance and two feet allowable over depth. All permitted construction lies within the footprint of the existing federally authorized project. No additional impacts to jurisdictional areas are proposed. Approximately 1.3 million cubic yards (mcy) of new work material will be generated as a result of the deepening.

Dredged material from the new work associated with the incremental deepening from -39 feet MLT to -45 feet MLT will be placed in previously authorized Dredged Material Placement Area (DMPA) 13 and/or DMPA 14. Dredged material from maintenance dredging will be placed in DMPA 13.

FIGURE 1: LOCATION MAP



1.2 Purpose and Need

The purpose of the proposed project is to deepen the channel to match the existing depth of the existing La Quinta Channel, which was constructed and maintained by the USACE, and to accommodate containerships and other vessels drafting more than 39 feet. The need for deeper water to better handle containerized cargo was documented in the 2003 FEIS and 2012 LRR. With the decision, announcement, and current construction of the Panama Canal Expansion anticipated to be complete in 2014, the expansion is expected to change global trading patterns resulting in increased ship traffic in the Gulf and the need to accommodate containerships and other vessels drafting more than 39 feet. With the existing La Quinta Channel at -45 feet, this project to deepen 1.4 miles of the channel by 6 feet will connect dock facilities in the area to 20 miles of existing 45-foot deep channel to the Gulf of Mexico.

The PCCA is moving forward with a feasibility study for Federal assumption of maintenance of the permitted deepening to -45 feet. The physical deepening to -45 feet by the PCCA would not be initiated until receiving approval of Federal assumption of maintenance from the Assistant Secretary of the Army (Civil Works) (ASA(CW)). To meet the Port's needs, the non-Federal project would be constructed immediately after construction of the -39-foot Federal project and will require approximately 1.3 mcy of additional new work dredging beyond the requirements of the Federal project.

1.3 Existing Project

The federally permitted 1.4 mile La Quinta Ship Channel Extension Project is currently under construction. The authorized project depth is -39 feet MLT, which is 6 feet less than that of the existing La Quinta Ship Channel, which was constructed and maintained by the USACE to -45 feet MLT by a 1968 Congressional Authorization. The PCCA received the USACE Section 10/404 permit SWG-2006-00515 (formerly No. 24150) on September 18, 2006 that mirrored the federally authorized extension of La Quinta Ship Channel. The permit authorized the placement of dredged material in DMPAs 13 and 14 and Beneficial Use Site (BUS) 6 and included mitigation in the form of 40 acres of shallow water habitat and 15 acres of seagrass. The permit was amended in June 2011, authorizing additional dredging to deepen the 1.4 mile La Quinta Ship Channel Extension to -45 feet plus two feet of advanced maintenance and two feet allowable overdraft. Construction of the Federal project to dredge the La Quinta Ship Channel Extension to -39 feet was initiated in November 2011 and is expected to be complete in the spring of 2013.

1.4 Problems, Needs, and Public Concerns

1.4.1 Navigation/Commerce

Vessels utilizing the federally constructed La Quinta Channel Extension will be limited to those with operating drafts of less than -39 feet. The proposed deepening of the La Quinta Channel Extension to -45 feet would allow for navigation by a larger range of vessels with deeper operating drafts than those that would transit the -39 foot channel, thereby reducing the transportation cost (cost per ton) for any given cargo. Detailed considerations of Navigation/Commerce are made in the 2003 FEIS and the 2012 LRR. The only changes to considerations of navigation and commerce in the La Quinta Channel Extension include the likely development of new facilities (PCCA's multi-purpose cargo dock and Cheniere Energy's Liquefied Natural Gas (LNG) terminal) along the channel extension, both of which would aim to capitalize on the use of deeper draft vessels.

1.4.2 Environmental

There have been no significant changes in the project area or sensitive resources that would result in impacts not previously considered in the 2003 FEIS, and updated the 2012 LRR. The projected maintenance dredging volumes associated with the request for Federal assumption of maintenance are equivalent to those considered in the FEIS and thus, environmental effects are considered to be the same. Based on this, the Record of Decision (ROD) remains applicable to the recommended plan.

1.5 Planning Objectives

The objectives of the proposed project included primarily the improvement of safety, the efficiency of the channel use and traffic management. Additionally, maintenance of, or enhancement of the local environment that include ecologically important resources have been included in the development of the objective which have gone unchanged since development of the 2003 FEIS.

1.6 Non-Federal Sponsor and Coordination

The PCCA is the designated non-Federal sponsor and continues to coordinate agency conditions and mandated actions needed to meet permitting requirements. These responsibilities remain the same as directed in this section of the 2003 FEIS.

1.7 Resource Management Screening

This section of the 2003 FEIS was primarily focused on coordination of beneficial use of dredged material in association with the Corpus Christi Ship Channel Improvements Project (CCSCIP). Maintenance material associated with the La Quinta Ship Channel was planned for placement in DMPA 13 in the 2003 FEIS, which is the same placement location considered in this study.

2.0 ALTERNATIVES

2.1 History and Process for Formulating

The USACE planning framework requires the systematic preparation and evaluation of alternative ways of addressing problems, needs, concerns, and opportunities while considering environmental factors. The criteria and broad planning objectives previously identified, as well as the project objective, form the basis for subsequent plan formulation, screening, and ultimately, plan selection.

The 2003 FEIS fully describes the process utilized for formulating alternatives and is still current.

2.2 Alternative Screening

Alternative screening during development of the 2003 FEIS resulted in six alternatives, one of which was the extension of the La Quinta Ship Channel. For the La Quinta Ship Channel Extension Alternative, numerous channel depths (including -45 feet) were considered.

In consideration of the PCCA's request for Federal assumption of maintenance, six alternatives were considered with respect to the engineering, economic, and environmental factors:

- Maintain -39 foot depth of La Quinta Ship Channel Extension (Without Project)
- Deepen to -40 feet with Federal assumption of maintenance
- Deepen to -41 feet with Federal assumption of maintenance
- Deepen to -42 feet with Federal assumption of maintenance
- Deepen to -43 feet with Federal assumption of maintenance
- Deepen to -44 feet with Federal assumption of maintenance
- Deepen to -45 feet with Federal assumption of maintenance (Preferred Alternative)

2.2.1 Channel Deepening Benefit Summary

In this study, to support the request for Federal assumption of maintenance, channel deepening benefits associated with each alternative were calculated for containerized cargo. The transportation savings benefits were calculated using a Federal discount rate of 4.0 percent for a period of analysis of 2014-2064. Net excess benefits increased with each considered alternative and the -45 foot alternative was identified as the preferred plan (see economic appendix for details).

2.2.2 Channel Widening Benefits

Based on the results of the problem identification phase of this study, existing constraints are a function of channel depth and are not a function of channel width. For this reason, benefits of channel widening were not considered for this study.

2.2.3 Deepening of the Existing La Quinta Federal Project

Examination of the vessel sizes and trade routes associated with post-panama canal expansion conditions showed that container vessels drafting in excess of -39 feet would be likely to call at the PCCA. Comparison of the economic benefits with construction and maintenance costs associated with the preferred alternative showed the highest net excess benefits and highest benefit to cost ratio (17.0 to 1) of the considered alternatives.

2.2.4 Extension of the Existing La Quinta Federal Project

The La Quinta Channel Extension is currently being constructed by the Federal government and therefore was not assessed in this study.

2.3 Alternatives Analysis

2.3.1 No-Action

The USACE planning guidance requires analysis of a "Without Project" plan as one of the alternatives. To comply with the requirements of the National Environmental Policy Act (NEPA), a No Action plan must be included in the alternative array. The "Without Project" plan is synonymous with the No Action plan. The "Without Project" plan also forms the basis against which all other alternative plans are measured.

The "Without Project" condition would retain the -39 foot Federal La Quinta Channel Extension and associated maintenance dredging program. The existing operational constraints that include limitations on vessel draft would remain. Port entry opportunities for large vessels would continue to be limited. This alternative does not satisfy fundamental project objectives.

2.3.2 Preferred Alternative

The following plan is based on the economic, engineering, and environmental factors and is the preferred alternative for the La Quinta Ship Channel Extension. The preferred ("With Project") alternative includes the non-Federal deepening of the 1,400 foot La Quinta Channel Extension from -39 feet to -45 feet (plus two feet of advanced maintenance and two feet of allowable overdepth) at no cost to the Federal government and Federal assumption of maintenance of the -45 foot channel extension.

The deepening from -39 feet to -45 feet (plus two feet of advanced maintenance and two feet of allowable overdepth) will require dredging of approximately 1.3 mcy of new work material, which will be placed of in DMPA 13 and/or DMPA 14. The projected annual shoaling rate for the -45 foot channel extension is 188,000 cy, which is equivalent to the shoaling rate considered for the -45 foot alternative in the 2003 Feasibility Study and 2003 FEIS. The 50-year maintenance dredging projection for the deepened channel extension is 9.4 mcy, which is equivalent to the volume coordinated for the -45 foot alternative in 2003 for the Federal La Quinta Channel Extension Project. Maintenance material associated with the non-Federal deepening will be placed in DMPA 13, which is consistent with the dredged material placement plan developed for all alternatives (including -45 feet) in 2003 for the Federal channel extension project.

3.0 AFFECTED ENVIRONMENT

3.1 Environmental Setting

The environmental setting for this project has gone unchanged since development of the 2003 FEIS. Refer to the 2003 FEIS for commentary on the environmental setting.

3.1.1 Physiography

The area includes fluvial-deltaic systems, bay-estuary-lagoon systems, barrier island-strand plain systems, locally distributed marsh-swamp systems, and eolian (wind) systems. Vegetation is sparse and consists of oak clusters and other coastal vegetation such as tall grasses, and marsh plants, in the more sandy areas and in the uplands along streams. Broad areas of coastal prairies, chaparral pastureland and farmland occur inland from the bays. The physiography has remained unchanged since the development of the 2003 FEIS..

3.1.2 Geology

The proposed project area lies within the Coastal Prairies subprovince of the young deltaic sands, silts, and clays erode to nearly flat grasslands that form almost imperceptible slopes to the southeast. Trees are uncommon except locally along streams and in Oak mottes, growing on coarser underlying sediments of ancient streams. The geology of the area has remained unchanged since the development of the 2003 FEIS.

3.1.3 Climate

The climate conditions surrounding the proposed project area are intermediate between that of the humid, subtropical coastal area to the northeast and that of the semiarid area to the west and southwest. Annual rainfall amounts are about 29 inches. Peak rainfall occurs in late summer and fall which coincides with the tropical storm/hurricane season. Temperatures for this area are about 95° Fahrenheit during the warmer months with lows in the mid 40s. Climatic conditions have remained the same since the development of the 2003 FEIS.

3.2 Water Quality

3.2.1 Water Exchange and Inflows

Conclusions regarding influences on water exchange and inflows have gone unchanged since development of the 2003 FEIS. The 2003 FEIS assessed the potential impact of deepening to -45 feet and determined the effect to be insignificant.

3.2.2 Salinity

Influences on salinity are documented for the -45 foot alternative in the 2003 FEIS and in the Engineering Appendix for this study, and are determined to be insignificant in both documents.

3.2.3 Water and Elutriate Chemistry

Water and elutriate chemistry considerations for the La Quinta Channel Extension are documented in the 2003 FEIS and 2012 LRR and are still applicable. Water and elutriate samples were most recently obtained from the La Quinta Channel in 2008. Results indicate that all samples obtained in 2008 were below applicable EPA Water Quality Criteria. Based on these findings, the 2012 LRR reports that existing water resources data for the La Quinta Channel and Corpus Christi Bay indicate no problems associated with water or elutriate sample testing.

The 2012 LRR concludes that requirements of Section 404(r) of the Clean Water Act of 1977, as amended have been met and that no new or additional water quality certification is required.

3.2.4 Brown Tide

Brown tide was fully considered in the 2003 FEIS. The discussion from the 2003 FEIS remains applicable and is not in need of updating.

3.2.5 Ballast Water

Environmental effects associated with ballast water were fully considered in the 2003 FEIS. The Ballast Water Management program is in response to national concerns, the National Invasive Species Act of 1996 (NISA) amended the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA). The U.S. Coast Guard has established both regulations and guidelines to prevent the introduction and spread of Aquatic Nuisance Species (ANS). The updated ballast water discharge standard was revised June 21, 2012 with new regulations on ballast water management establishing a standard for the allowable concentration of living organisms in ballast water discharged from ships in waters of the United States. The EPA Environmental Technology Verification (ETV) Program published a final protocol for verification of ballast water treatment systems in September 2010.

3.3 Sediment Quality

A narrative on sediment quality with the La Quinta Channel Extension is included in the 2003 FEIS. Sediment samples were most recently obtained from the La Quinta Channel in 2008. There are no EPA quality criteria for sediments; however, a comparison with sediment quality screening guidelines indicates that unacceptable adverse impacts would not result from dredging.

3.3.1 Surficial Sediments

Sediment samples from the La Quinta Channel were obtained by USACE in 2008. Based on the 2008 sediment data, unacceptable adverse impacts would not result from dredging and discharge.

3.3.2 Maintenance Material

Maintenance material within the La Quinta Channel Extension was fully considered in the 2003 FEIS, where it was determined that there is no indication of a cause for concern relative to maintenance material quality. Based on the 2003 FEIS and the 2008 water, elutriate, and sediment data, unacceptable adverse impacts would not result from maintenance dredging and discharge.

3.4 Community Types

As described in the 2003 FEIS and 2012 LRR, and verified by an August 2012 review of the project area, vegetation community types in the project vicinity include open water, beaches, barrier flats, dredged material disposal areas, salt water marshes, and brackish to fresh water marshes.

3.5 Fish and Wildlife Resources

The study area includes Corpus Christi Bay, Nueces Bay, and small portions of the Upper Laguna Madre, Redfish Bay, and the Gulf nearshore waters at the entrance channel in Port Aransas. The study area contains a diverse mix of aquatic and terrestrial resources as described below. The area also supports a productive sport and commercial fishery and provides recreational opportunities that are intensively utilized year round.

The proposed project is located in an area that has been identified by the Gulf of Mexico Fishery Management Council (GMFMC) as Essential Fish Habitat (EFH) for specific species. Based on communication with the National Marine Fisheries Service (NMFS), the EFH list for Corpus Christi Bay was updated in 2005. Updates were limited to the addition of five species of reef fish: dog snapper (*Lutjanus jocu*), gray snapper (*Lutjanus griseus*), lane snapper (*Lutjanus synagris*), goliath grouper (*Epinephelus itajara*), and yellowmouth grouper (*Mycteroperca interstitialis*). The EFH list for Corpus Christi Bay was then updated in 2009 to include eight highly migratory shark species: scalloped hammerhead (*Sphyrna lewini*), blacktip shark (Ca*rcharhinus limbatus*), bull shark (Ca*rcharhinus leucas*), lemon shark (*Negaprion brevirostris*), spinner shark (Ca*rcharhinus brevipinna*), bonnethead shark (*Sphyrna tiburo*), atlantic sharpnose shark (*Rhizoprionodon terraenovae*), and finetooth shark (*Carcharhinus isodon*).

3.6 Threatened and Endangered Species

The Federal Endangered Species Act of 1973 (ESA) (16 USC 1531–1544), as amended, prohibits the "take" of any Threatened or Endangered Species. The term "take" under the ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The term "harm" was further defined in 50 CFR 17.3 to include "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." Designation of critical habitat areas has been established for the public knowledge where the publishing of such information would not cause harm to the species. Any person, state, municipality, agency, or other entity operating in the U.S. is subject to the prohibitions of the ESA. Compliance with the ESA is designed to ensure the continued existence of listed species and the integrity of critical habitat. If a Federal action or an action by a non-federal party which requires a federal loan or permit might affect a listed species, the federal entity proposing the action or issuing the loan or permit must determine that the action would not jeopardize the continued existence of the listed species. For actions without a Federal nexus, permits may be issued for the "incidental take" of a species for otherwise lawful actions. The FWS and the NMFS are responsible for consultations and incidental take permitting under the ESA. Additional Federal protection is extended to migratory birds and bald and golden eagles under the Migratory Bird Treaty Act (MBTA) (16 USC 703–712), as amended, and the Bald (*Haliaeetus leucocephalus*) and Golden Eagle (*Aquila chrysaetos*) Protection Act (16 USC 668–668d). Only those species listed as endangered or threatened by the FWS or NMFS are afforded complete Federal protection.

3.6.1 Regional Listed Species

According to the USFWS and NMFS, there are four species of bird, two plants, three mammals, and five reptile species listed as threatened or endangered in Nueces and San Patricio Counties (USFWS, 2012 and NMFS, 2012). These species are protected under provisions of the Endangered Species Act of 1973, as amended. These endangered species are protected by both Federal and state statutes, which generally prohibit the take of animals and plants, as well as providing varying degrees of protection to habitat that may be considered critical to the species' continued existence. While the 2003 FEIS considered both Federal and State lists, this study only documents changes to species on the Federal list. **Table 1** provides a list of Threatened and Endangered Species known or thought to occur in Nueces and San Patricio Counties.

TABLE 1. FEDERALLY-LISTED THREATENED AND ENDANGERED SPECIES FOR NUECES AND SAN PATRICIO COUNTIES, TEXAS			
Common Name	**Scientific Name**	**Presence of Suitable Habitat**	**Federal Status**
Nueces County			
BIRDS			
Brown Pelican	*Pelecanus occidentalis*	Yes	DL
Piping Plover	*Charadrius melodus*	Yes	LT
Whooping Crane	*Grus americana*	Yes	LE
MAMMALS			
Ocelot	*Leopardus pardalis*	No	LE
Gulf Coast jaguarundi	*Herpailurus yagouaroundi cacomitli*	No	LE
West Indian manatee	*Trichechus manatus*	Yes	LE
REPTILES			
Atlantic hawksbill sea turtle	*Eretmochelys imbricata*	Yes	LE
Green sea turtle	*Chelonia mydas*	Yes	LE
Kemp's Ridley sea turtle	*Lepidochelys kempii*	Yes	LE
Leatherback sea turtle	*Dermochelys coriacea*	Yes	LE
Loggerhead sea turtle	*Caretta caretta*	Yes	LT
PLANTS			
South Texas ambrosia	*Ambrosia cheiranthifolia*	Yes	LE
Slender rushpea	*Hoffmannseggia tenella*		LE
San Patricio County			
BIRDS			
Brown Pelican	*Pelecanus occidentalis*	Yes	DL
Eskimo Curlew	*Numenius borealis*	No	LE
Northern Aplomado Falcon	*Falco femoralis septentrionalis*	No	LE
Piping Plover	*Charadrius melodus*	Yes	LT
Whooping Crane	*Grus americana*	Yes	LE
MAMMALS			
Ocelot	*Leopardus pardalis*	No	LE
Gulf Coast jaguarundi	*Herpailurus yagouaroundi cacomitli*	No	LE
West Indian manatee	*Trichechus manatus*	Yes	LE
MOLLUSKS			
Golden orb	*Quadrula aurea*		C
REPTILES			

Atlantic hawksbill sea turtle	*Eretmochelys imbricata*	Yes	LE
Green sea turtle	*Chelonia mydas*	Yes	LE
Kemp's Ridley sea turtle	*Lepidochelys kempii*	Yes	LE
Leatherback sea turtle	*Dermochelys coriacea*	Yes	LE
Loggerhead sea turtle	*Caretta caretta*	Yes	LT

Source: FWS (August 17, 2012).
C Candidate (These are species for which existing reliable information indicates a need for listing; however, no federal protection applies to such species.)
DL Federally delisted
LE Federally listed endangered
LT Federally listed threatened
NL Not federally listed

3.6.2 Regional Listed Species

One species has been listed by USFWS or NMFS as threatened since development of the 2003 FEIS. The Northern Aplomado Falcon (*Falco femoralis septentrionalis*) is now listed for San Patricio County. The USFWS has also listed the golden orb (*Quadrula aurea*)) as a candidate species and although it is shown in the list above, candidate species receive no statutory protection under the ESA.

There is no suitable habitat present within the proposed project area for the Northern Aplomado Falcon which prefers open country, especially savanna and open woodland that are barren or grassy plains and valleys with scattered mesquite, yucca, and cactus. They may also be found in coastal prairie along sand ridges. Additionally, the 2012 LRR indicated this species was removed from consideration in 2008.

No additional Threatened or Endangered Species have been identified by the USFWS or the NMFS in the species categories of amphibians, mammals, insects, or plants since the 2003 FEIS for this area. The Black lace cactus (*Echinocereus reichenbachii* var. *albertii*) has since been removed from the list developed in 2003. Additionally, since 2003, bald eagle (*Haliaeetus leucocephalus*) has been delisted but is remains a protected species, and Eskimo curlew (*Numenius borealis*) and the red wolf (*Canus rufus*) has been declared extinct.

An area located approximately 3.5 miles east of the proposed project area was designated as critical habitat for the Piping Plover in 2009 and since the 2003 FEIS. This critical habitat site encompasses the northern peninsular area which lies between Nueces Bay and Corpus Christi Bay.

3.7 Hazardous, Toxic, Radioactive Waste

The FEIS 2003 and the 2012 LRR indicated no National Priority List, State Superfund, or City/County Solid Waste Landfill sites in the study area. Refer to the 2003 FEIS and 2012 LRR for additional detail.

3.8 Historic Resources

3.8.1 Cultural History Overview

Potentially significant archeological and historic sites have been documented in the Corpus Christi area near the study area. Limited cultural resources investigations in the Corpus Christi area have revealed cultural remains from Paleo-Indian to Historic times. Erosion, urban and industrial development, and agricultural practices have

affected many of these sites. According to the Texas Historical Commission's (THC) Texas Historical Sites Atlas online map there are no Historic County Courthouses, National Register Properties, State Archeological Landmarks (Buildings Only), Historical Markers, Cemeteries, Museums, Military Sites, Sawmills, or Neighborhood Surveys near the study area. The closest resource is a Historic Marker located approximately three miles northwest of the study area in Portland, Texas.

Cultural resource investigations described in the 2003 FEIS identified potential impacts from proposed channel deepening and widening actions to one historic shipwreck: the *SS Mary* (41NU252) located adjacent to the Entrance Channel between the Port Aransas Jetties. Another unidentified shipwreck (41NU264) is located just beyond the end of the Port Aransas Jetties. Neither site occurs within the La Quinta Channel Extension.

Deepening to -45 feet was fully considered in the 2003 FEIS. Per the 2012 LRR, no other adverse impacts are anticipated within the proposed project area to any other submerged or terrestrial cultural resources. Per a search of the THC's Historic Sites Atlas, no new resources have been identified in the study area since publication of the FEIS.

3.9 Air Quality

The Clean Air Act (CAA) of 1970 (42 USC 7401 et seq. amendments 1977 and 1990) and Environmental Protection Agency (EPA) regulatory programs authorized under 40 Code of Federal Regulations (CFR) 50–99 govern air pollution assessment and control. In Texas, EPA and Texas Commission on Environmental Quality (TCEQ) are responsible for air quality protection. Under authority of the CAA, EPA established primary and secondary pollutant criteria called the National Ambient Air Quality Standards (NAAQS) (**Table 2**). EPA General Conformity Rules and corresponding TCEQ state rules also apply when applicable to regional attainment classifications.

TABLE 2. NATIONAL AMBIENT AIR QUALITY STANDARDS				
	Primary Standards		Secondary Standards	
Pollutant	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour [1]	None	
	35 ppm (40 mg/m^3)	1-hour [1]		
Lead	0.15 µg/m^3 [2]	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m^3 [2]	Quarterly Average	Same as Primary	
Nitrogen Dioxide	53 ppb [3]	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour [4]	None	
Particulate Matter (PM_{10})	150 µg/m^3	24-hour [5]	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15.0 µg/m^3	Annual [6] (Arithmetic Average)	Same as Primary	
	35 µg/m^3	24-hour [7]	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour [8]	Same as Primary	
	0.08 ppm (1997 std)	8-hour [9]	Same as Primary	
	0.12 ppm	1-hour [10]	Same as Primary	
Sulfur Dioxide	75 ppb	1-hour [11]	0.5 ppm	3-hour [1]

Source: EPA, 2012a

(1) Not to be exceeded more than once per year.

(2) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(3) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(4) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

(5) Not to be exceeded more than once per year on average over 3 years.

(6) To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.

(7) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).

(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm (effective March 27, 2008).

(9) The 1997 standard (3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm)—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard. EPA is in the process of reconsidering these standards (set in March 2008).

(10) In 1997, EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding"). The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

11) To attain this standard, the 3-year average of the 99th percentile of 1-hour daily maximum concentrations must not exceed 75 ppb (effective June 22, 2010). The 1971 annual and 24-hour SO_2 standards were revoked in this rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

NAAQS define key pollutants considered harmful to public health and the environment. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The CAA requires the EPA to assign an "attainment" designation to each area of the United States based on compliance or noncompliance with the NAAQS. The designations are as follows:

- Attainment – area currently meets the NAAQS
- Maintenance – area currently meets the NAAQS but has previously been out of compliance
- Non-attainment – area currently does not meet the NAAQS
- Unclassifiable – area cannot be classified on the basis of available information

The TCEQ, with EPA review and approval, has developed a State Implementation Plan (SIP) for attaining the air quality standards for non-attainment areas in Texas. The SIP is updated periodically to describe how specific areas would reach attainment of the NAAQS and sets emissions budgets for point sources (e.g., power plants); area wide sources (e.g., dry cleaners and paint shops); off-road mobile sources (e.g., boats and lawn mowers); and on-road sources (e.g., cars, trucks, and motorcycles). The EPA General Conformity Rule prohibits federal agencies from funding, permitting, or licensing any project that does not conform to an applicable SIP to ensure emissions do not contribute to air quality degradation. A General Conformity determination by the lead federal agency in consultation with TCEQ and EPA can result from evaluating plans, programs, and projects to ensure that proposed actions meet the requirements of the CAA and the SIP. For the proposed project area, Nueces and San Patricio counties are currently classified as 'attainment' or 'unclassifiable' for NAAQS and are not included in the TCEQ SIP (EPA 2012, TCEQ 2012).

During development of the 2003 FEIS, Nueces and San Patricio Counties were in attainment of the National Ambient Air Quality Standards (NAAQS) for ozone adopted by the EPA pursuant to the Clean Air Act. Refer to 2003 FEIS. Although still in attainment in 2012, EPA initiated a new Greenhouse Gas (GHG) reporting rule that requires reporting of GHG emissions by all sectors of the United States economy. The EPA issued several amendments to 40 CFR Part 98 (see Section 3.9 of this EA), including proposed amendments designed to provide greater clarity for existing requirements, correct errors, and provide additional flexibility for facilities subject to reporting emissions from the following source categories: petroleum and natural gas systems (40 CFR part 98, subpart W); electronics manufacturing (40 CFR part 98, subpart I); fluorinated gas production (40 CFR part 98, subpart L); and industrial waste landfills (40 CFR part 98, subpart TT). The EPA's electronic reporting tool (e-GGRT) is available at http://ghgreporting.epa.gov/.

3.10 Noise

There are no noise regulations that limit the maximum sound levels from construction and/or operation of industrial facilities in Texas. However, the EPA has developed noise level guidelines as directed by Congress in the Noise Control Act of 1972 and amended by the Quiet Communities Act of 1978. Any traffic noise analysis and proposed abatement, final design analysis, or noise workshop for a NEPA document completed after July 13, 2011 must comply with the new rule for 23 CFR 772.

Sound from highway traffic is generated primarily from a vehicle's tires, engine, and exhaust. It is commonly measured in decibels and is expressed as "dB." Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as "dB(A)."

The 2003 FEIS fully describes the implication of the Noise Control Act of 1972 and projects an increase in noise levels in proximity to urban communities. Refer to 2003 FEIS. No significant changes to regulations or site conditions that could potentially change the outcome of the 2003 FEIS have occurred.

3.11 Socioeconomics

The general study area for socioeconomic conditions includes Nueces and San Patricio counties. Corpus Christi is the nearest city to the proposed project. Based on an evaluation of 2010 census data, the socioeconomic conditions of these cities and counties have been characterized for this evaluation. Data for race, ethnicity, and income were gathered at the census block group level for those block groups located within 1 mile of the proposed project area to evaluate the potential for minority and low-income populations. Information for population, race, ethnicity, age and disability are available from the U.S. Census Bureau, Census 2010 (U.S. Census Bureau 2010).

3.11.1 Socioeconomics

According to the 2010 Census, the population of the City of Corpus Christi was 305,215; the population of the City of Ingleside was 9,387, the population of the City of Ingleside on the Bay was 615, and for the City of Portland, the population was 15,099. The 2010 populations of Nueces and San Patricio counties were 340,223and 64,804, respectively. A general comparison of 1990, 2000, and 2010 state and county data indicates a slower growth rate within the project vicinity compared to the state average except for the City of Ingleside which experienced a 64.8% increase for the time period from 1990 to 2000 and well above the state average growth (**Table 3**).

TABLE 3. COMPARISON OF 1990, 2000, AND 2010 CITY COUNTY AND STATE POPULATIONS					
Reference Area	**Total Population**			**Population Change (%)**	
	1990	**2000**	**2010**	**1990–2000**	**2000–2010**
City of Corpus Christi	257,453	277,454	305,215	7.8	10.0
City of Ingleside	5,696	9,388	9,387	64.8	0.0
City of Ingleside on the Bay	513	659	615	28.5	-6.7
City of Portland	12,224	14,827	15,099	21.3	1.8
Nueces County	291,145	313,645	340,223	7.7	8.5
San Patricio County	58,749	67,138	64,804	14.3	-3.5
State of Texas	16,986,510	20,851,820	25,145,561	22.8	20.6

Source: U.S. Census Bureau, Census 1990 P001. Persons. Data Set: 1990 Summary Tape File 3.
U.S. Census Bureau, Census. 2000 Summary File 1 (SF 1) 100-Percent Data.
U.S. Census Bureau, Census 2010 Summary File 1 (SF 1) 100-Percent Data.

County wide, the population in Nueces County grew 7.7% between 1990 and 2000 and showed a slight increase from 2000 to 2010 having an 8.5% increase. During the period from 1990 and 2000, San Patricio County's population growth rate was robust with a 14.3% increase in population, but from 2000 to 2010 the county's population fell by 6.7%.

TABLE 4. PROJECTED COUNTY AND STATE POPULATIONS				
Reference Area	**Actual**	**Projected**		
	2010	**2020**	**2030**	**2040**
Nueces County	340,223	394,002	426,926	454,471
San Patricio County	64,804	96,483	111,185	124,754
State of Texas	25,145,561	28,005,740	31,830,575	35,761,165

Source: Texas Workforce Commission 2012a, 2012b.

Based on 2009 population projections from the Texas Workforce Commission (TWC), Nueces and San Patricio counties and the state are forecasted to increase substantially through 2040 (**Table 4**). The proposed project is not anticipated to result in a change in local population numbers. Any residential relocation that would occur as a result of the proposed project would most likely be relocated in the general area. As a result, the proposed project would not likely impact the population in the surrounding area.

3.11.2 Age and Disability Status

The age distribution of a region can provide insight into the economic composition and income potential of that region (**Table 5**). If the age cohort 65 and older is higher than the state average, this suggests a stable, mature population that does not contribute greatly to the economy of the area. The age cohort under 18 years old is generally dependent and not part of the work force. When the 18 to 64 age cohort is higher than the state average, this is a sustainable economic situation because this group contains the greatest share of the labor force.

Based on a comparison of county data (**Table 5**), Nueces and San Patricio counties are similar values of 62.0% and 58.9% respectively. Both counties have percentages that are near, but slightly lower than that of the state (62.3%).

TABLE 5. AGE DISTRIBUTION

Area	Under 5 Years (%)	5–17 Years (%)	18–64 Years (%)	65+ Years (%)
Nueces County	7.1	18.9	62.0	12.0
San Patricio County	7.3	20.9	58.9	12.9
State of Texas	7.7	19.6	62.3	10.3

Source: U.S. Census Bureau, Census 2010 Summary File 1.

Table 6 provides data relative to the disability status of the civilian non-institutionalized population from the 2010 Census for Nueces and San Patricio counties. The 2010 Census for San Patricio County records only 0.05% for persons with disabilities in the 18-64 year age group. This same source data indicates that Nueces County has a lower population number with disabilities for the under 18 years and the 18-64 year age categories when compared to that of the state. Nueces has a slightly higher percentage than the state for the 65 years and older category.

TABLE 6. DISABILITY STATUS

Area	Under 18 Years (%)	18–64 Years (%)	65 + Years (%)
Nueces County	0.03	0.70	0.03
San Patricio County	0.0	0.05	0.0
State of Texas	0.1	1.20	0.2

Source: U.S. Census Bureau, Census 2010 Summary File 1.

3.11.3 Race and Ethnicity

The race of the population within Nueces and San Patricio counties is primarily white. Persons of Hispanic or Latino ethnicity comprise the largest minority in Nueces and San Patricio counties comprising 60.6% and 54.4% respectively. Both Nueces and San Patricio counties this population component is higher than the state average of 37.6% (**Table 7**). Hispanic or Latino is classified as an ethnicity and not that of a race; therefore, the Hispanic or Latino population was analyzed separately (U.S. Census Bureau 2010).

The cities of Corpus Christi, Ingleside, Ingleside on the Bay, and Portland, show a similar racial makeup having a predominantly white population with the Hispanic or Latino ethnicity comprising the largest minority population (**Table 7**).

TABLE 7. RACE AND ETHNICITY BY CITY AND COUNTY														
Race	**City of Corpus Christi**		**City of Ingleside**		**City of Ingleside on the Bay**		**City of Portland**		**Nueces County**		**San Patricio County**		**State of Texas**	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
White	353,293	82.5	5,021	53.5	494	80.3	9,079	60.1	277,402	81.5	55,660	85.9	17,701,552	70.4
Black or African American	15,011	3.5	164	1.7	6	1.0	208	1.4	13,637	4.0	1,071	1.7	2,979,598	11.8
American Indian and Alaska Native	2,685	0.6	39	0.4	2	0.3	57	0.4	2,128	0.6	386	0.6	170,972	0.7
Asian	6,723	1.6	185	2.0	2	0.3	189	1.3	5,731	1.7	537	0.8	964,596	3.8
Native Hawaiian and Other Pacific Islander	335	0.1	7	0.1	0	0.0	14	0.1	269	0.1	58	0.1	21,656	0.1
Some other race	39,786	9.3	9	0.1	0	0.0	19	0.1	32,797	9.6	5,522	8.5	2,628,186	10.5
Two or more races	10,352	2.4	128	1.4	5	0.8	207	1.4	8,259	2.4	1,5708	24.2	679,001	2.7
Hispanic Origin (regardless of race[1])	247,231	57.7	3,834	40.8	106	17.2	5,326	35.3	206,293	60.6	35,248	54.4	9,460,921	37.6
Total	**428,185**	**100**	**9,387**	**100**	**615**	**100**	**15,099**	**100**	**340,223**	**100**	**64,804**	**100**	**25,145,561**	**100**

Source: U.S. Census Bureau, Census 2010 Summary File 1, Table P5.

[1] "Hispanic or Latino" refers to a person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race and is defined by the U.S. Office of Management and Budget as an ethnicity and not a race.

According to the Council on Environmental Quality's (CEQ) NEPA EJ guidance (CEQ 1997), minority populations should be identified where either:

- The minority population of the affected area is equal to or greater than 50% of the total population, or
- The minority population percentage of the project area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis.

Executive Order (EO) 12898 states that population groups defined as minorities include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic/Latino origin; or Hispanic/Latino. Low-income populations are those communities or sets of individuals whose median income is below the current poverty level of the general population.

According to the U.S. Census Bureau, the minority populations that include only those persons of one race in Nueces and San Patricio counties are approximately 15.1%, and 9.1%, respectively (U.S. Census Bureau 2010).

To identify potential minority populations within or adjacent to the project area, Census data for block groups within 1 miles of the study area were used. **Table 8** presents the population by race and ethnicity for the block groups within 1 mile of the project area. For this evaluation, minority block groups were defined as those block groups with a minority population of greater than 50%. Therefore, a block group containing a minority population greater than 50% is considered to be meaningfully greater than the general population. Based on this definition, there are no block groups that contain minority populations within the study area where the minority populations ranged from 8.4% to 9.1% within the block groups.

TABLE 8. RACE AND ETHNICITY BY CENSUS TRACT AND CENSUS BLOCK GROUP

Race	Nueces County Block Group 4, Census Tract 9606		San Patricio County Block Group 1, Census Tract 9501	
	No.	%	No.	%
White	938	91.6	643	90.9
Black or African American	2	0.2	8	1.1
American Indian and Alaska Native	7	0.7	0	0.0
Asian	1	0.1	3	0.4
Native Hawaiian and Other Pacific Islander	0	0.0	0	0.0
Some other race	60	5.8	35	5.0
Two or more races	16	1.6	18	2.6
Hispanic Origin (regardless of race[1])	500	48.8	261	36.9
Total	**1,024**	**100.0**	**707**	**100.0**

Source: U.S. Census Bureau, Census 2010 Summary File 1, Table P5.

[1] "Hispanic or Latino" refers to a person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race and is defined by the U.S. Office of Management and Budget as an ethnicity and not a race.

3.11.4 Income

The proposed project is not anticipated to result in a changed racial or ethnic composition of the study area. There is no indication that minority populations would be disproportionately impacted by the proposed project.

To identify potential low-income populations within the study area, the Department of Health and Human Services (HHS) poverty guideline was used. Low-income is defined as a median household income at or below the HHS poverty guidelines for a family of 3, which is $19,090 (HHS, 2012). The 3-person household is used because the average household size for the block groups within 1 mile of the project area ranges from 2.9 to 3.0. **Table 9** presents median household income and percentage of persons living below the poverty line for the Census Tracts within 2 miles of the study area.

TABLE 9. MEDIAN HOUSHOLD INCOME

Reference Area	Median Household Income	Percent of Persons Living Below the Poverty Line (%)
City of Corpus Christi	$43,457	18.8
City of Ingleside	$54,338	12.0
City of Ingleside on the Bay	$55,500	6.4
City of Portland	$57,878	8.9
Nueces County	$43,280	16.0
San Patricio County	$45,189	16.6
State of Texas	$49,646	16.8

Source: U.S. Census Bureau ACS 2006-2010, Table DP-3.

The median household income in Nueces County was $43,280 and the average household size is three people. The 2012 poverty guideline for a family of three is $19,090 (HHS, 2012). Approximately 16% of people living in Nueces County over the age of 18 had an annual income below the poverty level.

According to the 2010 Census, the median household income in San Patricio County was $45,189, and the average household size is 2.86 people. Approximately 16.6% of people living in San Patricio County over the age of 18 had an annual income below the poverty level.

These updated socioeconomic data represent only a slight change (in most cases less than one percent) from those gathered during the 2003 FEIS.

During the period from 2000 to 2009, both Nueces and San Patricio counties showed increases in per capita income as did the state (**Table 10**).

TABLE 10. ANNUAL PER CAPITA INCOME 2000 TO 2009											
Reference Area	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Net Change 2000 to 2009 (%)**
Nueces County	$19,478	$20,238	$20,585	$21,038	$21,797	$23,292	$24,839	$26,521	$28,240	$28,333	4.3
San Patricio County	$25,874	$31,298	$32,082	$32,812	$36,573	$31,665	$34,237	$31,149	$37,006	$37,723	4.4
State of Texas	$28,504	$29,167	$28,938	$29,586	$31,082	$33,185	$35,272	$37,089	$39,838	$38,609	3.5

Source: Bureau of Economic Analysis (BEA) 2010.

3.11.5 Employment

In 2010, Nueces County had 148,104 people employed. The City of Corpus Christi has a low rate of unemployment (7 percent), with many of its residents working in the services, trade, and government. The Corpus Christi economy depends on the oil and petrochemical industry and on tourism. The port is also the base for two large US military bases, the Corpus Christi Army Depot and the Naval Air Station Corpus Christi, that employ over 6,000 local civilians.

In 2010, San Patricio County had an unemployment rate of 11 percent. San Patricio County has a diversified economy that includes an oil center, a petrochemicals center, agribusinesses, and a manufacturing complex.

3.11.6 Industry

The counties within the study area support several industries including agriculture, mining, construction, manufacturing, education, and others. According to the TWC the largest industries in the state and for Nueces and San Patricio counties are (TWC 2012a, 2012b).

Tables 11 and **12** summarize annual compensation (wages, salaries, and employer contributions) by industry for both counties in the study area. In Nueces County, construction and mining represented 4.2% and 9.4% of the county's total compensation, while the industry category of government and government enterprises comprised the largest compensation level for Nueces County at 26.4% of the total compensation (BEA 2010). Based on the limited available information for San Patricio County, the classification of government and government enterprises represented 44.2% of the compensation in 2010 (BEA 2010).

TABLE 11. COMPENSATION BY INDUSTRY IN NUECES COUNTY (IN $1,000S)							
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Total Compensation[1]	$312,808	$325,198	$355,518	$375,172	$414,102	$402,972	$424,868
Farm compensation	$4,347	$5,301	$4,652	$6,142	$6,766	$6,587	$6,443
Forestry, fishing, related activities,	$3,484	$3,818	$4,185	$4,457	$4,719	$4,270	$4,214

TABLE 11. COMPENSATION BY INDUSTRY IN NUECES COUNTY (IN $1,000S)							
	2004	2005	2006	2007	2008	2009	2010
and other[2]							
Mining	$23,504	$28,096	$38,799	$41,296	$50,042	$33,102	$39,674
Utilities	$18,055	$18,202	$18,500	$18,717	$21,625	$22,040	$23,120
Construction	$10,771	$10,949	$14,574	$17,107	$22,837	$21,271	$17,795
Manufacturing	$7,494	$7,446	$9,175	$10,924	$14,013	$14,996	$18,658
Wholesale trade	$16,373	$15,798	$16,055	$19,102	$18,141	$13,374	$17,239
Retail trade	$32,486	$34,897	$35,432	$37,192	$39,446	$40,543	$42,762
Transportation and warehousing	$5,877	$5,671	$5,937	$6,000	$6,074	$5,640	$5,705
Information	$5,461	$4,461	$4,550	$4,612	$4,971	$4,313	$4,652
Finance and insurance	$9,726	$12,167	$13,151	$8,668	$11,146	$12,203	$14,949
Real estate and rental and leasing	$2,284	$1,510	$2,371	$2,127	$2,091	$2,648	$3,185
Professional and technical services	$10,458	$8,594	$9,703	$10,631	$12,463	$9,882	$9,459
Management of companies and enterprises	(D)	$0	$0	$0	$0	$0	$0
Administrative and waste services	(D)	$9,792	$11,027	$8,617	$7,081	$7,256	$6,724
Educational services	(D)	(D)	(D)	$806	$891	(D)	$698
Health care and social assistance	(D)	(D)	(D)	$46,156	$48,976	(D)	$57,214
Arts, entertainment, and recreation	$543	$644	$669	$667	$602	$708	$773
Accommodation and food services	$9,333	$9,441	$9,437	$9,369	$8,809	$9,704	$11,451
Other services, except public administration	$19,745	$18,622	$19,176	$23,742	$29,678	$27,450	$28,039
Government and government enterprises	$83,832	$89,508	$93,607	$98,840	$103,731	$110,595	$112,114

Source: Table CA06 (North American Industry Classification System [NAICS]) (BEA 2010)

1. The estimates of compensation (wages, salaries, and employer contributions) are based on the 2002 North American Industry Classification System (NAICS).

2. "Other" consists of the wage and salary disbursements of U.S. residents employed by international organizations and foreign embassies and consulates in the United States.
(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals

TABLE 12. COMPENSATION BY INDUSTRY IN SAN PATRICIO COUNTY (IN $1,000S)							
	2004	2005	2006	2007	2008	2009	2010
Total Compensation[1]	312,808	325,198	355,518	375,172	414,102	402,972	424,868
Farm compensation	$4,347	$5,301	$4,652	$6,142	$6,766	$6,587	$6,443
Forestry, fishing, related activities, and other[2]	$3,484	$3,818	$4,185	$4,457	$4,719	$4,270	$4,214
Mining	$23,504	$28,096	$38,799	$41,296	$50,042	$33,102	$39,674
Utilities	$18,055	$18,202	$18,500	$18,717	$21,625	$22,040	$23,120
Construction	$10,771	$10,949	$14,574	$17,107	$22,837	$21,271	$17,795
Manufacturing	$7,494	$7,446	$9,175	$10,924	$14,013	$14,996	$18,658
Wholesale trade	$16,373	$15,798	$16,055	$19,102	$18,141	$13,374	$17,239
Retail trade	$32,486	$34,897	$35,432	$37,192	$39,446	$40,543	$42,762
Transportation and warehousing	$5,877	$5,671	$5,937	$6,000	$6,074	$5,640	$5,705
Information	$5,461	$4,461	$4,550	$4,612	$4,971	$4,313	$4,652
Finance and insurance	$9,726	$12,167	$13,151	$8,668	$11,146	$12,203	$14,949
Real estate and rental and leasing	$2,284	$1,510	$2,371	$2,127	$2,091	$2,648	$3,185
Professional and technical services	$10,458	$8,594	$9,703	$10,631	$12,463	$9,882	$9,459
Management of companies and enterprises	(D)	$0	$0	$0	$0	$0	$0
Administrative and waste services	(D)	$9,792	$11,027	$8,617	$7,081	$7,256	$6,724
Educational services	(D)	(D)	(D)	$806	$891	(D)	$698
Health care and social assistance	(D)	(D)	(D)	$46,156	$48,976	(D)	$57,214
Arts, entertainment, and recreation	$543	$644	$669	$667	$602	$708	$773
Accommodation and food services	$9,333	$9,441	$9,437	$9,369	$8,809	$9,704	$11,451

TABLE 12. COMPENSATION BY INDUSTRY IN SAN PATRICIO COUNTY (IN $1,000S)							
	2004	2005	2006	2007	2008	2009	2010
Other services, except public administration	$19,745	$18,622	$19,176	$23,742	$29,678	$27,450	$28,039
Government and government enterprises	$83,832	$89,508	$93,607	$98,840	$103,731	$110,595	$112,114

Source: Table CA06 (North American Industry Classification System [NAICS]) (BEA 2010)

1. The estimates of compensation are based on the 2002 North American Industry Classification System (NAICS).

2. "Other" consists of the wage and salary disbursements of U.S. residents employed by international organizations and foreign embassies and consulates in the United States.

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals

3.11.7 Employment

The labor force is measured as the total number of people currently employed and the number of people actively seeking employment. Nueces and San Patricio counties have had a slow, steady increase in annual growth from 2000 to 2007, when employment numbers dropped. From 2007 through 2011, the employment numbers from Nueces and San Patricio counties indicated recovery from the loss. Overall, Nueces had a 1.3% Average Annual Growth Rate from 2000 through 2011. For the same time period San Patricio County's Average Annual Growth Rate was more robust at 3.9% (**Table 13**).

TABLE 13. AVERAGE ANNUAL LABOR FORCE			
Year	Nueces County	San Patricio County	State of Texas
2000	17,195	398	10,347,847
2001	17,699	438	10,519,335
2002	18,464	436	10,803,187
2003	18,748	460	10,964,756
2004	18,912	434	11,051,912
2005[1]	19,057	382	11,150,684
2006	19,154	340	11,314,341
2007	18,684	335	11,411,891
2008	18,885	332	11,653,877
2009	19,513	362	11,968,199
2010	19,572	408	12,269,727
2011	19,758	559	12,451,504
Average Annual Growth Rate	1.3%	3.9%	1.7%

Source: Texas Workforce Commission, 2012c.

1. According to the data source, because of substantial methodology changes in geographic areas below the state level, data from 2005 and 2004 or earlier is not considered comparable

Overall, Texas, along with both Nueces and San Patricio counties, experienced an increase in unemployment rate from 2008 through 2010. There was an easing in rate figures reported for 2011 from 2010 unemployment rates. Texas and San Patricio County are experiencing an unemployment rate higher (7.9% and 9.5%), than McMullen County (7.6%) for 2011 (**Table 14**). However, based on projections from the Workforce Development Area total employment will increase approximately 20.0% through 2018 (TWC 2012c).

TABLE 14. AVERAGE ANNUAL UNEMPLOYMENT RATE

Year	Nueces County (%)	San Patricio County (%)	State of Texas (%)
2000	5.3	5.9	4.4
2001	5.3	6.0	5.0
2002	6.1	6.8	6.4
2003	6.5	7.2	6.7
2004	6.1	7.7	6.0
2005[1]	5.4	6.8	5.4
2006	4.9	5.9	4.9
2007	4.3	4.9	4.4
2008	4.6	5.4	4.9
2009	6.7	8.5	7.5
2010	7.6	10.9	8.2
2011	7.6	9.5	7.9

Source: Texas Workforce Commission, 2012c.

1. According to the data source, because of substantial methodology changes in geographic areas below the state level, data from 2005 and 2004 or earlier is not considered comparable.

Table 15 shows employment by industry for Nueces County for the past two years. Employment within all industrial sectors except construction and manufacturing showed some level of growth. The TWC did not report numbers for this category.

TABLE 15. AREA EMPLOYMENT BY INDUSTRY

Sector	2010	2011	Employment Change	Percent Change (%)
Atascosa County, Total All Industries	**9,186**	**9,775**	**589**	**6.41**
Natural Resources & Mining	944	976	32	3.39
Construction	456	439	-17	-3.73
Manufacturing	302	249	-53	-17.55
Trade, Transport, & Utilities	2,181	2,522	341	15.64
Information	NA	NA	NA	NA
Financial Activities Group	332	468	136	40.96
Professional, Business & Other Services	284	286	2	0.70
Education & Health Services	2,981	3,000	19	0.64

TABLE 15. AREA EMPLOYMENT BY INDUSTRY				
Sector	**2010**	**2011**	**Employment Change**	**Percent Change (%)**
Leisure & Hospitality Group	749	851	102	13.62
Other Services	332	337	5	1.51
Public Administration	551	573	22	3.99
San Patricio County, Total All Industries[1]	**NA**	**NA**	**NA**	**NA**

3.12 Land Use

3.12.1 Transportation

Nueces County and San Patricio County is served by several major roads, rail lines, airports, and marine terminals. The area is served by Corpus Christi International Airport and Interstate 37, U.S. Highway 77, Texas State Highway 35, and Texas State Highway 44. The inner city public transportation is provided by Corpus Christi Regional Transportation Authority with its 28 bus routes. In 2011, the Texas Senate approved a resolution to study South Texas, including Corpus Christi, as an option for cruise ships. The City is accessed by two major bridges, the Harbor Bridge (US 181) and the John F. Kennedy Causeway (PR 22).

3.12.2 Community Services

The study area is within the jurisdiction of Nueces County, San Patricio County, and the PCCA. Nueces County provides land side services such as county sheriffs, court, libraries, emergency management, parks, public works, and veteran's services. The PCCA offers tours of their facilities, public speakers, energy and economic initiates, and business services for the community.

3.12.2.1 Aesthetics

Considerations of aesthetics are fully described in the 2003 FEIS and have gone unchanged since development of that document.

3.12.2.2 Future Development and Development Restrictions

Considerations of future development and restrictions are fully described in the 2003 FEIS and have gone unchanged since development of that document.

4.0 ENVIRONMENTAL CONSEQUENCES

This section addresses impacts associated with the No-Action Alternative (maintaining the -39 foot Federal La Quinta Ship Channel Extension) and the Proposed Action which includes deepening the La Quinta Ship Channel Extension from -39 feet to -45 feet (plus two feet of advanced maintenance and two feet of allowable overdepth) and Federal assumption of maintenance of the deepened channel extension.

4.1 Water Quality

4.1.1 Water Exchange and Inflows

Impacts to water exchange and inflows associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. Deepening from -39 feet to -45 feet will have minimal to no effect on water exchange and inflows and Federal assumption of maintenance will have no effect on water exchange and inflows.

4.1.2 Salinity

Impacts to salinity associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS, and then again in the Engineering Appendix for this study. Deepening from -39 feet to -45 feet will have minimal to no effect on salinity and Federal assumption of maintenance will have no effect on salinity.

4.1.3 Water and Elutriate Chemistry

Impacts to water and elutriate chemistry associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. As described in the 2012 LRR, indirect effects from the proposed project are anticipated to be temporary. For example, impacts from increased turbidity are anticipated to occur over only a short term. Federal assumption of maintenance will have no effect on water and elutriate chemistry.

4.1.4 Brown Tide

Impacts to brown tide associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS, which concluded minimal or no effect. Federal assumption of maintenance will have no effect on brown tide.

4.1.5 Ballast Water

Impacts from ballast water associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. The vessels included in the 2003 FEIS ballast water analysis included both container ships and bulk carriers expected to utilize the proposed -52 foot CCSC and -45 foot La Quinta Channel Extension. Federal assumption of maintenance will have no effect on impacts from ballast water.

4.2 Sediment Quality

4.2.1 Surficial Sediments

Impacts related to surficial sediments associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. Deepening from -39 feet to -45 feet will have no effect on surficial sediments. Additionally, dredging of paid allowable overdepth and non-pay dredging (work below the allowable overdepth limit that may result from the inherent imprecision in the dredging process) will have no effect on surficial sediments. Federal assumption of maintenance will have no effect related to surficial sediments.

4.2.2 Maintenance Material

Maintenance material associated with deepening to -45 feet was fully described in the 2003 FEIS. Maintenance material associated with the -45 foot channel will be very similar to that observed in the -39 foot channel. Additionally, maintenance dredging of paid allowable overdepth and non-pay dredging will have no effect on sediment quality. Federal assumption of maintenance results in no change to conclusions made in the 2003 FEIS regarding maintenance material.

4.3 Community Types

4.3.1 Submerged Aquatic Vegetation/Seagrasses

Impacts to SAV/seagrasses associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. There are no impacts to SAV associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on SAV/seagrasses.

4.3.2 Coastal Wetlands

Impacts to coastal wetlands associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. Deepening from -39 feet to -45 feet will have no effect on coastal wetlands. Federal assumption of maintenance will have no effect on coastal wetlands.

4.3.2.1 Salt Marshes/Estuarine Shrublands/Sand Flats/Mud Flats/Algal Mats

Impacts to these areas associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS, with no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on these areas.

4.3.3 Open Water/Reef Habitat

Impacts to open water and reef habitat associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. There are no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on these areas.

4.3.4 Coastal Shore Areas/Beaches/Sand Dunes

Impacts to coastal shore areas, beaches, and sand dunes associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. There are no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on these areas.

4.4 Fish and Wildlife Resources

4.4.1 Finfish and Shellfish

Impacts to finfish and shellfish associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. There are no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on finfish or shellfish.

4.4.2 Recreational and Commercial Fisheries

Impacts to recreational and commercial fisheries associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. There are no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on recreational or commercial species.

4.4.3 Aquatic Communities

Impacts to aquatic communities associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS. There are no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will have no effect on aquatic communities.

4.4.4 Essential Fish Habitat

Impacts to the EFH associated with the construction activities to deepen to -45 feet and maintenance dredging were fully documented in the 2003 FEIS and the 2012 LRR. While 13 species have been added to the EFH list for Corpus Christi Bay since 2003, documented habitats for the five newly listed reef fish include mangroves and seagrass beds (which will not be impacted as a result of deepening or maintenance dredging) and the eight newly listed shark species are listed as highly migratory (which means they are unlikely to depend on the project area for extended periods of time). Deepening to -45 feet may result in minor indirect effects such as temporarily increasing turbidity and suspended sediment load in the estuarine water column. These are not expected to be permanent and the Federal assumption of maintenance will have no effect on previously documented (2003 FEIS) EFH or the newly listed EFH for reef fish and migratory sharks.

4.4.5 Wildlife Resources

4.4.5.1 Dredging/Construction Activities

Impacts associated with dredging (including maintenance dredging) and construction activities were fully described in the 2003 FEIS and in the Environmental Assessment/Statement of Findings for the Section 10/404 permit. There are no anticipated effects associated with deepening from -39 feet to -45 feet. Federal assumption of maintenance will not result in any impacts not already considered by these two documents.

4.4.5.2 Operational Activities

Impacts from operational activities were fully described in the 2003 FEIS. Federal assumption of maintenance will not result in any impacts from operational activities that were not previously considered in the 2003 FEIS.

4.5 THREATENED AND ENDANGERED SPECIES

4.5.1 Flora

All activities associated with deepening to -45 feet and Federal assumption of maintenance will occur within the footprint of the existing La Quinta Channel Extension or within DMPA 13 (location for placement of maintenance material). The project will have no effect on Threatened or Endangered Flora.

4.5.2 Fauna

Given that the proposed deepening of the La Quinta Ship Channel Extension will occur within the footprint of the previously authorized Federal project and no new activities are being proposed, the species-specific determinations made as part of the FEIS for the Federal project are applicable to the deepening project.

- **Gulf Coast Jaguarundi** – The project will have no effect. The project area does not include habitat for this species.
- **Ocelot** – The project will have no effect. The project area does not include habitat for this species.
- **Piping Plover** – The project will have no effect. The project area does not include habitat for

this species.

- **Slender Rushpea** – The project will have no effect. The project area does not include habitat for this species.
- **South Texas Ambrosia** – The project will have no effect. The project area does not include habitat for this species.
- **Whooping Crane** – The project will have no effect. The project area does not include habitat for this species.
- **Sea Turtle spp**. (5) – Potential impacts to sea turtles remain unchanged from the 2003 FEIS and agency coordination documented in the 2003 FEIS remains appropriate and in effect. The project is not likely to adversely affect any of the 5 sea turtle species found in the area. While there is the potential for sea turtles to be found within the project area, new work and maintenance dredging will be conducted via hydraulic methods, which are recognized by NMFS as very unlikely to impact sea turtles. No hopper dredging is proposed.
- **West Indian Manatee** – The project is not likely to adversely affect West Indian Manatee. While manatees have historically been observed in the project area, the likelihood of them occurring in the project area is very small. Further, the project will be constructed via hydraulic methods, which are recognized by NMFS as very unlikely to impact manatees. No hopper dredging is proposed.

4.5.2.1 Construction Activities

Impacts associated with deepening to -45 feet and maintenance dredging were fully described in the 2003 FEIS and in the 2011 Environmental Assessment/Statement of Findings for the Section 10/404 permit. No new construction related impacts are anticipated in association with deepening from -39 feet to -45 feet. There are no anticipated construction related impacts associated with Federal assumption of maintenance.

4.5.2.2 Operational Activities

Impacts associated with operational activities were fully described in the 2003 FEIS. There are no anticipated effects associated with operational activities. No new impacts related to operational activities will result from Federal assumption of maintenance.

4.6 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

4.6.1 Hazardous Material Impacts to the Existing Environment from Project Activities

Hazardous material impacts from deepening to -45 feet and maintenance dredging are fully described in the 2003 FEIS. There are no changes from considerations made in the 2003 FEIS or the 2012 LRR. There are no anticipated effects associated with deepening from -39 feet to -45 feet. No hazardous material impacts will result from Federal assumption of maintenance.

4.6.2 Hazardous Material Impacts to the Project from Operation Activities

Hazardous material impacts associated with operation activities are fully described in the 2003 FEIS. No hazardous material impacts from operational activities will result from Federal assumption of maintenance.

4.7 HISTORIC RESOURCES

4.7.1 Previous Investigations

No historic resources of significance were identified within the dredging footprint during development of the 2003 FEIS, 2012 LRR, EA/Statement of Findings for the Section 10/404 permit, or this EA. All four of these analyses considered a -45 foot La Quinta Channel Extension.

4.7.2 Environmental Consequences

Deepening from -39 feet to -45 feet and Federal assumption of maintenance will have no effect on historic resources (which were determined to not occur within the channel footprint).

4.8 AIR QUALITY

4.8.1 Construction Dredging

Air quality impacts attributable to new work dredging to -45 feet were fully described in the 2003 FEIS and updated in the 2012 LRR. The 2012 LRR concluded that due to one-time construction dredging and implementation of best management practices for reduction of construction emissions, it is expected that there will be no long-term impacts to air quality in the area.

4.8.2 Maintenance Dredging

Air quality impacts attributable to maintenance dredging were fully described in the 2003 FEIS. The 2003 FEIS concluded that maintenance dredging activities will result in minor short-term impacts on air quality in the immediate vicinity of the project. This conclusion was made in the context of a -45 foot channel extension. Federal assumption of maintenance will have no effect on air quality not already determined by the 2003 FEIS.

4.9 Noise

The 2003 FEIS identified noise sensitive areas (residential areas) that may be exposed to short-term noise associated with construction and maintenance dredging activities. Since maintenance dredging is not expected to increase significantly from the Without Project condition, noise associated with maintenance dredging is not expected to increase significantly with the preferred alternative. Federal assumption of maintenance will have no additional contribution to noise impacts.

4.10 Socioeconomic Resources

4.10.1 No-Action Alternative

The no-action alternative for this study is equivalent to the selected plan for the La Quinta Channel Extension in the 2003 FEIS. The primary difference between this alternative and the With Project condition is that the channel would remain at a -39 foot depth. Socioeconomic impacts associated with the two alternatives are very similar.

4.10.2 Methodology

This study relies on the methodology and results from the 2003 FEIS and assumes that only minimal, if any, socioeconomic impacts will result from Federal assumption of maintenance.

4.10.3 Population

Impacts to population characteristics were fully described in the 2003 FEIS. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance are likely to induce new industrial development, thereby augmenting population growth within Nueces and San Patricio Counties.

4.10.3.1 Life, Health, and Safety

This socioeconomic category was fully described in the 2003 FEIS and updated in the 2012 LRR. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance are expected to have no disproportionately high or negative impacts to life, health, and safety.

4.10.3.2 Employment

Impacts to employment were fully described in the 2003 FEIS and updated in the 2012 LRR. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance are likely to induce new industrial development, thereby resulting in a net increase in jobs within Nueces and San Patricio Counties.

4.10.4 Economy

Impacts to the local economy were fully described in the 2003 FEIS and updated in the 2012 LRR. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance are expected to positively affect the economy in Nueces and San Patricio Counties.

4.10.4.1 Historical Perspective/Community Growth

This category was fully described in the 2003 FEIS and updated in the 2012 LRR. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance is not likely to result in adverse changes to demographics or community cohesion characteristics.

4.10.4.2 Tax Base

Impacts to the tax base were fully described in the 2003 FEIS and 2012 LRR. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance is likely to benefit populations within Nueces and San Patricio Counties through an increase in economic output, creation of new jobs, and tax base within the communities.

4.10.5 Land Use

Impacts to land use were fully described in the 2003 FEIS. Based on findings of the 2003 FEIS and updates to this category developed in this EA, deepening to -45 feet and Federal assumption of maintenance are expected to have no negative effects.

4.10.5.1 Aesthetics

Impacts to aesthetics were fully described in the 2003 FEIS. Based on findings of the 2003 FEIS and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance are expected to have no negative effects.

4.10.5.2 Community Services

Impacts to community services were fully described in the 2003 FEIS. Based on findings of the 2003 FEIS and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance are expected to have no negative effects.

4.10.6 Environmental Justice

Environmental Justice was considered in the 2003 FEIS and updated in the 2012 LRR. While the study area does have some areas that have disproportionately high percentages of ethnic minorities and persons of poverty status, the 2003 FEIS concluded that the project would not result in a disproportionate impact. The 2012 LRR concludes that the project impacts are not considered a disproportionate impact on ethnic minorities or low income populations since there are no disproportionately high or adverse human health or environmental effects on the populations. Based on findings of the 2003 FEIS, 2012 LRR, and updates developed in this EA, deepening to -45 feet and Federal assumption of maintenance will not result in negative effects on Environmental Justice.

4.11 ANY ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PREFERRED ALTERNATIVE BE IMPLEMENTED

There are no significant permanent adverse environmental impacts associated with deepening from -39 feet to -45 feet or Federal assumption of maintenance.

4.12 ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES INVOLVED IN THE IMPLEMENTATION OF THE RECOMMENDED PLAN

There are no irreversible or irretrievable commitments of resources associated with deepening from -39 feet to -45 feet or Federal assumption of maintenance.

4.13 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Deepening to -45 feet or Federal assumption of maintenance will not result in any short-term use of man's environment. Therefore, the benefits of Federal assumption of maintenance exceed the value of any short-term loss of resources (there are none).

4.14 MITIGATION

There are no resource impacts associated with deepening from -39 feet to -45 feet or Federal assumption of maintenance. Therefore, there is no mitigation.

4.15 ENERGY AND NATURAL OR DEPLETABLE RESOURCE REQUIREMENTS AND CONSERVATIVE POTENTIAL OR VARIOUS ALTERNATIVES AND MITIGATION MEASURES

The energy requirements for constructing and maintaining the project are equivalent to those considered for the 2003 FEIS. Federal assumption of maintenance will have no additional effect on energy consumption.

5.0 CUMULATIVE IMPACTS

5.1 INTRODUCTION

Federal assumption of maintenance will have very little (if any) effect on cumulative impacts.

5.1.1 Cumulative Impact Assessment Methodology

This EA relies on the 2003 FEIS and 2011 Environmental Assessment/Statement of Findings for the Section 10/404 permit.

5.1.2 Evaluation Criteria

Evaluation Criteria are fully described in the 2003 FEIS and have gone unchanged.

5.2 REASONABLY FORESEEABLE FUTURE ACTIONS

Future actions include continued residential development, construction of new or expansion of several existing commercial marine terminals associated with liquefied natural gas processing facilities, the La Quinta Multi-Purpose Cargo Dock and Container Facility, and pending Corps permits for large dredge or fill activities. The impacts or expected impacts from these other actions are: possible pollution associated with oil and gas exploration and transportation, sunlight attenuation due to increased turbidity from dredging and the placement of fill into the water, and increases in human populations in the area. The overall impacts that can be expected if the individual impacts are allowed to accumulate is an increase in turbidity and subsequent changes in light quality that may affect the species make-up and quantity of seagrass beds, and disturbances to natural areas through an increase in human activities such as boating as dredging increases accessibility to shallower portions of the bay. Specific disturbances include: incidental spillages of petroleum fuels, motor oil, and lubricants; stormwater runoff washing silt and trash into the bay; trash and other items being lost over thrown over the sides of ships and smaller vessels utilizing the facility; and possible damage to seagrass beds and shallow water habitat from the wakes of vessels utilizing La Quinta Channel. Scarring of seagrass beds and prop-washing of shallow water areas by off course vessels can cause long-term damage to the aquatic community.

5.2.1 Corpus Christi Liquefaction

Cheniere energy is currently proposing to construct a LNG export facility on the La Quinta Channel Extension. The project, which was previously permitted as an import facility would result in impacts to approximately 14 acres of coastal saltmarsh, 1.3 acres of high marsh habitat, 3.2 acres of sand/algal flats, and 9.4 acres of SAV.

5.2.2 Port of Corpus Christi Multi-Purpose Cargo Dock and Container Facility

The Port of Corpus Christi proposes to construct a multi-purpose cargo dock and container facility at the western terminus of the La Quinta Channel Extension. Environmental impacts are subject to project refinement.

5.2.3 Various Non-Federal Channel Improvements

Various minor dredging projects, most of which will be conducted by Port tenants along the La Quinta Channel, Corps Christi Ship Channel, and Gulf Intracoastal Waterway (GIWW) have been proposed. Examples include expansion of Kiewit Offshore Services (Kiewit) “deep loading hole”, widening of the La Quinta Channel by Kiewit, and widening of the GIWW by Gulf Marine Fabricators. These projects are likely to result in minor impacts SAV and will require mitigation to ensure no net loss of aquatic function.

5.3 PAST OR PRESENT ACTIONS

An effort was made to document the number of DA permits issued by the USACE Galveston District, the number of acres of tidal and non-tidal wetlands authorized to be impacted, and the number of acres of wetlands to be mitigated. The permits authorized activities such as construction of roads, piers, marinas, and utility lines, and oil and gas development, erosion control, and dredge and fill activities associated with residential and commercial developments. Starting in the mid-1990s, information on acres of wetland impacts and mitigation authorized has been entered into the USACE database. A search of the database was conducted for Corpus Christi Bay, Nueces Bay, Redfish Bay, lower Aransas Bay, upper Laguna Madre as well as the surrounding and adjacent lands to the bays including the lower portion of the Live Oak, Mustang Island and the upper portion of South Padre Island through 2006. For those areas, 841 permits have been issued, authorizing impacts to 130 acres of tidal wetlands and 304 acres of non-tidal wetlands and requiring 600 acres of tidal wetland mitigation and 76 acres of non-tidal wetland mitigation.

5.3.1 Packery Channel

This project has been constructed consistent with the description from the 2003 FEIS. Refer to the 2003 FEIS.

5.3.2 JFK Causeway (DA Permit No. 22304)

This project has been constructed in accordance with the description from the 2003 FEIS. Refer to the 2003 FEIS.

5.3.3 Joe Fulton International Trade Corridor

This project has been constructed consistent with the description from the 2003 FEIS. Refer to the 2003 FEIS.

5.3.4 Rincon Canal Federal Assumption of Maintenance

This project has been constructed consistent with the description from the 2003 FEIS. Refer to the 2003 FEIS.

5.4 Results

While the dredging of the La Quinta Ship Channel Extension to -45 feet and associated maintenance dredging will contribute to both positively and negatively to the resources described below, these effects have already been identified and justified in the 2003 FEIS (where the net effect was determined to be positive), 2011 Environmental Assessment/Statement of Findings for the Section 10/404 permit, and 2012 LRR. Federal assumption of maintenance is unlikely to negatively affect cumulative impacts to the following categories:

- Ecological/Biological Resources
- Physical/Chemical Resources
- Cultural/Socioeconomic Resources

5.5 CONCLUSIONS

Cumulative impacts associated with the -45 foot La Quinta Ship Channel Extension were addressed in the 2003 FEIS (which found the project to produce a net positive cumulative impact), the 2011 Environmental Assessment/Statement of Findings for the Section 10/404 permit, and the 2012 LRR. Federal assumption of maintenance simply represents the Federal government's decision to take on responsibility for an action that has already been reviewed and approved. Therefore, Federal assumption of maintenance will contribute insignificantly (if at all) to cumulative impacts.

6.0 COMPLIANCE WITH TEXAS COASTAL MANAGEMENT PROGRAM

The project was reviewed and found consistent by the Coastal Coordination Council. Compliance with the Texas Coastal Management Program (CMP) is documented in Appendix C.

7.0 CONSISTENCY WITH OTHER STATE AND FEDERAL REGULATIONS

Project planning and development of this EA took into full consideration State and Federal Regulations. This EA is in compliance with the following regulatory guidance/laws. Substantiation is documented throughout this EA.

- **CEQ Memorandum Dated 11 August 1980, Prime or Unique Farmlands** – There will be no impacts to prime and unique farmlands from the preferred alternative.

- **Clean Air Act of 1972** – The CAA is intended to protect and enhance the quality of the nation's air resources; to initiate and accelerate research and development to prevent and control air pollution; to provide technical and financial assistance for air pollution prevention and control programs; and to encourage and assist regional air pollution prevention and control programs. The 2003 FEIS's preferred alternative was determined to be in compliance with this Act. This EA has reviewed and provided data indicating the proposed project remains in compliance with the CAA.

- **Clean Water Act - Section 404** – Section 404 of the Act applies to the preferred alternative and compliance will be achieved under Section 404(r). Section 404(r) provides an exemption from obtaining either State water quality certification or a 404 permit if specific requirements are met. This EA did not identify any new or additional resources not previously addressed in the 2003 FEIS.

- **Coastal Barrier Improvement Act of 1990** – This Act is intended to protect fish and wildlife resources and habitat to prevent loss of human life and to preclude the expenditure of Federal funds that may induce develop on coastal barrier islands and adjacent nearshore areas. Certain exceptions exist which allow for such expenditures. The preferred alternative is exempt from the prohibitions identified in the Act.

- **Coastal Zone Management Act of 1972** – This Act established a voluntary national program within the Department of Commerce to encourage coastal States to develop and implement coastal zone management plans (CMP). Funds were authorized for cost-sharing grants to States to develop their programs. In order to be eligible for Federal approval, each State's plan was required to define boundaries of the coastal zone, to identify uses of the area to be regulated by the State, the mechanism (criteria, standards or regulations) for controlling such uses, and broad guidelines for priorities of uses within the coastal zone. This EA is in compliance with the Texas Coastal Management Program (CMP).

- **Endangered Species Act** – This EA reviewed proposed project area to determine and identify federally threatened or endangered species that were either newly added, or removed from consideration, since the 2003 FEIS. The review was conducted in accordance with the Federal Endangered Species Act of 1973 (ESA) (16 USC 1531–1544), as amended, prohibits the "take" of any threatened or endangered species. Current USFWS and NMFS species lists were reviewed and potential impacts to listed species (including sea turtles) remain unchanged from 2003.

- **Executive Order 11988, Floodplain Management** – This Executive Order (EO) directs Federal agencies to evaluate the potential effects of proposed actions on floodplains. Such actions should not be

undertaken that directly or indirectly induce growth in the floodplain unless there is no practical alternative. The preferred alternative will not significantly affect the Corpus Christi Bay floodplain.

- **Executive Order 11990, Protection of Wetlands** – This EO directs Federal agencies to avoid undertaking or assisting in new construction located in wetlands, unless no practical alternative is available. The preferred alternative has been analyzed for compliance with EO 11990. Deepening from -39 feet to -45 feet and Federal assumption of maintenance will not negatively affect wetlands.

- **Executive Order 12898, Environmental Justice** – This EA was prepared in accordance with this EO. Population groups defined as minorities include: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic/Latino origin; or Hispanic/Latino. Low-income populations are those communities or sets of individuals whose median income is below the current poverty level of the general population were identified. The EA identified no minority populations that would be disproportionately impacted by the proposed project.

- **Federal Water Project Recreation Act** – This 1995 Act requires consideration of opportunities for outdoor recreation and fish and wildlife enhancement in planning water resource projects. Deepening from -39 feet to -45 feet and Federal assumption of maintenance will not negatively affect outdoor recreation or fish and wildlife. Enhancement to fish and wildlife resources will result from the Federal deepening to -39 feet (via the construction of BUS 6). Construction of BUS 6 will be completed during the Federal deepening to -39 feet, leaving no further opportunity for enhancement associated with the non-Federal deepening to -45 feet.

- **Fish and Wildlife Coordination Act** – The 2003 FEIS included a Final Coordination Act Report (CAR). The proposed project including current proposed design and construction activities were previously coordinated with the FWS and other State and Federal resource agencies. This EA reviewed the potential for new coordination requirements for compliance with the Act and no instances were identified.

- **Fishery Conservation and Management Act of 1996** – This EA was prepared in accordance with enacted amendments to the Magnuson-Stevens Fishery Conservation and Management Act (PL 94-265) as amended in 1996 that established procedures for identifying Essential Fish Habitat (EFH) and required interagency coordination to further the conservation of Federally managed fisheries. This EA relies upon the 2003 FEIS and more recent updates (2005 and 2009) to the EFH lists for Corpus Christi Bay to address EFH in the project area and meet the requirements of the Act.

- **Marine Mammal Protection Act of 1972** – This Act, passed in 1972 and amended through 1997, is intended to conserve and protect marine mammals, establish a marine mammal commission, establish the International Dolphin Conservation Program, and establish a Marine Mammal Health and Stranding Response Program. The preferred alternative is in compliance with this Act.

- **Marine Protection Research and Sanctuaries Act of 1972** – The 2003 FEIS reviewed for compliance with this Act which requires a determination that dredged material placement in the ocean will not

reasonably degrade or endanger human health, welfare, or amenities or the marine environment, ecological systems, or economic potentialities (shellfish beds, fisheries, or recreational areas). All construction material destined for the Gulf of Mexico was evaluated using the CWA 404(b)(1) guidelines. Maintenance material proposed for placement at the existing Ocean Dredged Material Disposal Site designated by the EPA for maintenance material from the Corpus Christi Entrance Channel is subject to evaluation using the ocean dumping environmental criteria. This EA confirms that this compliance has not changed since the 2003 FEIS.

- **National Environmental Policy Act** – This document has been prepared in accordance with the Council on Environmental Quality regulations and in compliance with NEPA. Impacts on terrestrial and aquatic resources have been reviewed and identified with regard resources (species) newly added, modification through regulatory oversight, or removal from consideration, since the 2003 FEIS. No significant adverse impacts to resources and/or species requiring mitigation have been documented. Therefore, no mitigation has been proposed.

- **National Historic Preservation Act** – Compliance with the NHPA of 1966, as amended, requires identification of all NRHP listed or NRHP-eligible properties in the project area and development of mitigation measures for those adversely affected in coordination with the SHPO and the Advisory Council on Historic Preservation (ACHP). Review of proposed project area to determine any new or previously unrecorded NRHP listed or NRHP-eligible properties have occurred since the 2003 FEIS was conducted. No new properties were identified.

8.0 PUBLIC INVOLVEMENT, REVIEW, AND CONSULTATION

Public involvement is important to the planning process and assures that opportunities are provided to the greatest extent possible for timely input of information allowing the USACE a complete understanding of issues and consequences associated with the study, During the public involvement process for the 2003 FEIS, the USACE and the PCCA involved the public through newsletters, public meetings, and special interest group meetings.

This EA is largely based on the public views and concerns documented in the 2003 FEIS and the public and agency views and concerns raised during the Section 10/404 permitting process. During the public involvement process for the Section 10/404 permit, the public was involved through a public notice issued by the USACE Regulatory Branch.

Additionally, for this EA, a public notice was issued notifying the public and agencies of the ongoing 204(f) study for Federal assumption of maintenance and the USACE's intent to develop an Environmental Assessment. The public notice was issued by the USACE on March 30, 2012, to all known Federal, State, and local agencies were invited to review and comment on this EA. Only TPWD responded to the invitation.

A list including those who were sent a copy of the public notice advertising the ongoing 204(f) study and USACE's intent to develop this EA can be found in Appendix B.

Following preliminary approval of this EA, a Notice of Availability will be published to allow for public and agency review of the EA.

9.0 REFERENCES

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APPENDIX A:

Resource Agency Coordination

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

REPLY TO
ATTENTION OF

Environmental Section

March 9, 2012

PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT

CORPUS CHRISTI SHIP CHANNEL, TEXAS
LA QUINTA CHANNEL EXTENSION AND DEEPENING PROJECT, SECTION 204 (f) FEDERAL ASSUMPTION OF MAINTENANCE

PURPOSE

This public notice is to inform interested parties that the Port of Corpus Christi Authority (POCCA) will prepare a draft environmental assessment (EA) in accordance with the National Environmental Policy Act (NEPA), Public Law 91-190, and regulations for implementing the procedural provisions of NEPA, 40 Code of Federal Regulations 1500 – 1508 for the Corpus Christi Ship Channel, Texas, La Quinta Channel Extension and Deepening Project, Section 204 (f) Federal Assumption of Maintenance (project). Additionally, the POCCA will initiate agency coordination as appropriate for this project. The project is being pursued by the POCCA under Section 204 (f) of the Water Development Resources Act (WRDA) 1986, amended 1990.

This notice is being distributed to interested State, Federal, and local agencies, private organizations, news media, and individuals in order to assist in collecting facts and recommendations concerning the assumption of maintenance of the permitted deepening of the La Quinta Ship Channel Extension from -39 feet Mean Low Tide (MLT) to -45 feet plus 2 feet advanced maintenance and 2 feet allowable over depth.

PROJECT LOCATION

The project is located at the northwest end of the existing La Quinta Ship Channel, approximately 2.5 miles southeast of Portland in Nueces County, Texas.

PROJECT DESCRIPTION

The existing La Quinta Ship Channel was constructed and is maintained by USACE to a depth of -45 feet MLT under a 1968 Congressional Authorization. In November 2011, the POCCA initiated construction of the 2007 Federally authorized 1.4 mile La Quinta Ship Channel Extension to a depth of -39 feet MLT and is expected to be complete in the spring of 2013. The authorized project depth for the La Quinta Ship Channel Extension of -39 feet MLT is 6 feet less than that of the existing La Quinta Ship Channel. The POCCA received a USACE Section 10/404 permit SWG-2006-00515 (formerly no. 24150) in September 2006 to construct the Federally authorized extension of the La Quinta Ship Channel; the permit was then amended in June 2011, authorizing additional dredging to deepen the 1.4 mile La Quinta Ship Channel Extension to -45 feet MLT. Upon approval of Federal assumption of maintenance, the POCCA would initiate deepening of the La Quinta Ship Channel Extension to -45 MLT.

NEED FOR WORK

The USACE is responsible for the Federally authorized Corpus Christi Ship Channel, and specifically the La Quinta Ship Channel, to its authorized dimensions to ensure proper navigation of the waterway. The Corpus Christi Ship Channel, Texas, La Quinta Channel Extension and Deepening Project, Section 204 (f) Federal Assumption of Maintenance would extend the current maintenance dredging responsibilities of the USACE. The need for this project is derived from the transportation savings associated with handling containerized cargo as described in the Corpus Christi Ship Channel, Texas, Channel Improvement Project, Final Feasibility Report and Final Environmental Impact Statement dated April 2003 and also in a February 2010 Limited Re-evaluation Report, which updated the environmental and economic components of the project. It is anticipated that the economic benefits for this project will be generated primarily from transportation cost savings associated with utilizing more fully laden vessels.

PUBLIC COMMENT

Persons desiring to express their views or provide information to be considered in evaluating the impact of this work and the future maintenance and operations are requested to mail their comments within 15 days of the date of this notice to:

Joe Moake
HDR Engineering
555 N. Carancahua St.
Suite 1650
Corpus Christi, TX 78401

or email at: joseph.moake@hdrinc.com

A mailing list for the public notice for the Draft EA will be developed from the comments received in response to this notice.

Any questions concerning the proposed action may be directed to Mr. Joe Moake at the email address above.

Dolan Dunn
Chief, Planning, Environmental
and Regulatory Division
Galveston District

CORPUS CHRISTI SHIP CHANNEL, TEXAS
LA QUINTA SHIP CHANNEL EXTENSION DEEPENING PROJECT
SECTION 204(f), FEDERAL ASSUMPTION OF MAINTENANCE

LIST OF PUBLIC NOTICE RECIPIENTS

COMPANY/AGENCY	ADDRESS	PHONE NUMBER	POINT OF CONTACT
Texas Parks and Wildlife Department	Texas A&M University Corpus Christi ATTN: Paul Silva, Texas Parks & Wildlife Dept. NRC 2501 6300 Ocean Drive Corpus Christi, TX 78412-5845	(361) 289-5566	Paul Silva
US Fish and Wildlife Service	6300 Ocean Drive Corpus Christi, TX 78412	(361) 994-9005	Pat Clements
Environmental Protection Agency, Region 6	1445 Ross Avenue, Suite 1200 Dallas, TX 75202	(214) 665 - 2760	Jim Herrington
Texas Commission on Environmental Quality	P.O. Box 13087, Austin, 78711-3087 MC 233, 12100 Park 35 Circle Austin, TX 78753	(512) 239-5308	Charles Maguire
Texas General Land Office	1700 Congress Avenue Austin, TX 78701	(800) 998-4456	Tony Williams
National Marine Fisheries Service	4700 Avenue U Galveston, TX 77551	(409) 766-3500	Rusty Swafford
Texas Historical Commission	P.O. Box 12276< Ausin, TX 78711-2276 1511 Colorado Austin, TX 78701	(512) 463-6100	Administration Department
Cheniere Energy	700 Milam Street, Suite 800 Houston, TX 77002	(713) 375-5000	Andrew Chartrand
Sherwin Alumina	4633 Highway 361 Gregory, TX 78359	(361) 777-2400	Tom Ballou
Aransas-Corpus Christi Pilots Association	P.O. Box 2767, Corpus Christi, TX 78403 710 Buffalo, Ste. 611 Corpus Christi, TX 78401	(361) 884-5899	Capt. Bobby Grumbles
Sierra Club	P.O. Box 3512, Corpus Christi, TX 78404 1002 Chamberland Corpus Christi, TX 78404	(361) 852-7938	Ms. Pat Suter
Audubon Society	P.O. Box 3604 Corpus Christi, TX 78463	(361) 885-6203	David Newstead
The Nature Conservancy	205 N. Carrizo Street Corpus Christi, TX 78401	(361) 882-3584	Mark Dumesnil
Coastal Bend Bays and Estuaries Program	1305 N. Shoreline Boulevard, Suite 205 Corpus Christi, TX 78401	(361) 885-6202	Ray Allen
Nueces County	901 Leopard Street, Room 303 Corpus Christi, TX 78401	(361) 888-0444	Judge Samuel L. Neal, Jr.
San Patricio County	400 West Sinton Street, Suite 109 Sinton, TX 78387	(361) 364-9301	Judge Terry A. Simpson
City of Portland	1900 Billy G. Webb Drive Portland, TX 78374	(361) 777-4500	Mayor David Krebbs
City of Gregory	206 W. 4th Street Gregory, TX 78359	(361) 643-6562	Mayor Victor Lara
City of Corpus Christi	1201 Leopard Street Corpus Christi, TX 78401	(361) 826-3100	Mayor Joe Adame
Representative Todd A. Hunter - DIST 32	15217 South Padre Island Drive, Suite 205 Corpus Christi, TX 78418	(361) 949-4603	Representative Todd A. Hunter

CORPUS CHRISTI SHIP CHANNEL, TEXAS
LA QUINTA SHIP CHANNEL EXTENSION DEEPENING PROJECT
SECTION 204(f), FEDERAL ASSUMPTION OF MAINTENANCE

LIST OF PUBLIC NOTICE RECIPIENTS

COMPANY/AGENCY	ADDRESS	PHONE NUMBER	POINT OF CONTACT
Texas Department of Transportation	1701 South Padre Island Drive Corpus Christi, TX 78416	(361) 808-2275	John Casey, P.E.
Corpus Christi Regional Economic Development Corporation	800 N Shoreline, Suite 300 South Corpus Christi, TX 78401	(361) 882-7448	Roland Mower
Corpus Christi Chamber of Commerce	1501 North Chaparral Corpus Christi, TX 78401	(361) 881-1800	Foster Edwards
City of Port Aransas	710 W. Avenue A Port Aransas, TX 78373	(361) 749-4111	Mayor Keith McMullin
City of Ingleside	2671 San Angelo P.O. Drawer 400 Ingleside, TX 78362	(361) 776-2517	Mayor Pete Perkins
City of Aransas Pass	P.O. Box 2000 Aransas Pass, TX 78335	(361) 758-5301	Mayor Tommy Knight
Equistar Chemicals	1501 McKinzie Road P.O. Box 10940 Corpus Christi, TX 78460	(361) 242-8000	Diana Gonzalez, HR Assistant
Representative Ryan Guillen - DIST 31	Eastern District Office P.O. Box 689 131 West Main Street Benavides, TX 78341	(361) 256-3970	Representative Ryan Guillen
Representative Raul Torres - DIST 33	2820 South Padre Island Drive, Suite 106 Corpus Christi, TX 78415	(361) 853-7222	Representative Raul Torres
Representative Connie Scott - DIST 34	9359 IH 37, Suite D Corpus Christi, TX 78409	(361) 241-7186	Representative Connie Scott
Adjacent Property Owner	Berryman Investments, Inc. Fail Oaks Plaza 28731 West IH 10 Boerne, TX 78006-9112	Bii@gvtc.com pberryman1@aol.com	Mr. Phil Berryman, President

Moake, Joe

AMServiceURLStr: https://Slingshot.hdrinc.com:443/CFSS/control?view=services/FTService

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From: Heather Young [mailto:heather.young@noaa.gov]
Sent: Tuesday, October 02, 2012 5:01 PM
To: Moake, Joe
Subject: Re: La Quinta Channel Extension Assumption of Maintenance - EFH

Joe,

June 2009 is the date of the last amendment to the fishery management plan for highly migratory species such as coastal sharks. For the other species managed by the Gulf council (shrimp, red drum, reef fish, and coastal migratory pelagics) the last EFH amendment was in 2005. One change that has occurred is stone crab no longer have EFH designated in the Gulf, because they are no longer federally managed in the Gulf as of October 2011. This fishery is now managed solely by the state of Florida.

I am not sure what species were listed in the past EFH assessments for the La Quinita Channel. We (NMFS HCD) have been working to refine our interpretation of the EFH information presented in these fishery management plans and in their corresponding NEPA documents. I have attached a list of federally managed species with EFH in Corpus Christi Bay based on my interpretation of this information for your use in the EA. You can draw from it as needed.

hope this helps,
Heather

--
Heather Young
NOAA National Marine Fisheries Service
Southeast Region, Habitat Conservation Division
Office Ph: (409)766-3699
Fax: (409) 766-3575
Email: heather.young@noaa.gov

Reef Fish With Essential Fish Habitat In Corpus Christi Bay			
Species	**Life Stage**	**Habitats**	**Function**
Dog Snapper (*Lutjanus jocu*)	Early Juvenile Late Juvenile Adult	seagrass, marsh, water column mangrove, water column seagrass, water column	growth growth feeding
Gray Snapper (*Lutjanus griseus*)	Adults	marsh, sand/shell, soft bottom, water column	feeding
Goliath Grouper (*Epinephelus itajara*)	Post Larval Early Juvenile Late Juvenile	mangrove, water column seagrass, mangrove, water column seagrass, mangrove, hard bottom, water column	growth growth, feeding growth, feeding
Lane Snapper (*Lutjanus synagris*)	Post Larval Early Juvenile Late Juvenile	seagrass, water column seagrass, mangrove, sand/shell, soft bottom, water column seagrass, mangrove, sand/shell, soft bottom, water column	growth growth, feeding growth, feeding
Yellowmouth Grouper (*Mycteroperca interstitialis*)	Early Juvenile Late Juvenile	mangrove, water column mangrove, water column	growth growth, feeding

Red Drum Essential Fish Habitat In Corpus Christi Bay			
Species	**Life Stage**	**Habitats**	**Function**
Red Drum (*Sciaenops ocellatus*)	Larval Post Larval Early Juvenile Late Juvenile Subadult	seagrass, soft bottom, water column seagrass, soft bottom, sand/shell, marsh, water column soft bottom, marsh, water column seagrass, water column seagrass, soft bottom, sand/shell, oyster reef, marsh, water column	growth, feeding growth, feeding growth, feeding growth, feeding feeding

Shrimp With Essential Fish Habitat In Corpus Christi Bay			
Species	**Life Stage**	**Habitats**	**Function**
Brown Shrimp (*Farfantepenaeus aztecus*)	Post Larval Early Juvenile Late Juvenile	marsh, seagrass, sand/shell, soft bottom, oyster reef, water column marsh, seagrass, sand/shell, soft bottom, oyster reef, water column marsh, seagrass, sand/shell, soft bottom, oyster reef, water column	growth, feeding growth, feeding growth, feeding
White Shrimp (*Litopenaeus setiferus*)	Post Larval Early Juvenile Late Juvenile	marsh, soft bottom, water column marsh, soft bottom, water column marsh, soft bottom, water column	growth, feeding growth, feeding growth, feeding
Pink Shrimp (*Farfantepenaeus duorarum*)	Post Larval Early Juvenile Late Juvenile	seagrass, sand/shell, water column seagrass, sand/shell, water column seagrass, sand/shell, water column	growth, feeding growth, feeding growth, feeding

EFH information used to create this table was obtained from:

Gulf of Mexico Fishery Management Council. 2004. Final environmental impact statement for the generic amendment to the following fishery management plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, United States Waters; Red Drum Fishery of the Gulf of Mexico; Reef Fish Fishery of the Gulf of Mexico; Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico and South Atlantic; Stone Crab Fishery of the Gulf of Mexico; Spiny Lobster in the Gulf of Mexico and South Atlantic; Coral and Coral Reefs of the Gulf of Mexico. Gulf of Mexico Fishery Management Council. Tampa, FL.

Highly Migratory Species With Essential Fish Habitat In Corpus Christi Bay	
Species	**Life Stage**
Scalloped Hammerhead (*Sphyrna lewini*)	neonate/young of year juvenile
Blacktip Shark (*Carcharhinus limbatus*)	neonate/young of year juvenile adult
Bull Shark (*Carcharhinus leucas*)	neonate/young of year juvenile
Lemon Shark (*Negaprion brevirostris*)	juvenile
Spinner Shark (*Carcharhinus brevipinna*)	neonate/young of year juvenile
Bonnethead Shark (*Sphyrna tiburo*)	neonate/young of year juvenile adult
Atlantic Sharpnose Shark (*Rhizoprionodon terraenovae*)	neonate/young of year juvenile adult
Finetooth Shark (*Carcharhinus isodon*)	juvenile adult

EFH information used to create this table was obtained from:

NMFS. 2009. Final Amendment 1 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan, Essential Fish Habitat. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD. Public Document. pp. 395.

APPENDIX B:

Public Comments and Responses

TEXAS PARKS & WILDLIFE

Life's better outside.®

Commissioners

T. Dan Friedkin
Chairman
Houston

Ralph H. Duggins
Vice-Chairman
Fort Worth

Antonio Falcon, M.D.
Rio Grande City

Karen J. Hixon
San Antonio

Dan Allen Hughes, Jr.
Beeville

Bill Jones
Austin

Margaret Martin
Boerne

S. Reed Morian
Houston

Dick Scott
Wimberley

Lee M. Bass
Chairman-Emeritus
Fort Worth

Carter P. Smith
Executive Director

April 17, 2012

Mr. Joe Moake
HDR Engineering
555 N. Carancahua St.
Corpus Christi, TX 78401

Re: Corpus Christi Ship Channel, Texas
La Quinta Channel Extension and Deepening Project,
Section 204(f) Federal Assumption of Maintenance

Dear Mr. Moake,

Texas Parks and Wildlife Department (TPWD) has reviewed the Public Notice (PN) for the proposed Corpus Christi Ship Channel, Texas, La Quinta Channel Extension and Deepening Project, Section 204 (f) Federal Assumption of Maintenance (Project) dated March 9, 2012. Provided that the U.S. Army Corps of Engineers adheres to the permitted conditions of the project and coordinates with the resource agencies for the placement of beneficial use material, TPWD has no objection.

Questions can be directed to Ms. Jackie Robinson (361-825-3243) or Ms. Leslie Williams (361-825-2329) in Corpus Christi.

Sincerely,

Rebecca Hensley

Ms. Rebecca Hensley
Regional Director, Ecosystem Resources Program
Science and Policy Branch
Coastal Fisheries Division

RH:LW:JR

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512.389.4800

www.tpwd.state.tx.us

APPENDIX C:

Compliance with Texas Coastal Management Program

Coastal Coordination Council

P.O. Box 12873 ♦ Austin, Texas 78711-2873 ♦ (800) 998-4GLO ♦ FAX (512) 475-0680

April 14, 2011

Port of Corpus Christi Authority
P.O. Box 1541
Corpus Christi, Texas 78401-6137

Re: Corps of Engineers Permit Application No. SWG-2006-00515
La Quinta Channel, Corpus Christi Bay
CMP#: 11-0366-F3

Dear Applicant:

Pursuant to Title 31 Natural Resources and Conservation, Part 16 Coastal Coordination Council rules, Section 506.30, the project referenced above has been reviewed for consistency with the Texas Coastal Management Program (CMP).

It has been determined that there are no significant unresolved consistency issues with respect to the project. Therefore, this project is consistent with the CMP goals and policies.

Please note that this letter does not authorize the use Coastal Public Land. No work may be conducted or structures placed on State-owned land until you have obtained all necessary authorizations, including any required by the General Land Office and the U.S. Army Corps of Engineers.

Sincerely,

Kate Zultner

Kate Zultner
Consistency Review Coordinator
Texas General Land Office

email cc: Mark Pattillo, USACE
GLO PSC Lower Coast