The BA states that the proposed work to be conducted by pipeline dredges (in the bay) and hopper dredges (in the entrance channel) is unlikely to have any significant adverse impacts on any Federally listed threatened or endangered species under NOAA Fisheries purview because: "Sea turtles easily avoid pipeline dredges due to the slow movement of the dredge. Incidental take of sea turtles by hopper dredges is reduced by using draghead deflectors and scheduling offshore dredging during the winter months when sea turtles are most likely to be elsewhere in warmer waters. Also, an agreement between National Marine Fisheries Service and U.S. Army Corps of Engineers is in place and implemented regarding take of sea turtles with hopper dredges and the use of observers to document incidental take to ensure that significant impacts do not occur."

Our comments will address the potential adverse effects of the action on endangered or threatened species (Kemp's ridley, green, loggerhead, and leatherback sea turtles) under NOAA Fisheries purview from the potential use of a hopper dredge, since NOAA Fisheries has previously determined that use of pipeline or clam shell type dredges is unlikely to adversely affect the above-listed species. However, the potential for lethal take of sea turtles by hopper dredges, even with sea turtle deflector dragheads in place, is well documented. Hopper dredges equipped with deflector dragheads routinely kill sea turtles during maintenance dredging activities in Federal navigation channels on the Atlantic Seaboard and the Gulf of Mexico. Therefore, NOAA Fisheries disagrees with the COE's determination of potential effects to listed species.

Potential adverse effects of hopper dredges on the above-listed species have already been analyzed, and an incidental take authorized, by the NOAA Fisheries September 22, 1995, Regional Biological Opinion (RBO) to the COE's Galveston and New Orleans Districts on maintenance dredging of navigation channels in Texas and Louisiana using hopper dredges. That opinion analyzed hopper dredging effects on sea turtles and included non-discretionary reasonable and prudent measures, and implementing terms and conditions, to minimize potential interactions with these Federally-listed marine species. The RBO includes, as a reasonable and prudent measure to minimize adverse effects to sea turtles, a hopper dredging window (i.e., hopper dredging shall be conducted from December 1-March 31, whenever possible). The RBO also states that pipeline or hydraulic dredges must be used whenever possible between April 1 and November 30.

NOAA Fisheries does not foresee any impacts of hopper dredging that have not already been considered and previously addressed in the RBO; however, the RBO addressed only maintenance dredging and did not consider new dredging projects, including widening and deepening such as proposed in this action. Therefore, any takes associated with new (non-maintenance) work such as the proposed action must be authorized by another biological opinion, such as was prepared for the Houston-Galveston Navigation Channels project.

The information provided in the Draft EIS and BA appears sufficient for the Service to complete its biological opinion. Section 7 allows NOAA Fisheries up to 90 days to conclude formal consultation with your agency, and an additional 45 days to prepare our biological opinion (unless we mutually agree to an extension). Therefore, our anticipated biological opinion completion date is 135 days from the date of this letter. The ESA requires that after initiation of formal consultation the Federal action agency make no irreversible or irretrievable commitment of resources that limits future options. This practice ensures agency actions do not preclude the formulation and implementation of reasonable and prudent

alternatives that avoid jeopardizing the continued existence of endangered or threatened species or destroying or modifying their critical habitats.

Pursuant to the essential fish habitat consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1855(b)(2) and 50 CFR 600.905-.930, Subpart K), the NMFS Habitat Conservation Division (HCD) is being copied with this letter. The HCD biologist for this region is Mr. Rusty Swafford. If you have any questions about consultation regarding essential fish habitat for this project, please contact Mr. Swafford at 409/766-3699 or by e-mail at Rusty.Swafford@noaa.gov.

We appreciate the opportunity to comment on this project and work with the COE to ensure the protection of threatened and endangered species under NOAA Fisheries purview, and to help the COE fulfill its mandate under the ESA. The Protected Resources Division biologist assigned to conduct this consultation is Mr. Dennis Klemm. Please contact Mr. Klemm or Mr. Eric Hawk at 727/570-5312 if you have any questions or if we may be of assistance.

Sincerely,

Georgia Cranmore
Assistant Regional Administrator
for Protected Resources

cc: F/SER42 - Rusty Swafford; F/PR3

o:\section7\informal\corpus christi channel improvement project.wpd
File: 1514-22 f.1. COE Galveston District

SPARR & BREWSTER, INC.
ATTORNEYS AT LAW

RICHARD A. SPARR, JR.

1313 N.E. Loop 410, Suite 100
San Antonio, Texas 78209
(210) 828-6500
FAX (210) 828-5444

July 16, 2002

Dr. Terrell Roberts
Department of the Army
Galveston District
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Dr. Roberts:

Please allow this to be my public comment on the Draft Environmental Impact Statement ("DEIS") and the Draft Feasibility Report ("DFR") for the proposed improvements to the Corpus Christi Ship Channel.

It is my understanding that the purpose of the this project is to improve the efficiency and safety of the port's navigation system while protecting the **quality (emphasis added)** of the coast on the estuarine resources then I must have missed the point since the channel between the entrance to the jetties and the Port Aransas Marina have not been addressed.

You are no doubt aware that the City of Port Aransas objected to these proposals because of the continued shoreline erosion caused by the deepening of the ship channel and the wake of ships. Now that you are participating in the addition of bulkheading along Charlie's Pasture the City's concerns are not of the magnitude that they were previously. However, what the Port Aransas City Manager Tom Brooks failed to point out is that the widening of the ship channel, the increased ship channel traffic, and the speeds by which the ships go through the channel are causing erosion in the neighborhood located between the Pilot's house and the UT Marine Science Center Marina and Cline's Landing Condominium adjacent to the Port Aransas City Marina. There is a neighborhood subdivision where people live called the Port Aransas Private Marina. Approximately 13 houses front the channel and constantly have to deal with erosion problems occurring because of the ship traffic and the lack of any bulkhead along this beach front. The private residents have done everything they could to protect their property but due to the increased ship traffic, the size of the wakes deepening of the channel and your proposal to deepen the channel again making the waves ever increasing this will be a losing battle.

1

2

I am starting to represent a group of the homeowners who are concerned about your proposal and the damage it will cause to their beach and ultimately the roadway that allows them to get to their residence.

In the past we have done what we can to solidify and fortify our bulkheads but approximately 275 feet of the shoreline is unprotected. Concrete stones have been placed to protect and allow for the buildup of soils that can be groomed to protect the homes from rising water and ship wakes. Unfortunately the ship wakes constantly wear away, and reduce and erode the soil that is native to this area.

I find no where in the comments and proposals any indication of taking care of these private land owners who are just as entitled to protection as the City of Port Aransas is. I am somewhat surprised that the City of Port Aransas was not concerned about its residents who are tax paying citizens and who have equal rights and standings as the City of Port Aransas.

The purpose of our letter is to see if you or anyone within the study has addressed this strip of land and these private homeowners. 2

I think a meeting could accomplish the following goals:

1. Add appropriate bulk heading along the strip of land that is unprotected as is being done in Charlie's Pasture and/or

2. Slow down **all** ships coming through the channel so that they do not create the 4 to 6 foot waves that erode the soil every time a ship goes through the channel and/or

3. Place concrete in a similar manner to try to protect and limit soil erosion in the area of the channel.

These homeowners cannot stand by and watch the continued erosion. In just a few more feet the erosion will take down their street and they will not be able to get to their residence.

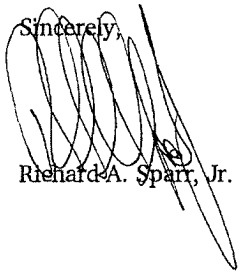
I invite you to meet with me at a time that is convenient for you to walk through this project and develop a project and plan that will address the private homeowners' and taxpayers' needs. Obviously the jetties are fortified by rocks and this does not cause a problem. The same thing with the Port Aransas public marina all the way down to Charlie's Pasture which you have now addressed. Ours seems to be a forgotten area and one that has not been addressed. 3

More importantly is the speed by which ships are going through the channel and the deepening of the channel causing the acceleration of erosion. The individuals that I have talked to have said that the traffic has increased over the years and the depth of the vessels 4

going through has increased because of their increased size. Thus, there is an ever increasing amount of wave action and the height of the waves causing beach erosion.

I look forward to your input and thoughts on this matter.

Sincerely,



Richard A. Sparr, Jr.

RAS/jl

Mr. Richard A. Sparr, Jr.
Sparr & Brewster, Inc.
1313 N.E. Loop 410, Suite 100
San Antonio, Texas 78209

RESPONSE TO COMMENTS

Comment No.	Response
1	The reach of shoreline at the area known as Charlie's Pasture at the County Pier in Port Aransas was protected this past year with a concrete sheetpile bulkhead. The bulkhead project was a cost shared, Texas General Land Office – Coastal Erosion Planning and Response Act (CEPRA) project between the City of Port Aransas and the State of Texas. The Port of Corpus Christi (the non-Federal Sponsor for the proposed CCSCCIP), not the USACE, participated with the City of Port Aransas in the sponsor funding for the CEPRA project. The project included shoreline erosion protection on both the north and south sides of the channel. As part of the CCSCCIP, erosion protection is proposed for the south side of the channel west of last year's CEPRA bulkhead project.
2	During the three-year study for the CCSCCIP Feasibility Study that included a significant amount of public outreach and solicitation of comments and concerns (including Port Aransas specifically), no concerns/comments were raised for this reach of channel. This letter is the first mention of any potential shoreline erosion damage to this private property. Results from the outreach initiative helped develop the scope of work for a Shoreline Erosion Study that was used to identify any possible changes in erosion controlling forces and effects of these changes from the proposed CCSCCIP. The CCSCCIP will not cause an increase in the number of vessels using the channel, relative to the No Action (present condition) alternative. For the CCSCCIP Feasibility Study, this particular reach of shoreline was not "addressed" with respect to shoreline erosion because no concerns had been voiced during numerous public meetings.
3	On August 30, 2002, representatives from the Port of Corpus Christi Authority met with Mr. Richard Sparr at his residence at 350 Private Road A, Port Aransas, Texas. Mr. Sparr reiterated the concerns addressed in the letter and was seeking assistance to create long-term shoreline protection in front of his and his adjacent property along the Entrance Channel. It was evident steps (placement of fill, rock and concrete rubble) have been made to protect the shoreline in this reach. An eroding shoreline bluff exists in a portion of the unbulkheaded area forward of a well maintained, approximately 20 foot wide, grassy area in front of the private road leading to the houses. The Federal navigation project process and schedule was reviewed and, during discussions, it was determined that it was the responsibility of the property owners and not the Federal Government to protect privately owned lands. The shoreline erosion protection along and west of Charlie's Pasture in Port Aransas proposed for the CCSC-CIP is a multi-functional Ecosystem Restoration feature of CCSC-CIP project designed as

Mr. Richard A. Sparr, Jr.
Sparr & Brewster, Inc.
1313 N.E. Loop 410, Suite 100
San Antonio, Texas 78209

	protection for hundreds of acres of sensitive environmental habitat and not designed as protection of private property. Though it is the responsibility of the private property owners to protect their lands, it was suggested and recommended that, if the owners wanted assistance, there are programs and opportunities available to them. The permitting process was explained and various programs and opportunities were described and discussed including the CEPRA program and requests for cost sharing with their local government.
4	Vessel operators and the harbor pilots on board to assist in navigating the channels determine the necessary travel speed for safe passage. According to the Shoreline Erosion Study, vessel speed is one component that affects the size of the waves and pressure fields that are created from passing ships. Other components include vessel characteristics and channel and shoreline shape. Proposed channel improvements in this reach include widening on the opposite side of the channel from the subject property. This improvement should actually reduce the pressure field effects of deep draft vessels passing this private property. It was also determined during the Shoreline Erosion Study for this project that there are numerous causes controlling erosion, including sea level rise, wind generated waves, pressure field effects, vessel wakes, storms, and geomorphologic channel conditions. Although this area was not specifically studied, projections in nearby, similar areas indicated only a potential slight increase in the contribution to erosion from the proposed project because of pressure field effects (2% and 5% increase – for shorelines along Harbor and Mustang Island). The analysis assumed no shore protection existed in the area. Because of the projected increase in throughput at the Port of Corpus Christi, the increase in ship traffic is projected to continue with or without the channel improvement project. However, with the project, the number of vessels trips will be less than without the project. See the Economic Appendix.

Monte N. Swetnam
420 Marina Drive
Port Aransas, Texas
78373

August 7, 2002

Environmental Section
Department of the Army
Galveston District, Corps of Engineers
P. O. Box 1229
Galveston, Texas 77553-1229

Re: Corpus Christi Ship Channel
Channel Improvement Project

ARMY CORPS OF ENGINEERS:

I am writing in response to the recently published Feasibility Study and Environmental Impact Statement for the Corpus Christi Ship Channel - Channel Improvement Project (PROJECT). It is my considered opinion that the PROJECT is not needed at this time or in the foreseeable future, is not fiscally responsible and will have a significant negative environmental impact.

From a need standpoint, the Houston Ship Channel handles three times as many ships (6,600 vs. 2,060) and twice as much total tonnage (191 million short tons vs. 83 million short tons) as the Corpus Christi Ship Channel and does it with a channel that is shallower and narrower (40' x 400' vs. 45' x 500 - 600'). In fact, after the current improvements to the Houston Ship Channel, it will only be equivalent to the existing Corpus Christi facility. What possible need is there to improve a facility that is already better than one which far exceeds it in utilization? Also, there is no reported evidence that cargoes have been lost or diverted from the Port of Corpus Christi because of channel inadequacies. With all of the refineries operating at or near capacity, additional volumes of crude oil will not be required for import nor will additional volumes of refined product be available to export. The Sherwin Alumina plant is struggling to stay in business and can't be depended on to expand capacity. Agriculture has peaked in the region and the recently completed refrigerated warehouse can't seem to get off the ground. In short, there is no compelling evidence that the existing channel is not sufficient for the needs of Corpus Christi and South Texas for many years into the future. 1 2

In terms of fiscal responsibility, why would one spend money to enlarge a channel to permit larger ships when the Port of Corpus Christi will continue to be ship size constrained by the Harbor Bridge and the Tule Lake Lift Bridge? Why would one enlarge the Channel when many of the ships that visit the port come from harbors and channels that are themselves size constrained (71% foreign trade)? Why would one spend money for an enlarged channel when the Port of Houston does much more with less? Additionally, why should the U. S. Taxpayer pay to dredge a channel to improve the value of property for the Port of Corpus Christi (Tenneco property) instead of the Port paying for it? Finally, how are the monetary returns that the Corps Feasibility 3 4 5 6

Study proposes in their study to be realized? Are they in the form of tolls paid to the U. S. Government? Are they in the form of additional taxes that the users and the Port pay to the U. S. Government? Are they simply a subsidy to private companies that may or may not pass on the benefit to their customer? There are many questions that can be asked and few, if any, answers provided by the Corps of Engineers study. 7

In terms of environmental impact, a recent Associated Press news article (*Corpus Christi Caller Times* 7/22/02), stated that unregulated foreign ships are "a major source of pollution and there are few answers on how to solve the problem". The *Houston Chronicle* states that "these ships comprise the fastest-growing unregulated source of air pollution in the nation". In Houston, these ships "each year emit 273,000 tons of nitrogen oxide, a key contributor to smog". As we all know, Corpus Christi has periodic problems with air quality. Could these unregulated ships push the Corpus Christi area into non-attainment? What is the Corps environmental assessment of any increased air pollution that will result from their projected increase in shipping? <u>They don't even mention it!</u> 8

Finally, there is the question of safety. The Aransas-Corpus Christi Pilots (ship) feel that the existing Corpus Christi Ship Channel is too narrow for ships to pass. This begs the question of how the Houston Pilots handle three times more ship traffic in an even narrower channel. Are they more skillful, more careful or just lucky? Do the Aransas-Corpus Christi Pilots have a problem of their making by navigating the channel at too great a speed (a practice which, at the very least, has caused extensive shoreline erosion)? The perceived passing problem is apparently not a new complaint by the Pilots for a mooring area was built near Ingleside as part of the 1968 channel deepening to eliminate the need for ships to pass. How well does it work? <u>It doesn't</u> because "shippers would rather wait offshore and time their entrance... rather than go through the trouble and expense to get tug assistance to moor and wait with a pilot on board..." (USACE Feasibility Report). This all sounds a bit petty to the writer but I agree that the best and most economical answer to the perceived problem is simply a matter of scheduling the passage of ships through the channel. 9

It is not my intent to argue that there is no merit in the proposed PROJECT; the barge shelves in the Upper Bay and the shoreline protection to prevent further ship-wake erosion are certainly of value. However, public money to dredge a channel (La Quinta) to improve certain land values for the quasi-private Port of Corpus Christi is wrong. Public money to improve a channel which is already better than the existing channel at Houston (and will continue to be better than Houston's even after Houston's current improvements are completed) is also wrong. Now is not the time for this project: come back in another twenty years. 10

Very truly yours,

Monte N. Swetnam

Monte N. Swetnam

Mr. Monte N. Swetnam
420 Marina Drive
Port Aransas, Texas 78373

RESPONSE TO COMMENTS

Comment No.	Response
1	Specific research was not conducted to determine if cargoes have been diverted or lost due to Corpus Christi Ship Channel "inadequacies"; however, the USACE recognizes competition between ports and realizes that one port can be substituted for another. As the cost of using a port increases, it is expected that some traffic should shift to other ports and conversely, as the cost of using a port declines, it is expected that traffic currently routed through a competing port would shift to the port in question. Theoretically, the demand for a project is typically derived as the difference between the least cost transportation cost routings. Refineries in both Houston and Corpus Christi are operating at high rates and each provides feedstock to specific regional refineries. In cases of established ports and refinery infrastructure systems, the assumption of long-term price inelasticity is usually reasonable. The Corpus Christi Ship Channel has had a 45-foot operating depth since the early nineties and while they experienced short-term increases in Houston tonnage between 1999-2000, the 1991-2000 average annual rates of growth for both Corpus Christi and Houston is 5 percent. The 1981-2000 average annual growth rates for both ports were 4 percent. Growth rates during the nineteen eighties between the two ports were also comparable. The economic efficiencies that increase in channel depths would provide could very well result in diversions between ports but this phenomena will be less likely for established cargoes such as petro-chemicals. Modifications to some existing port facilities will be necessary to realize benefits, including dock enhancements and access dredging, and these costs have been included in the average annual costs. The port also expects to create additional facilities in response to the channel improvement project. Existing refrigerator facilities are nearing capacity and the PCCA is considering construction of an additional refrigerated warehouse. Also, the extension of the La Quinta Channel would allow the port to utilize existing land for the construction of a new container terminal. Some facilities will require no modifications, such as the Sherwin Alumina plant and others on the existing La Quinta Channel, as no modifications are proposed for that portion of the channel.
2	The USACE analysis demonstrated that there are cost savings from loading the existing fleet of vessels more fully. The additional cargo transported per trip is expected to reduce the per ton delivery costs. Determination of the percentage of tonnage and vessels that could carry more cargo was made based on discussions with Corpus Christi shippers and world port depth. Benefits were calculated for the portion of tonnage that could take advantage of the proposed deepening. The transportation savings were compared to the project cost and this comparison showed that benefits for the channel-deepening project exceeded the cost. In its economic analysis, the USACE is tasked with determining National

Mr. Monte N. Swetnam
420 Marina Drive
Port Aransas, Texas 78373

	Economic Development (NED) benefits and costs. NED benefit is defined as contributions to national economic development that result in increases in the value of national outputs of goods and services. The NED benefit analysis procedures provide the basis for evaluating Federal investment in all types of water resources projects. The Federal interest in projects to improve navigation is derived from the commerce clause of the Constitution. Federal interest in a project depends on whether it provides benefits to the public by facilitating commerce.
3	For this project configuration we were able to identify over $53 million in annual benefits while the average annual cost of construction would be just over $18 million. A majority of these benefits are realized with channel deepening of the Corpus Christi Ship Channel and Inner Harbor. Vessels that travel to the Port of Corpus Christi from other ports, whose depths range anywhere from 20 to almost 90 feet, will be able to enter the channel fully laden in most cases. Also, because a deeper channel will allow the existing ship fleet to be more heavily laden, vessel size is not expected to increase, thus insuring that the Harbor Bridge and Tule Lake Lift Bridge will not restrict petroleum and bulk cargo vessel transit. Container ships using the proposed terminal at the La Quinta Channel extension would not be affected by the Harbor Bridge or Tule Lake Lift Bridge.
4	The project benefits were calculated for vessels coming from ports that were not constrained. For this reason, benefits were not calculated for total tonnage. Depths of other ports are found in Table 19 and 25 in the Economic Appendix (Appendix G).
5	The WES ship simulation analysis, along with pilot input, was used to determine the width recommendations for both the Corpus Christi Ship Channel and the Houston Ship Channel. The Houston Ship Channel is being widened to 530 feet, the same as proposed for the Corpus Christi Ship Channel.
6	Comment noted. Please see response to comment #2 and # 7.
7	Benefits associated with the proposed channel improvement project are identified as contributions to national economic development (NED), which are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct net benefits that accrue in the planning area and the rest of the Nation. The Economic Appendix details the expected benefits and relates them to project cost.
8	We expect fewer total ships in the with project future condition than the without project future. See the Economic Appendix. Therefore air quality is not expected to change as a result of the project. . A NEPA document for permitting the proposed container terminal will describe the air quality impacts of construction and operation of the new ship berthing and land based facilities and traffic. .
9	See comment #5. The widening of the channel, as well as the construction of barge lanes, would create benefits through a reduction in delays and an increase in safety by allowing two-way ship traffic in the channel system

Mr. Monte N. Swetnam
420 Marina Drive
Port Aransas, Texas 78373

	while barge traffic will be able to operate away from large ship traffic. This would reduce the potential for accidents and spills, as a majority of the commodities passing through the port are petro-chemical in nature.
10	Thank you for your comments

THE PORT OF CORPUS CHRISTI

Department of Engineering Services

August 8, 2002

Project. No. 98012A

Colonel Leonard D. Waterworth
District Engineer
Department of the Army, Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Subject: Corpus Christi Ship Channel, Texas Channel Improvement Project Draft Feasibility Report and Draft Environmental Impact Statement for the Corpus Christi Ship Channel, Texas Channel Improvement Project, June 2002

Dear Colonel Waterworth:

The Port of Corpus Christi Authority staff has the following comments on the subject.

Syllabus

Page 1, 3rd Paragraph, last sentence:

Last sentence states that the Selected Plan has two breakwater "environmental restoration" features. The features actually consist of two different types of protection: a "offshore" breakwater and a shoreline revetment. Both features will protect and enhance existing habitats. 1

FEASIBILITY REPORT

Figure 1: Title block refers to "50-foot Project" though the Table of Contents lists this figure as the "52-Foot Project".

The figure supplied is for the existing Corpus Christi Ship Channel, which is the 45-foot Project. The Channel Improvement Project, the focus of the FR and the DEIS, was in the congressional resolution adopted August 1, 1990 by the Committeee on Public Works, House of Representatives that authorized study for improvements to the CCSC was originally referred to as the "50-foot Project". However, as correctly stated in the Syllabus, the project is now referred to as the "Corpus Christi Ship Channel – Channel Improvement Project". 2

Page 7, Socioeconomic Considerations:

PCCA notes this section does not mention the military or medical field as being part of the broad base economy of Corpus Christi. 3

Website: www.portofcorpuschristi.com
222 Power Street Corpus Christi, TX 78401 • P.O. Box 1541 Corpus Christi, TX 78403 • TEL: 361-882-5633 • FAX: 361-881-5163

Page 9, 1st paragraph:
The last sentence refers to the project area being geographically divided into three segments and then refers to Figure1. This infers that these segments would be delineated or labeled on the figure, and they are not. 4

Page 9 and Table 1 on page 10:
Note that the text descriptions of the channel reach dimensions do not all match those listed in the table. 5

Page 11, 1st paragraph:
First sentence should read, "A Regulatory Agency Coordination Team (RACT)", instead of "A Resource Agency Coordination..." 6

Page 47, 2nd sentence on page:
Sentence should be corrected from: "The RACT, Beneficial Use Workgroup and Contaminant Workgroup have..." to "The RACT, Beneficial Use, and Contaminant Workgroups have..." Note that all three groups listed are CCSCCIP Workgroups. 7

Page 50, Inner Harbor paragraph:
Last sentence should include the listing of placement area IH-PA 3C in order to be consistent with the DEIS, the DMMP, and the remainder of the report. 8

Page 51, 7th sentence:
Sentence should be corrected to read that the Mitigation Workgroup, not the Beneficial Use Workgroup, developed the 3:1 mitigation ratio. 9

Page 54, Entrance Channel paragraph, 6th sentence:
Sentence states the channel will be extended to the 54' contour. This contradicts the remainder of the report that states the channel will be extended to the –56' contour. 10

Page 55, Inner Harbor paragraph, 2nd sentence:
Sentence states that this reach will have 2 feet of advanced maintenance. Actually, the inner harbor will have varying amounts of advanced maintenance from 1' to 6'. 11

Page 59, Division of Plan Responsibilities/Cost Sharing Requirements:
The cost sharing provided only generally describes the project. The final cost sharing responsibilities by reach and depth will be negotiated for the Project Cooperation Agreement between the Federal Government and the Port of Corpus Christi Authority. 12

Page 61, Table 19 and page 62, Table 20:
Appears that the value for Non-Federal Cost for Real Estate should be distributed differently. For the CCSC, Real Estate costs should include the value of IH PA 6 and Suntide; and for La Quinta, the costs should include the value of La Quinta Buffer Zone property. The tables should be adjusted accordingly. 13

Pages 66 to 73:
Bulleted items are understood to be subject to negotiation for the Project Cooperation Agreement between the Federal Government and the Port of Corpus Christi Authority. 14

Plates 1, 2,3,4:
The DMPA labels for the Inner Harbor should be preceded with the designation (IH) to make consistent with the text (Page 43. Upland Confined Placement Plan) 15

Plate 1:
The Tule Lake Placement Area designation should be corrected to IH PA 6 not PA 7. 16

Plates 4, 5, and 6:
Please note that it is difficult to read that the area within the dark hash lines with stippling represents the proposed barge shelves and not exclusively for the proposed widening in this reach. 17

Plate 6:
The area labeled Placement Area No. 11 should be labeled instead "Berry Island". PA 11 no longer exists; the former PA has reverted to private ownership. 18

Plate 7:
Placement Area 9, located just north of BU Site R, should be labeled. 19

Plate 7:
Placement Area 8, constituting the western lobe of Pelican Island, and Placement Area 7, constituting the eastern lobe of Pelican Island, should be labeled accordingly. 20

Plate 8:
The placement area labeled "Placement Area No. 3" should be label PA 4. PA 3 no longer exists and was previously located at the current location of Robert's Park adjacent to the municipal marina in Port Aransas, Texas. 21

Plate 8:
This plate should show the location of PA 5 on Mustang Island, south from BU Site L. 22

Plate 12:
Reference and label of "Proposed Available Tract for Placement Area" in the middle of site of the PCCA's proposed container terminal should be deleted. 23

Plate 13:
Reference and label of "Placement Area No. 12" northwest of the Jewel –Fulton Canal should be deleted. 24

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Page DEIS-iv, SUMMARY, Preferred Plan section:

The summary of the preferred plan should include the description of the GNF of the La Quinta Channel Extension and should read something like - "The preferred plan includes the extension of La Quinta Channel approximately 7400 feet at a width of 400-feet and to a depth of –39-foot MLT". This action is clearly described elsewhere in the Feasibility Report and the DEIS as an element of the proposed action but it is not described in the Summary. 25

Figure 1-1:

The referenced Figure 1-1 in the text and listed in the DEIS Table of Contents as "Corpus Christi Ship Channel Study Area" is missing. Pages DEIS-3 and DEIS-7 appear to be copies of the same Figure 1-2. 26

Page DEIS-200:

Under the paragraph listing the projects that are not in foreseeable future or did not have documents available, the region referred to should be "Region "L" not "Region "N". Region "L" is for the San Antonio region. Region "N" is for the Coastal Bend Regional Water plan that is described as included in the reasonably foreseeable actions section. 27

Pages DEIS-202 and 203, Table 5.1-1:

Please note there are a few corrections or updated revisions to be made to the draft entries under the Joe Fulton International Trade Corridor column. Under **MITIGATION/BENEFITS***, Upland Habitat, NI to 1.1 ac; Bay Bottom Habitat, no change; Shallow Water Habitat, NI to 5.2 ac. 28

Pages DEIS-202 and 203, Table 5.1-1:

Please note there are a few corrections or updated revisions to be made to the draft entries under the La Quinta Gateway Project column. Starting with **RESOURCE IMPACTS** these are: Topography/Bathymetry, 32 acres to NI; Shore/Beach/Dunes, 0.7 statue mile to 1.8 acres; Salt Marsh 1.7 ac to 2.1 ac; Flats, no change; Open Water, 32 acres; Oyster Reef, no change; Upland Wetlands, NI; Shallow Bay Habitat, 27.5 to 27.1; Gulf of Mexico Bottom, no change; Terrestrial Habitat, 295 ac (excludes cropland) to 245 ac (excludes 869 ac cropland); Submerged Aquatic Vegetation, 2.9 ac to 2.4 ac; Essential Fish Habitat, 32.1 to 31.6 ac. 29

Under **MITIGATION/BENEFITS*** these are: Upland Habitat, no change; Bay Bottom Habitat, no change; Shallow Water Habitat, NI to 27.1; Submerged Aquatic Vegetation, 8.6 to 7.2; and Wetlands, 5.3 to 5.9. 30

Pages DEIS-208 to 217, Section 5.4 RESULTS: 31

Changes to Table 5.1-1 should also be reflected in 5.4 RESULTS, as applicable.

Page DEIS-205, Section 5.2.4, La Quinta Gateway Project, 2nd paragraph: 32
In order to be consistent, the first sentence should state the terminal would have a 295-acre marine terminal instead of a 245-acre marine terminal.

Page DEIS-229, Section 8, 2nd paragraph:
In the 7th sentence it states that a "series of newsletters was also sent to people who attended meetings on the project". To better capture the public involvement and coordination performed for this project, the sentence should have read: "A series of newsletters was sent to approximately 1,300 people or organizations in the area, including those who attended meetings or expressed an interest in the project or could potentially be interested in the project." 33

Page DEIS-248:
The Shiner, Moseley and Associates, Inc., Carter and Burgess, Inc., and Olivarri and Associates, Inc. citation should be corrected to the following since the DEIS uses revised information from: Shiner Moseley Associates, Inc, (2001). Environmental assessment for the proposed Joe Fulton International Trade Corridor from IH 37 to US 181, Nueces County Texas July. The citation provided should replace the citation for the obsolete draft EA dated April 2001. 34

APPENDIX D, COORDINATION

There appears to be pages missing from the letter dated March 31, 2000 from Galveston District to Texas Historical Commission. 35

Please note for clarification only that the coordination effort provided in the DEIS represents a part of the record of public involvement and agency coordination that took place during the Feasibility Study. The PCCA has 6, 4-inch binders of detailed meeting summaries on the approximately 40 CCSCCIP Workgroup meetings, 11 public forums, 4 public meetings, 3 scoping and/or public hearings and numerous individual interest group presentations and meetings, three newsletters and numerous newspaper articles published in dailies throughout the region. The project sponsors are very proud of this effort and the PCCA shall continue to keep the public informed and involved throughout construction and operation. The PCCA believes the project has been made possible due to the participation and commitment of the people in the community. 36

With regard to agency participation, the DEIS is clear on the coordination involvement however, we would like to provide for the record a list of the personnel of the various agencies that participated in the various CCSCCIP Workgroups. (See attached list of Agency Workgroup Participants) 37

APPENDIX F

Page F-29, Paragraph 4.5.7:
Tule Lake Placement Area should be referenced as IH PA 6 not PA7. 38

APPENDIX H

Appendix 5:
BU Site L should be labeled on Plate C-13; and on Plate F-42, Tule Lake placement area should be labeled as IH PA 6 not as DMPA-7 (TULE LAKE). There is no DMPA 7 in the Inner Harbor. 39

ADDITIONAL COMMENTS

The net positive benefits due to the recommended DMM/BU plan are much larger and more significant than described in the DEIS. For example, the PCCA fully intends to use the created beneficial use Site GH for mitigation related to impacts to estuarine resources associated with construction of the slip and docking facility for the La Quinta Container Terminal. 40

A significant resource management problem that regulatory agencies and permit applicants constantly address in this region is the lack of available or suitable areas to locate and perform mitigation and/or habitat enhancement activities. The implementation of the CCSCCIP DMM/BU plan will provide several hundred acres of beneficial use sites where such actions can be conducted. Clearly, the created beneficial use sites should be readily adoptable and available in the earliest years following initial construction for mitigation plantings or habitat management actions that may be required by other permitted water dependent actions in the bay system. Ultimately, as these sites mature and become invaded by seagrass vegetation, they may become less readily amenable to alternative uses or mitigation; however, that does not diminish the value for the described purposes. The PCCA will work closely with persons and with local, state and federal agencies who may seek to lease these areas from the PCCA for mitigation plantings and habitat enhancement to maximize the beneficial use potential of the sites. 41

Several possible developmental activities not described in the DEIS, such as channels to access existing oil and gas production facilities may need to occur within the created beneficial use sites. However, simply because they are not specifically included, they should not later be considered incompatible with the resource management opportunities provided by the creation of the beneficial use sites. Clearly any proposal to conduct a separate developmental activity is expected to be addressed on an individual permit basis. 42

Thank you for the opportunity to comment on the Draft Feasibility Report and DEIS.

Sincerely,

John P. LaRue,
Executive Director

Cc: Frank C. Brogan, PCCA
Greg W. Brubeck, PCCA
David L. Krams, PCCA
Paul D. Carangelo, PCCA
Lloyd H. Saunders, Ph.D. Chief, Planning, Environmental and Reg. Div., USACE-Galv.
Dr. Terrell Roberts, USACE-Galveston
Robert Heinly, USACE-Galveston

Corpus Christi Ship Channel - Channel Improvement Project

Workgroup Participants

1998 - present (May 14, 2002)

Texas Parks and Wildlife Department
Smiley Nava
Jim Tolan
Mary Ellen Vega
Beau Hardegree
Kay Jenkins

U. S. Fish and Wildlife Service
Johnny French
Clare Lee
Tom Schultz
Tom Shearer
Pat Clements
Mary Orms

National Marine Fisheries Service
Bill Jackson
Rusty Swafford

Texas Natural Resource Conservation Commission
Bruce Moulton
Mark Fisher
Rene Mariscal
Chris Caudle
Robert Burgess

Texas Department of Transportation
Raul Cantu
Amy Link
Melissa Gabriel
Paul Douglas
Scott Sullivan

Texas Railroad Commission
Mary McDaniel
Don Gault
Bill Meyer

U. S. Environmental Protection Agency
Mike Jansky
Monica Young
Tim Landers

Texas General Land Office
Ray Newby
Tom Calnan
Kim Halbrook
Heidi Wadzinski

Texas Water Development Board
Gary Powell
Junji Matsumoto
Barney Austin
Mark Wetzel

Coastal Bend Bays and Estruary Program
Leo Trevino

Pacific International Engineering
Vladimir Shepsis
Hugo Bermudez

Olivarri and Associates
Leah Olivarri
Kelly Billington

PBS&J
Martin Arhelger
Gary Galbraith
Kari Jecker
Kathy Calnan

Port of Corpus Christi Authority
Greg Brubeck
David Krams
Paul Carangelo
Stacey Bryant
Sandy Escobar

U. S. Army Corps of Engineers
Frank Garcia
Bob Bass
Bob Heinly
Terry Roberts
Carolyn Murphy
Rob Hauch

U. S. Army Corps of Engineers
Gary Ray - WES
Doug Clark - WES
Carl Anderson
Wade Williams
Carlos Tate
Jon Plymale
John McManus

U. S. Army Corps of Engineers
Dale Williams
Rick Medina
Rao Vemulakonda - WES
Ed Reindl
Mike Kieslich
George Alcala

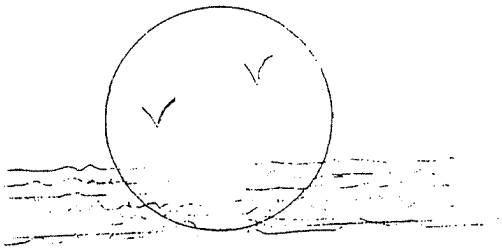
Mr. John P. Larue
Executive Director
The Port of Corpus Christi
222 Power Street
Corpus Christi, Texas 78401

RESPONSE TO COMMENTS

Comment No.	Response
1	Text will be revised.
2	Text will be revised.
3	Text will be revised.
4	Reference to the figure at this location has been removed. It is cited in several other locations throughout the report.
5	The text and table have been modified so that the numbers are correct.
6	Text will be revised.
7	Text will be revised.
8	Text will be revised.
9	Text will be revised.
10	The paragraph will be modified to clarify that dredging in that location will be to –54 feet with 2 feet of advanced maintenance, and will extend to the 56-foot contour.
11	Text will be revised to remove reference to a specific amount of advanced maintenance.
12	Comment noted.
13	Tables will be adjusted to update non-Federal cost share appropriately.
14	Comment noted.
15	Text will be revised.
16	Text will be revised.
17	Comment noted.
18	Text will be revised.
19	Text will be revised.
20	Text will be revised.
21	Text will be revised.
22	Text will be revised.
23	Text will be revised.
24	Text will be revised.
25	Text will be added to the summary.
26	The correct figure will be in the FEIS.
27	According to Water for Texas - 2002 (Texas Water Development Board, January 2002), the State of Texas Regional Water Planning Area N refers to the Coastal Bend Planning Group.
28	Text will be revised.
29	Text will be revised.
30	Text will be revised.
31	Table will be revised according to changes in document.
32	Text will be revised.
33	Text will be revised.
34	Text will be revised.
35	The letter will be complete.

Mr. John P. Larue
Executive Director
The Port of Corpus Christi
222 Power Street
Corpus Christi, Texas 78401

36	Comment noted. The FEIS will note that there was other communication with the public that is not part of this official record. There were a large number of documents available and the most pertinent documents were chosen to make the EIS less cumbersome.
37	The Agency Workgroup Participants list will be included in the FEIS as Table 1.6-1 in Section 1.6.
38	Text will be revised.
39	Text will be revised.
40	The La Quinta Container Terminal is not a part of the project, therefore the net positive benefits may be larger, but are difficult to measure. See comment #41.
41	Any mitigation efforts for future projects (non-federal or federal projects, other than USACE projects) in these BU sites will be handled under the USACE's permit application process.
42	See comment #1 in the response to the Texas General Land Office.



AUG 2 1 2002
COASTAL BEND ENVIRONMENTAL COALITION
P.O.BOX 3512 Corpus Christi, 78404

C 3 2002

August 9, 2002

Department of the Army
Galveston District, Corps of Engineers
P.O. Box 1229
Galveston, TX 77553-1229

Re: Corpus Christi Ship Channel Improvements

Dear Sirs:

The Environmental Coalition appreciates this opportunity to comment on the DEIS on the channel improvement proposed for the Port of Corpus Christi. We wish to complement the persons who have studied and prepared this document and believe that they have done an admirable job on all sections of the project except the reach between the La Quinta Channel and the harbor bridge. It is this section of the project that we will address here. 1

The methods of spoil disposal (dredged material from both the construction and maintenance dredging procedures) seem to us to be just a continuation of the old procedures of the past where the material is deposited along the channel. This practice appears to be simply an insurance policy for the maintenance workers as the material will quickly slither back into the channel. This practice continues to create problems in the bay and also in Laguna Madre. 2

If the COE and the Port of Corpus Christi insist on performing the disposal of the dredge material in this manner, we suggest that specifications be written to the effect that the delivery of the material be as far from the channel as possible within each of the eight sites. We believe that by using this suggestion, the Port would save considerable money from dredging needs becoming necessary at less frequent intervals and the silting would therefore be diminished in the area of the bay nearest the channel. 3

We would like to see a comparison of costs of the creation of a spoil island close to the channel in this reach for the disposal of the dredged material within some form of containment with the usual dumping of the material along side of the channel and the costs of continual maintenance dredging. . While initially more expensive, we 4

believe that this would bring a long term solution to the disposal problem and would create a beneficial use of the material by creating a nesting island for the birds.

Thank you for the opportunity to comment on this DEIS.

Sincerely,

Patricia H. Suter

Patricia H. Suter, President
Chairman, Coastal Bend Sierra Club

Ms. Patricia H. Suter
Coastal Bend Environmental Coalition
P.O. Box 3512
Corpus Christi, Texas 78404

RESPONSE TO COMMENTS

Comment No.	Response
1	Thank you for your comment.
2	Comment noted.
3	As explained in the DEIS, all construction material from the Entrance Channel, the Lower Bay reach, and the La Quinta Channel (except for some stockpiling) will be used to create new BU sites. Additionally, construction material from a portion of the Upper Bay will be used for the creation of BU sites (DEIS Section 2.3.2). Table 1.7-1 provides data on each of the BU sites, all of which will be created with construction material, and the sites total 935 acres. Section VII of the FR notes that due to the silty nature of the construction material from the rest of the Upper Bay reach, this material is not suitable for beneficial uses. The USACE has already implemented your suggestion to place the material as far away from the channel as possible (within the limits of the designated PAs), as noted in Section 4.1.5 of Appendix F to the DEIS: "...in an effort to improve management practices at those open-water sites and possibly reduce dredging frequency,...the dredge pipes will be placed at the back limits of the designated placement sites to release dredged material as far from the channel as possible." It will take time to determine if this practice does lead to a reduction in shoaling rates and frequency of dredging.
4	Dredged material in this reach (both new work and maintenance and in the proposed placement areas) consists primarily of very soft, gray clay from the existing bay/channel bottom to the proposed dredge depths. The estimated cost for the new work dredging proposed in the DEIS for the Upper Bay reach is approx. $30 Million including contingencies. The total estimated operation and maintenance cost to maintain the Upper Bay reach for the 50 year life of the Recommended Alternative, based on the USACE's estimate of 16 dredging cycles (about once every 3 years) with contingencies is approximately $140 to $150 million. The creation of an UCPA in the bay, which is fully contained to hold all anticipated new work and maintenance material for the Upper Bay reach for 50 years (without the cost to perform and place the maintenance dredging described above), would be approximately $200 to $300 million. Based on USACE estimated shoaling quantities, a 25% bulking factor, and no expected consolidation of the maintenance dredge material or the underlying soil/bay bottom, a hypothetical UCPA could be created by two (2) approximately 2,000 acre sites each (a total of 4000 acres or 6.25 square miles) either contained with a rock rubble mound breakwater-like structure or a steel sheet pile structure that would extend approximately 6 feet above the waterline.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

AUG 9 2002

Lloyd H. Sanders, Ph.D.
Chief, Planning, Environmental
and Regulatory Division
Galveston District, Corps of Engineers
P.O. Box 1229
Galveston, TX 77553-1229

Dear Dr. Sanders:

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality's Regulations for Implementing NEPA, the Environmental Protection Agency (EPA) Region 6 Office in Dallas, Texas, completed its review of the Draft Environmental Impact Statement (DEIS) on the Corpus Christi Channel Improvements Project, Corpus Christi and Neuces bays, Neuces and San Patricio counties, Texas, dated June 2002.

EPA has rated the DEIS as **LO, Lack of Objections**. Our classification will appear in the *Federal Register* according to EPA's responsibility under Section 309 of the CAA, to inform the public of our views on proposed Federal actions. 1

Correction or clarification of certain items would help to strengthen the Final EIS and the enclosed comments on the DEIS more clearly identify these suggested areas. Please send our office five copies of the Final EIS when it is sent to the EPA, Office of Federal Activities, EIS Filing Section, South Ariel Rios Bldg. (Room 7220), 1200 Pennsylvania Ave, N.W., Washington, D.C. 20004. If you have any questions, please contact Joe Swick at (214) 665-7456.

Sincerely yours,

Robert D. Lawrence, Chief
Office of Planning and
Coordination (6EN-XP)

Enclosure

Corpus Christi Ship Channel Improvement Project
Draft EIS Comments

1. In reference to the TWDB report (Matsumoto et al., 2001) used to estimate the risk of altering the hydrodynamics of the bays system, the Final EIS would be strengthened by clarifying this study in more detail, including the study design, assumptions, and conclusions. 2

2. In lieu of actual surveys of the coverage of seagrasses, the Final EIS would be strengthened by clarifying that the potential impacts to seagrasses, based on assumptions from areal coverage of seagrasses in the project area and water depth, are conservative and worst case. 3

3. In reference to Tier 1 analyses using existing data to evaluate environmental effects of dredged material disposal and comparisons to sediment screening guidelines, the Final EIS should clarify that sediment samples from the proposed project will be collected and analyzed according to Inland Testing Manual protocols. 4

4. The document states that sites will be suitable for seagrass colonization, however, this process will rely upon natural recolonization instead of plantings. The Final EIS would be strengthened by clarifying if this process would be initiated by planting seagrasses to jump start and enhance the natural recolonization, which is expected to occur over time. If plantings are not considered feasible, this should be clarified in the Final EIS as well as the potential for success from only the natural recolonization of seagrasses. 5

5. We suggest revising Table 3.2-12 in the Final EIS, since the following species were listed as non-indigenous marine species and they are generally recognized as widely distributed in Gulf estuaries, including Corpus Christi Bay: spotted seatrout, sheepshead minnow, gulf killifish, Atlantic croaker, black drum and red drum. 6

6. Section 7.8 (page DEIS-226) in the Final EIS should be clarified to reflect that all construction material destined for disposal in the Gulf has been evaluated using the CWA 404(b)(1) guidelines (Appendix A), and that all maintenance material is proposed for placement at the existing ODMDS, subject to evaluation using the ocean dumping environmental criteria. 7

Mr. Robert D. Lawrence
United States Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RESPONSE TO COMMENTS

Comment No.	Response
1	Thank you for your support.
2	NEPA states that an EIS should use references to the extent possible to avoid being encyclopedic. However, the report is available upon request should anyone require more detailed information.
3	Comment will be included.
4	Comment will be included.
5	Seagrass planting is not considered for all BU sites because ~~of~~ the existing seed bank and vegetative propagule supply in the area is considered sufficient to initiate colonization within a few months to a year, depending on site location, the season the site is completed, and the sediment stabilization-consolidation time needed to support colonization. The natural colonization process is a common phenomena observed by seagrass biologists in the project area. The BU sites are designed to create a platform that seagrass can colonize. Seagrass plantings for all sites are not part of the recommended plan and were not analyzed in the cost-benefit analysis.
6	Table 3.2-12 will remain unchanged since the information cited is from the Gulf of Mexico Program.
7	Comment noted. All materials have been evaluated and Section 7.8 will be clarified.

Coastal Bend Bays & Estuaries Program, Inc.
1305 N. Shoreline, Suite 205, Corpus Christi, Texas 78401 • 361-885-6202 • 361-883-7801 (fax)

August 12, 2002

Department of the Army
Galveston District, Corps of Engineers
Attn: Environmental Section
P.O. Box 1229
Galveston, Texas 77553-1229

Re: Corpus Christi Ship Channel, Texas - Channel Improvement Project, Draft EIS

Dear Dr. Saunders

Coastal Bend Bays & Estuaries (CBBEP) has reviewed the draft EIS for the Corpus Christi Ship Channel – Channel Improvement Project. The Channel Improvement Project purposes to deepen and widen the Corpus Christi Ship Channel. The result of the project will provide improved barge and ship traffic. As part of the work, the plan proposes to use material from the dredging beneficially to enhance areas by creating shallow water and emergent island habitats.

CBBEP is in support of the proposed project as it meets several objectives of the Bays Plan. Specifically, the project will result in improved maritime safety, Bays Plan objective MC1 (to support construction of the barge shelves on both sides of the ship channel). The construction of the shelves will provide a greater safety margin relative to potential collusions, which are a cause of inadvertent releases of undesirable material to the bays and surrounding waters. Additionally, the project addresses Bays Plan objective D-1 (establish a proactive beneficial uses group to maximize the beneficial use of dredged material). 1

Should you have any questions or if I may be of further assistance, you may contact me by telephone at 361 885-6244 or email ltrevino@cbbep.org.

Respectfully,

Leo B. Trevino

Leo B. Trevino
Director – Project Implementation

Coastal Bend Bays & Estuaries Program, Inc.
1305 N. Shoreline, Suite 205
Corpus Christi, Texas 78401

RESPONSE TO COMMENTS

Comment No.	Response
1	Thank you for your comments.

Texas General Land Office

David Dewhurst Commissioner

Stephen F. Austin Building

1700 North Congress Avenue

Austin, Texas 78701-1495

512-463-5001

August 12, 2002

Dr. Lloyd H. Saunders
Chief, Planning, Environmental and Regulatory Division
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

RE: Comments on the Corpus Christi Ship Channel – Channel Improvement Project Draft Environmental Impact Statement (DEIS)

Dear Dr. Saunders:

The Texas General Land Office (GLO) appreciates the opportunity to comment on the DEIS for the Corpus Christi Ship Channel (CCSC) Channel Improvement Project (CIP). The following comments reflect issues that have been raised in Regulatory Agency Coordination Team (RACT) and associated workgroup meetings held with state and federal resource agencies as well as in previous GLO consultation with the Port of Corpus Christi and U.S. Army Corps of Engineers – Galveston District (USACE).

Beneficial Use of Dredged Material

Corpus Christi Bay, including the CCSC project area, is an area of active oil and gas production. Revenue generated from petroleum development and the leasing of state-owned mineral lands in the area is deposited into the Permanent School Fund (PSF) to help fund the education of the school children of Texas. Some of the Beneficial Use (BU) sites, as currently designed and proposed in Corpus Christi and Redfish bays, may complicate and increase the cost of accessing and developing PSF lands for future mineral exploitation. Applicable laws and restrictions already complicate development in the areas of the proposed BU sites as drilling activities are prohibited in the vicinity of existing navigation channels and dredged waterways, and the GLO does not want to make it more complex and difficult than it is already.

The proposed BU sites of greatest concern are sites "CQ," "GH," "S," and "R." The size of these sites and their proximity to the navigation channels, with respect to the mainland shore, would obstruct access to known oil and gas deposits. The remaining BU sites do not appear to pose substantial obstruction to mineral access as current directional drilling technology can most likely compensate for the decreased surface access. 1

Construction of no additional BU sites would be the ideal alternative concerning future development of PSF minerals. However, realizing that environmental and economic interests need to be considered while retaining flexibility in the future development of state-owned minerals,

there are several options that can be pursued to ensure those PSF assets can be developed in the future without undue complication. These options include:

1. Maintaining keyhole channels, as originally proposed in the development of the BU plan, into sites "CQ," "S," and "R" that can be used in the future without mitigation if development is done in environmentally sound ways using state-of-art technical processes.

2. Designating emergent parts of present or future islands to use as drill sites without substantial mitigation if development is done in environmentally sound ways using state-of-art technical processes.

3. Ensuring a series of drill sites on the mainland shore in the vicinity of sites "CQ,"GH," "S," and "R."

A BU plan, with minor design modifications, for the CCSC CIP can be implemented to ensure that future development of state-owned minerals can proceed without accruing additional costs for access and mitigation than would occur under existing conditions. The GLO intends to be an active participant in the further development of a detailed BU plan for the CCSC CIP that meets the best interest of all stakeholders involved.

Shoreline Erosion

The Port of Corpus Christi's effort to analyze the causes of shoreline erosion in the project area and identify future erosion impacts expected to result from the proposed project has been excellent. The CCSC CIP Shoreline Erosion Study prepared by Pacific International Engineering indicates that shoreline erosion associated with vessel wakes and vessel pressure-field effects is a significant environmental impact near some portions of the existing CCSC project. It also appears that shoreline erosion will continue to be a deleterious environmental effect of the project in the future if not properly addressed by the project sponsors as part of the CIP. To that end, we recommend that shoreline erosion be listed and discussed as an individual item under DEIS Section 3.0 - Affected Environment and Section 4.0 – Environmental Consequences. 2

Overall, the RACT process has been very successful. The GLO looks forward to working with the Port of Corpus Christi and USACE in the successful planning and implementation of the CCSC CIP. Please contact me at 512/475-3624 or by email at ray.newby@glo.state.tx.us if you need any additional information regarding this matter.

Sincerely,

Ray Newby
Texas General Land Office

RN:kh

cc: Texas Parks and Wildlife Department
Texas Natural Resource Conservation Commission
U.S. Fish and Wildlife Service
National Marine Fisheries Service

Mr. Ray Newby
Texas General Land Office
1700 North Congress Avenue
Austin, Texas 78701-1495

RESPONSE TO COMMENTS

Comment No.	Response
1	The BU plan in the DEIS is conceptual and was prepared under the guidance of the BU Workgroup, which included a GLO representative. Each BU site was designed as a multipurpose site for environmental enhancement. The final site location and design plan for each BU site will be prepared during the Plans & Specifications phase under the continued guidance of the BU Workgroup. All concerns of each workgroup member will be addressed at that time and incorporated in the final BU plan to the maximum extent practicable. However, providing and maintaining "keyhole channels" in some of the BU sites represents an additional construction and maintenance cost that may not be necessary if there is no mineral development at these sites. At this time, it is preferable to deal with future minerals development in a BU site through the permitting process with BU Workgroup review, rather than attempt to provide a mitigation-free work area at each BU site.
2	Shoreline erosion is discussed in Section 4.3. The technical subject is best summarized in this section and refers the reader to the study. NEPA states that an EIS should use references to the extent possible to avoid being encyclopedic.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

August 12, 2002

Lloyd H. Saunders, Ph.D.
Chief, Planning, Environmental and Regulatory Division
Department of the Army
Galveston District, Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553

Dear Dr. Saunders:

This responds to your request for review of the Draft Feasibility Report and Draft Environmental Impact Statement (DEIS) dated June 2002 for the Corpus Christi Ship Channel, Channel Improvement Project. A copy of the DEIS dated June 2002 was received by the U.S. Fish and Wildlife Service on June 26, 2002. In reviewing the DEIS, the Service notes that many of the comments dated December 19, 2001 that were submitted for the November 2001 Preliminary DEIS have not been addressed. These comments are re-iterated below along with additional comments.

Section 1.4.2, Environmental, page DEIS-9: The Service notes that Federally listed threatened or endangered species are not included in this section although issues that directly relate to these species are included, such as shoreline erosion, which could affect the brown pelican nesting island and/or erosion of tidal flats used by wintering piping plovers. Also, dredging methodologies selected for the CCSP-CIP could potentially affect sea turtles in the bays. The Service recommends that Endangered Species be included as an "area of concern" with the other fish and wildlife issues noted in this section. 1

Section 1.6, NON-FEDERAL SPONSOR AND COORDINATION, DEIS-12: The Service is very concerned that the "beneficial" aspects of the Beneficial Use (BU) sites have not been documented. The benefits of a BU site should, in the assessment of the Service, provide gains to the system other than as a convenient, low-cost disposal site. The Service strongly recommends that such documentation should include detailed descriptions of how each site would provide an improvement to the existing conditions, as well as a monitoring plan, which will track each site's development and attainment of the specific site-related goals selected to characterize the benefits of each site. Although the Service agrees that the Beneficial Uses Workgroup (BUW) should remain organized and active throughout the life of the project, the appropriate function of the BUW would be to review monitoring reports provided by POCC and USACE, and the proponents of the project as well as to provide recommendations. 2

Section 1.7 RESOURCE MANAGEMENT ACTIONS, Site CQ, DEIS-16: The Service is aware that the Department of the Navy may have some concerns regarding the use of BU Site CQ and the potential increase in Bird Aircraft Strike Hazards (BASH) resulting from the design and construction of this site. The development of a detailed assessment relating to the "benefits" of this site should assess the BASH issue in light of the expected use by birds. Given what has been observed elsewhere regarding the temporal nature of geotubes, the Service recommends that this also be addressed more specifically. The EIS should outline expected life of the geotubes and the approach to be taken for their short-term and long-term maintenance. 3

DEIS-16, Site P: Development of a monitoring plan for this site is paramount in determining the success of this structure in protecting adjacent seagrasses. 4

DEIS-16, Site I: The Service has not been provided convincing evidence that the design and configuration of this BU would be unaffected by degrading forces from ship channel traffic, and that the material, proposed for placement on the west side, would remain in the site. Again, a rigorous monitoring plan would identify unanticipated changes in the site and perhaps indicate corrective actions that may be needed to avoid secondary impacts to the sensitive and extremely productive Redfish Bay system. 5

DEIS-17, Sites R and S: According to the DEIS, for sites R and S, the project provides for the deposition of new work dredged material to create shallow water habitat. Information is not provided concerning how this material represents a net gain for the Corpus Christi Bay system as currently the bay bottom at these BU's is not damaged or degraded in any way. Additionally, the BASH issue referenced for Site CQ may also need to be assessed for Site S. 6

DEIS-17, Pelican Island: The Service recommends that all of the proposed work at Pelican Island and anticipated impacts of this work be incorporated into the Biological Assessment as a component of the consultation for the CCSP-CIP, including cumulative effects from the construction of Site I. In addition, the Service notes that Pelican Island riprap and geotube decreased from 5500 feet of protection in PDEIS to 2200 feet in the DEIS. Justification for the reduction of protective barriers at this site should be clarified. 7

Assuming that the design for the 1500 feet of armoring on the northeast corner for the 45-foot project was appropriate, the Service recommends that the DEIS evaluate the on-going maintenance needs for this feature and develop a better maintenance schedule so that the site will not be degraded due to expected increases in traffic and/or ship size. 8

DEIS-18, Site L: The Service recommends that all of the proposed work at Site L and anticipated impacts of this work be incorporated into the Biological Assessment as a component of the consultation for the CCSP-CIP with regards to the federally listed, threatened, piping plover (*Charadrius melodus*). 9

DEIS-18, Sites ZZ and MN: The DEIS does not explain how the topographical relief created at the sites would enhance the marine ecosystem. 10

Section 2.3.2, Preferred Alternative, DEIS-27: The Service recommends that use of PA6, PA7, and PA8 and anticipated impacts of this work be incorporated into the Biological Assessment as a component of the consultation for the CCSP-CIP. 11

Section 3.3.1, Surficial Sediments, DEIS-45: The DEIS states that the U.S. Navy (1987) data indicated ERL exceedances for arsenic (8 out of nine stations by as much as eight times), cadmium (4 stations), and mercury (2 stations) in the Lower Bay reach. If the material has since been dredged and removed, the Service recommends identifying the placement of that material. 12

Section 3.5.1, Finfish and Shellfish, DEIS-58, last paragraph: If information pertinent to the CCSC-CIP was discovered as part of the Environmental Benefits Determination (EBD) for the Packery Channel Feasibility Study, then that EBD should be included in the CCSC-CIP EIS as an appendix. Where information from that EBD has been used in the environmental consequences section of the CCSC-CIP EIS, specific references to the EBD should be included. 13

Section 3.6.2.2, Birds, Table 3.6-1 and DEIS-73, paragraph 2: The Interior Least Tern protection as endangered is restricted to populations found in the "interior" of the United States. In Texas, the least tern, within 50 miles (80 km) of the Gulf Coast is not included in this protection under the Endangered Species Act. All least terns are; however, protected under the Migratory Bird Treaty Act and the take of these birds, nests, and eggs is prohibited. The responsibilities of Federal Agencies to protect migratory birds have been reinforced by Executive Order 13186. The least tern is only one of several species of migratory birds which nest along the coast, very likely within portions of the footprint of the CCSP-CIP. Methodologies to avoid impacts to nesting migratory birds will need to be addressed in the EIS. 14

Section 3.6.2.4 Mammals, DEIS-77: The Service recommends that the Marine Mammal Stranding Network also be consulted for information on and records of sightings for manatees in the CCISP-CIP project area. 15

Section 3.6.2.5 Reptiles, DEIS-79, last paragraph add: The Texas diamondback terrapin is the only turtle in the world entirely restricted to estuarine habitat, where it lives in coastal marshes, tidal mudflats, and tidal creeks. 16

The Service recommends coordination with Ms. Kim Holbrook with regards to the potential for impacts of the CCISP-CIP to the Texas diamondback terrapin. 17

Section 4.1.1, DEIS-141, Water Exchange and Inflows: The Service recommends that the DEIS address the affect on water exchange in the study area with the dredging of Packery Channel. 18

Section 4.4.1, DEIS 147, Finfish and Shellfish: The Service is concerned that in the discussion of turbidity effects, no distinction is made between the types of sediment being dredged (is the material dominantly sandy or silt) nor in the various placement options used for dredging (open bay, upland enclosed with a weir to the bay etc.). 19

A discussion is needed comparing the differences in turbidity as it relates to construction 20

assesses the anticipated type of material to be placed, and identifies whether the material is new work (one time placement) or maintenance material (periodic placement). This type of assessment in the EIS would provide for the reader a more accurate picture of anticipated turbidity effects for specific BUs and PAs. 20

Section 4.4.3, DEIS- 150 Aquatic Communities: The Service would like for the DEIS to clarify the choice in referencing data from Mobile Bay, Alabama over data from another closer bay system such as Galveston Bay. In other words, what characteristics of Mobile Bay are more like Corpus Christi and Nueces Bays, than another bay system, such as Galveston Bay for which there is current data on suspended sediments? 21

Section 4.4.4, Essential Fish Habitat, DEIS-152, paragraph 2: The Service recommends that the last sentence of this paragraph be revised as follows:

> On the other hand, construction of the preferred alternative will have more beneficial than detrimental impacts since, for example, the BU sites are strategically placed to prevent shoreline erosion and preserve and create potential seagrass habitat. The site-by-site plan for each BU will characterize the habitat goals, and the monitoring plan will document the environmental gains to the Nueces Bay or Corpus Christi Bay system. 22

Section 4.6.1 Hazardous Material impacts to the Existing Environment from Project Activities, DEIS-162, paragraph 4. The DEIS states that carbon tetrachloride and perchloroethane from groundwater seepage could potentially be impacting the sediment in the La Quinta channel. The results for the chemical analyses should be cited. 23

Section 4.3.2.1 Salt Marshes/Estuarine Shrublands/Sand Flats/Mud Flats/Algal Mats, DEIS-146, paragraph 2: Indicates that the CCSCCIP would "slightly increase shoreline erosion rates", if so, why the need for 9,000 linear feet of shoreline protection? The Service recommends that shoreline erosion rates be more specifically characterized in the EIS. 24

Section 4.4.5.1 Dredging/Construction Activities: In paragraph the DEIS states that "Several studies (Hartley and Fisher, 1936; Stott, 1936; Doan, 1942; and Jermolajev, 1958) briefly mention the tendency of turbidity to concentrate food species such as small fish associated with plankton near the surface where birds may prey upon them. However, the feeding efficiency of pelagic birds does not appear to be significantly affected by water opacity." At least two of the citations in refer to studies in fjords that are not relevant to conditions in Corpus Christi Bay, therefore, the Service suggests either leaving out this sentence or referencing more recent or more relevant sources. 25

The DEIS does not state that the dredging activities will be coordinated and timed to avoid impacts to rookery islands. As previously noted, birds utilizing the rookery islands are protected under the Migratory Bird Treaty Act and the take of these birds, nests, and eggs is prohibited. As stated previously, the responsibilities of Federal Agencies to protect migratory birds have been reinforced by Executive Order 13186. Methodologies to avoid impacts to nesting birds utilizing the rookery islands and in other proposed placement areas will need to be addressed in the DEIS. 26

Section 4.3.2.1 Salt marshes/Estuarine Shrublands/Sand Flats/Mud Flats/Algal Flats, DEIS-145-146: The statement in the DEIS that the "decrease in the number of vessels in the project area would reduce the potential for erosion of some of the PAs with rookeries" does not account for the need for shoreline protection measures proposed for the CCSP-CIP. Unless that decrease in erosion is contingent upon the proposed shoreline protection measures. This needs to be clarified in the DEIS. Current effects are currently due to wind-generated waves and sea level rise according to the PIE (2001) report. However the DEIS does not adequately address erosion due to deeper draft vessels compared to vessels currently using the channel or the effects of additional numbers of vessels using the proposed La Quinta extension. 27

Section 4.6.1, Hazardous Material Impacts to the Existing Environment from Project Activities, DEIS-162: The DEIS states that the proposed project could affect the existing pipelines across the CCSC, but does not assess the potential impacts related to the mandatory relocation of the referenced 63 pipelines that cross the project area of the CCSP-CIP, nor how the relocations would be timed or phased to minimize the potential for accidental spills related to those relocations. 28

Section 4.11, ANY ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PREFERRED ALTERNATIVE BE IMPLEMENTED, DEIS-191: The DEIS states that the BU sites will provide higher value habitat, but there is no assurance in the DEIS that higher value habitat will occur in the BU sites, only potential habitat is being created. This point should be clarified and any methodology to establish the habitat gains at the BU sites should be included in monitoring plans for each site. 29

Section 5.1.1 Cumulative Impact Assessment Methodology, DEIS 200, paragraph 2: Is "Region Plan Prepared for Region "N" referencing the State of Texas Regional Water Plan? The Service recommends that this be clarified in the DEIS. 30

Section 5.2 REASONABLY FORESEEABLE FUTURE ACTIONS, DEIS-201: Although the DEIS does not so state, the Service recommends that prior to the publication of the final EIS for the CCSP-CIP, an attempt be made to verify and update published documents, and other features of the referenced 'Reasonably Foreseeable Future Actions' in order to refine Section 5.4 RESULTS which describes their anticipated interaction with the CCSP-CIP project. For example, Section 5.4.2.8 Circulation/Tides contains the following statement: 31

> Changes in circulation will occur with the opening of Packery Channel.

An up-to-date version of the Packery Channel project plan, or U.S. Army Corps of Engineers Public Notice, should afford the opportunity to assess the impacts on currents/tides in Corpus Christi Bay in conjunction with the CCSP-CIP.

Section 5.1.2.1, Individual Project Evaluation and Table 5.1-1, Cumulative Impacts, DEIS- 201-203: Cumulative impacts combines existing and proposed projects and their impacts; these need to be distinguished individually and reflected in the totals. This table should also reflect accurate amounts of habitat created and not proposed. For example, the ten acre seagrass mitigation 32

requirement for the Mine Warfare Center of Excellence has not to date been achieved.

Appendix G, H and I are not listed in Table of Contents. 33

We thank you for allowing us to comment. If there are any further questions please contact Clare Lee or Pat Clements at (361) 994-9005.

Sincerely,

Patricia Bacah-Clements

for Allan M. Strand
Field Supervisor

cc: Paul Carangelo, PCCA, Corpus Christi, TX
Terry Roberts, USACE, Galveston, TX
Bill Jackson, NMFS, Galveston, TX
Smiley Nava, TPWD, Corpus Christi, TX
Raul Cantu, TXDOT, Austin, TX
Mark Fisher, TNRCC, Austin, TX
Mary McDaniel, RRC, Austin, TX
Ray Newby, GLO, Austin, TX
Mike Jansky, EPA, Dallas, TX
Lee Harbison, Naval Station Ingleside, Ingleside, TX

Mr. Allan M. Strand
United States Department of the Interior
Fish and Wildlife Service
Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

RESPONSE TO COMMENTS

Comment No.	Response
1	Section 1.4 addresses problems, needs, and public concerns that were identified through coordination and public meetings. Federally listed threatened or endangered species are an area of concern; however, these species were not identified during public meetings. Therefore, endangered species are not included in this section, but are addressed in the document in Section 4.5.
2	The RACT and the other CCSCCIP Workgroups provided guidance and wise counsel on matters relating to the evaluation of environmental impacts of this project. A list of members, including FWS, NMFS, and TPWD, is found in Section 1.6 of the DEIS. The BUW agrees with the assessment of the FWS, that a BU site would provide a net environmental gain for the ecosystem. The BU sites proposed are not "convenient, low-cost disposal sites". In fact, a higher cost would be accrued to configure the sites in open water, armor them, and place dredged material in the proposed configurations of BU sites. It is anticipated the UCPA would be cheaper since they are upland and already have levees and water control structures in place, but there is not sufficient capacity for all of the material without increasing the size of the PAs. The proposed BU sites are conceptual and were discussed during BUW and RACT meetings. BUW and RACT members recognized that individuals define value of a habitat differently, and therefore, no particular value was given. However, there was consensus among BUW and RACT members that all proposed BU sites would potentially provide higher value habitat than existing conditions. Documentation of detailed descriptions and a monitoring plan of specific site-related goals for each BU site will not be provided in the FEIS. The USACE tries to use dredged material in a beneficial manner for the environment. This material is clean and could provide beneficial habitat such as emergent marsh and seagrass nursery habitat for marine organisms. In addition, members of the BUW and RACT listened to the public for ideas on how best to use these materials beneficially and determined the proposed BU sites were multipurpose for the benefit of the human and physical environment. Site-specific use of material will be discussed during development of plans and specifications prior to construction for each reach, but the USACE and PCCA have no plans to conduct monitoring for BU sites.
3	The PCCA met with the Naval Air Station and the Naval Station Ingleside to explicitly state the preferred alternative and there were no issues of concern. In addition, no letters of concern were received. Expected, geotube life is 15 years, with armoring. The FWS has not

	objected to the use of geotubes for other BU sites, for example, Shamrock Island.
4	Monitoring plans and site-specific use of material will be discussed during development of plans and specifications prior to construction for each reach.
5	Currents were monitored between Site I and Dagger Island under extreme tide conditions. Pacific International (PI) Engineering performed a feasibility level design of the shoreline protection system for the BU Site I. The plan view and cross-sectional configuration of the Site I shore protection system were developed based on comments received from the BUW and a coastal engineering analysis summarized in the CCSC CIP Shoreline Erosion Study dated January 2001. The feasibility level design of the shoreline protection system for the BU Site I was developed in a two-step process. The first step was to determine the location and extent in plan view of the shoreline protection system. The second step was to develop a cross-section for the structure that would be stable under the physical conditions and forces expected at the site after channel improvements. The alignment and extent of the shore protection system on the western side of BU Site I were chosen to minimize wind wave erosion to ~~of~~ the site. Wind wave modeling was used to determine the extent of the shore protection to the north and to develop wind wave parameters such as wave height and period for the design of the cross section. Additionally, the shore protection resulted in benefits to the stabilization of Dagger Island from wave impacts from southeasterly to easterly winds. The cross-sectional design for the eastern side of the site consists of a 30ft circumference geotube with a crest height of +5ft. The design includes a rock toe to prevent undermining. The toe protection incorporates a rock size gradation with a 1,000lb maximum and extended to an elevation of –3ft. This rock is stable for design wave heights of 2.5 to 3.0 feet for a 3- to 4-second period (PI Engineering, January 2001). This protection system is designed to withstand daily wave attack from the southeasterly to easterly winds. The alignment and extent of the shoreline protection system along the southern portion of BU Site I were chosen to prevent erosion of the site due to pressure field effects induced by deep draft vessel passage. Pelican Island, south of the BU Site I, provides protection for the site from wind waves. In addition, the pressure field effects were found to be the dominating design condition along the southern portion of BU Site I. The cross-sectional design for the southern side of the site consists of a

Mr. Allan M. Strand
United States Department of the Interior
Fish and Wildlife Service
Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

	30-ft circumference geotube built to an elevation of –2ft and adjoining rock dike with a crest elevation to +5ft. The rock dike is designed with a crest width of 4ft and a front face slope of 1V on 2H on the channel side. The rock was sized to assure the stability of the structure under pressure field effects produced by deep draft vessels (PI Engineering, January 2001). It was determined that a rock size gradation with a 2,200lb maximum should be used. This rock size is stable for design conditions that would be created by deep-draft vessels 920 feet long by 174 feet wide, drafting 47 feet of water, and moving at a speed of 10 knots. Based on PI Engineering experience, the material proposed for placement on the west side of BU Site I, behind the shoreline protection structure, should remain fairly stable under pressure field effects. However, further and more detailed pressure field modeling, usually performed during the final design phase, should give a good indication to the fate of the sediment and whether adjustments to the western end of the south shoreline protection system are required. Overall, the feasibility level design performed by PI Engineering for the shoreline protection system of the BU Site I takes into consideration all major factors known to be contributing to the erosion of the land features adjacent to the CCSC (PI Engineering, January 2001). During final design, most of the structure geometrical parameters should be analyzed further to assure the stability of the shoreline protection system and thus the material to be placed at the site.
6	See comment #2 and #3.
7	The proposed work at Pelican Island was the best plan for brown pelicans and shoreline protection within a quiet zone. Additional information has been added to the BA and provided to the FWS and the project team will work with the FWS and Audubon Society during development of plans and specifications prior to construction for that reach. The reduction in the length of the protective barriers is a correction of a typographical error due to a graphical misrepresentation.
8	Maintenance is only added to this site on an as-needed basis, in consultation with PCCA, FWS, and the National Audubon Society. We expect fewer total ships in the with project future condition than the without project future. See the Economic Appendix.
9	No impacts to the piping plover are anticipated at Site L. A meeting was held with the FWS in August 2000 to establish survey protocol and sites. Site L was not included in the survey area determined by the FWS.
10	Topographical relief created offshore has been recommended as beneficial for other projects such as Galveston and Sabine Pass, especially by NMFS. Again, it was the consensus of the BUW and RACT, including FWS representatives, which recommended this as a

Mr. Allan M. Strand
United States Department of the Interior
Fish and Wildlife Service
Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

	beneficial use of dredged material.
11	Placement Area 6 is not critical habitat for the piping plover nor is it used by the brown pelican, and therefore is not in the BA. Critical Habitat Map Unit TX-14 is located south and east of PA 6. PA 7 and PA 8 are currently included in the BA.
12	The dredged material was placed in the Navy Upland Placement Area east of Dupont and north of Kiewit.
13	The paragraph discussing the EBD was an error and has been deleted.
14	The interior least tern will be removed from Table 3.6-1 and the text. The purposes and mandates of E.O. 13186 are clearly presented and direct Federal agencies to initiate an MOU. It requires no mandatory action by Federal agencies prior to the initiation of the MOU, and in fact, states that "the MOU shall recognize that the agency may not be able to implement some elements of the MOU until such time as the agency has successfully included them in each agency's formal planning process...including public participation and NEPA analysis." The Corps cannot agree to preconditions that are not part of the MOU as mandated by E.O. 13186, such as avoiding a PA that may or may not be used for nesting. The Corps and PCCA can contact the USFWS and TPWD to coordinate a management plan, such as location of pipeline route or access corridor, to reduce, if not eliminate, impacts to birds that might nest at a site projected for use in a dredging contract. However, it would be difficult to avoid using a PA for a long period of time (bird nesting and sediment consolidation window) without jeopardizing a long construction schedule. This plan (avoidance during nesting season) may be more viable during maintenance dredging operations for a completed project when long construction schedules are not involved and if that is part of the MOU.
15	On page DEIS-77, manatee information as recent as 2001 is cited. No stranding information was listed for manatees on the Marine Mammal Stranding Network website. http://www.tmmsn.org/research/PresentsPubs.html
16	The sentence has been added to the text.
17	No impacts are anticipated to the habitat of the Texas diamondback terrapin.
18	Water exchange in the study area, both with and without CCSCCIP, was modeled with the proposed Packery Channel included. The following sentence will be added to the end of the second paragraph in Section 4.1.1: "Based on the recommendation of the Hydrodynamic and Salinity Modeling Workgroup, the Cumulative Impact Workgroup and the RACT, the study included the opening of Packery Channel and modifications to the JFK causeway."
19	Page DEIS-148, paragraph 3 states the type of construction and maintenance materials. DEIS-15, Table 1.7-1 lists type of material to be used at each BU site. Details on the placement of dredged material

Mr. Allan M. Strand
United States Department of the Interior
Fish and Wildlife Service
Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

	would be determined during development of plans and specifications prior to construction for each reach. Best management practices will be part of the plans and specifications. Downward directed pipes and deflectors will likely be used within the designated open water Placement Areas. Section 4.1.5 of Appendix F to the DEIS notes that "...in an effort to improve management practices at those open-water sites and possibly reduce dredging frequency...the dredge pipes will be placed at the back limits of the designated placement sites to release dredged material as far from the channel as possible."
20	All BU sites would be created with one time placement of new work material. Anticipated turbidity effects would be temporary and only suitable material will be used. Placement of maintenance material would follow a USACE maintenance plan in upland confined placement areas that would not create turbidity effects in the bay.
21	Data from Mobile Bay, Alabama was chosen for data reference because it is a classic reference on dredged material and turbidity. Suspended sediment in water acts similarly in all estuarine systems; therefore, this reference is pertinent and has been included in all of the EISs for estuarine systems along the Texas coast that the FWS has reviewed.
22	Comment noted. Site-specific use of material will be discussed during development of plans and specifications prior to construction for each reach. See Comment #2.
23	DEIS-81, paragraph 3, includes citations for the chemical analyses. NEPA states that an EIS should use references to the extent possible to avoid being encyclopedic.
24	The shoreline protection is proposed to protect habitats as an enhancement feature of the proposed plan, not compensation or mitigation. Shoreline erosion rates were not determined by PIE 2001. Shoreline erosion under existing conditions was compared to the preferred alternative and is discussed on DEIS-146.
25	Comment noted. Sentence is omitted.
26	See comment #14.
27	This phrase cannot be found in Section 4.3.2.1. The closest statement to the one quoted in this comment is found in Section 4.5.2.2: "A decrease in the number of vessels in the area and the erosion protection features there may reduce the potential for erosion of the Pelican Island brown pelican rookery." The actual sentence from the DEIS needs no clarification. The DEIS does address erosion due to deeper draft vessels on DEIS-147 since PIE, 2001b, does include deeper draft vessels in the analysis.
28	It will be the responsibility of the pipeline owners to remove the pipelines at their cost or cost-share it with the local sponsor. A removal/relocation schedule has not been coordinated at this time. However, the project cannot proceed at the pipeline locations until they are removed. The owners are expected to use best management practices to avoid

Mr. Allan M. Strand
United States Department of the Interior
Fish and Wildlife Service
Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

	hazardous material releases during the removal operation.
29	This statement is based on the conclusions of the agency personnel, including FWS, which attended the numerous BUW Workshops and RACT meetings. However, the sentence has been revised to state that BU sites will "potentially provide..."
30	"Region Plan Prepared for Region N" is referring to the State of Texas Regional Water Planning Area N, or the Coastal Bend Planning Group. The text will be revised.
31	The EIS does include information about impacts on currents and tides from the CCSCCIP project. The model used for this project included Packery Channel.
32	Comment noted. Changes to the text will be made that some mitigation is proposed.
33	These appendices are not part of the DEIS and are, therefore, not listed in the DEIS Table of Contents.

19 August, 2002

Carolyn Murphy, Chief
Environmental Branch
U.S. Army Corps of Engineers
P.O. Box 1220
Galveston, TX 88553-1229

Dear Ms. Murphy:

This letter is in response to the request for comments concerning the Draft Feasibility Report (DFR) and the Draft Environmental Impact Statement (DEIS) for the Corpus Christi Ship Channel (CCSC), Texas, Channel Improvement Project dated June 2002. The proposed project involves the deepening and widening of the channel from the Gulf of Mexico to the end of the Corpus Christi Inner Harbor, Nueces County, Texas.

For the past two years, Texas Parks & Wildlife Department (TPWD) staff has participated in Regulatory Agency Coordination Team (RACT) meetings and work groups with other state and federal natural resource agencies, the Port of Corpus Christi Authority (PCCA), and U.S. Army Corps of Engineers (USACE). The team provided information and discussed potential environmental concerns associated with the project. TPWD has reviewed the DFR and the DEIS and offers the following information.

The Primary Purpose of the Study

The primary purpose of the project, as identified in the DFR and DEIS, is to allow for a more effective, safe and efficient use of the waterway. The project will reportedly eliminate major problems that contribute to inefficiencies on the waterway including current depth and width, requirements for one-way ship traffic and would provide shelves for the safe passage of barges and smaller vessels. In addition, the PCCA performed studies to determine the economic viability of a new container terminal and turning basin at the northwest end of the current La Quinta Channel and included a 50 year maintenance plan for dredge material placement in the proposed project plans.

Direct Habitat Impacts and Mitigation

Survey results indicate that bay bottom within the project area with water depths to -4 ft MLT comprise approximately 45 acres, of which only 5 acres of SAV (Submerged Aquatic Vegetation) would be directly impacted by the project. These 5 acres are within the La Quinta Channel extension. The planting of 15 1

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512-389-4800
www.tpwd.state.tx.us

acres of seagrass within Beneficial Use site GH will be conducted as mitigation for the direct loss for the 5 acres of SAV during project construction, a ratio of 3 to 1. (DEIS Chapter 4.3.1). Staff does not have any comments on the mitigation plan except to emphasize that mitigative procedures and measures, described in the Conditions for Seagrass Transplanting Efforts(DEIS-193 to 195), must be followed, monitoring of the mitigation site must be conducted and that stated success criteria should be achieved. 1

Preferred Alternative Plan

Of the twenty-three alternative project plans developed in the Initial Plan Formulation Phase and presented in DEIS-22, the preferred alternative plan recommended by the USACE and preferred by the PCCA includes the following: deepening the CCSC from Viola Basin to the end of the jetties to 52 feet; deepening the remainder (Gulf of Mexico portion) to 54 feet; widening of the Upper Bay and Lower Bay reaches to 530 feet, construction of barge lanes across the Upper Bay portion of the CCSC; extension of the La Quinta Channel, and deepening La Quinta Channel to 39 feet. Regarding the last preferred alternative, DEIS-25 states that the La Quinta Channel will be extended to a length of 7400 feet beyond its current limits. Delete the reference of 39 feet on page DEIS-22, or correct the statement to reflect that the depth of the proposed extension to be 39 feet. 2

Dredge Material Management Plan

The DFR and the DEIS indicate that eleven sites are proposed for new habitat development (actually alteration) and/or protection. The amount of new work material from deepening channel below the current authorized depth will generate approximately 16.7 million cubic yards (mcy) of new dredge material. This new material is proposed for placement in two offshore sites, one upland site, and five open water sites. The upland site placement (proposed at the container terminal) will total about 120 acres. Open water sites total about 935 acres of unvegetated deep-water bay bottom (pages DFR-44 to 46, DEIS-12 to 18 and A-10). Coordination with the RACT for beneficial use (BU) proposals of this material was an important aspect of this project and options to provide greater benefits other than the currently authorized upland or open bay disposal of the dredge material at existing Placement Areas (PA's). Comments on beneficial uses are further discussed in the following section.

Beneficial Use Sites

Several beneficial use sites are proposed and referenced in the DFR and DEIS. Staff's recommendations to the BU plan include:

- Staff recommends the RACT BU workgroup continue meeting to review project designs and coordinate development of the proposed BU sites. 3

TPWD recommends that the BU work group continue serve in its original function of reviewing and assessing project designs, work proposals, reviewing or recommending additional models, and reviewing final plans for construction. In addition, the BU workgroup should be involved in the development of a monitoring regime used to evaluate the project impacts of all BU sites. 3

Staff recommends that monitoring be conducted to assure that minimal or no impacts result from the BU plans, particularly where placement may alter water patterns and affect shallow water habitats or shorelines. Monitoring can verify DFR and DEIS statements describing the positive aspects of the project. For example, page A-10 states that 900 acres of seagrass habitat (compared to the 935 acres previously mentioned) will be created by new BU sites, a 94 % increase in SAV of previously unvegetated deep bay bottoms. Also, page A-8 states that BU sites were not shown to affect currents or circulation patterns according to TWDB studies. Therefore the creation of BU sites CQ and I should not erode or impact shorelines, fringe seagrass habitats, or emergent marshes. If these targets are not actually known or accurate, staff recommends that these statements be revised or removed from the DFR or DEIS. 4

Regarding the BU plan, the DFR and DEIS identifies 5 five open water placement sites for the new work material: BU sites GH, CQ, I, R and S. Of these, only BU site GH would be monitored as required as a mitigation site. This site will be planted with seagrasses and monitored to determine if mitigation for project impacts is successful. TPWD recommends that monitoring be done on all BU sites in order to truly access their beneficial use. 5

BU Site I

BU site I presents major concerns to Department staff. This site is described as a 163 acre area located between Dagger Island and the CCSC. As described in the DEIS and DFR, a primary benefit derived from developing BU site I, other than the disposition of dredge material, is the creation of emergent habitat and potential areas for colonization of SAV. In addition, BU site I may provide shoreline protection for Dagger Island, potentially reducing wind generated currents erosion effects. Department staff has recently met with the PCCA and their consultants to address clarification of our concerns of this site. During the meeting, some modeling, which was not available during the early part of the project planning, was introduced to address staff's concerns. These models included wave refraction-diffraction and velocity and circulation changes. Errors and deficiencies in these models did not adequately answer questions. 6

TPWD is always supportive of Beneficial Use Sites when there is a clear understanding that an overall benefit will be derived. In the case of BU site I, TPWD believes that not all issues concerning the benefits and potential detrimental effects have been adequately addressed. If the following concerns can

adequately be addressed prior to the project implementation, the Department would be supportive of BU site I, otherwise, our best option would be to recommend BU site I not be part of the project.

Staff questions include the following:

- Can BU site I adequately reduce wind driven erosive effects on Dagger Island and if so, can these be adequately measured?
- What effects will BU site I have on the ship wake pressure field?
- Will sediment runoff from BU site I affect adjacent SAV?
- Will altered current patterns caused by BU site I, combined with other proposed dredge material disposal sites, increase erosion of shorelines along the southern end of Redfish Bay?
- Will the described colonization by SAV occur in BU site I? 7
- Will the social and economic benefits derived from the creation of BU site I surpass those currently derived from commercial shrimping activities, commercial and recreational crabbing, and recreational fishing in the site location?
- Why does the DFR and DEIS not include a monitoring plan to determine if the desired positive effects are achieved?
- Who will be the responsible party for developing a corrective plan and a source of funding if the described or predicted benefits are not achieved?

Staff Recommendations

TPWD recommends that:

- Models be created to address questions on water circulation changes and their potential impacts. For example, the wave refraction-diffraction model should take into consideration the effect of wind created waves on the entire southern area of Redfish Bay and a model should be developed to demonstrate the area of influence and effect of ship wake pressure to nearby shorelines and circulation patterns
- A monitoring regime be developed to document changes in shoreline, SAV survival, and sediment movement. As part of this recommendation, PCCA should continue to meet with the RACT BU workgroup so that monitoring, reporting and other needs can be clearly defined. TPWD will continue to serve in the BU workgroup and provide recommendations for monitoring. Aerial photography has already been expressed as one type of monitoring. 8
- A plan be developed to address any unexpected changes in shoreline erosion, SAV abundance and distribution, and bottom alterations. Plan should also list parties responsible for developing and implementing corrective measures and obtaining appropriate funding.

- Chapter 3 of the DEIS, Affected Environment, reviews habitat types within the project. Department staff wishes to comment on the conversion of deep bay bottom habitat to one of a shallow bay bottom as proposed at BU site I. While there is no estimate of the current value of deep bay bottoms, or it is one of undetermined value, staff wishes to convey that this is an area which is used for crabbing, recreational sports fishing, and trawling for bay shrimpers. Staff's comment is that there is no apparent problem identified with those deep bay bottom habitats which would need corrective action at the proposed site of the BU site. As previouly recommended, a monitoring plan for BU sites is important to determine the benefits or impacts of proposed project actions where there are no apparent problems associated with an area. 8

Other General Comments

DFR-51 – "All existing aquatic areas that have depths suitable for seagrass transplantation are already vegetated." Because there are numerous factors which determine where seagrasses establish themselves, and their seasonal variability particularly with shoalgrass, this statement is not entirely accurate. Recommend that this statement be removed. 9

DFR-59 – Below "Ecosystem Restoration Features", replace NED for NER. 10

TPWD staff appreciates the opportunity to comment on the DFR and DEIS for the Corpus Christi Ship Channel, Texas, Channel Improvement Project. Staff looks forward to discussing any issues or comments presented in this letter. If you have any questions, contact Ismael "Smiley" Nava at (361) 825-3242 or Rollin MacRae At (512) 389-4639.

Sincerely

Larry D. McKinney, Ph.D., Senior Director
Aquatic Resources

Cc:

U.S. Fish and Wildlife Service, Corpus Christi
Texas Parks & Wildlife Department
National Marine Fisheries Service, Galveston, Texas
Texas General Land Office, Austin, Texas
Texas Natural Resource Conservation Commission, Austin, Texas

Dr. Larry D. McKinney
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744-3291

RESPONSE TO COMMENTS

Comment No.	Response
1	Comment noted. A monitoring plan to document achievement of success criteria is included in the EIS and will be followed.
2	The La Quinta Channel is currently maintained at 45 feet. The statement on DEIS-22 states the extension will be dredged to 39 feet and is correct. Therefore, the statement will not be changed. The confusion about depths appears to be in your quotation of our statement on DEIS-22, which is incorrect. Please re-read the statement on page DEIS-22 and you will see it is correct.
3	The BUW will continue meeting to review site-specific use of material during development of plans and specifications for the BU sites prior to construction for each reach of the project.
4	Seagrass mitigation will be monitored according to DEIS-193 to 195. No additional monitoring of BU sites would be authorized by the Federal project at this time. However, this issue may be revisited during the project design phase and additional meetings of the BUW. BU sites are expected to provide a benefit to the ecosystem, based on the conclusions of the BUW and the RACT. The dredged material to be used in the BU sites is clean and could provide beneficial habitat, such as emergent marsh and seagrass nursery for marine organisms. In addition, members of the BUW and RACT listened to the public for ideas on how best to use these materials beneficially and determined the proposed BU sites would be multipurpose for the benefit of the human and natural environment. Site-specific use of material will be discussed during development of plans and specifications prior to construction for each project reach. The BUW will continue to follow the sites through the construction and operations phases. Any erosion as a result of a CCSC-CIP BU would be evident without monitoring. The PCCA would support renovation of any eroded areas being addressed separate from the CIP as a CEPRA. Any change in protective breakwaters would be found in post construction elevation and maintenance activities. Page A-10 will be revised to state 935 acres of seagrass habitat.
5	Please see the response to Comment #4.
6	Comment noted. Issues will be discussed during development of plans and specifications prior to construction of BU Site I.
7	Comment noted. As you stated in your comment #6, PCCA and TWDB met with your staff to address their concerns with the latest model information. As discussed, the hydrodynamic model indicated very little change to the water patterns or erosive current velocities as a result of constructing the BU Site I. Unfortunately, the results of these state-of-the-art models used to predict impacts associated with BU Site I did not alleviate their concerns. Based on the decision of the RACT and BUW, we will proceed with plans to construct the site. In coordination with the BUW we will continue engineering design development including tasks to

Dr. Larry D. McKinney
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744-3291

	address, for example, TPWD staff concerns during the preparation of construction plans and specifications for site construction and await the results of later observations on any unforeseen impacts of the site on the surrounding area before determining remedial actions during the operations phase.
8	The RACT and the other CCSCCIP Workgroups provided guidance and wise counsel on matters relating to the evaluation of environmental impacts of this project. A list of members, including FWS, NMFS, and TPWD, is found in Section 1.6 of the DEIS. The Mitigation Workgroup (MW) concluded the plan to convert deep water to shallow water was an impact that did not require mitigation; the BUW believed that the plan would provide a net environmental gain for the ecosystem. The proposed BU sites are conceptual and were discussed during BUW and RACT meetings. BUW and RACT members recognized that individuals define value of a habitat differently, and therefore, no specific value was given. All proposed BU sites would potentially provide higher value habitat, especially as potential nursery habitat for the fish, shrimp, and crabs that are sought by the sports and commercial interests. Documentation of detailed descriptions and a monitoring plan of specific site-related goals for each BU site will not be provided in the FEIS, however, in coordination with the BUW a monitoring regime to document changes may be developed. The USACE tries to use dredged material in a beneficial manner for the environment. This material is clean and could provide beneficial habitat such as emergent marsh and seagrass nursery for marine organisms. In addition, members of the BUW and RACT listened to the public for ideas on how best to use these materials beneficially and determined the proposed BU sites were multipurpose for the benefit of the human and physical environment. The BU plan was presented at numerous public meetings and is widely supported. Site-specific use of material will be discussed during development of plans and specifications prior to construction for each reach.
9	The statement will be revised to "All existing aquatic areas that currently have conditions suitable for seagrass growth are already vegetated."
10	Text will be revised.

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

August 22, 2002

Mr. Loyd Saunders
Galveston District CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Attn: Terrell Roberts

Re: USACE Corpus Christi Ship Channel Improvement Project, Corpus Christi, Texas

Dear Mr. Roberts:

The U.S. Army Corps of Engineers (Corps) is seeking 401 certification on a channel modification of the Corpus Christi Ship Channel(CCSC). The proposed plan includes the following: deepening the CCSC from the current maintained depth of 45 feet to a depth of 52 feet from the Aransas Pass Jetties westward 21 miles to the Viola Turning Basin, the widening of the channel to 530 feet through the bay, the addition of 12 foot deep 200 foot wide barge lanes on either side of the 530 foot channel for 9.6 miles in the upper bay, the dredging of the Outer Bar channel nearly 3 miles to the 54 foot isobath, and an 39 foot deep by 7,400 foot long extension of the La Quinta Channel. All channels will be dredged with a 2 foot over-depth. The project is projected to produce 41 million cubic yards (mcy) of new work material, and 208 mcy of maintenance material over the 50 year life of the project. Dredge material suitable for beneficial use will be used to create the following features: creation of 935 acres of shallow water habitat, creation of 15 acres of submerged aquatic vegetation (as mitigation), creation of 26 acres of marsh, construction of 26,400 linear feet of rock breakwater, creation of 1,590 acres of offshore topographic relief, construction of 120 acres of upland buffer, construction of 7,500 feet of rock revetment, protection of 45 acres of submerged aquatic vegetation, protection of an existing bird island, and protection of over 400 acres of wetlands. Dredge material not deemed suitable for beneficial use will be placed in eight existing confine upland sites, one offshore open water site, and eight open water sites.

In response to the Draft Feasibility and Draft Environmental Impact Statement dated June, 2002, the Texas Natural Resource Conservation Commission (TNRCC) has the following concerns about the project plans submitted. These concerns will need to be addressed before an individual 401 1

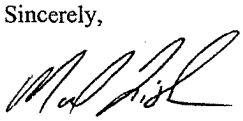
certification can be completed. Other comment letters, as well as responses to this letter, may raise other issues that will need to be addressed before a water quality certification can be made.

1. The plan mentions eight open water placement areas, as well as several beneficial use sites, in the bay where management practices to limit suspended solids are not addressed. While these areas cannot be strictly controlled like containment facilities, the addition of best management practices are encouraged to minimize impacts of suspended particulates. Please supply plans that deal with suspended solids at all placement and beneficial use areas in the bay. 2

2. Hydrodynamic, and salinity modeling demonstrated that tidal amplitude may increase up to 0.06 feet due to the project. While the value of this measurement is small, and the accuracy of the model not estimated, the tidal range of the system is currently only 0.7 feet. Therefore, the projected increase in tidal range is about 9%. The effect of increasing the tidal range by this amount is unknown, but may produce tidal currents that would erode sensitive areas. Likewise, the salinity projections are a reduction of 4ppt, or nearly 13 to 15% depending on location. This is less likely to be a concern since the bay historically was fresher, and continues to have a trend towards increasing salinity. Please provide estimates of the projected effects that the changes in these physical variables will have on the biota of the bay system. 3

The TNRCC looks forward to receiving and evaluating other agency or public comments during or after the comment period. Please provide any agency comments, public comments, as well as the applicant's comments, to Mr. Robert Burgess of the Water Quality Division MC-150, P.O. Box 13087, Austin, Texas 78711-3087. Mr. Burgess may also be contacted by phone at (512) 239-3163, or by e-mail at *rburgess@tnrcc.state.tx.us*.

Sincerely,



Mark Fisher, Manager
Water Quality Assessment Section
Water Quality Division
Texas Natural Resource Conservation Commission

MF/RB/emh

Mr. Mark Fisher
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

RESPONSE TO COMMENTS

Comment No.	Response
1	An individual 401 certification is not requested. The USACE is invoking Section 404(r) as is explained on DEIS-225.
2	Site-specific management of the material will be discussed by the BUW during development of plans and specifications prior to construction for each reach. Best management practices will be part of the plans and specifications. Downward submerged pipes and deflectors will be used at the extreme ends of designated open water Placement Areas. Section 4.1.5 of Appendix F to the DEIS notes that "...in an effort to improve management practices at those open-water sites and possibly reduce dredging frequency,...the dredge pipes will be placed at the back limits of the designated placement sites to release dredged material as far from the channel as possible."
3	To determine the projected change in tidal currents due to the preferred plan, a computer modeling study was performed. A relatively large tide was selected to simulate the higher tidal currents. The tide modeled was for a gulf shore tide of nearly 3-ft which corresponded to a 2.3-ft tide at Port Aransas and a 1-ft tide in Corpus Christi Bay. Tidal ranges with this magnitude occurred less than 10% of the time during the model years 1993 and 1994. The physical effect of changes in tidal currents are projected to be very minor for a relatively large tide and can be expected to be even less significant during normal or average tidal conditions. The principal findings from the report on the modeling were as follows. The peak velocity in the Corpus Christi Ship Channel will increase by a range of 0.1 to 0.3 fps from Port Aransas to La Quinta Junction. The peak velocity will increase by 0.05 fps in the ship channel at mid Corpus Christi Bay and 0.01 fps near the upper end of the ship channel. In the open Corpus Christi Bay, the peak velocity will increase by 0.06 fps in the north and 0.01 fps in the south. The existing dredged material placement area near the proposed shallow water habitat Site-CQ will experience a velocity decrease of 0.1 fps. At other placement areas, the peak velocity will increase by a range of 0.05 to 0.1 fps. The flow pattern of the currents will be affected by the habitat Site-CQ. Inside the shallow-water-habitat BU sites, the peak velocity will be much smaller, ranging from 0.01 fps to 0.08 fps, because of their enclosure by breakwater structures. In summary, the projected changes in tidal current velocities are very minor with the most notable changes occurring within the CCSC. Open bay and shallow water areas are projected to generally have less than 0.1 fps increases in currents.

Mr. Mark Fisher
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

According to the TWDB, there is "no biological significance in the very small salinity differences projected because none of the salinity levels are near the absolute tolerance limits for survival, growth, and reproduction of the marine species using this estuarine area."

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702

August 29, 2002

Colonel Leonard D. Waterworth
District Engineer, Galveston District
Department of the Army, Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Colonel Waterworth:

The National Marine Fisheries Service (NOAA Fisheries) has reviewed the Draft Environmental Impact Statement (EIS) and Feasibility Report for the Corpus Christi Ship Channel, Texas, Channel Improvement Project dated June 2002. The proposed project is to deepen the Corpus Christi Ship Channel to 52 feet deep, widen it to 530 feet and extend the La Quinta Ship Channel by 7,200 feet.

Representatives from the NOAA Fisheries have participated on the Resource Agency Task Force in formulating a beneficial use of dredged material plan. If properly constructed, monitored, and managed the project should provide an overall net benefit living marine resources, Federally managed fishery species and their associated Essential Fish Habitat (EFH). Therefore, we have no EFH Conservation Recommendations to provide regarding the proposed channel improvements. We have the following comments concerning the adequacy of the Draft EIS:

Section 3.0 Affected Environment

Section 3.5.1.3 Essential Fish Habitat - The proposed project area has been identified by the Gulf of Mexico Fishery Management Council as EFH for postlarval, juvenile, and subadult red drum, brown shrimp and white shrimp, adult Spanish mackerel and juvenile pink shrimp. Therefore, all references to other species, such as stone crab which is only managed off the west coast of Florida (defined as stone crab fishery area restrictions under 50CFR Part 654.23(b)(1)(i)), should be eliminated from the EFH assessment in the Final EIS. 1

Section 4.0 Environmental Consequences

Section 4.4.4 Essential Fish Habitat - Rock breakwaters/revetment will be utilized at Beneficial Uses Sites CQ, GH, I, L, P, R and S. In addition, rock breakwaters and geotubes will be used at Pelican Island. All of these structures will convert estuarine water column and estuarine mud bottoms to rock and uplands. These impacts should be characterized, quantified and discussed in this section of the Final EIS. Additionally, an unquantified area in Site I will be pumped to an 8-10 2

feet above sea level for a bird rookery. This will convert estuarine water column and estuarine mud to terrestrial bird habitat. This impact to EFH needs to be addressed in the Final EIS.

If we may be of further assistance, please contact Mr. Rusty Swafford of our Galveston Facility at (409) 766-3699.

Sincerely,

for

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

Ms. Andreas Mager, Jr.
National Marine Fisheries Service
Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702

RESPONSE TO COMMENTS

Comment No.	Response
1	Text has been revised.
2	Impacts that can be quantified, in addition to the creation of 935 acres of shallow-water habitat in formerly deep water, will be added to the discussion in Section 4.4.4. Thus, this section will be revised to include discussion of the detrimental impacts to EFH from these items, as well as the beneficial impacts to EFH.

Texas Department of Transportation

P O BOX 149217 • AUSTIN, TEXAS 78714-9217 • (512) 486-5000

September 11, 2002

Dr. Terrell Roberts
Galveston District, Corps of Engineers
P. O. Box 1229
Galveston, Texas 77553-1229

FILE: TPP (M)
(512) 416-2349

Re: Corpus Christi Ship Channel – Channel Improvements Project

Dear Dr. Roberts:

The Texas Department of Transportation (TxDOT) has received and reviewed the draft Feasibility Report and Environmental Impact Statement for improving the navigation channel in Corpus Christi Bay. Improvements to the ship channel will facilitate the movement of goods and provide the ability for the Port of Corpus Christi to meet future commercial and international trade needs of Texas. These improvements will assist in providing an efficient and environmentally safe port facility well into the future.

In reviewing the draft Environmental Impact Statement, TxDOT was pleased to note the efforts of the port to beneficially use dredged material, when affordable opportunities existed. It is very apparent that the port has developed an ambitious and well coordinated beneficial use plan while maintaining a high benefit to cost ratio. 1

TxDOT supports the Port of Corpus Christi's Channel Improvement Plan and the associated dredged material management plan. These documents were developed in consultation with various interagency entities and resulted in a comprehensive, well-planned project that, when constructed, will aid in meeting the future transportation needs of the state.

If you have any questions, please call Raul Cantu, Jr., P.E., at (512) 416-2344.

Sincerely,

James L. Randall

James L. Randall, P.E.
Director, Transportation
Planning and Programming

cc: David Casteel, Corpus Christi District Engineer, TxDOT
Raul Cantu, Jr., P.E., Transportation Planning and Programming Division, TxDOT

Mr. James L. Randall, P.E.
Texas Department of Transportation
P.O. Box 149217
Austin, Texas 78714-9271

RESPONSE TO COMMENTS

Comment No.	Response
1	Thank you for your support of the project.

November 25, 2002

TEXAS PARKS & WILDLIFE

Colonel Leonard D. Waterworth
District Engineer
Galveston District, Corps of Engineers
P.O. Box 1229
Galveston TX 77553-1229

Re: Corpus Christi Ship Channel Project

Dear Colonel Waterworth:

Your letter of October 29, 2002 addressed issues raised in our response to the DEIS for the Corpus Christi Ship Channel Project in our letter of August 19, 2002. Specifically, Department staff was concerned about the potential generation of erosive currents by proposed Beneficial Use Site I, and the need for monitoring of the project components.

The modeling that had been done relative to Beneficial Use Site I appeared to be less than conclusive by our staff review, and the possibility of damaging erosion and sedimentation was a serious concern. Similarly, staff believes that monitoring of the project components for success and any needed upgrades or remediation is essential to the positive outcome that our staffs have worked for the last two years.

Your letter expressed the commitment to continue to work with both the Resource Agency Coordination Team and the Beneficial Uses Workgroup to assure that the project is completed in accordance with the plan outlined in the DEIS, and to address and remedy any significant problems that arise from a mutually agreed-upon monitoring plan. The Department is satisfied that our cooperative working relationship will continue and will assure that the public interest is served.

The Department appreciates your positive approach to these issues and commits to working with you and your staff to resolve any problems that arise.

Sincerely,

Larry D. McKinney, Ph.D.
Senior Director for Aquatic Resources

cc: Jeb Boyt, Coastal Coordination Council
Mark Fisher, TCEQ
Smiley Nava, TPWD, Corpus Christi

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512-389-4800

www.tpwd.state.tx.us